

Base Metal Grouping for Welding Procedure and Performance Qualification



AWS B2.1/B2.1M-BMG:2021

Base Metal Grouping for Welding Procedure and Performance Qualification

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Prepared by the
American Welding Society (AWS) B2 Committee on Procedure and Performance Qualification

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This document provides the AWS base metal grouping for welding procedure and performance qualification and is identical to Annex C of AWS B2.1/B2.1M:2021, *Specification for Welding Procedure and Performance Qualification*.



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Table of Contents

	Page No.
<i>Personnel</i>	v
<i>List of Tables</i>	vii
1. Scope	1
Annex C (Normative)—Base Metal Grouping	3
Annex H (Informative)—Requesting an Official Interpretation on an AWS Standard	225
Annex I (Informative)—Guidelines for Requesting Adoption of New Materials Under the AWS B2.1 Standard ...	227
List of AWS Documents on Welding Procedure and Performance Qualification	231

List of Tables

Table	Page No.
C.1 Listing of Base Metal Specifications—Ferrous Alloys	4
C.1 Listing of Base Metal Specifications—Nonferrous Alloys	53
C.2 M-Number Listing of Base Metals—Ferrous Alloys.....	80
C.2 M-Number Listing of Base Metals—Nonferrous Alloys.....	158
C.3 Listing of Base Metal Specifications—Iron Castings	209
C.4 <u>Listing of Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications—Ferrous Alloys</u>	211

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Base Metal Grouping for Welding Procedure and Performance Qualification

1. Scope

This publication is an extract of AWS B2.1/B2.1M:2021, *Specification for Welding Procedure and Performance Qualification*, and is identical to Annex C, Base Metal Grouping, in the 2021 edition of that standard. This publication revises AWS B2.1/B2.1M-BMG:2014. Underlined text or a vertical line in the margin indicates a revision from the 2014 edition.

This publication may be referred to by other codes and standards that have welding procedure and performance requirements in order to avoid duplication of materials tables in those publications.

Base metals and filler metals have been grouped into categories that will minimize the number of qualification tests required. Substitution of one base metal or filler metal for another, even when within the allowable rules, should only be made after an evaluation of the factors involved. For some materials, additional tests may be required. Materials not listed require separate qualification.

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Annex C (Normative)

Base Metal Grouping

(see 3, 4.3.12, 4.3.15, and Table 5.3)

This annex is part of this standard and includes mandatory elements for use with this standard.

C1. Base Metal Specifications

Table C.1 indexes ASTM, ABS, API, AS, AS/NZS, CSA, AMS, ISO, NACE, and MSS base metals in numerical order to provide ease of reference when determining into what grouping a particular base metal specification falls.

Table C.2 groups base metals for welding procedure and performance qualification on the basis of mechanical properties, chemical composition, and metallurgical compatibility to minimize the number of welding qualification where this can logically be done.

The column “ISO/TR 15608 Group” in Table C.1 and C.2 is a listing of the assignments of materials in accordance with the grouping criteria of ISO/TR 15608, *Welding — Guidelines for a metallic materials grouping system*, and it is consistent with the assignments found in ISO/TR 20173, *Grouping systems for materials — American materials*. While this listing is provided as a convenience to users worldwide, it is provided for information only. AWS B2.1 does not refer to this grouping as a basis for establishing the range of base metals qualified for either procedure or performance qualification.

Table C.3 lists base metal specifications for iron castings in accordance with AWS D11.2 groups.

C2. Material Number (M-Number) Groupings

Base metal has been divided into general categories, e.g., Material Numbers (M-Numbers) 1, 1A, 3, 3A, 4, 4A, etc., and further divided into groups within each general category.

The category grouping does not imply that base metals may be substituted for other base metals within the same Material Number (M-Number) without consideration for weldability.

C3. Iron Castings Specifications

Base metal specifications for iron castings are divided into D11.2 groups.

C4. Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications

List of base metal specifications for Standard Welding Procedure Specifications for naval applications—ferrous alloys.

Table C.1
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AAR	TC128	10C	1	11.1	B	—	Plate
AAR	M201	1	1	11.1	A	—	Castings
AAR	M201	1	2	11.1	B	—	Castings
AAR	M201	1	3	11.1	B+	—	Castings
AAR	M201	1	4	11.1	C	—	Castings
ABS	ABS	1	1	1.1	E	K01801	Plate, Bar & Shapes
ABS	ABS	1	1	1.1	D	K02101	Plate, Bar & Shapes
ABS	ABS	1	1	1.1	B	K02102	Plate, Bar & Shapes
ABS	ABS	1	1	1.1	A	K02300	Plate, Bar & Shapes
ABS	ABS	1	1	1.2	AH32	K11846	Plate, Bar & Shapes
ABS	ABS	1	1	1.2	DH32	K11846	Plate, Bar & Shapes
ABS	ABS	1	1	1.2	EH32	K11846	Plate, Bar & Shapes
ABS	ABS	1	1	1.2	FH32	K11846	Plate, Bar & Shapes
ABS	ABS	1	2	1.2	AH36	K11852	Plate, Bar & Shapes
ABS	ABS	1	2	1.2	DH36	K11852	Plate, Bar & Shapes
ABS	ABS	1	2	1.2	EH36	K11852	Plate, Bar & Shapes
ABS	ABS	1	2	1.2	FH36	K11852	Plate, Bar & Shapes
ABS	ABS	1	2	1.3	AH40	K11857	Plate, Bar & Shapes
ABS	ABS	1	2	1.3	DH40	K11857	Plate, Bar & Shapes
ABS	ABS	1	2	1.3	EH40	K11857	Plate, Bar & Shapes
ABS	ABS	1	2	1.3	FH40	K11857	Plate, Bar & Shapes
API	2H	1	1	1.2	42	—	Plate
API	2H	1	2	1.2	50	—	Plate
API	2MT1	1	1	1.2	50	—	Plate
API	2W	1	1	1.2	50	—	Plate
API	2W	1	2	1.3	60	—	Plate
API	2Y	1	1	1.2	42	—	Plate
API	2Y	1	1	1.2	50	—	Plate
API	2Y	1	2	1.2	50T	—	Plate
API	2Y	1	2	1.3	60	—	Plate
API	5L	1	1	1.1	A	—	Seamless & Welded Pipe
API	5L	1	1	1.1	A25	—	Seamless & Welded Pipe
API	5L	1	1	1.1	A25, Cl. I	—	Seamless & Welded Pipe & Tube
API	5L	1	1	1.1	A25, Cl. II	—	Seamless & Welded Pipe & Tube
API	5L	1	1	1.1	A25P	—	Seamless & Welded Pipe
API	5L	1	1	11.1	B	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BM	—	Welded Pipe
API	5L	1	1	1.1	BMO	—	Welded Pipe
API	5L	1	1	1.1	BMS	—	Welded Pipe
API	5L	1	1	1.1	BN	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BNO	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BNS	—	Seamless & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
API	5L	1	1	1.1	BQ	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BQO	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BQS	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BR	—	Seamless & Welded Pipe
API	5L	1	1	11.1	X42	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42M	—	Welded Pipe
API	5L	1	1	1.2	X42MO	—	Welded Pipe
API	5L	1	1	1.2	X42MS	—	Welded Pipe
API	5L	1	1	1.2	X42N	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42NO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42NS	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42Q	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42QO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42QS	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42R	—	Seamless & Welded Pipe
API	5L	1	1	11.1	X46	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46M	—	Welded Pipe
API	5L	1	1	1.2	X46MO	—	Welded Pipe
API	5L	1	1	1.2	X46MS	—	Welded Pipe
API	5L	1	1	1.2	X46N	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46NO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46NS	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46Q	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46QO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46QS	—	Seamless & Welded Pipe
API	5L	1	1	11.1	X52	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52M	—	Welded Pipe
API	5L	1	1	1.2	X52MO	—	Welded Pipe
API	5L	1	1	1.2	X52MS	—	Welded Pipe
API	5L	1	1	1.2	X52N	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52NO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52NS	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52Q	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52QO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52QS	—	Seamless & Welded Pipe
API	5L	1	2	11.1	X56	—	Seamless & Welded Pipe
API	5L	1	2	2.1	X56M	—	Welded Pipe
API	5L	1	2	2.1	X56MO	—	Welded Pipe
API	5L	1	2	2.1	X56MS	—	Welded Pipe
API	5L	1	2	1.3	X56N	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X56Q	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X56QO	—	Seamless & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
API	5L	1	2	3.1	X56QS	—	Seamless & Welded Pipe
API	5L	1	2	11.1	X60	—	Seamless & Welded Pipe
API	5L	1	2	2.1	X60M	—	Welded Pipe
API	5L	1	2	2.1	X60MO	—	Welded Pipe
API	5L	1	2	2.1	X60MS	—	Welded Pipe
API	5L	1	2	1.3	X60N	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X60Q	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X60QO	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X60QS	—	Seamless & Welded Pipe
API	5L	1	2	11.1	X65	—	Seamless & Welded Pipe
API	5L	1	2	2.1	X65M	—	Welded Pipe
API	5L	1	2	2.1	X65MO	—	Welded Pipe
API	5L	1	2	2.1	X65MS	—	Welded Pipe
API	5L	1	2	3.1	X65Q	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X65QO	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X65QS	—	Seamless & Welded Pipe
API	5L	1	3	11.1	X70	—	Seamless & Welded Pipe
API	5L	1	3	2.2	X70M	—	Welded Pipe
API	5L	1	3	2.2	X70MO	—	Welded Pipe
API	5L	1	3	2.2	X70MS	—	Welded Pipe
API	5L	1	3	3.1	X70Q	—	Seamless & Welded Pipe
API	5L	1	3	3.1	X70QO	—	Seamless & Welded Pipe
API	5L	1	3	3.1	X70QS	—	Seamless & Welded Pipe
API	5L	1	4	2.2	X80M	—	Welded Pipe
API	5L	1	4	2.2	X80MO	—	Welded Pipe
API	5L	1	4	3.1	X80Q	—	Seamless & Welded Pipe
API	5L	1	4	3.1	X80QO	—	Seamless & Welded Pipe
API	5LS	1	1	11.1	X46	—	Spiral Welded Pipe
AS ASTM	A945	1	2	1.2	50	—	Plate
AS ASTM	A945	1	2	1.3	65	—	Plate
AS	1448	1	1	1.1	K3	—	Forgings
AS	1448	1	2	11.2	K4	—	Forgings
AS	1448	1	2	11.2	K5	—	Forgings
AS	1448	1	3	11.2	K6	—	Forgings
AS	1448	1	1	1.2	K8	—	Forgings
AS	1448	1	2	1.2	K9	—	Forgings
AS	1448	1	3	11.1	K10	—	Forgings
AS	1448	1	1	1.1	S1	—	Forgings
AS	1448	1	1	1.1	S3	—	Forgings
AS	1448	1	2	11.2	S4	—	Forgings
AS	1448	1	2	11.2	S5	—	Forgings
AS	1448	1	3	11.2	S6	—	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AS	1548	1	2	1.2	5-490	—	Plate
AS	1548	1	1	1.2	7-430	—	Plate
AS	1548	1	1	1.2	7-460	—	Plate
AS	1548	1	2	1.2	7-490	—	Plate
AS	1548	1	1	1.2	PT430	—	Plate
AS	1548	1	1	1.2	PT460	—	Plate
AS	1548	1	2	1.2	PT490	—	Plate
AS	4728	1	1	1.1	200 L0	—	E.R.W. Pipe
AS	4728	1	1	1.1	240 L0	—	E.R.W. Pipe
AS	4728	1	1	1.2	290 L0	—	E.R.W. Pipe
AS/NZS	1594	1	1	1.1	HA1	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA3	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA4N	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA200	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA250	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA250/1	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HA300	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HA300/1	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HA350	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	2.1	HA400	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HU250	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HU300	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HU300/1	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.4	HW350	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	XF300	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	2.1	XF400	—	Plate, Sheet & Strip
AS/NZS	1594	1	3	2.2	XF500	—	Plate, Sheet & Strip
AS/NZS	3597	11B	—	3.1	700PV	—	Plate
AS/NZS	3678	1	1	1.1	200	—	Plate
AS/NZS	3678	1	1	1.2	250	—	Plate
AS/NZS	3678	1	1	1.2	250L15	—	Plate
AS/NZS	3678	1	2	1.2	300	—	Plate
AS/NZS	3678	1	2	1.2	300L15	—	Plate
AS/NZS	3678	1	2	1.2	350	—	Plate
AS/NZS	3678	1	2	1.2	350L15	—	Plate
AS/NZS	3678	1	2	1.3	400	—	Plate
AS/NZS	3678	1	2	1.3	400L15	—	Plate
AS/NZS	3678	1	2	1.3	450	—	Plate
AS/NZS	3678	1	2	1.3	450L15	—	Plate
AS/NZS	3678	3	1	1.4	WR350	—	Plate
AS/NZS	3678	3	1	1.4	WR350L0	—	Plate
AS/NZS	3679.1	1	1	1.1	250	—	Bar & Sections

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AS/NZS	3679.1	1	1	1.1	250L0	—	Bar & Sections
AS/NZS	3679.1	1	1	1.1	250L15	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	300	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	300L0	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	300L15	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	350	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	350L0	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	350L15	—	Bar & Sections
AS/NZS	3679.1	1	2	1.3	400	—	Bar & Sections
AS/NZS	3679.1	1	2	1.3	400L0	—	Bar & Sections
AS/NZS	3679.1	1	2	1.3	400L15	—	Bar & Sections
ASTM	A27	1	2	1.1	70-40	J02501	Castings
ASTM	A27	1	1	11.1	60-30	J03000	Castings
ASTM	A27	1	1	1.1	U-60-30	J03000	Castings
ASTM	A27	1	1	11.1	65-35	J03001	Castings
ASTM	A27	1	2	11.1	70-36	J03501	Castings
ASTM/ASME	A/SA-31	1	1	11.1	B	K03100	Rivets
ASTM/ASME	A/SA-36	1	1	11.1	—	—	Bar
ASTM/ASME	A/SA-36	1	1	11.1	—	K02595	Plates
ASTM/ASME	A/SA-36	1	1	11.1	—	K02596	Plates
ASTM/ASME	A/SA-36	1	1	11.1	—	K02597	Plates
ASTM/ASME	A/SA-36	1	1	1.1	—	K02598	Plates
ASTM/ASME	A/SA-36	1	1	1.1	—	K02599	Plates
ASTM/ASME	A/SA-36	1	1	11.1	—	K02600	Shapes
ASTM/ASME	A/SA-53	1	1	1.1	E, A	K02504	Resistance Welded Pipe
ASTM/ASME	A/SA-53	1	1	1.1	S, A	K02504	Seamless Pipe
ASTM/ASME	A/SA-53	1	1	11.1	E, B	K03005	Resistance Welded Pipe
ASTM/ASME	A/SA-53	1	1	11.1	F	K03005	Furnace Welded Pipe
ASTM/ASME	A/SA-53	1	1	11.1	S, B	K03005	Seamless Pipe
ASTM/ASME	A/SA-105	1	2	11.1	—	K03504	Flanges & Fittings
ASTM/ASME	A/SA-106	1	1	1.1	A	K02501	Seamless Pipe
ASTM/ASME	A/SA-106	1	1	11.1	B	K03006	Seamless Pipe
ASTM/ASME	A/SA-106	1	2	11.1	C	K03501	Seamless Pipe
ASTM	A108	1	1	1.1	1015	G10150	Bar
ASTM	A108	1	1	1.1	1018	G10180	Bar
ASTM	A108	1	1	1.1	1020	G10200	Bar
ASTM	A108	3	3	4.1	8620	G86200	Bar
ASTM	A131	1	1	1.1	A	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	AH32	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	AH36	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	1	1.1	B	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	1	1.1	CS	—	Plate, Shapes, Bar & Rivets

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A131	1	1	1.1	D	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	DH32	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	DH36	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	1	1.1	DS	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.1	E	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	EH32	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	EH36	—	Plate, Shapes, Bar & Rivets
ASTM/ASME	A/SA-134	1	1	1.1	SA283, A	K01400	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA285, A	K01700	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA283, B	K01702	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA285, B	K02200	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA283, C	K02401	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA36	K02599	Welded Pipe
ASTM/ASME	A/SA-134	1	1	11.1	SA283, D	K02702	Welded Pipe
ASTM/ASME	A/SA-134	1	1	11.1	SA285, C	K02801	Welded Pipe
ASTM/ASME	A/SA-135	1	1	1.1	A	K02509	E.R.W. Pipe
ASTM/ASME	A/SA-135	1	1	11.1	B	K03018	E.R.W. Pipe
ASTM	A139	1	1	1.1	A	K02508	Welded Pipe
ASTM	A139	1	1	11.1	B	K03003	Welded Pipe
ASTM	A139	1	1	11.1	C	K03004	Welded Pipe
ASTM	A139	1	1	11.1	D	K03010	Welded Pipe
ASTM	A139	1	1	11.1	E	K03012	Welded Pipe
ASTM	A148	4	3	—	90-60	D50600	Castings
ASTM	A161	1	1	—	Low Carbon	K01504	Tube
ASTM	A161	3	1	1.1	T1	K11522	Tube
ASTM	A167	8	1	8.1	302B	S30215	Plate, Sheet & Strip
ASTM	A167	8	2	8.2	308	S30800	Plate, Sheet & Strip
ASTM	A167	8	2	8.2	309	S30900	Plate, Sheet & Strip
ASTM	A167	8	2	8.2	310	S31000	Plate, Sheet & Strip
ASTM/ASME	A/SA-178	1	1	1.1	A	K01200	E.R.W. Tube
ASTM/ASME	A/SA-178	1	2	11.1	D	K02709	E.R.W. Tube
ASTM/ASME	A/SA-178	1	1	11.1	C	K03503	E.R.W. Tube
ASTM/ASME	A/SA-179	1	1	1.1	—	K01200	Seamless Tube
ASTM/ASME	A/SA-181	1	1	11.1	Cl. 60	K03502	Pipe Flange & Fittings
ASTM/ASME	A/SA-181	1	2	11.1	Cl. 70	K03502	Pipe Flange & Fittings
ASTM/ASME	A/SA-182	4	1	5.1	F12, Cl.1	K11562	Forgings
ASTM/ASME	A/SA-182	4	1	5.1	F12, Cl.2	K11564	Forgings
ASTM/ASME	A/SA-182	4	1	5.1	F11, Cl.2	K11572	Forgings
ASTM/ASME	A/SA-182	4	1	5.1	F11, Cl.3	K11572	Forgings
ASTM/ASME	A/SA-182	4	1	5.1	F11, Cl.1	K11597	Forgings
ASTM/ASME	A/SA-182	3	2	4.2	F2	K12122	Forgings
ASTM/ASME	A/SA-182	3	2	1.1	F1	K12822	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-182	5A	1	5.2	F22, Cl.1	K21590	Forgings
ASTM/ASME	A/SA-182	5A	1	5.2	F22, Cl.3	K21590	Forgings
ASTM/ASME	A/SA-182	9A	1	9.1	FR	K22035	Forgings
ASTM/ASME	A/SA-182	5C	1	6.2	F3VCb	K31390	Forgings
ASTM/ASME	A/SA-182	5A	1	5.2	F21	K31545	Forgings
ASTM/ASME	A/SA-182	5C	1	6.2	F3V	K31830	Forgings
ASTM/ASME	A/SA-182	5C	1	6.2	F22V	K31835	Forgings
ASTM/ASME	A/SA-182	5B	1	5.3	F5	K41545	Forgings
ASTM/ASME	A/SA-182	5B	1	5.3	F5a	K42544	Forgings
ASTM/ASME	A/SA-182	15E	1	6.4	F91	K90901	Forgings
ASTM/ASME	A/SA-182	5B	1	5.4	F9	K90941	Forgings
ASTM/ASME	A/SA-182	15E	1	6.4	F92	K92460	Forgings
ASTM/ASME	A/SA-182	8	3	8.3	FXM-19	S20910	Forgings
ASTM/ASME	A/SA-182	8	3	8.3	FXM-11	S21904	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304	S30400	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304L	S30403	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304H	S30409	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304N	S30451	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304LN	S30453	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F46	S30600	Forgings
ASTM/ASME	A/SA-182	8	2	8.2	F45	S30815	Forgings
ASTM/ASME	A/SA-182	8	2	8.2	F310	S31000	Forgings
ASTM/ASME	A/SA-182	8	2	8.2	F310H	S31009	Forgings
ASTM/ASME	A/SA-182	8	2	8.2	F310MoLN	S31050	Forgings
ASTM/ASME	A/SA-182	10H	1	10.2	F50	S31200	Forgings
ASTM/ASME	A/SA-182	8	4	8.2	F44	S31254	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316	S31600	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316L	S31603	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316H	S31609	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316N	S31651	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316LN	S31653	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F317	S31700	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F317L	S31703	Forgings
ASTM/ASME	A/SA-182	10H	1	10.1	F51	S31803	Forgings
ASTM/ASME	A/SA-182	8	4	8.2	—	S32053	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F321	S32100	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F321H	S32109	Forgings
ASTM/ASME	A/SA-182	10H	1	10.1	—	S32202	Forgings
ASTM/ASME	A/SA-182	10H	1	10.1	F60	S32205	Forgings
ASTM/ASME	A/SA-182	10H	1	10.2	F61	S32550	Forgings
ASTM/ASME	A/SA-182	10H	1	10.2	F53	S32750	Forgings
ASTM/ASME	A/SA-182	10H	1	10.1	F55	S32760	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-182	8	2	8.1	F10	S33100	Forgings
ASTM/ASME	A/SA-182	8	4	8.3	F49	S34565	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F347	S34700	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F347H	S34709	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F348	S34800	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F348H	S34809	Forgings
ASTM/ASME	A/SA-182	10H	1	10.2	F54	S39274	Forgings
ASTM/ASME	A/SA-182	6	1	7.2	F6a, Cl.1	S41000	Forgings
ASTM/ASME	A/SA-182	6	3	7.2	F6a, Cl.2	S41000	Forgings
ASTM/ASME	A/SA-182	6	3	7.2	F6a, Cl.3	S41000	Forgings
ASTM/ASME	A/SA-182	6	3	7.2	F6a, Cl.4	S41000	Forgings
ASTM/ASME	A/SA-182	6	3	7.2	F6b	S41026	Forgings
ASTM/ASME	A/SA-182	6	4	7.2	F6NM	S41500	Forgings
ASTM/ASME	A/SA-182	6	2	7.2	F429	S42900	Forgings
ASTM/ASME	A/SA-182	7	2	7.1	F430	S43000	Forgings
ASTM/ASME	A/SA-182	10I	1	7.1	FXM-27Cb	S44627	Forgings
ASTM/ASME	A/SA-192	1	1	1.1	—	K01201	Seamless Tube
ASTM	A199	4	1	5.1	T11	K11597	Seamless Tube
ASTM	A199	5A	1	5.2	T22	K21590	Seamless Tube
ASTM	A199	5A	1	—	T4	K31509	Seamless Tube
ASTM	A199	5A	1	—	T21	K31545	Seamless Tube
ASTM	A199	5B	1	5.3	T5	K41545	Seamless Tube
ASTM	A199	5B	1	5.4	T9	K81590	Seamless Tube
ASTM	A199	15E	1	6.4	T91	K90901	Seamless Tube
ASTM	A200	5A	1	5.2	T22	K21590	Tube
ASTM	A200	5A	1	—	T4	K31509	Tube
ASTM	A200	5A	1	—	T21	K31545	Tube
ASTM/ASME	A/SA-202	4	1	4.2	A	K11742	Plate
ASTM/ASME	A/SA-202	4	1	4.2	B	K12542	Plate
ASTM/ASME	A/SA-203	9B	1	9.2	F	—	Plate
ASTM/ASME	A/SA-203	9A	1	9.1	A	K21703	Plate
ASTM/ASME	A/SA-203	9A	1	9.1	B	K22103	Plate
ASTM/ASME	A/SA-203	9B	1	9.2	D	K31718	Plate
ASTM/ASME	A/SA-203	9B	1	9.2	E	K32018	Plate
ASTM/ASME	A/SA-204	3	1	1.1	A	K11820	Plate
ASTM/ASME	A/SA-204	3	2	1.1	B	K12020	Plate
ASTM/ASME	A/SA-204	3	2	1.2	C	K12320	Plate
ASTM/ASME	A/SA-209	3	1	1.1	T1b	K11422	Seamless Tube
ASTM/ASME	A/SA-209	3	1	1.1	T1	K11522	Seamless Tube
ASTM/ASME	A/SA-209	3	1	1.1	T1a	K12023	Seamless Tube
ASTM/ASME	A/SA-210	1	1	11.1	A-1	K02707	Seamless Tube
ASTM/ASME	A/SA-210	1	2	11.1	C	K03501	Seamless Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A211	1	1	1.1	A570-30	K02502	Welded Pipe
ASTM	A211	1	1	1.1	A570-33	K02502	Welded Pipe
ASTM	A211	1	1	1.1	A570-40	K02502	Welded Pipe
ASTM/ASME	A/SA-213	3	1	4.2	T2	K11547	Seamless Tube
ASTM/ASME	A/SA-213	4	1	5.1	T12	K11562	Seamless Tube
ASTM/ASME	A/SA-213	4	1	5.1	T11	K11597	Seamless Tube
ASTM/ASME	A/SA-213	10B	1	4.1	T17	K12047	Seamless Tube
ASTM/ASME	A/SA-213	5A	1	5.2	T22	K21590	Seamless Tube
ASTM/ASME	A/SA-213	5A	1	5.2	T21	K31545	Seamless Tube
ASTM/ASME	A/SA-213	5B	1	5.3	T5c	K41245	Seamless Tube
ASTM/ASME	A/SA-213	5B	1	5.3	T5	K41545	Seamless Tube
ASTM/ASME	A/SA-213	5B	1	5.3	T5b	K51545	Seamless Tube
ASTM/ASME	A/SA-213	15E	1	6.4	T91	K90901	Seamless Tube
ASTM/ASME	A/SA-213	5B	1	5.4	T9	K90941	Seamless Tube
ASTM/ASME	A/SA-213	15E	1	6.4	T92	K92460	Seamless Tube
ASTM/ASME	A/SA-213	8	3	8.3	TP201	S20100	Seamless Tube
ASTM/ASME	A/SA-213	8	3	8.3	TP202	S20200	Seamless Tube
ASTM/ASME	A/SA-213	8	3	8.3	XM-19	S20910	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304	S30400	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304L	S30403	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304H	S30409	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	—	S30432	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304N	S30451	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304LN	S30453	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	S30815	S30815	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP309S	S30908	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP309H	S30909	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP309Cb	S30940	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP309HCb	S30941	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	310	S31000	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310S	S31008	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310H	S31009	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310Cb	S31040	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310HCb	S31041	Seamless Tube
ASTM/ASME	A/SA-213	8	3	8.2	TP310HCbN	S31042	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310MoLN	S31050	Seamless Tube
ASTM/ASME	A/SA-213	8	4	8.2	—	S31254	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316	S31600	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316L	S31603	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316H	S31609	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316Ti	S31635	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316N	S31651	Seamless Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-213	8	1	8.1	TP316LN	S31653	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP317	S31700	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP317L	S31703	Seamless Tube
ASTM/ASME	A/SA-213	8	4	8.1	TP317LM	S31725	Seamless Tube
ASTM/ASME	A/SA-213	8	4	8.1	TP317LMN	S31726	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP321	S32100	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP321H	S32109	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	S32615	S32615	Seamless Tube
ASTM/ASME	A/SA-213	8	4	8.3	S34565	S34565	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP347	S34700	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP347H	S34709	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP347HFG	S34710	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP347LN	S34751	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP348	S34800	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP348H	S34809	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	XM-15	S38100	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	—	S38815	Seamless Tube
ASTM/ASME	A/SA-214	1	1	1.1	—	K01807	E.R.W. Tube
ASTM/ASME	A/SA-216	1	1	1.1	WCA	J02502	Castings
ASTM/ASME	A/SA-216	1	2	1.1	WCC	J02503	Castings
ASTM/ASME	A/SA-216	1	2	1.1	WCB	J03002	Castings
ASTM/ASME	A/SA-217	4	1	5.1	WC6	J12072	Castings
ASTM/ASME	A/SA-217	4	1	9.1	WC4	J12082	Castings
ASTM/ASME	A/SA-217	3	1	1.1	WC1	J12524	Castings
ASTM/ASME	A/SA-217	5A	1	5.2	WC9	J21890	Castings
ASTM/ASME	A/SA-217	4	1	4.2	WC5	J22000	Castings
ASTM/ASME	A/SA-217	5B	1	5.3	C5	J42045	Castings
ASTM/ASME	A/SA-217	5B	1	5.4	C12	J82090	Castings
ASTM/ASME	A/SA-217	15E	1	6.4	C12A	J84090	Castings
ASTM/ASME	A/SA-217	6	3	7.2	CA15	J91150	Castings
ASTM/ASME	A/SA-225	10A	1	2.1	D	K12004	Plate
ASTM/ASME	A/SA-225	10A	1	4.1	C	K12524	Plate
ASTM	A226	1	1	1.1	—	K01201	E.R.W. Tube
ASTM/ASME	A/SA-234	4	1	5.1	WP11, Cl.1	—	Piping Fittings
ASTM/ASME	A/SA-234	4	1	5.1	WP11, Cl.2	—	Piping Fittings
ASTM/ASME	A/SA-234	4	1	5.1	WP11, Cl.3	—	Piping Fittings
ASTM/ASME	A/SA-234	1	1	11.1	WPB	K03006	Piping Fittings
ASTM/ASME	A/SA-234	1	2	11.1	WPC	K03501	Piping Fittings
ASTM/ASME	A/SA-234	4	1	5.1	WP12, Cl.1	K12062	Piping Fittings
ASTM/ASME	A/SA-234	4	1	5.1	WP12, Cl.2	K12062	Piping Fittings
ASTM/ASME	A/SA-234	3	1	11.2	WP1	K12821	Piping Fittings
ASTM/ASME	A/SA-234	5A	1	5.2	WP22, Cl.1	K21590	Piping Fittings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-234	5A	1	5.2	WP22, Cl.3	K21590	Piping Fittings
ASTM/ASME	A/SA-234	9A	1	9.1	WPR	K22035	Piping Fittings
ASTM/ASME	A/SA-234	5B	1	5.3	WP5, Cl.1	K41545	Piping Fittings
ASTM/ASME	A/SA-234	5B	1	5.3	WP5, Cl.3	K41545	Piping Fittings
ASTM/ASME	A/SA-234	15E	1	6.4	WP91	K90901	Piping Fittings
ASTM/ASME	A/SA-234	5B	1	5.4	WP9, Cl.1	K90941	Piping Fittings
ASTM/ASME	A/SA-234	5B	1	5.4	WP9, Cl.3	K90941	Piping Fittings
ASTM	A234	15E	1	6.4	WP92	K92460	Piping Fittings
ASTM/ASME	A/SA-240	8	3	8.3	201-1	S20100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	201-2	S20100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	201LN	S20153	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	202	S20200	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	—	S20400	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	XM-19	S20910	Plate
ASTM/ASME	A/SA-240	8	3	8.3	XM-19	S20910	Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	XM-17	S21600	Plate
ASTM/ASME	A/SA-240	8	3	8.3	XM-17	S21600	Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	XM-18	S21603	Plate
ASTM/ASME	A/SA-240	8	3	8.3	XM-18	S21603	Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.1	S21800	S21800	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	XM-29	S24000	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	301	S30100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	302	S30200	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304	S30400	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304L	S30403	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304H	S30409	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304N	S30451	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	XM-21	S30452	Plate
ASTM/ASME	A/SA-240	8	1	8.1	XM-21	S30452	Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304LN	S30453	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	305	S30500	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	S30600	S30600	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	S30601	S30601	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	S30815	S30815	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	309S	S30908	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	309H	S30909	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	309Cb	S30940	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	309HCb	S30941	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	310S	S31008	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	310H	S31009	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	310Cb	S31040	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	310HCb	S31041	Plate, Sheet & Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-240	8	2	8.2	310MoLN	S31050	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S31200	S31200	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.2	S31254	S31254	Plate
ASTM/ASME	A/SA-240	8	4	8.2	S31254	S31254	Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S31260	S31260	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316	S31600	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316L	S31603	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316H	S31609	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316Ti	S31635	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316Cb	S31640	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316N	S31651	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316LN	S31653	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	317	S31700	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	317L	S31703	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.1	S31725	S31725	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.1	S31726	S31726	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	S31753	S31753	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	S31803	S31803	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S32003	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.2	—	S32053	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	321	S32100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S32101	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	321H	S32109	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S32202	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	2205	S32205	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S32304	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32550	S32550	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	S32615	S32615	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.2	—	S32654	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32750	S32750	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32760	S32760	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	329	S32900	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32906	S32906	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32950	S32950	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.3	S34565	S34565	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	347	S34700	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	347H	S34709	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	348	S34800	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	348H	S34809	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	XM-15	S38100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	—	S38815	Plate, Sheet & Strip
ASTM/ASME	A/SA-249	8	1	8.1	—	S38815	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-240	7	1	7.1	405	S40500	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	1	7.1	409	S40910	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	1	7.1	409	S40920	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	1	7.1	409	S40930	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	6	1	7.2	410	S41000	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	1	7.2	410S	S41008	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	6	4	7.2	S41500	S41500	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	6	2	7.2	429	S42900	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	430	S43000	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	439	S43035	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	S43932	S43932	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	S43940	S43940	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	—	S44100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	S44400	S44400	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10I	1	7.1	XM-33	S44626	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10I	1	7.1	XM-27	S44627	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10I	1	7.1	S44635	S44635	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10K	1	7.1	S44660	S44660	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10J	1	7.1	S44700	S44700	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10K	1	7.1	S44800	S44800	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S82012	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S82031	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S82441	Seamless & Welded Tube
ASTM/ASME	A/SA-249	8	3	8.3	TP 201	S20100	Welded Tube
ASTM/ASME	A/SA-249	8	3	8.3	TP 202	S20200	Welded Tube
ASTM/ASME	A/SA-249	8	3	8.3	TP XM-19	S20910	Welded Tube
ASTM/ASME	A/SA-249	8	3	8.3	TP XM-29	S24000	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304	S30400	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304L	S30403	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304H	S30409	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304N	S30451	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304LN	S30453	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	S30815	S30815	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309	S30900	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309S	S30908	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309H	S30909	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309Cb	S30940	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309HCb	S30941	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP310S	S31008	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP310H	S31009	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP310Cb	S31040	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP310HCb	S31041	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-249	8	2	8.2	TP310MoLN	S31050	Welded Tube
ASTM/ASME	A/SA-249	8	4	8.2	S31254	S31254	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316	S31600	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316L	S31603	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316H	S31609	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316N	S31651	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316LN	S31653	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP317	S31700	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP317L	S31703	Welded Tube
ASTM/ASME	A/SA-249	8	4	8.1	S31725	S31725	Welded Tube
ASTM/ASME	A/SA-249	8	4	8.1	S31726	S31726	Welded Tube
ASTM/ASME	A/SA-249	8	4	8.2	—	S32053	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP321	S32100	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP321H	S32109	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP347	S34700	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP347H	S34709	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP348	S34800	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP348H	S34809	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP XM-15	S38100	Welded Tube
ASTM/ASME	A/SA-250	3	1	1.1	T1b	K11422	E.R.W. Tube
ASTM/ASME	A/SA-250	3	1	1.1	T1	K11522	E.R.W. Tube
ASTM/ASME	A/SA-250	3	1	4.2	T2	K11547	E.R.W. Tube
ASTM/ASME	A/SA-250	4	1	5.1	T12	K11562	E.R.W. Tube
ASTM/ASME	A/SA-250	4	1	5.1	T11	K11597	E.R.W. Tube
ASTM/ASME	A/SA-250	3	1	1.1	T1a	K12023	E.R.W. Tube
ASTM/ASME	A/SA-250	5A	1	5.2	T22	K21590	E.R.W. Tube
ASTM	A252	1	1	—	1	—	Pipe Piles
ASTM	A252	1	1	—	2	—	Pipe Piles
ASTM	A252	1	1	—	3	—	Pipe Piles
ASTM/ASME	A/SA-266	1	2	11.1	4	K03017	Forgings
ASTM/ASME	A/SA-266	1	1	11.1	1	K03506	Forgings
ASTM/ASME	A/SA-266	1	2	11.1	2	K03506	Forgings
ASTM/ASME	A/SA-266	1	2	11.2	3	K05001	Forgings
ASTM/ASME	A/SA-268	7	1	7.1	TP405	S40500	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	1	7.1	S40800	S40800	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	1	7.1	TP409	S40900	Seamless & Welded Tube
ASTM/ASME	A/SA-268	6	1	7.2	TP410	S41000	Seamless & Welded Tube
ASTM/ASME	A/SA-268	6	4	7.2	S41500	S41500	Seamless & Welded Tube
ASTM/ASME	A/SA-268	6	2	7.2	TP429	S42900	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	2	7.1	TP430	S43000	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	2	7.1	TP439	S43035	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	2	7.1	TP430Ti	S43036	Seamless & Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-268	7	2	7.1	18Cr-2Mo	S44400	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	TP 446-1	S44600	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	TP 446-2	S44600	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	TP XM-33	S44626	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	TP XM-27	S44627	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	25-4-4	S44635	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10K	1	7.1	26-3-3	S44660	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10J	1	7.1	29-4	S44700	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10J	1	7.1	S44735	S44735	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10K	1	7.1	29-4-2	S44800	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-19	S20910	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-10	S21900	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-11	S21904	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-29	S24000	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP304	S30400	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP304L	S30403	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP304LN	S30453	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP316	S31600	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP316L	S31603	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP316LN	S31653	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP317	S31700	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP321	S32100	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP347	S34700	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP348	S34800	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-15	S38100	Seamless & Welded Tube
ASTM	A270	8	1	8.1	TP304	S30400	Seamless & Welded Tube
ASTM	A271	8	1	8.1	TP304	S30400	Seamless Tube
ASTM	A271	8	1	8.1	TP304H	S30409	Seamless Tube
ASTM	A271	8	1	8.1	TP316	S31600	Seamless Tube
ASTM	A271	8	1	8.1	TP316H	S31609	Seamless Tube
ASTM	A271	8	1	8.1	TP321	S32100	Seamless Tube
ASTM	A271	8	1	8.1	TP321H	S32109	Seamless Tube
ASTM	A271	8	1	8.1	TP347	S34700	Seamless Tube
ASTM	A271	8	1	8.1	TP347H	S34709	Seamless Tube
ASTM/ASME	A/SA-276	8	1	8.1	TP304	S30400	Bar
ASTM/ASME	A/SA-276	8	1	8.1	TP304L	S30403	Bar
ASTM/ASME	A/SA-276	8	2	8.2	314	S31400	Hot-finished Bar
ASTM/ASME	A/SA-276	8	1	8.1	TP316	S31600	Bar
ASTM/ASME	A/SA-276	8	1	8.1	TP316L	S31603	Bar
ASTM	A276	10H	1	10.1	—	S32101	Bar
ASTM/ASME	A/SA-276	10H	1	10.1	S32205	S32205	Bar
ASTM/ASME	A/SA-276	10H	1	10.1	—	S32550	Bars & Shapes

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-276	6	1	7.2	TP410	S41000	Bar
ASTM/ASME	A/SA-283	1	1	1.1	A	K01400	Plate
ASTM/ASME	A/SA-283	1	1	1.1	B	K01702	Plate
ASTM/ASME	A/SA-283	1	1	1.1	C	K02401	Plate
ASTM/ASME	A/SA-283	1	1	1.1	D	K02702	Plate
ASTM/ASME	A/SA-285	1	1	1.1	A	K01700	Plate
ASTM/ASME	A/SA-285	1	1	1.1	B	K02200	Plate
ASTM/ASME	A/SA-285	1	1	11.1	C	K02801	Plate
ASTM	A297	8	2	8.2	HF	J92603	Castings
ASTM	A297	8	2	8.2	HE	J93403	Castings
ASTM	A297	8	2	8.2	HH	J93503	Castings
ASTM	A297	8	2	8.2	HI	J94003	Castings
ASTM	A297	8	2	8.2	HK	J94224	Castings
ASTM/ASME	A/SA-299	1	2	11.1	A	K02803	Plate
ASTM/ASME	A/SA-299	1	3	11.1	B	K02803	Plate
ASTM/ASME	A/SA-312	8	3	8.3	TP XM-19	S20910	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	3	8.3	TP XM-11	S21904	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	3	8.3	TP XM-29	S24000	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304	S30400	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304L	S30403	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304H	S30409	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304N	S30451	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304LN	S30453	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	S30600	S30600	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	S30815	S30815	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP309S	S30908	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP309H	S30909	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP309Cb	S30940	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP309HCb	S30941	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310S	S31008	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310H	S31009	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310Cb	S31040	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310HCb	S31041	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310MoLN	S31050	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.2	S31254	S31254	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316	S31600	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316L	S31603	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316H	S31609	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316Ti	S31635	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316N	S31651	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316LN	S31653	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP317	S31700	Seamless & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-312	8	1	8.1	TP317L	S31703	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.1	S31725	S31725	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.1	S31726	S31726	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.2	—	S32053	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP321	S32100	Seamless Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP321H	S32109	Seamless Pipe
ASTM/ASME	A/SA-312	8	1	8.1	S32615	S32615	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.3	S34565	S34565	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP347	S34700	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP347H	S34709	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP347LN	S34751	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP348	S34800	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP348H	S34809	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP XM-15	S38100	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	1	3	11.1	10	—	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	1	1	11.1	6	K03006	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	1	1	11.1	1	K03008	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	4	2	4.1	4	K11267	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	9A	1	9.1	7	K21903	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	9A	1	9.1	9	K22035	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	9B	1	9.2	3	K31918	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	11A	1	9.3	8	K81340	Seamless & Welded Pipe
ASTM/ASME	A/SA-334	1	1	11.1	6	K03006	Welded Tube
ASTM/ASME	A/SA-334	1	1	11.1	1	K03008	Welded Tube
ASTM/ASME	A/SA-334	9A	1	9.1	7	K21903	Welded Tube
ASTM/ASME	A/SA-334	9A	1	9.1	9	K22035	Welded Tube
ASTM/ASME	A/SA-334	9B	1	9.2	3	K31918	Welded Tube
ASTM/ASME	A/SA-334	11A	1	9.3	8	K81340	Welded Tube
ASTM/ASME	A/SA-335	3	1	1.1	P1	K11522	Seamless Pipe
ASTM/ASME	A/SA-335	3	1	4.2	P2	K11547	Seamless Pipe
ASTM/ASME	A/SA-335	4	1	5.1	P12	K11562	Seamless Pipe
ASTM/ASME	A/SA-335	3	1	—	P15	K11578	Seamless Pipe
ASTM/ASME	A/SA-335	4	1	5.1	P11	K11597	Seamless Pipe
ASTM/ASME	A/SA-335	5A	1	5.2	P22	K21590	Seamless Pipe
ASTM/ASME	A/SA-335	5A	1	5.2	P21	K31545	Seamless Pipe
ASTM/ASME	A/SA-335	5B	1	5.3	P5c	K41245	Seamless Pipe
ASTM/ASME	A/SA-335	5B	1	5.3	P5	K41545	Seamless Pipe
ASTM/ASME	A/SA-335	5B	1	5.3	P5b	K51545	Seamless Pipe
ASTM/ASME	A/SA-335	15E	1	6.4	P91	K90901	Seamless Pipe
ASTM/ASME	A/SA-335	5B	1	5.4	P9	K90941	Seamless Pipe
ASTM/ASME	A/SA-335	15E	1	6.4	P92	K92460	Seamless Pipe
ASTM/ASME	A/SA-336	4	1	5.1	F12	K11564	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-336	4	1	5.1	F11, Cl.2	K11572	Forgings
ASTM/ASME	A/SA-336	4	1	5.1	F11, Cl.3	K11572	Forgings
ASTM/ASME	A/SA-336	4	1	5.1	F11, Cl.1	K11597	Forgings
ASTM/ASME	A/SA-336	3	2	1.1	F1	K12520	Forgings
ASTM/ASME	A/SA-336	5A	1	5.2	F22, Cl.1	K21590	Forgings
ASTM/ASME	A/SA-336	5A	1	5.2	F22, Cl.3	K21590	Forgings
ASTM/ASME	A/SA-336	5C	1	6.2	F3VCb	K31390	Forgings
ASTM/ASME	A/SA-336	5A	1	5.2	F21, Cl.1	K31545	Forgings
ASTM/ASME	A/SA-336	5A	1	5.2	F21, Cl.3	K31545	Forgings
ASTM/ASME	A/SA-336	5C	1	6.2	F3V	K31830	Forgings
ASTM/ASME	A/SA-336	5C	1	6.2	F22V	K31835	Forgings
ASTM/ASME	A/SA-336	5B	1	5.3	F5	K41545	Forgings
ASTM/ASME	A/SA-336	5B	1	5.3	F5A	K42544	Forgings
ASTM/ASME	A/SA-336	15E	1	6.4	F91	K90901	Forgings
ASTM/ASME	A/SA-336	5B	1	5.4	F9	K90941	Forgings
ASTM/ASME	A/SA-336	15E	1	6.4	F92	K92460	Forgings
ASTM/ASME	A/SA-336	8	3	8.3	FXM-19	S20910	Forgings
ASTM/ASME	A/SA-336	8	3	8.3	FXM-11	S21904	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304	S30400	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304L	S30403	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304H	S30409	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304N	S30451	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304LN	S30453	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F46	S30600	Forgings
ASTM/ASME	A/SA-336	8	2	8.2	F310	S31000	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316	S31600	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316L	S31603	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316H	S31609	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316N	S31651	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316LN	S31653	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F321	S32100	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F321H	S32109	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F347	S34700	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F347H	S34709	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F348	S34800	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F348H	S34809	Forgings
ASTM/ASME	A/SA-336	6	3	7.2	F6	S41000	Forgings
ASTM/ASME	A/SA-336	10I	1	7.1	FXM-27Cb	S44627	Forgings
ASTM/ASME	A/SA-350	1	1	11.1	LF1	K03009	Forgings
ASTM/ASME	A/SA-350	1	2	11.1	LF2	K03011	Forgings
ASTM/ASME	A/SA-350	1	1	1.2	LF6, Cl.1	K12202	Forgings
ASTM/ASME	A/SA-350	1	3	4.1	LF6, Cl.2	K12202	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-350	1	2	1.3	LF6, Cl.3	K12202	Forgings
ASTM/ASME	A/SA-350	9A	1	9.1	LF5 Cl.1	K13050	Forgings
ASTM/ASME	A/SA-350	9A	1	9.1	LF5 Cl.2	K13050	Forgings
ASTM/ASME	A/SA-350	1	2	3.3	LF787, Cl.2	K20747	Forgings
ASTM/ASME	A/SA-350	1	3	3.3	LF787, Cl.3	K20747	Forgings
ASTM/ASME	A/SA-350	9A	1	9.1	LF9	K22036	Forgings
ASTM/ASME	A/SA-350	9B	1	9.2	LF3	K32025	Forgings
ASTM/ASME	A/SA-351	8	1	8.1	CF3	J92500	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF3A	J92500	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF10	J92590	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF8	J92600	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF8A	J92600	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF8C	J92710	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF3M	J92800	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CE20N	J92802	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF8M	J92900	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF10M	J92901	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF10MC	J92971	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CG8M	J93000	Castings
ASTM/ASME	A/SA-351	8	4	8.2	CK3MCuN	J93254	Castings
ASTM/ASME	A/SA-351	10H	1	10.2	CE8MN	J93345	Castings
ASTM/ASME	A/SA-351	10H	1	10.2	CD4MCu	J93370	Castings
ASTM/ASME	A/SA-351	10H	1	10.2	CD3MWCuN	J93380	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CH8	J93400	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CH10	J93401	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CH20	J93402	Castings
ASTM/ASME	A/SA-351	8	3	8.3	CG6MMN	J93790	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CK20	J94202	Castings
ASTM/ASME	A/SA-351	8	2	8.2	HK30	J94203	Castings
ASTM/ASME	A/SA-351	8	2	8.2	HK40	J94204	Castings
ASTM/ASME	A/SA-352	1	1	11.1	LCA	J02504	Castings
ASTM/ASME	A/SA-352	1	2	11.1	LCC	J02505	Castings
ASTM/ASME	A/SA-352	1	1	1.1	LCB	J03003	Castings
ASTM/ASME	A/SA-352	3	1	1.1	LC1	J12522	Castings
ASTM/ASME	A/SA-352	9A	1	9.1	LC2	J22500	Castings
ASTM/ASME	A/SA-352	9B	1	9.3	LC3	J31550	Castings
ASTM/ASME	A/SA-352	9C	1	9.3	LC4	J41500	Castings
ASTM/ASME	A/SA-352	11A	5	9.2	LC2-1	J42215	Castings
ASTM/ASME	A/SA-352	6	4	7.2	CA6NM	J91540	Castings
ASTM/ASME	A/SA-353	11A	1	9.3	—	K81340	Plate
ASTM	A356	1	2	11.1	1	J03502	Castings
ASTM	A356	4	1	6.2	8	J11697	Castings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A356	4	1	5.1	6	J12073	Castings
ASTM	A356	3	1	1.1	2	J12523	Castings
ASTM	A356	4	1	6.2	9	J21610	Castings
ASTM	A356	5A	1	5.2	10	J22090	Castings
ASTM	A356	15E	1	6.4	12A	J84090	Castings
ASTM/ASME	A/SA-358	8	3	8.3	XM-19	S20910	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	3	8.3	XM-29	S24000	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304	S30400	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304L	S30403	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304H	S30409	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304N	S30451	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304LN	S30453	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	S30815	S30815	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	309	S30900	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	309S	S30908	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	309Cb	S30940	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	310	S31000	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	310S	S31008	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	310Cb	S31040	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	4	8.2	S31254	S31254	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316	S31600	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316L	S31603	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316H	S31609	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316N	S31651	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316LN	S31653	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	4	8.1	S31725	S31725	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	4	8.1	S31726	S31726	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	4	8.2	—	S32053	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	321	S32100	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	347	S34700	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	348	S34800	Fusion Welded Pipe
ASTM	A366	1	1	1.1	CS	—	Sheet
ASTM/ASME	A/SA-369	1	1	1.1	FPA	K02501	Forged Pipe
ASTM/ASME	A/SA-369	1	1	1.1	FPB	K03006	Forged Pipe
ASTM/ASME	A/SA-369	3	1	1.1	FP1	K11522	Forged Pipe
ASTM/ASME	A/SA-369	3	1	4.2	FP2	K11547	Forged Pipe
ASTM/ASME	A/SA-369	4	1	5.1	FP12	K11562	Forged Pipe
ASTM/ASME	A/SA-369	4	1	5.1	FP11	K11597	Forged Pipe
ASTM/ASME	A/SA-369	5A	1	5.2	FP22	K21590	Forged Pipe
ASTM/ASME	A/SA-369	5A	1	5.2	FP21	K31545	Forged Pipe
ASTM/ASME	A/SA-369	5B	1	5.3	FP5	K41545	Forged Pipe
ASTM/ASME	A/SA-369	15E	1	6.4	FP91	K90901	Forged Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-369	5B	1	5.4	FP9	K90941	Forged Pipe
ASTM/ASME	A/SA-369	15E	1	6.4	FP92	K92460	Forged Pipe
ASTM/ASME	A/SA-372	1	1	11.1	A	K03002	Forgings
ASTM/ASME	A/SA-372	1	2	11.1	B	K04001	Forgings
ASTM/ASME	A/SA-376	8	1	8.1	16-8-2H	S16800	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP304	S30400	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP304H	S30409	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP304N	S30451	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP304LN	S30453	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP316	S31600	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP316H	S31609	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP316N	S31651	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP316LN	S31653	Seamless Pipe
ASTM/ASME	A/SA-376	8	4	8.1	S31725	S31725	Seamless Pipe
ASTM/ASME	A/SA-376	8	4	8.1	S31726	S31726	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP321	S32100	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP321H	S32109	Seamless Pipe
ASTM/ASME	A/SA-376	8	4	8.3	S34565	S34565	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP347	S34700	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP347H	S34709	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP348	S34800	Seamless Pipe
ASTM	A381	1	1	11.1	Y35	—	Welded Pipe
ASTM	A381	1	1	11.1	Y42	—	Welded Pipe
ASTM	A381	1	1	11.1	Y46	—	Welded Pipe
ASTM	A381	1	1	11.1	Y48	—	Welded Pipe
ASTM	A381	1	1	11.1	Y50	—	Welded Pipe
ASTM	A381	1	2	11.1	Y52	—	Welded Pipe
ASTM	A381	1	2	11.1	Y56	—	Welded Pipe
ASTM	A381	1	2	11.1	Y60	—	Welded Pipe
ASTM	A381	1	3	11.1	Y65	—	Welded Pipe
ASTM/ASME	A/SA-387	4	1	5.1	12, Cl. 1	K11757	Plate
ASTM/ASME	A/SA-387	4	1	5.1	12, Cl. 2	K11757	Plate
ASTM/ASME	A/SA-387	4	1	5.1	11, Cl. 1	K11789	Plate
ASTM/ASME	A/SA-387	4	1	5.1	11, Cl. 2	K11789	Plate
ASTM/ASME	A/SA-387	3	1	4.2	2, Cl. 1	K12143	Plate
ASTM/ASME	A/SA-387	3	2	4.2	2, Cl. 2	K12143	Plate
ASTM/ASME	A/SA-387	5A	1	5.2	22, Cl. 1	K21590	Plate
ASTM/ASME	A/SA-387	5A	1	5.2	22, Cl. 2	K21590	Plate
ASTM/ASME	A/SA-387	5A	1	5.2	21, Cl. 1	K31545	Plate
ASTM/ASME	A/SA-387	5A	1	5.2	21, Cl. 2	K31545	Plate
ASTM/ASME	A/SA-387	5B	1	5.3	5, Cl. 1	K41545	Plate
ASTM/ASME	A/SA-387	5B	1	5.3	5, Cl. 2	K41545	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-387	15E	1	6.4	91, Cl.2	K90901	Plate
ASTM/ASME	A/SA-387	5B	1	5.4	9, Cl. 1	K90941	Plate
ASTM/ASME	A/SA-387	5B	1	5.4	9, Cl. 2	K90941	Plate
ASTM	A389	4	1	6.2	C23	J12080	Castings
ASTM	A389	4	1	6.2	C24	J12092	Castings
ASTM/ASME	A/SA-403	8	3	8.3	WPXM-19	S20910	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304	S30400	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304L	S30403	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304H	S30409	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304N	S30451	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304LN	S30453	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	2	8.2	WP309	S30900	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	2	8.2	WP310	S31000	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	2	8.2	WP310S	S31008	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	4	8.2	—	S31254	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316	S31600	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316L	S31603	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316H	S31609	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316N	S31651	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316LN	S31653	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP317	S31700	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP317L	S31703	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	4	8.1	WP S31726	S31726	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	4	8.2	—	S32053	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP321	S32100	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP321H	S32109	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	4	8.3	S34565	S34565	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP347	S34700	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP347H	S34709	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP348	S34800	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP348H	S34809	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP S38815	S38815	Wrought Piping Fittings
ASTM	A405	4	1	6.2	P24	K11591	Seamless Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP304	S30400	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP304L	S30403	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	S30815	S30815	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	TP309S	S30908	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	TP309Cb	S30940	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	TP310S	S31008	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	TP310Cb	S31040	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.2	S31254	S31254	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP316	S31600	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-409	8	1	8.1	TP316L	S31603	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP317	S31700	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.1	S31725	S31725	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.1	S31726	S31726	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.2	—	S32053	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP321	S32100	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.3	S34565	S34565	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP347	S34700	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP348	S34800	Welded Pipe
ASTM/ASME	A/SA-414	1	1	1.1	A	K01501	Sheet
ASTM/ASME	A/SA-414	1	1	1.1	B	K02201	Sheet
ASTM/ASME	A/SA-414	1	1	1.1	C	K02503	Sheet
ASTM/ASME	A/SA-414	1	1	1.1	D	K02505	Sheet
ASTM/ASME	A/SA-414	1	1	11.1	E	K02704	Sheet
ASTM/ASME	A/SA-414	1	2	11.1	F	K03102	Sheet
ASTM/ASME	A/SA-414	1	2	11.1	G	K03103	Sheet
ASTM/ASME	A/SA-420	1	1	11.1	WPL6	K03006	Piping Fittings
ASTM/ASME	A/SA-420	9A	1	9.1	WPL9	K22035	Piping Fittings
ASTM/ASME	A/SA-420	9B	1	9.2	WPL3	K31918	Piping Fittings
ASTM/ASME	A/SA-420	11A	1	9.3	WPL8	K81340	Piping Fittings
ASTM/ASME	A/SA-423	4	2	5.1	1	K11535	Seamless & Welded Tube
ASTM/ASME	A/SA-423	4	2	5.1	2	K11540	Seamless & Welded Tube
ASTM/ASME	A/SA-426	3	1	1.1	CP15	J11522	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	3	1	4.2	CP2	J11547	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	4	1	5.1	CP12	J11562	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	4	1	5.1	CP11	J12072	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	3	1	1.1	CP1	J12521	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5A	1	5.2	CP22	J21890	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5A	1	5.2	CP21	J31545	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5B	1	5.3	CP5	J42045	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5B	1	5.3	CP5b	J51545	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5B	1	5.4	CP9	J82090	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	6	3	7.2	CPCA15	J91150	Centrifugal Cast Pipe
ASTM	A430	8	1	8.1	FP16-8-2H	S16800	Forged Pipe
ASTM	A430	8	1	8.1	FP304	S30400	Forged Pipe
ASTM	A430	8	1	8.1	FP304H	S30409	Forged Pipe
ASTM	A430	8	1	8.1	FP304N	S30451	Forged Pipe
ASTM	A430	8	1	8.1	FP316	S31600	Forged Pipe
ASTM	A430	8	1	8.1	FP316H	S31609	Forged Pipe
ASTM	A430	8	1	8.1	FP316N	S31651	Forged Pipe
ASTM	A430	8	1	8.1	FP321	S32100	Forged Pipe
ASTM	A430	8	1	8.1	FP321H	S32109	Forged Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A430	8	1	8.1	FP347	S34700	Forged Pipe
ASTM	A430	8	1	8.1	FP347H	S34709	Forged Pipe
ASTM	A441	1	2	—	Group 1	—	Shapes
ASTM	A441	1	2	—	Group 2	—	Shapes
ASTM	A441	1	2	—	Group 3	—	Shapes
ASTM	A441	1	2	—	Group 4	—	Shapes
ASTM	A441	1	2	—	Group 5	—	Shapes
ASTM	A441	1	2	—	—	K12211	Plate & Bar
ASTM/ASME	A/SA-451	8	1	8.1	CPF3	J92500	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF3A	J92500	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF8	J92600	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF8A	J92600	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF8C	J92710	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF3M	J92800	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPE20N	J92802	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF8M	J92900	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF10MC	J92971	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPH8	J93400	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPH10	J93402	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPH20	J93402	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPK20	J94202	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP304H	S30409	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP316H	S31609	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP347H	S34709	Centrifugal Cast Pipe
ASTM/ASME	A/SA-455	1	2	11.2	—	K03300	Plate
ASTM	A473	8	3	8.3	201	S20100	Forgings
ASTM	A473	8	3	8.3	202	S20200	Forgings
ASTM	A473	8	3	8.3	XM-10	S21900	Forgings
ASTM	A473	8	3	8.3	XM-11	S21904	Forgings
ASTM	A473	8	1	8.1	302	S30200	Forgings
ASTM	A473	8	1	8.1	302B	S30215	Forgings
ASTM	A473	8	1	8.1	304	S30400	Forgings
ASTM	A473	8	1	8.1	304L	S30403	Forgings
ASTM	A473	8	1	8.1	305	S30500	Forgings
ASTM	A473	8	2	8.2	308	S30800	Forgings
ASTM	A473	8	2	8.2	S30815	S30815	Forgings
ASTM	A473	8	2	8.2	309	S30900	Forgings
ASTM	A473	8	2	8.2	309S	S30908	Forgings
ASTM	A473	8	2	8.2	310	S31000	Forgings
ASTM	A473	8	2	8.2	310S	S31008	Forgings
ASTM	A473	8	2	8.2	314	S31400	Forgings
ASTM	A473	8	1	8.1	316	S31600	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A473	8	1	8.1	316L	S31603	Forgings
ASTM	A473	8	1	8.1	317	S31700	Forgings
ASTM	A473	8	1	8.1	321	S32100	Forgings
ASTM	A473	8	1	8.1	347	S34700	Forgings
ASTM	A473	8	1	8.1	348	S34800	Forgings
ASTM	A473	6	1	7.1	403	S40300	Forgings
ASTM	A473	7	1	7.1	405	S40500	Forgings
ASTM	A473	6	1	7.2	410	S41000	Forgings
ASTM	A473	6	4	7.2	414	S41400	Forgings
ASTM	A473	6	2	7.2	420	S42000	Forgings
ASTM	A473	6	2	7.2	429	S42900	Forgings
ASTM	A473	7	2	7.1	430	S43000	Forgings
ASTM/ASME	A/SA-479	8	3	8.3	XM-19	S20910	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.3	XM-17	S21600	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.3	XM-18	S21603	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.1	S21800	S21800	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.3	XM-11	S21904	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.3	XM-29	S24000	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	302	S30200	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304	S30400	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304L	S30403	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304H	S30409	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304N	S30451	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304LN	S30453	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	S30600	S30600	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	S30815	S30815	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	309S	S30908	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	309Cb	S30940	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	310S	S31008	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	310Cb	S31040	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.2	S31254	S31254	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316	S31600	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316L	S31603	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316H	S31609	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316Ti	S31635	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316Cb	S31640	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316N	S31651	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316LN	S31653	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.1	S31725	S31725	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.1	S31726	S31726	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S31803	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.2	—	S32053	Bars & Shapes

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-479	8	1	8.1	321	S32100	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S32101	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	321H	S32109	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S32202	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S32205	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.2	S32550	S32550	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	S32615	S32615	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.2	S32750	S32750	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.2	S32906	S32906	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.3	—	S34565	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	347	S34700	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	347H	S34709	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	348	S34800	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	348H	S34809	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	—	S38815	Bars & Shapes
ASTM/ASME	A/SA-479	6	1	7.1	403	S40300	Bars & Shapes
ASTM/ASME	A/SA-479	7	1	7.1	405	S40500	Bars & Shapes
ASTM/ASME	A/SA-479	6	1	7.2	410	S41000	Bars & Shapes
ASTM/ASME	A/SA-479	6	1	7.2	XM-30	S41040	Bars & Shapes
ASTM/ASME	A/SA-479	6	4	7.2	414	S41400	Bars & Shapes
ASTM/ASME	A/SA-479	6	4	7.2	S41500	S41500	Bars & Shapes
ASTM/ASME	A/SA-479	7	2	7.1	430	S43000	Bars & Shapes
ASTM/ASME	A/SA-479	7	2	7.1	439	S43035	Bars & Shapes
ASTM/ASME	A/SA-479	7	2	7.1	S44400	S44400	Bars & Shapes
ASTM/ASME	A/SA-479	10I	1	7.1	XM-27	S44627	Bars & Shapes
ASTM/ASME	A/SA-479	10J	1	7.1	S44700	S44700	Bars & Shapes
ASTM/ASME	A/SA-479	10K	1	7.1	S44800	S44800	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S82441	Bars
ASTM/ASME	A/SA-487	10A	1	2.1	1, Cl. A	J13002	Castings
ASTM/ASME	A/SA-487	10A	1	2.1	1, Cl. B	J13002	Castings
ASTM/ASME	A/SA-487	3	3	2.1	2, Cl. A	J13005	Castings
ASTM/ASME	A/SA-487	3	3	2.1	2, Cl. B	J13005	Castings
ASTM/ASME	A/SA-487	3	3	3.1	4, Cl. A	J13047	Castings
ASTM/ASME	A/SA-487	11A	3	3.1	4, Cl. B	J13047	Castings
ASTM/ASME	A/SA-487	3	3	3.1	4, Cl. C	J13047	Castings
ASTM/ASME	A/SA-487	11A	3	3.1	4, Cl. E	J13047	Castings
ASTM/ASME	A/SA-487	5C	1	5.2	8, Cl. A	J22091	Castings
ASTM/ASME	A/SA-487	5C	4	5.2	8, Cl. B	J22091	Castings
ASTM/ASME	A/SA-487	5C	4	5.2	8, Cl. C	J22091	Castings
ASTM/ASME	A/SA-487	1	2	1.1	16, Cl. A	J31200	Castings
ASTM/ASME	A/SA-487	6	3	7.2	CA15 Cl. C	J91150	Castings
ASTM/ASME	A/SA-487	6	3	7.2	CA15M Cl. A	J91151	Castings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-487	6	3	7.2	CA15 Cl. B	J91171	Castings
ASTM/ASME	A/SA-487	6	3	7.2	CA15 Cl. D	J91171	Castings
ASTM/ASME	A/SA-487	6	4	7.2	CA6NM Cl. A	J91540	Castings
ASTM/ASME	A/SA-487	6	4	7.2	CA6NM Cl. B	J91540	Castings
ASTM	A500	1	1	1.2	C	K02705	Seamless & Welded Tube
ASTM	A500	1	1	11.1	A	K03000	Seamless & Welded Tube
ASTM	A500	1	1	11.1	B	K03000	Seamless & Welded Tube
ASTM	A500	1	1	11.1	D	K03000	Seamless & Welded Tube
ASTM	A501	1	1	11.1	A	K03000	Seamless & Welded Tube
ASTM	A501	1	1	1.2	B	K03000	Seamless & Welded Tube
ASTM/ASME	A/SA-508	3	3	3.1	3, Cl.1	K12042	Forgings
ASTM/ASME	A/SA-508	3	3	3.1	3, Cl.2	K12042	Forgings
ASTM/ASME	A/SA-508	3	3	3.1	2, Cl.1	K12766	Forgings
ASTM/ASME	A/SA-508	3	3	3.1	2, Cl.2	K12766	Forgings
ASTM/ASME	A/SA-508	1	2	11.1	1	K13502	Forgings
ASTM/ASME	A/SA-508	1	2	11.1	1A	K13502	Forgings
ASTM/ASME	A/SA-508	5C	1	5.2	22, Cl. 3	K21590	Forgings
ASTM/ASME	A/SA-508	11A	5	3.1	4N, Cl.1	K22375	Forgings
ASTM/ASME	A/SA-508	11B	10	3.1	4N, Cl.2	K22375	Forgings
ASTM/ASME	A/SA-508	3	3	3.1	4N, Cl.3	K22375	Forgings
ASTM/ASME	A/SA-508	5C	1	6.2	3VCb	K31390	Forgings
ASTM/ASME	A/SA-508	5C	1	6.2	3V	K31830	Forgings
ASTM/ASME	A/SA-508	11A	5	3.1	5, Cl.1	K42365	Forgings
ASTM/ASME	A/SA-508	11B	10	3.1	5, Cl.2	K42365	Forgings
ASTM	A511	8	1	8.1	MT 302	S30200	Seamless Tube
ASTM	A511	8	1	8.1	MT 304	S30400	Seamless Tube
ASTM	A511	8	1	8.1	MT 304L	S30403	Seamless Tube
ASTM	A511	8	2	8.2	MT 309S	S30908	Seamless Tube
ASTM	A511	8	2	8.2	MT 310S	S31008	Seamless Tube
ASTM	A511	8	1	8.1	MT 316	S31600	Seamless Tube
ASTM	A511	8	1	8.1	MT 316L	S31603	Seamless Tube
ASTM	A511	8	1	8.1	MT 317	S31700	Seamless Tube
ASTM	A511	8	1	8.1	MT 321	S32100	Seamless Tube
ASTM	A511	8	1	8.1	MT 347	S34700	Seamless Tube
ASTM	A512	1	1	1.1	MTX 1015	—	Tube
ASTM	A512	1	1	1.1	MTX 1020	—	Tube
ASTM	A512	1	1	1.1	1008	G10080	Tube
ASTM	A512	1	1	1.1	1010	G10100	Tube
ASTM	A512	1	1	1.1	MT 1010	G10100	Tube
ASTM	A512	1	1	1.1	1012	G10120	Tube
ASTM	A512	1	1	1.1	1015	G10150	Tube
ASTM	A512	1	1	1.1	MT 1015	G10150	Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A512	1	1	—	1016	G10160	Tube
ASTM	A512	1	1	1.1	1018	G10180	Tube
ASTM	A512	1	1	—	1019	G10190	Tube
ASTM	A512	1	1	1.1	1020	G10200	Tube
ASTM	A512	1	1	1.1	MT 1020	G10200	Tube
ASTM	A512	1	1	—	1021	G10210	Tube
ASTM	A512	1	2	11.1	1025	G10250	Tube
ASTM	A512	1	1	11.1	1026	G10260	Tube
ASTM	A512	1	2	11.1	1030	G10300	Tube
ASTM/ASME	A/SA-513	1	1	—	MTX 1015	—	Tube
ASTM/ASME	A/SA-513	1	1	—	MTX 1020	—	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1008	G10080	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1010	G10100	Tube
ASTM/ASME	A/SA-513	1	1	1.1	MT 1010	G10100	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1015	G10150	Tube
ASTM	A513	1	1	1.1	1015 CW	G10150	Tube
ASTM/ASME	A/SA-513	1	1	1.1	MT 1015	G10150	Tube
ASTM/ASME	A/SA-513	1	1	—	1017	G10170	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1018	G10180	Tube
ASTM/ASME	A/SA-513	1	1	—	1019	G10190	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1020	G10200	Tube
ASTM	A513	1	2	1.1	1020 CW	G10200	Tube
ASTM/ASME	A/SA-513	1	1	1.1	MT 1020	G10200	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1021	G10210	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1022	G10220	Tube
ASTM/ASME	A/SA-513	1	1	—	1023	G10230	Tube
ASTM/ASME	A/SA-513	1	1	—	1024	G10240	Tube
ASTM/ASME	A/SA-513	1	2	11.1	1025	G10250	Tube
ASTM	A513	1	2	1.2	1025 CW	G10250	Tube
ASTM/ASME	A/SA-513	1	1	11.1	1026	G10260	Tube
ASTM	A513	1	3	11.1	1026 CW	G10260	Tube
ASTM/ASME	A/SA-513	1	2	11.1	1030	G10300	Tube
ASTM	A514	11B	9	3.1	Q	—	Plate
ASTM	A514	11B	12	3.1	R	—	Plate
ASTM	A514	11B	6	3.1	S	—	Plate
ASTM	A514	11B	6	3.1	T	—	Plate
ASTM	A514	11B	6	3.1	C	K11511	Plate
ASTM	A514	11B	6	3.1	K	K11523	Plate
ASTM	A514	11B	3	3.1	F	K11576	Plate
ASTM	A514	11B	6	3.1	J	K11625	Plate
ASTM	A514	11B	4	3.1	B	K11630	Plate
ASTM	A514	11B	3	3.1	H	K11646	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A514	11B	10	3.1	M	K11683	Plate
ASTM	A514	11B	1	3.1	A	K11856	Plate
ASTM	A514	11B	2	3.1	E	K21604	Plate
ASTM	A514	11B	8	3.1	P	K21650	Plate
ASTM/ASME	A/SA-515	1	1	11.1	60	—	Plate
ASTM	A515	1	1	1.1	55	K02001	Plate
ASTM/ASME	A/SA-515	1	1	1.1	60	K02401	Plate
ASTM/ASME	A/SA-515	1	1	11.1	65	K02800	Plate
ASTM/ASME	A/SA-515	1	2	11.1	70	K03101	Plate
ASTM/ASME	A/SA-516	1	1	1.1	55	K01800	Plate
ASTM/ASME	A/SA-516	1	1	1.1	60	K02100	Plate
ASTM/ASME	A/SA-516	1	1	1.1	65	K02403	Plate
ASTM/ASME	A/SA-516	1	2	11.1	70	K02700	Plate
ASTM/ASME	A/SA-517	11B	9	3.1	Q	—	Plate
ASTM/ASME	A/SA-517	11B	6	3.1	S	—	Plate
ASTM	A517	11B	6	3.1	T	—	Plate
ASTM	A517	11B	14	3.1	C	K11511	Plate
ASTM	A517	11B	6	3.1	K	K11523	Plate
ASTM/ASME	A/SA-517	11B	3	3.1	F	K11576	Plate
ASTM	A517	11B	6	3.1	J	K11625	Plate
ASTM/ASME	A/SA-517	11B	4	3.1	B	K11630	Plate
ASTM/ASME	A/SA-517	11B	3	3.1	H	K11646	Plate
ASTM	A517	11B	10	3.1	M	K11683	Plate
ASTM/ASME	A/SA-517	11B	1	3.1	A	K11856	Plate
ASTM/ASME	A/SA-517	11B	2	3.1	E	K21604	Plate
ASTM/ASME	A/SA-517	11B	8	3.1	P	K21650	Plate
ASTM	A519	1	1	—	MTX 1015	—	Tube
ASTM	A519	1	1	—	MTX 1020	—	Tube
ASTM	A519	1	1	1.1	1008	G10080	Tube
ASTM	A519	1	1	1.1	MT 1010	G10100	Tube
ASTM	A519	1	1	1.1	1012	G10120	Tube
ASTM	A519	1	1	1.1	1015	G10150	Tube
ASTM	A519	1	1	1.1	MT 1015	G10150	Tube
ASTM	A519	1	1	—	1016	G10160	Tube
ASTM	A519	1	1	—	1017	G10170	Tube
ASTM	A519	1	1	1.1	1018	G10180	Tube
ASTM	A519	1	2	1.1	1018 CW	G10180	Tube
ASTM	A519	1	1	1.1	1018 HR	G10180	Tube
ASTM	A519	1	1	—	1019	G10190	Tube
ASTM	A519	1	1	1.1	1020	G10200	Tube
ASTM	A519	1	2	1.1	1020 CW	G10200	Tube
ASTM	A519	1	1	1.1	1020 HR	G10200	Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A519	1	1	1.1	MT 1020	G10200	Tube
ASTM	A519	1	1	—	1021	G10210	Tube
ASTM	A519	1	1	1.1	1022	G10220	Tube
ASTM	A519	1	2	1.1	1022 CW	G10220	Tube
ASTM	A519	1	1	1.1	1022 HR	G10220	Tube
ASTM	A519	1	2	11.1	1025	G10250	Tube
ASTM	A519	1	2	1.2	1025 CW	G10250	Tube
ASTM	A519	1	1	1.1	1025 HR	G10250	Tube
ASTM	A519	1	1	—	1026	G10260	Tube
ASTM	A519	1	2	11.1	1026 CW	G10260	Tube
ASTM	A519	1	1	11.1	1026 HR	G10260	Tube
ASTM	A519	1	2	—	1030	G10300	Tube
ASTM	A519	11B	9	—	4130	G41300	Tube
ASTM	A519	11B	9	—	8630	G86300	Tube
ASTM	A521	1	1	—	CC	—	Die Forging
ASTM	A521	1	1	—	CC1	—	Die Forging
ASTM	A521	1	2	—	CE	—	Die Forging
ASTM/ASME	A/SA-522	11A	1	9.3	II	K71340	Forgings
ASTM/ASME	A/SA-522	11A	1	9.3	I	K81340	Forgings
ASTM	A523	1	1	1.1	A	K02504	Pipe
ASTM	A523	1	1	11.1	B	K03005	Pipe
ASTM/ASME	A/SA-524	1	1	1.1	I	K02104	Seamless Pipe
ASTM/ASME	A/SA-524	1	1	1.1	II	K02104	Seamless Pipe
ASTM	A526	1	1	—	II	—	Galvanized Sheet
ASTM	A527	1	1	—	II	—	Galvanized Sheet
ASTM	A529	1	2	11.1	50	—	Plate, Bar & Shapes
ASTM	A529	1	2	11.1	55	—	Plate, Bar & Shapes
ASTM	A529	1	1	11.1	42	K02703	Plate, Bar & Shapes
ASTM/ASME	A/SA-533	3	3	3.1	A, Cl. 1	K12521	Plate
ASTM/ASME	A/SA-533	3	3	3.1	A, Cl. 2	K12521	Plate
ASTM/ASME	A/SA-533	11A	4	3.1	A, Cl. 3	K12521	Plate
ASTM/ASME	A/SA-533	3	3	3.1	D, Cl. 1	K12529	Plate
ASTM/ASME	A/SA-533	3	3	3.1	D, Cl. 2	K12529	Plate
ASTM/ASME	A/SA-533	11A	4	3.1	D, Cl. 3	K12529	Plate
ASTM/ASME	A/SA-533	3	3	3.1	B, Cl. 1	K12539	Plate
ASTM/ASME	A/SA-533	3	3	3.1	B, Cl. 2	K12539	Plate
ASTM/ASME	A/SA-533	11A	4	3.2	B, Cl. 3	K12539	Plate
ASTM/ASME	A/SA-533	3	3	3.1	C, Cl. 1	K12554	Plate
ASTM/ASME	A/SA-533	3	3	3.1	C, Cl. 2	K12554	Plate
ASTM/ASME	A/SA-533	11A	4	3.2	C, Cl. 3	K12554	Plate
ASTM/ASME	A/SA-533	3	3	3.1	E, Cl. 1	K12554	Plate
ASTM/ASME	A/SA-533	3	3	3.1	E, Cl. 2	K12554	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-537	1	2	1.2	Cl. 1	K12437	Plate
ASTM/ASME	A/SA-537	1	3	1.2	Cl. 2	K12437	Plate
ASTM/ASME	A/SA-537	1	3	1.2	Cl. 3	K12437	Plate
ASTM	A539	1	1	—	—	K01506	Coiled Tube
ASTM/ASME	A/SA-541	1	2	11.1	1A	K03020	Forgings
ASTM/ASME	A/SA-541	1	2	11.1	1	K03506	Forgings
ASTM/ASME	A/SA-541	4	1	5.2	11, Cl. 4	K11572	Forgings
ASTM/ASME	A/SA-541	3	3	4.1	3, Cl.1	K12045	Forgings
ASTM/ASME	A/SA-541	3	3	4.1	3, Cl.2	K12045	Forgings
ASTM/ASME	A/SA-541	3	3	4.2	2, Cl.1	K12765	Forgings
ASTM/ASME	A/SA-541	3	3	4.2	2, Cl.2	K12765	Forgings
ASTM/ASME	A/SA-541	5C	1	5.2	22, Cl. 3	K21390	Forgings
ASTM/ASME	A/SA-541	5C	4	5.2	22, Cl. 4	K21390	Forgings
ASTM/ASME	A/SA-541	5C	5	5.2	22, Cl. 5	K21390	Forgings
ASTM/ASME	A/SA-541	5C	1	6.2	3VCb	K31390	Forgings
ASTM/ASME	A/SA-541	5C	1	6.2	3V	K31830	Forgings
ASTM/ASME	A/SA-541	5C	1	5.2	22V	K31835	Forgings
ASTM/ASME	A/SA-542	5C	4	5.2	A, Cl. 1	K21590	Plate
ASTM/ASME	A/SA-542	5C	5	5.2	A, Cl. 2	K21590	Plate
ASTM/ASME	A/SA-542	5C	3	5.2	A, Cl. 3	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	5.2	A, Cl. 4	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	5.2	A, Cl. 4a	K21590	Plate
ASTM/ASME	A/SA-542	5C	4	5.2	B, Cl. 1	K21590	Plate
ASTM/ASME	A/SA-542	5C	5	5.2	B, Cl. 2	K21590	Plate
ASTM/ASME	A/SA-542	5C	3	5.2	B, Cl. 3	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	5.2	B, Cl. 4	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	5.2	B, Cl. 4a	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	6.2	E, Cl. 4a	K31390	Plate
ASTM/ASME	A/SA-542	5C	4	6.2	C, Cl. 1	K31830	Plate
ASTM/ASME	A/SA-542	5C	5	6.2	C, Cl. 2	K31830	Plate
ASTM/ASME	A/SA-542	5C	3	6.2	C, Cl. 3	K31830	Plate
ASTM/ASME	A/SA-542	5C	1	6.2	C, Cl. 4	K31830	Plate
ASTM/ASME	A/SA-542	5C	1	6.2	C, Cl. 4a	K31830	Plate
ASTM/ASME	A/SA-542	5C	1	6.3	D, Cl. 4a	K31835	Plate
ASTM/ASME	A/SA-543	11A	5	3.1	C Cl. 1	—	Plate
ASTM/ASME	A/SA-543	11B	10	3.1	C Cl. 2	—	Plate
ASTM/ASME	A/SA-543	3	3	3.1	C Cl. 3	—	Plate
ASTM/ASME	A/SA-543	11A	5	3.1	B Cl. 1	K42339	Plate
ASTM/ASME	A/SA-543	11B	10	3.1	B Cl. 2	K42339	Plate
ASTM/ASME	A/SA-543	3	3	3.1	B Cl. 3	K42339	Plate
ASTM/ASME	A/SA-553	11A	1	9.2	III	—	Plate
ASTM/ASME	A/SA-553	11A	1	9.3	II	K71340	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-553	11A	1	9.3	I	K81340	Plate
ASTM	A554	8	1	8.1	MT 302	S30200	Welded Tube
ASTM	A554	8	1	8.1	MT 304	S30400	Welded Tube
ASTM	A554	8	1	8.1	MT 304L	S30403	Welded Tube
ASTM	A554	8	2	8.2	MT 309S	S30908	Welded Tube
ASTM	A554	8	2	8.2	MT 309S-Cb	S30940	Welded Tube
ASTM	A554	8	2	8.2	MT 310S	S31008	Welded Tube
ASTM	A554	8	1	8.1	MT 316	S31600	Welded Tube
ASTM	A554	8	1	8.1	MT 316L	S31603	Welded Tube
ASTM	A554	8	1	8.1	MT 317	S31700	Welded Tube
ASTM	A554	8	1	8.1	MT 321	S32100	Welded Tube
ASTM	A554	8	1	8.1	MT 347	S34700	Welded Tube
ASTM/ASME	A/SA-556	1	1	1.1	A2	K01807	Seamless Tube
ASTM/ASME	A/SA-556	1	1	11.1	B2	K02707	Seamless Tube
ASTM/ASME	A/SA-556	1	2	11.1	C2	K03006	Seamless Tube
ASTM/ASME	A/SA-557	1	1	1.1	A2	K01807	E.R.W. Tube
ASTM/ASME	A/SA-557	1	1	11.1	B2	K03007	E.R.W. Tube
ASTM/ASME	A/SA-557	1	2	11.1	C2	K03505	E.R.W. Tube
ASTM/ASME	A/SA-562	1	1	1.1	—	K11224	Plate
ASTM	A569	1	1	1.1	30	K02502	Sheet & Strip
ASTM	A569	1	1	1.1	33	K02502	Sheet & Strip
ASTM	A569	1	1	1.1	36	K02502	Sheet & Strip
ASTM	A569	1	1	1.1	40	K02502	Sheet & Strip
ASTM	A569	1	1	1.2	45	K02502	Sheet & Strip
ASTM	A569	1	1	1.2	50	K02502	Sheet & Strip
ASTM	A570	1	1	1.1	30	K02502	Sheet & Strip
ASTM	A570	1	1	1.1	33	K02502	Sheet & Strip
ASTM	A570	1	1	1.1	36	K02502	Sheet & Strip
ASTM	A570	1	1	1.1	40	K02502	Sheet & Strip
ASTM	A570	1	1	1.2	45	K02502	Sheet & Strip
ASTM	A570	1	1	1.2	50	K02502	Sheet & Strip
ASTM	A570	1	1	1.3	55	K02502	Sheet & Strip
ASTM/ASME	A/SA-572	1	1	1.2	42	—	Plate & Shapes
ASTM/ASME	A/SA-572	1	1	1.2	50	—	Plate & Shapes
ASTM/ASME	A/SA-572	1	2	1.3	55	—	Plate & Shapes
ASTM	A572	1	2	1.3	55	—	Plate, Sheet, Bar & Shapes
ASTM/ASME	A/SA-572	1	2	11.1	60	—	Plate & Shapes
ASTM	A572	1	3	11.1	65	—	Plate, Sheet, Bar & Shapes
ASTM/ASME	A/SA-572	1	3	1.3	65	—	Plate & Shapes
ASTM	A573	1	1	11.1	58	—	Plate
ASTM	A573	1	1	11.1	65	—	Plate
ASTM	A573	1	2	11.1	70	—	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A575	1	1	1.1	M1008	—	Bar
ASTM	A575	1	1	1.1	M1010	—	Bar
ASTM	A575	1	1	1.1	M1012	—	Bar
ASTM	A575	1	1	1.1	M1015	—	Bar
ASTM	A575	1	1	1.1	M1017	—	Bar
ASTM	A575	1	1	11.1	M1020	—	Bar
ASTM	A575	1	1	11.1	M1023	—	Bar
ASTM	A575	1	1	11.1	M1025	—	Bar
ASTM	A576	1	1	1.1	G10080	—	Bar
ASTM	A576	1	1	1.1	G10100	—	Bar
ASTM	A576	1	1	1.1	G10120	—	Bar
ASTM	A576	1	1	1.1	G10150	—	Bar
ASTM	A576	1	1	1.1	G10160	—	Bar
ASTM	A576	1	1	1.1	G10170	—	Bar
ASTM	A576	1	1	1.1	G10180	—	Bar
ASTM	A576	1	1	1.1	G10190	—	Bar
ASTM	A576	1	1	1.1	G10200	—	Bar
ASTM	A576	1	1	11.1	G10210	—	Bar
ASTM	A576	1	1	11.1	G10220	—	Bar
ASTM	A576	1	1	11.1	G10230	—	Bar
ASTM	A576	1	1	11.1	G10250	—	Bar
ASTM/ASME	A/SA-587	1	1	1.1	A2	K01807	E.R.W. Tube
ASTM/ASME	A/SA-587	1	1	—	B2	K03007	E.R.W. Tube
ASTM/ASME	A/SA-587	1	1	1.1	—	K11500	E.R.W. Pipe
ASTM	A588	3	1	1.4	K	—	Plate & Bar
ASTM	A588	3	1	1.4	K	—	Shapes
ASTM	A588	3	1	1.4	A	K11430	Plate & Bar
ASTM	A588	3	1	1.4	A	K11430	Shapes
ASTM	A588	3	1	1.4	C	K11538	Plate & Bar
ASTM	A588	3	1	1.4	C	K11538	Shapes
ASTM	A588	3	1	1.4	B	K12043	Plate & Bar
ASTM	A588	3	1	1.4	B	K12043	Shapes
ASTM/ASME	A/SA-592	11B	3	3.1	F	K11576	Forgings
ASTM/ASME	A/SA-592	11B	2	3.1	E	K11695	Forgings
ASTM/ASME	A/SA-592	11B	1	3.1	A	K11856	Forgings
ASTM	A595	1	2	11.1	A	K02004	Welded Tube
ASTM	A595	1	2	11.1	B	K02005	Welded Tube
ASTM	A595	3	1	11.1	C	K11526	Welded Tube
ASTM	A606	1	2	1.4	2, CR, AR	—	Sheet & Strip
ASTM	A606	1	2	1.4	2, HR, A	—	Sheet & Strip
ASTM	A606	1	2	1.4	2, HR, AR	—	Sheet & Strip
ASTM	A606	1	2	1.4	2, HR, N	—	Sheet & Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A607	1	1	—	45	—	Sheet & Strip
ASTM	A607	1	1	—	50	—	Sheet & Strip
ASTM	A607	1	2	—	55	—	Sheet & Strip
ASTM	A607	1	3	—	60	—	Sheet & Strip
ASTM	A607	1	3	—	65	—	Sheet & Strip
ASTM	A607	1	3	—	70	—	Sheet & Strip
ASTM	A611	1	1	1.1	D	G10120	Sheet & Strip
ASTM	A611	1	1	—	A	G10170	Sheet & Strip
ASTM	A611	1	1	—	B	G10170	Sheet & Strip
ASTM	A611	1	1	—	C	G10170	Sheet & Strip
ASTM	A611	1	3	—	E	G10170	Sheet & Strip
ASTM/ASME	A/SA-612	10C	1	1.3	-	K02900	Plate
ASTM	A615	1A	4	—	40	—	Rebar
ASTM	A615	1A	4	—	60	—	Rebar
ASTM	A618	1	2	1.2	Ia	—	Tube
ASTM	A618	1	2	1.2	Ib	—	Seamless & Welded Tube
ASTM	A618	1	2	1.2	Ib	K02601	Tube
ASTM	A618	1	2	1.2	II	K12609	Tube
ASTM	A618	1	1	1.2	III	K12700	Tube
ASTM	A620	1	1	1.1	A	K00040	Sheet
ASTM	A620	1	1	1.1	B	K00040	Sheet
ASTM	A633	1	1	1.1	A	K01802	Plate
ASTM	A633	1	1	1.1	C	K12000	Plate
ASTM	A633	1	2	1.1	C	K12000	Plate
ASTM	A633	1	1	1.1	D	K12037	Plate
ASTM	A633	1	2	1.1	D	K12037	Plate
ASTM	A633	1	3	4.1	E	K12202	Plate
ASTM/ASME	A/SA-645	11A	2	9.2	A	K41583	Plate
ASTM	A653	1	1	—	33	—	Galvanized Sheet
ASTM	A653	1	1	—	37	—	Galvanized Sheet
ASTM	A653	1	1	—	40	—	Galvanized Sheet
ASTM	A653	1	1	—	80	—	Galvanized Sheet
ASTM/ASME	A/SA-656	1	1	1.2	T3, 50	—	Plate
ASTM/ASME	A/SA-656	1	2	1.3	T3, 60	—	Plate
ASTM/ASME	A/SA-656	1	3	2.2	T3, 70	—	Plate
ASTM/ASME	A/SA-656	1	4	2.2	T3, 80	—	Plate
ASTM/ASME	A/SA-656	1	1	1.2	T7, 50	—	Plate
ASTM/ASME	A/SA-656	1	2	1.3	T7, 60	—	Plate
ASTM/ASME	A/SA-656	1	3	2.2	T7, 70	—	Plate
ASTM/ASME	A/SA-656	1	4	2.2	T7, 80	—	Plate
ASTM/ASME	A/SA-656	1	1	1.2	50	K11804	Plate
ASTM/ASME	A/SA-656	1	1	1.3	60	K11804	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-656	1	2	1.3	70	K11804	Plate
ASTM/ASME	A/SA-656	1	3	1.3	80	K11804	Plate
ASTM	A659	1	1	1.1	1015	G10150	Sheet & Strip
ASTM	A659	1	1	—	1016	G10160	Sheet & Strip
ASTM	A659	1	1	—	1017	G10170	Sheet & Strip
ASTM	A659	1	1	1.1	1018	G10180	Sheet & Strip
ASTM	A659	1	1	1.1	1020	G10200	Sheet & Strip
ASTM	A659	1	1	—	1021	G10210	Sheet & Strip
ASTM	A659	1	1	—	1023	G10230	Sheet & Strip
ASTM/ASME	A/SA-660	1	1	11.1	WCA	J02504	Centrifugal Cast Pipe
ASTM/ASME	A/SA-660	1	2	11.1	WCC	J02505	Centrifugal Cast Pipe
ASTM/ASME	A/SA-660	1	2	1.1	WCB	J03003	Centrifugal Cast Pipe
ASTM/ASME	A/SA-662	1	1	1.1	A	K01701	Plate
ASTM/ASME	A/SA-662	1	2	1.1	C	K02007	Plate
ASTM/ASME	A/SA-662	1	1	1.1	B	K02203	Plate
ASTM	A663	1	1	—	—	—	Bar
ASTM	A663	1	1	—	45	—	Bars & Shapes
ASTM	A663	1	1	—	50	—	Bars & Shapes
ASTM	A663	1	1	—	55	—	Bars & Shapes
ASTM	A663	1	1	—	60	—	Bars & Shapes
ASTM	A663	1	1	—	65	—	Bars & Shapes
ASTM	A663	1	2	—	70	—	Bars & Shapes
ASTM	A663	1	2	—	75	—	Bars & Shapes
ASTM	A663	1	3	—	80	—	Bars & Shapes
ASTM/ASME	A/SA-666	8	3	8.3	201-1	S20100	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	3	8.3	201-2	S20100	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	3	8.3	XM-11	S21904	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	302	S30200	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	304	S30400	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	304L	S30403	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	304N	S30451	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	304LN	S30453	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	316	S31600	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	316L	S31603	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	316N	S31651	Plate, Sheet & Strip
ASTM	A668	1	3	11.1	F	—	Forgings
ASTM	A668	1	1	1.1	B	G10200	Forgings
ASTM	A668	1	2	11.1	C	G10250	Forgings
ASTM	A668	1	2	11.1	D	G10300	Forgings
ASTM/ASME	A/SA-671	1	1	1.1	CC60	K02100	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	11.1	CE55	K02202	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	1.1	CB60	K02401	Fusion Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-671	1	1	11.1	CE60	K02402	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	1.1	CC65	K02403	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	2	11.1	CC70	K02700	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	11.1	CB65	K02800	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	11.1	CA55	K02801	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	2	11.1	CK75	K02803	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	2	11.1	CB70	K03101	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	2	1.2	CD70	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	3	1.2	CD80	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	3	3.1	J80	—	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	3	3.1	J90	—	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	A45	K01700	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	C55	K01800	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	B55	K02001	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	C60	K02100	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	A50	K02200	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	11.1	E55	K02202	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	B60	K02401	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	11.1	E60	K02402	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	C65	K02403	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	2	11.1	C70	K02700	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	11.1	B65	K02800	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	11.1	A55	K02801	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	2	11.1	N75	K02803	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	2	11.1	B70	K03101	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	1	1.1	L65	K11820	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	2	1.2	L70	K12020	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	2	1.1	H75	K12021	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	3	1.2	H80	K12022	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	2	1.2	L75	K12320	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	2	1.2	D70	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	3	1.2	D80	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-672	11A	4	3.2	J100	K12521	Fusion Welded Pipe
ASTM/ASME	A/SA-675	1	1	11.1	45	—	Bar
ASTM/ASME	A/SA-675	1	1	11.1	50	—	Bar
ASTM/ASME	A/SA-675	1	1	11.1	55	—	Bar
ASTM/ASME	A/SA-675	1	1	11.1	60	—	Bar
ASTM/ASME	A/SA-675	1	1	11.1	65	—	Bar
ASTM/ASME	A/SA-675	1	2	11.1	70	—	Bar
ASTM/ASME	A/SA-675	1	3	—	80	—	Bar
ASTM/ASME	A/SA-675	1	4	—	90	—	Bar
ASTM	A678	1	2	1.2	A	K01600	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A678	1	3	1.3	B	K02002	Plate
ASTM	A678	1	3	1.3	C	K02204	Plate
ASTM	A678	1	4	1.3	C	K02204	Plate
ASTM	A678	1	4	1.3	D	K12202	Plate
ASTM/ASME	A/SA-680	8	1	—	80	S46953	Seamless & Welded Fitting
ASTM/ASME	A/SA-688	8	3	8.3	XM-29	S24000	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP304	S30400	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP304L	S30403	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP304N	S30451	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP304LN	S30453	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP316	S31600	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP316L	S31603	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP316N	S31651	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP316LN	S31653	Welded Tube
ASTM	A690	1	2	1.4	—	K12249	Marine Piling-Plate & Bar
ASTM/ASME	A/SA-691	1	2	11.1	CMS-75	K02803	Fusion Welded Pipe
ASTM/ASME	A/SA-691	4	1	5.1	1CR, Cl. 1	K11757	Fusion Welded Pipe
ASTM/ASME	A/SA-691	4	1	5.1	1CR, Cl. 2	K11757	Fusion Welded Pipe
ASTM/ASME	A/SA-691	4	1	5.1	1.25CR, Cl. 1	K11789	Fusion Welded Pipe
ASTM/ASME	A/SA-691	4	1	5.1	1.25CR, Cl. 2	K11789	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	1	1.1	CM-65	K11820	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	2	1.2	CM-70	K12020	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	1	4.2	0.5Cr, Cl. 1	K12143	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	2	4.2	0.5Cr, Cl. 2	K12143	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	2	1.2	CM-75	K12320	Fusion Welded Pipe
ASTM/ASME	A/SA-691	1	2	1.2	CMSH-70	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-691	1	3	1.2	CMSH-80	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5A	1	5.2	2.25CR, Cl. 1	K21590	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5A	1	5.2	2.25CR, Cl. 2	K21590	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5A	1	5.2	3CR, Cl. 1	K31545	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5A	1	5.2	3CR, Cl. 2	K31545	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5B	1	5.3	5CR, Cl. 1	K41545	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5B	1	5.3	5CR, Cl. 2	K41545	Fusion Welded Pipe
ASTM/ASME	A/SA-691	15E	1	6.4	91	K91560	Fusion Welded Pipe
ASTM	A694	1	1	11.1	F42	K03014	Forgings
ASTM	A694	1	1	11.1	F46	K03014	Forgings
ASTM	A694	1	1	11.1	F48	K03014	Forgings
ASTM	A694	1	1	11.1	F50	K03014	Forgings
ASTM	A694	1	1	11.1	F52	K03014	Forgings
ASTM	A694	1	2	11.1	F56	K03014	Forgings
ASTM	A694	1	2	11.1	F60	K03014	Forgings
ASTM	A694	1	2	11.1	F65	K03014	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A694	1	3	11.1	F70	K03014	Forgings
ASTM/ASME	A/SA-695	1	1	11.1	B, 35	K03504	Bar
ASTM/ASME	A/SA-695	1	2	11.1	B, 40	K03504	Bar
ASTM/ASME	A/SA-696	1	1	11.1	B	K03200	Bar
ASTM/ASME	A/SA-696	1	2	11.1	C	K03200	Bar
ASTM	A706	1A	4	1.3	60	—	Rebar
ASTM	A707	1	1	1.2	L1, Cl. 1	K02302	Forgings
ASTM	A707	1	1	1.2	L1, Cl. 2	K02302	Forgings
ASTM	A707	3	1	—	L6, Cl. 1	K02902	Forgings
ASTM	A707	3	1	—	L6, Cl. 2	K02902	Forgings
ASTM	A707	3	2	—	L6, Cl. 3	K02902	Forgings
ASTM	A707	3	4	—	L6, Cl. 4	K02902	Forgings
ASTM	A707	1	1	11.1	L2, Cl. 1	K03301	Forgings
ASTM	A707	1	1	11.1	L2, Cl. 2	K03301	Forgings
ASTM	A707	1	2	11.1	L2, Cl. 3	K03301	Forgings
ASTM	A707	1	1	—	L4, Cl. 1	K12089	Forgings
ASTM	A707	1	1	—	L4, Cl. 2	K12089	Forgings
ASTM	A707	1	2	—	L4, Cl. 3	K12089	Forgings
ASTM	A707	1	1	1.2	L3, Cl. 1	K12510	Forgings
ASTM	A707	1	1	1.2	L3, Cl. 2	K12510	Forgings
ASTM	A707	1	2	1.3	L3, Cl. 3	K12510	Forgings
ASTM	A707	1	1	—	L5, Cl. 1	K20934	Forgings
ASTM	A707	1	1	—	L5, Cl. 2	K20934	Forgings
ASTM	A707	1	2	—	L5, Cl. 3	K20934	Forgings
ASTM	A707	1	4	—	L5, Cl. 4	K20934	Forgings
ASTM	A707	9B	1	—	L7, Cl. 1	K32218	Forgings
ASTM	A707	9B	1	—	L7, Cl. 2	K32218	Forgings
ASTM	A707	9B	1	—	L8, Cl. 1	K42247	Forgings
ASTM	A707	9B	1	—	L8, Cl. 2	K42247	Forgings
ASTM	A707	9B	1	—	L8, Cl. 3	K42247	Forgings
ASTM	A707	9B	1	—	L8, Cl. 4	K42247	Forgings
ASTM	A709	1	1	11.1	36	—	Plate, Bar & Shapes
ASTM	A709	1	1	1.2	50	—	Plate, Bar & Shapes
ASTM	A709	1	1	1.2	50S	—	Plate, Bar & Shapes
ASTM	A709	1	2	1.4	50W, A	—	Plate, Bar & Shapes
ASTM	A709	1	2	1.4	50W, B	—	Plate, Bar & Shapes
ASTM	A709	1	2	1.4	HPS 50W	—	Plate, Bar & Shapes
ASTM	A709	11B	11	1.4	HPS 70W	—	Plate, Bar & Shapes
ASTM	A710	12C	1	3.3	A Cl.1	K20747	Plate
ASTM	A710	12A	1	3.3	A Cl.2	K20747	Plate
ASTM	A710	12B	1	3.3	A Cl.3	K20747	Plate
ASTM	A714	9A	1	9.1	V	K22035	Seamless & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A714	9A	1	9.1	V, E	K22035	Seamless & Welded Pipe
ASTM/ASME	A/SA-724	1	4	3.1	A	K11831	Plate
ASTM/ASME	A/SA-724	1	4	3.1	B	K12031	Plate
ASTM/ASME	A/SA-724	1	4	1.1	C	K12037	Plate
ASTM/ASME	A/SA-727	1	1	11.1	—	K02506	Forgings
ASTM/ASME	A/SA-731	6	4	7.2	S41500	S41500	Seamless & Welded Pipe
ASTM/ASME	A/SA-731	7	2	7.1	TP439	S43035	Seamless & Welded Pipe
ASTM/ASME	A/SA-731	7	2	7.1	18Cr-2Mo	S44400	Seamless & Welded Pipe
ASTM/ASME	A/SA-731	10I	1	7.1	TPXM-33	S44626	Seamless & Welded Pipe
ASTM/ASME	A/SA-731	10I	1	7.1	TPXM-27	S44627	Seamless & Welded Pipe
ASTM/ASME	A/SA-731	10K	1	7.1	S44660	S44660	Seamless & Welded Pipe
ASTM/ASME	A/SA-731	10J	1	7.1	S44700	S44700	Seamless & Welded Pipe
ASTM/ASME	A/SA-731	10K	1	7.1	S44800	S44800	Seamless & Welded Pipe
ASTM	A734	11A	2	3.1	A	K21205	Plate
ASTM/ASME	A/SA-737	1	2	11.1	B	K12001	Plate
ASTM/ASME	A/SA-737	1	3	4.1	C	K12202	Plate
ASTM/ASME	A/SA-738	1	3	11.1	C	K02008	Plate
ASTM/ASME	A/SA-738	1	3	11.1	B	K12007	Plate
ASTM/ASME	A/SA-738	1	2	11.1	A	K12447	Plate
ASTM/ASME	A/SA-739	4	1	5.1	B11	K11797	Bar
ASTM/ASME	A/SA-739	5A	1	5.2	B22	K21390	Bar
ASTM	A743	6	3	7.2	CA15	J91150	Castings
ASTM	A743	6	3	7.2	CA15M	J91151	Castings
ASTM	A743	6	4	7.2	CA40	J91153	Castings
ASTM	A743	6	4	7.2	CA6NM	J91540	Castings
ASTM	A743	6	4	7.2	CB6	J91804	Castings
ASTM	A743	8	1	8.1	CF3	J92500	Castings
ASTM	A743	8	1	8.1	CF8	J92600	Castings
ASTM	A743	8	2	8.2	CF20	J92602	Castings
ASTM	A743	7	1	7.1	CC50	J92615	Castings
ASTM	A743	8	1	8.2	CF16F	J92701	Castings
ASTM	A743	8	1	8.1	CF8C	J92710	Castings
ASTM	A743	8	1	8.1	CF3M	J92800	Castings
ASTM	A743	8	1	8.2	CF3MN	J92804	Castings
ASTM	A743	8	1	8.1	CF8M	J92900	Castings
ASTM	A743	8	1	8.1	CF10SMnN	J92972	Castings
ASTM	A743	8	1	8.2	CG3M	J92999	Castings
ASTM	A743	8	1	8.1	CG8M	J93000	Castings
ASTM	A743	8	2	8.2	CG12	J93001	Castings
ASTM	A743	8	4	8.2	CK3MCuN	J93254	Castings
ASTM	A743	8	2	8.2	CH10	J93401	Castings
ASTM	A743	8	2	8.2	CH20	J93402	Castings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A743	8	2	8.2	CE30	J93423	Castings
ASTM	A743	8	2	8.2	CN3M	J94652	Castings
ASTM/ASME	A/SA-765	1	3	1.1	IV	K02009	Forgings
ASTM/ASME	A/SA-765	1	1	11.1	I	K03046	Forgings
ASTM/ASME	A/SA-765	1	2	11.1	II	K03047	Forgings
ASTM/ASME	A/SA-765	9B	1	9.2	III	K32026	Forgings
ASTM	A774	8	1	8.1	304L	S30403	Wrought Piping Fittings
ASTM	A774	8	1	8.1	316L	S31603	Wrought Piping Fittings
ASTM	A774	8	1	8.1	F317L	S31703	Wrought Piping Fittings
ASTM	A774	8	1	8.1	321	S32100	Wrought Piping Fittings
ASTM	A774	8	1	8.1	347	S34700	Wrought Piping Fittings
ASTM	A778	8	1	8.1	304L	S30403	Welded Unannealed Tube
ASTM	A778	8	1	8.1	316L	S31603	Welded Unannealed Tube
ASTM	A778	8	1	8.1	F317L	S31703	Welded Unannealed Tube
ASTM	A778	8	1	8.1	321	S32100	Welded Unannealed Tube
ASTM	A778	8	1	8.1	347	S34700	Welded Unannealed Tube
ASTM	A782	11B	4	—	1	—	Plate
ASTM/ASME	A/SA-789	10H	1	10.2	S31200	S31200	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.2	S31260	S31260	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.1	S31500	S31500	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.1	S31803	S31803	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.1	—	S32003	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.1	—	S32101	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.1	—	S32202	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.1	—	S32205	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.1	S32304	S32304	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.2	S32550	S32550	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.2	S32750	S32750	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.2	S32760	S32760	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.2	S32900	S32900	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.2	S32906	S32906	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.2	S32950	S32950	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.2	S39274	S39274	Seamless & Welded Tube
ASTM/ASME	A/SA-789	10H	1	10.1	—	S82441	Seamless & Welded Tube
ASTM/ASME	A/SA-790	10H	1	10.2	S31200	S31200	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.2	S31260	S31260	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.1	S31500	S31500	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.1	S31803	S31803	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.1	—	S32003	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.1	—	S32101	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.1	—	S32202	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.1	2205	S32205	Seamless & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-790	10H	1	10.1	S32304	S32304	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.2	S32550	S32550	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.2	S32750	S32750	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.2	S32760	S32760	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.2	S32900	S32900	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.2	S32906	S32906	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.2	S32950	S32950	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.2	S39274	S39274	Seamless & Welded Pipe
ASTM/ASME	A/SA-790	10H	1	10.1	—	S82441	Seamless & Welded Pipe
ASTM	A795	1	1	—	E, A	—	Resistance Welded Pipe
ASTM	A795	1	1	—	E, B	—	Resistance Welded Pipe
ASTM	A795	1	1	—	F	—	Furnace Welded Pipe
ASTM	A795	1	1	—	S, A	—	Seamless Pipe
ASTM	A795	1	1	—	S, B	—	Seamless Pipe
ASTM/ASME	A/SA-803	7	2	7.1	TP439	S43035	Welded Tube
ASTM/ASME	A/SA-803	10K	1	7.1	26-3-3	S44660	Welded Tube
ASTM	A808	1	1	1.4	—	K11852	Plate
ASTM/ASME	A/SA-813	8	3	8.3	TPXM-19	S20910	Welded Pipe
ASTM/ASME	A/SA-813	8	3	8.3	TPXM-11	S21904	Welded Pipe
ASTM/ASME	A/SA-813	8	3	8.3	TPXM-29	S24000	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP304	S30400	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP304L	S30403	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP304H	S30409	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP304N	S30451	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP304LN	S30453	Welded Pipe
ASTM/ASME	A/SA-813	8	2	8.2	S30815	S30815	Welded Pipe
ASTM/ASME	A/SA-813	8	2	8.2	TP309S	S30908	Welded Pipe
ASTM/ASME	A/SA-813	8	2	8.2	TP309Cb	S30940	Welded Pipe
ASTM/ASME	A/SA-813	8	2	8.2	TP310S	S31008	Welded Pipe
ASTM/ASME	A/SA-813	8	2	8.2	TP310Cb	S31040	Welded Pipe
ASTM/ASME	A/SA-813	8	4	8.2	S31254	S31254	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP316	S31600	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP316L	S31603	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP316H	S31609	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP316N	S31651	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP316LN	S31653	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP317	S31700	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP317L	S31703	Welded Pipe
ASTM/ASME	A/SA-813	8	4	8.2	—	S32053	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP321	S32100	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP321H	S32109	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP347	S34700	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-813	8	1	8.1	TP347H	S34709	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP348	S34800	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TP348H	S34809	Welded Pipe
ASTM/ASME	A/SA-813	8	1	8.1	TPXM-15	S38100	Welded Pipe
ASTM/ASME	A/SA-814	8	3	8.3	TPXM-19	S20910	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	3	8.3	TPXM-11	S21904	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	3	8.3	TPXM-29	S24000	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP304	S30400	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP304L	S30403	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP304H	S30409	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP304N	S30451	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP304LN	S30453	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	2	8.2	S30815	S30815	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	2	8.2	TP309S	S30908	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	2	8.2	TP309Cb	S30940	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	2	8.2	TP310S	S31008	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	2	8.2	TP310Cb	S31040	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	4	8.2	S31254	S31254	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP316	S31600	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP316L	S31603	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP316H	S31609	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP316N	S31651	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP316LN	S31653	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP317	S31700	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP317L	S31703	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	4	8.2	—	S32053	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP321	S32100	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP321H	S32109	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP347	S34700	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP347H	S34709	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP348	S34800	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TP348H	S34809	Cold Worked Welded Pipe
ASTM/ASME	A/SA-814	8	1	8.1	TPXM-15	S38100	Cold Worked Welded Pipe
ASTM/ASME	A/SA-815	10H	1	10.1	S31803	S31803	Fittings
ASTM/ASME	A/SA-815	10H	1	10.1	—	S32101	Fittings
ASTM/ASME	A/SA-815	10H	1	10.1	—	S32202	Fittings
ASTM/ASME	A/SA-815	10H	1	10.1	S32205	S32205	Fittings
ASTM/ASME	A/SA-815	10H	1	10.2	S32550	S32550	Fittings
ASTM/ASME	A/SA-815	10H	1	10.2	S32750	S32750	Fittings
ASTM/ASME	A/SA-815	10H	1	10.2	S32760	S32760	Fittings
ASTM/ASME	A/SA-815	6	4	7.2	S41500	S41500	Fittings
ASTM	A830	1	1	1.1	1006	G10060	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A830	1	1	1.1	1008	G10080	Plate
ASTM	A830	1	1	1.1	1009	G10090	Plate
ASTM	A830	1	1	1.1	1010	G10100	Plate
ASTM	A830	1	1	1.1	1012	G10120	Plate
ASTM	A830	1	1	1.1	1015	G10150	Plate
ASTM	A830	1	1	1.1	1016	G10160	Plate
ASTM	A830	1	1	1.1	1017	G10170	Plate
ASTM	A830	1	1	1.1	1018	G10180	Plate
ASTM	A830	1	1	1.1	1019	G10190	Plate
ASTM	A830	1	1	1.1	1020	G10200	Plate
ASTM	A830	1	1	1.1	1021	G10210	Plate
ASTM	A830	1	1	1.1	1022	G10220	Plate
ASTM	A830	1	1	11.1	1023	G10230	Plate
ASTM	A830	1	2	11.1	1025	G10250	Plate
ASTM/ASME	A/SA-832	5C	1	6.2	23V	—	Plate
ASTM/ASME	A/SA-832	5C	1	6.2	21V	K31830	Plate
ASTM/ASME	A/SA-832	5C	1	6.2	22V	K31835	Plate
ASTM/ASME	A/SA-836	1	1	1.1	—	—	Forgings
ASTM/ASME	A/SA-841	1	2	1.2	A, Cl. 1	—	Plate
ASTM/ASME	A/SA-841	1	3	1.3	B, Cl. 2	—	Plate
ASTM/ASME	A/SA-841	3	3	2.2	F, Cl. 6	—	Plate
ASTM/ASME	A/SA-841	3	3	2.2	F, Cl. 7	—	Plate
ASTM	A844	11A	1	9.3	—	K81340	Plate
ASTM	A852	11B	11	4.2	—	K12043	Plate
ASTM	A857	1	1	1.1	25	—	Sheet & Strip
ASTM	A857	1	1	1.1	30	—	Sheet & Strip
ASTM	A857	1	1	1.1	33	—	Sheet & Strip
ASTM	A857	1	1	1.1	36	—	Sheet & Strip
ASTM	A859	11C	1	3.3	A Cl.1	K20747	Forgings
ASTM	A859	11C	1	3.3	A Cl.2	K20747	Forgings
ASTM	A860	1	1	1.2	WPHY 42	—	Seamless & Welded Fittings
ASTM	A860	1	1	1.2	WPHY 46	—	Seamless & Welded Fittings
ASTM	A860	1	1	1.2	WPHY 52	—	Seamless & Welded Fittings
ASTM	A860	1	2	1.3	WPHY 60	—	Seamless & Welded Fittings
ASTM	A860	1	2	1.3	WPHY 65	—	Seamless & Welded Fittings
ASTM	A860	1	3	1.3	WPHY 70	—	Seamless & Welded Fittings
ASTM	A871	3	2	4.2	60	—	Plate
ASTM	A871	3	3	4.2	65	—	Plate
ASTM	A890	10H	1	10.1	4A	J92205	Castings
ASTM	A890	10H	1	10.2	2A	J93345	Castings
ASTM	A890	10H	1	10.2	1A	J93370	Castings
ASTM	A890	10H	1	10.2	3A	J93371	Castings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A890	10H	1	10.2	1B	J93372	Castings
ASTM	A890	10H	1	10.2	1C	J93373	Castings
ASTM	A890	10H	1	10.2	6A	J93380	Castings
ASTM	A890	10H	1	10.2	5A	J93404	Castings
ASTM	A913	1	2	1.2	50	—	Shapes
ASTM	A913	1	3	3.1	60	—	Shapes
ASTM	A913	1	3	3.1	65	—	Shapes
ASTM	A913	1	4	3.1	70	—	Shapes
ASTM	A928	10H	1	10.1	S31803	S31803	Welded Pipe
ASTM	A928	10H	1	10.1	S32003	S32003	Welded Pipe
ASTM	A928	10H	1	10.1	2205	S32205	Welded pipe
ASTM	A928	10H	1	10.1	2304	S32304	Welded Pipe
ASTM	A928	10H	1	10.2	255	S32550	Welded pipe
ASTM	A928	10H	1	10.2	2507	S32750	Welded Pipe
ASTM	A928	10H	1	10.2	—	S32760	Welded pipe
ASTM	A935	1	1	1.2	45 Cl. 1	—	Sheet & Strip
ASTM	A935	1	1	1.2	45 Cl. 2	—	Sheet & Strip
ASTM	A935	1	1	1.2	50 Cl. 1	—	Sheet & Strip
ASTM	A935	1	1	1.2	50 Cl. 2	—	Sheet & Strip
ASTM	A935	1	2	1.3	55 Cl. 1	—	Sheet & Strip
ASTM	A935	1	1	1.3	55 Cl. 2	—	Sheet & Strip
ASTM	A935	1	2	11.1	60 Cl. 1	—	Sheet & Strip
ASTM	A935	1	2	1.3	60 Cl. 2	—	Sheet & Strip
ASTM	A935	1	3	11.1	65 Cl. 1	—	Sheet & Strip
ASTM	A935	1	2	1.3	65 Cl. 2	—	Sheet & Strip
ASTM	A935	1	3	11.1	70 Cl. 1	—	Sheet & Strip
ASTM	A935	1	3	1.3	70 Cl. 2	—	Sheet & Strip
ASTM/ASME	A/SA-965	8	3	8.3	FXM-19	S20910	Forgings
ASTM/ASME	A/SA-965	8	3	8.3	FXM-11	S21904	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F304	S30400	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F304L	S30403	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F304H	S30409	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F304N	S30451	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F304LN	S30453	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F46	S30600	Forgings
ASTM/ASME	A/SA-965	8	2	8.2	F310	S31000	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F316	S31600	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F316L	S31603	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F316H	S31609	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F316N	S31651	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F316LN	S31653	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F321	S32100	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-965	8	1	8.1	F321H	S32109	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F347	S34700	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F347H	S34709	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F348	S34800	Forgings
ASTM/ASME	A/SA-965	8	1	8.1	F348H	S34809	Forgings
ASTM	A984	1	1	1.1	35	—	Pipe
ASTM	A984	1	2	1.2	50	—	Pipe
ASTM	A984	1	2	1.3	60	—	Pipe
ASTM	A984	1	3	—	70	—	Pipe
ASTM	A984	1	4	—	80	—	Pipe
ASTM	A992	1	1	1.2	—	—	Shapes
ASTM/ASME	A/SA-995	10H	1	10.1	4A	J92205	Castings
ASTM/ASME	A/SA-995	10H	1	10.2	2A	J93345	Castings
ASTM/ASME	A/SA-995	10H	1	10.2	3A	J93371	Castings
ASTM/ASME	A/SA-995	10H	1	10.2	1B	J93372	Castings
ASTM/ASME	A/SA-995	10H	1	10.2	6A	J93380	Castings
ASTM/ASME	A/SA-995	10H	1	10.2	5A	J93404	Castings
ASTM/ASME	A/SA-1008	1	1	1.1	CS, A	—	Sheet
ASTM/ASME	A/SA-1008	1	1	1.1	CS, B	—	Sheet
ASTM	A1008	1	1	1.1	CS, C	—	Sheet
ASTM	A1008	1	1	1.1	DS, A	—	Sheet
ASTM/ASME	A/SA-1008	1	1	1.1	DS, B	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS 45 Cl. 1	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS 45 Cl. 2	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS 50 Cl. 1	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS 50 Cl. 2	—	Sheet
ASTM	A1008	1	2	1.3	HSLAS 55 Cl. 1	—	Sheet
ASTM	A1008	1	1	1.3	HSLAS 55 Cl. 2	—	Sheet
ASTM	A1008	1	2	11.1	HSLAS 60 Cl. 1	—	Sheet
ASTM	A1008	1	2	1.3	HSLAS 60 Cl. 2	—	Sheet
ASTM	A1008	1	3	11.1	HSLAS 65 Cl. 1	—	Sheet
ASTM	A1008	1	2	1.3	HSLAS 65 Cl. 2	—	Sheet
ASTM	A1008	1	3	11.1	HSLAS 70 Cl. 1	—	Sheet
ASTM	A1008	1	3	1.3	HSLAS 70 Cl. 2	—	Sheet
ASTM	A1008	1	1	1.2	HSLAS-F 50	—	Sheet
ASTM	A1008	1	2	1.3	HSLAS-F 60	—	Sheet
ASTM	A1008	1	3	1.3	HSLAS-F 70	—	Sheet
ASTM	A1008	1	4	1.3	HSLAS-F 80	—	Sheet
ASTM	A1008	1	1	1.1	SS 25	—	Sheet
ASTM	A1008	1	1	1.1	SS 30	—	Sheet
ASTM	A1008	1	1	1.1	SS 33, 1	—	Sheet
ASTM	A1008	1	1	1.1	SS 33, 2	—	Sheet

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A1008	1	1	1.1	SS 40, 1	—	Sheet
ASTM	A1008	1	1	1.1	SS 40, 2	—	Sheet
ASTM	A1008	1	3	1.3	SS 80	—	Sheet
ASTM/ASME	A/SA-1010	7	1	7.2	40	S41003	Plate, Sheet & Strip
ASTM/ASME	A/SA-1010	7	1	7.2	50	S41003	Plate, Sheet & Strip
ASTM	A1011	1	1	1.1	CS, A	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.1	CS, B	—	Sheet & Strip
ASTM	A1011	1	1	1.1	CS, C	—	Sheet & Strip
ASTM	A1011	1	1	1.1	CS, D	—	Sheet & Strip
ASTM	A1011	1	1	1.1	DS, A	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.1	DS, B	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.2	HSLAS 45 Cl. 1	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.2	HSLAS 45 Cl. 2	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.2	HSLAS 50 Cl. 1	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.2	HSLAS 50 Cl. 2	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	2	1.3	HSLAS 55 Cl. 1	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.3	HSLAS 55 Cl. 2	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	2	1.3	HSLAS 60 Cl. 1	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	2	1.3	HSLAS 60 Cl. 2	—	Sheet & Strip
ASTM	A1011	1	3	11.1	HSLAS 65 Cl. 1	—	Sheet & Strip
ASTM	A1011	1	2	1.3	HSLAS 65 Cl. 2	—	Sheet & Strip
ASTM	A1011	1	3	11.1	HSLAS 70 Cl. 1	—	Sheet & Strip
ASTM	A1011	1	3	1.3	HSLAS 70 Cl. 2	—	Sheet & Strip
ASTM	A1011	1	1	1.2	HSLAS-F 50	—	Sheet & Strip
ASTM	A1011	1	2	1.3	HSLAS-F 60	—	Sheet & Strip
ASTM	A1011	1	3	1.3	HSLAS-F 70	—	Sheet & Strip
ASTM	A1011	1	4	1.3	HSLAS-F 80	—	Sheet & Strip
ASTM	A1011	1	1	1.1	SS 30	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.1	SS 33	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.1	SS 36, 1	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.1	SS 36, 2	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.2	SS 40	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.2	SS 45	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.2	SS 45, 1	—	Sheet & Strip
ASTM	A1011	1	1	1.2	SS 45, 2	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	1	1.2	SS 50	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	2	1.3	SS 55	—	Sheet & Strip
ASTM/ASME	A/SA-1011	1	2	1.3	SS 60	—	Sheet & Strip
ASTM	A1011	1	3	1.3	SS 70	—	Sheet & Strip
ASTM	A1011	1	4	1.3	SS 80	—	Sheet & Strip
ASTM/ASME	A/SA-1017	15E	1	6.4	92	K92460	Plate
ASTM	A1018	1	1	1.2	HSLAS 45 Cl. 1	—	Sheet & Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A1018	1	1	1.2	HSLAS 45 Cl. 2	—	Sheet & Strip
ASTM	A1018	1	1	1.2	HSLAS 50 Cl. 1	—	Sheet & Strip
ASTM	A1018	1	1	1.2	HSLAS 50 Cl. 2	—	Sheet & Strip
ASTM	A1018	1	2	1.3	HSLAS 55 Cl. 1	—	Sheet & Strip
ASTM	A1018	1	1	1.3	HSLAS 55 Cl. 2	—	Sheet & Strip
ASTM	A1018	1	2	11.1	HSLAS 60 Cl. 1	—	Sheet & Strip
ASTM	A1018	1	2	1.3	HSLAS 60 Cl. 2	—	Sheet & Strip
ASTM	A1018	1	2	11.1	HSLAS 65 Cl. 1	—	Sheet & Strip
ASTM	A1018	1	2	1.3	HSLAS 65 Cl. 2	—	Sheet & Strip
ASTM	A1018	1	3	11.1	HSLAS 70 Cl. 1	—	Sheet & Strip
ASTM	A1018	1	3	1.3	HSLAS 70 Cl. 2	—	Sheet & Strip
ASTM	A1018	1	1	1.2	HSLAS-F 50	—	Sheet & Strip
ASTM	A1018	1	3	1.3	HSLAS-F 60	—	Sheet & Strip
ASTM	A1018	1	3	1.3	HSLAS-F 70	—	Sheet & Strip
ASTM	A1018	1	4	1.3	HSLAS-F 80	—	Sheet & Strip
ASTM	A1018	1	1	1.1	SS 30	—	Sheet & Strip
ASTM	A1018	1	1	1.1	SS 33	—	Sheet & Strip
ASTM	A1018	1	1	1.1	SS 36, 1	—	Sheet & Strip
ASTM	A1018	1	1	1.1	SS 36, 2	—	Sheet & Strip
ASTM	A1018	1	1	1.1	SS 40	—	Sheet & Strip
ASTM	A1066	3	1	1.2	50	—	Plate
ASTM	A1066	3	2	2.1	60	—	Plate
ASTM	A1066	3	3	2.1	65	—	Plate
ASTM	A1066	3	3	2.2	70	—	Plate
ASTM	A1066	3	3	2.2	80	—	Plate
ASTM	A1085	1	1	11.1	—	—	Structural Sections
ASTM	A1091	15E	1	6.4	C91	J84090	Castings
CSA	G30.18	1A	4	—	300R	—	Rebar
CSA	G30.18	1A	4	—	400R	—	Rebar
CSA	G30.18	1A	4	11.1	400W	—	Rebar
CSA	G30.18	1A	4	—	500R	—	Rebar
CSA	G30.18	1A	4	11.1	500W	—	Rebar
CSA	G40.21	1	1	1.1	260W	—	Plate, Bar & Shapes
CSA	G40.21	1	1	1.1	260WT	—	Plate, Bar & Shapes
CSA	G40.21	1	1	1.2	300W	—	Plate, Bar & Shapes
CSA	G40.21	1	1	1.2	300WT	—	Plate, Bar & Shapes
CSA	G40.21	1	2	1.4	350A	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	2	1.4	350AT	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	2	1.4	350R	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	1	1.2	350W	—	Plate, Bar & Shapes
CSA	G40.21	1	2	1.2	350WT	—	Plate, Bar & Shapes
CSA	G40.21	1	2	1.3	380W	—	Plate, Bar & Shapes

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
CSA	G40.21	1	2	1.3	380WT	—	Plate, Bar & Shapes
CSA	G40.21	1	2	1.4	400A	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	2	1.4	400AT	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	2	1.3	400W	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	2	1.3	400WT	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	3	1.4	480A	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	3	1.4	480AT	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	3	11.1	480W	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	3	11.1	480WT	—	HSLA Plate, Bar, Shapes
CSA	G40.21	1	4	1.4	550A	—	Plate, Bar & Shapes
CSA	G40.21	1	4	1.4	550AT	—	Plate, Bar & Shapes
CSA	G40.21	1	4	1.3	550W	—	Plate, Bar & Shapes
CSA	G40.21	1	4	1.3	550WT	—	Plate, Bar & Shapes
CSA	Z245.1	1	1	11.1	172	—	Pipe
CSA	Z245.1	1	1	11.1	207	—	Pipe
CSA	Z245.1	1	1	11.1	241	—	Seamless & Welded Pipe
CSA	Z245.1	1	1	11.1	290	—	Seamless & Welded Pipe
CSA	Z245.1	1	2	11.1	317	—	Pipe
CSA	Z245.1	1	1	11.1	359	—	Seamless & Welded Pipe
CSA	Z245.1	1	2	11.1	386	—	Seamless & Welded Pipe
CSA	Z245.1	1	2	11.1	414	—	Seamless & Welded Pipe
CSA	Z245.1	1	2	11.1	448	—	Seamless & Welded Pipe
CSA	Z245.1	1	3	11.1	483	—	Seamless & Welded Pipe
CSA	Z245.1	1	4	11.1	550	—	Seamless & Welded Pipe
CSA	Z245.1	1	4	11.1	620	—	Seamless & Welded Pipe
CSA	Z245.11	1	1	11.1	207	—	Fittings
CSA	Z245.11	1	1	11.1	241	—	Fittings
CSA	Z245.11	1	1	11.1	290	—	Fittings
CSA	Z245.11	1	2	11.1	317	—	Fittings
CSA	Z245.11	1	2	11.1	359	—	Fittings
CSA	Z245.11	1	2	11.1	386	—	Fittings
CSA	Z245.11	1	3	11.1	414	—	Fittings
CSA	Z245.11	1	3	11.1	448	—	Fittings
CSA	Z245.11	1	3	11.1	483	—	Fittings
CSA	Z245.11	1	4	11.1	550	—	Fittings
CSA	Z245.12	1	1	11.1	248	—	Flanges
CSA	Z245.12	1	1	11.1	290	—	Flanges
CSA	Z245.12	1	2	11.1	317	—	Flanges
CSA	Z245.12	1	2	11.1	359	—	Flanges
CSA	Z245.12	1	2	11.1	386	—	Flanges
CSA	Z245.12	1	3	11.1	414	—	Flanges
CSA	Z245.12	1	3	11.1	448	—	Flanges

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
CSA	Z245.12	1	3	11.1	483	—	Flanges
MSS	SP-75	1	1	11.1	WPHY-42	—	Seamless & Welded Fittings
MSS	SP-75	1	1	11.1	WPHY-46	—	Seamless & Welded Fittings
MSS	SP-75	1	1	11.1	WPHY-52	—	Seamless & Welded Fittings
MSS	SP-75	1	2	11.1	WPHY-56	—	Seamless & Welded Fittings
MSS	SP-75	1	2	11.1	WPHY-60	—	Seamless & Welded Fittings
MSS	SP-75	1	2	11.1	WPHY-65	—	Seamless & Welded Fittings
MSS	SP-75	1	3	11.1	WPHY-70	—	Seamless & Welded Fittings

(Continued)

Table C.1
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
AMS	4914	—	53	R58153	54	Sheet
AMS	4915	—	54	R54810	52	Plate
AMS	4915	—	54	R54810	52	Sheet & Strip
AMS	4919	—	54	R54620	52	Sheet
AMS	4973	—	54	R54810	52	Forgings
AMS	4975	—	54	R54620	52	Bar
AMS	4976	—	54	R54620	52	Forgings
AMS	5711	—	44	N06635	43	Sheet
ASTM/ASME	A/SA-182	—	45	N08367	8.2	Forgings
ASTM/ASME	A/SA-182	F904L	45	N08904	8.2	Forgings
ASTM/ASME	A/SA-182	F58	45	S31266	8.2	Forgings
ASTM/ASME	A/SA-240	—	45	S31266	8.2	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	S31277	45	S31277	8.2	Plate, Sheet & Strip
ASTM/ASME	A/SA-249	—	45	N08367	8.2	Welded Tube
ASTM/ASME	A/SA-249	—	45	N08904	8.2	Welded Tube
ASTM/ASME	A/SA-312	N08367	45	N08367	8.2	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	—	45	N08904	8.2	Seamless & Welded Pipe
ASTM/ASME	A/SA-351	CN3MN	45	J94651	8.2	Castings
ASTM/ASME	A/SA-351	CN7M	45	N08007	8.2	Castings
ASTM/ASME	A/SA-351	CT15C	45	N08151	45	Castings
ASTM/ASME	A/SA-351	HT30	45	N08603	45	Castings
ASTM/ASME	A/SA-358	N08367	45	N08367	8.2	Fusion Welded Pipe
ASTM/ASME	A/SA-358	—	45	S31266	8.2	Fusion Welded Pipe
ASTM	A403	—	45	N08367	8.2	Wrought Piping Fittings
ASTM/ASME	A/SA-403	—	45	N08904	8.2	Wrought Piping Fittings
ASTM/ASME	A/SA-479	—	45	N08367	8.2	Bars & Shapes
ASTM	A479	904L	45	N08904	8.2	Bars & Shapes
ASTM/ASME	A/SA-494	M35-2	42	N04020	42	Castings
ASTM/ASME	A/SA-494	CY40	43	N06040	43	Castings
ASTM/ASME	A/SA-494	CU5MCuC	45	N08826	45	Castings
ASTM/ASME	A/SA-494	M30C	42	N24130	42	Castings
ASTM/ASME	A/SA-494	M35-1	42	N24135	42	Castings
ASTM/ASME	A/SA-494	CW2M	43	N26455	43	Castings
ASTM/ASME	A/SA-494	CW6MC	43	N26625	43	Castings
ASTM/ASME	A/SA-494	N7M	44	N30007	44	Castings
ASTM/ASME	A/SA-494	CW6M	44	N30107	44	Castings
ASTM/ASME	A/SA-813	N08367	45	N08367	8.2	Welded Pipe
ASTM/ASME	A/SA-814	N08367	45	N08367	8.2	Cold Worked Welded Pipe
ASTM	B21	—	32	C46400	32.2	Rod & Bar
ASTM	B21	—	32	C46400	32.2	Shapes
ASTM/ASME	B/SB-26	208	26	A02080	25	Castings
ASTM/ASME	B/SB-26	222.0, O	26	A02220	—	Castings
ASTM/ASME	B/SB-26	222.0, T61	26	A02220	—	Castings
ASTM/ASME	B/SB-26	319.0, F	26	A03190	25	Castings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-26	319.0, T5	26	A03190	25	Castings
ASTM/ASME	B/SB-26	319.0, T6	26	A03190	25	Castings
ASTM/ASME	B/SB-26	328.0, F	26	A03280	25	Castings
ASTM/ASME	B/SB-26	328.0, T6	26	A03280	25	Castings
ASTM/ASME	B/SB-26	356.0, F	26	A03560	24.2	Castings
ASTM/ASME	B/SB-26	356.0, T6	26	A03560	24.2	Castings
ASTM/ASME	B/SB-26	356.0, T7	26	A03560	24.2	Castings
ASTM/ASME	B/SB-26	356.0, T51	26	A03560	24.2	Castings
ASTM/ASME	B/SB-26	356.0, T71	26	A03560	24.2	Castings
ASTM/ASME	B/SB-26	443	26	A04430	24.1	Castings
ASTM/ASME	B/SB-26	512	26	A05120	23.1	Castings
ASTM/ASME	B/SB-26	514	26	A05140	23.1	Castings
ASTM/ASME	B/SB-26	535	26	A05350	—	Castings
ASTM/ASME	B/SB-26	705.0, T5	26	A07050	23.2	Castings
ASTM/ASME	B/SB-26	710.0, T5	26	A07100	23.2	Castings
ASTM/ASME	B/SB-26	A356.0, T6	26	A13560	24.2	Castings
ASTM/ASME	B/SB-26	A356.0, T61	26	A13560	24.2	Castings
ASTM/ASME	B/SB-26	B443.0	26	A24430	24.1	Castings
ASTM/ASME	B/SB-42	—	31	C10200	31	Seamless Pipe
ASTM/ASME	B/SB-42	—	31	C10300	31	Seamless Pipe
ASTM/ASME	B/SB-42	—	31	C10800	31	Seamless Pipe
ASTM/ASME	B/SB-42	—	31	C12000	31	Seamless Pipe
ASTM/ASME	B/SB-42	—	31	C12200	31	Seamless Pipe
ASTM/ASME	B/SB-43	—	32	C23000	32.1	Seamless Pipe
ASTM	B68	—	31	C10200	31	Tube
ASTM	B68	—	31	C10300	31	Tube
ASTM	B68	—	31	C10800	31	Tube
ASTM	B68	—	31	C12000	31	Tube
ASTM	B68	—	31	C12200	31	Tube
ASTM/ASME	B/SB-75	—	31	C10100	31	Seamless Tube
ASTM/ASME	B/SB-75	—	31	C10200	31	Seamless Tube
ASTM/ASME	B/SB-75	—	31	C10300	31	Seamless Tube
ASTM/ASME	B/SB-75	—	31	C10800	31	Seamless Tube
ASTM/ASME	B/SB-75	—	31	C12000	31	Seamless Tube
ASTM/ASME	B/SB-75	—	31	C12200	31	Seamless Tube
ASTM/ASME	B/SB-75	—	31	C14200	31	Seamless Tube
ASTM	B80	AZ91C, F	83	M11914	—	Castings
ASTM	B80	AZ92A, F	83	M11920	—	Castings
ASTM	B80	K1A	83	M18010	—	Castings
ASTM	B88	—	31	C10200	31	Tube
ASTM	B88	—	31	C12000	31	Tube
ASTM	B88	—	31	C12200	31	Tube
ASTM	B90	AZ31B	81	M11311	—	Plate & Sheet
ASTM	B90	AZ31C	81	M11312	—	Plate & Sheet

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM	B90	AZ31C	81	M11312	—	Sheet
ASTM	B90	HK31A	81	M13310	—	Plate
ASTM	B90	HK31A	81	M13310	—	Plate & Sheet
ASTM	B90	ZE10A	81	M16100	—	Plate
ASTM	B90	ZE10A	81	M16100	—	Sheet
ASTM	B91	AZ31B	81	M11311	—	Forgings
ASTM	B91	AZ61A	81	M11610	—	Forgings
ASTM/ASME	B/SB-96	—	33	C65100	37	Plate, Sheet & Strip & Bar
ASTM/ASME	B/SB-96	—	33	C65400	37	Plate, Sheet & Strip & Bar
ASTM/ASME	B/SB-96	—	33	C65500	37	Plate, Sheet & Strip & Bar
ASTM/ASME	B/SB-98	—	33	C65100	37	Rod, Bar & Shapes
ASTM/ASME	B/SB-98	—	33	C65500	37	Rod, Bar & Shapes
ASTM/ASME	B/SB-98	—	33	C66100	37	Rod, Bar & Shapes
ASTM	B107	AZ31B	81	M11311	—	Tube
ASTM	B107	AZ31B	81	M11311	—	Bar, Rods, Profiles & Wire
ASTM	B107	AZ31B	81	M11311	—	Hollow Profiles
ASTM	B107	AZ31C	81	M11312	—	Tube
ASTM	B107	AZ31C	81	M11312	—	Hollow Profiles
ASTM	B107	AZ31C	81	M11312	—	Bar, Rods, Profiles & Wire
ASTM	B107	AZ61A	81	M11610	—	Hollow Profiles
ASTM	B107	AZ61A	81	M11610	—	Tube
ASTM	B107	AZ61A	81	M11610	—	Bar, Rods, Profiles & Wire
ASTM	B107	M1A	81	M15100	—	Hollow Profiles
ASTM	B107	M1A	81	M15100	—	Tube
ASTM	B107	M1A	81	M15100	—	Bar, Rods, Profiles & Wire
ASTM/ASME	B/SB-108	308	26	A03080	25	Castings
ASTM/ASME	B/SB-108	319	26	A03190	25	Castings
ASTM/ASME	B/SB-108	333.0, F	26	A03330	25	Castings
ASTM/ASME	B/SB-108	333.0, T5	26	A03330	25	Castings
ASTM/ASME	B/SB-108	333.0, T6	26	A03330	25	Castings
ASTM/ASME	B/SB-108	333.0, T7	26	A03330	25	Castings
ASTM/ASME	B/SB-108	356.0, F	26	A03560	24.2	Castings
ASTM/ASME	B/SB-108	356.0, T6	26	A03560	24.2	Castings
ASTM/ASME	B/SB-108	356.0, T71	26	A03560	24.2	Castings
ASTM/ASME	B/SB-108	443	26	A04430	24.1	Castings
ASTM/ASME	B/SB-108	513	26	A05130	23.2	Castings
ASTM/ASME	B/SB-108	535	26	A05350	—	Castings
ASTM/ASME	B/SB-108	A356.0	26	A13560	24.2	Castings
ASTM/ASME	B/SB-108	A444.0	26	A14440	24.1	Castings
ASTM/ASME	B/SB-108	B443.0	26	A24430	24.1	Castings
ASTM/ASME	B/SB-111	—	31	C10100	31	Seamless Tube
ASTM/ASME	B/SB-111	—	31	C10200	31	Seamless Tube
ASTM/ASME	B/SB-111	—	31	C10300	31	Seamless Tube
ASTM/ASME	B/SB-111	—	31	C10800	31	Seamless Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-111	—	31	C12000	31	Seamless Tube
ASTM/ASME	B/SB-111	—	31	C12200	31	Seamless Tube
ASTM/ASME	B/SB-111	—	31	C14200	31	Seamless Tube
ASTM/ASME	B/SB-111	—	31	C19200	31	Seamless Tube
ASTM/ASME	B/SB-111	—	32	C23000	32.1	Seamless Tube
ASTM/ASME	B/SB-111	—	32	C28000	32.1	Seamless Tube
ASTM/ASME	B/SB-111	—	32	C44300	32.2	Seamless Tube
ASTM/ASME	B/SB-111	—	32	C44400	32.2	Seamless Tube
ASTM/ASME	B/SB-111	—	32	C44500	32.2	Seamless Tube
ASTM/ASME	B/SB-111	—	35	C60800	35	Seamless Tube
ASTM/ASME	B/SB-111	—	35	C61300	35	Seamless Tube
ASTM/ASME	B/SB-111	—	35	C61400	35	Seamless Tube
ASTM/ASME	B/SB-111	—	32	C68700	32.2	Seamless Tube
ASTM/ASME	B/SB-111	—	34	C70400	34	Seamless Tube
ASTM/ASME	B/SB-111	—	34	C70600	34	Seamless Tube
ASTM/ASME	B/SB-111	—	34	C70620	34	Seamless Tube
ASTM/ASME	B/SB-111	—	34	C71000	34	Seamless Tube
ASTM/ASME	B/SB-111	—	34	C71500	34	Seamless Tube
ASTM/ASME	B/SB-111	—	34	C71520	34	Seamless Tube
ASTM/ASME	B/SB-111	—	34	C71640	34	Seamless Tube
ASTM/ASME	B/SB-111	—	34	C72200	34	Seamless Tube
ASTM/ASME	B/SB-127	—	42	N04400	42	Plate, Sheet & Strip
ASTM/ASME	B/SB-135	—	32	C22000	32.1	Seamless Tube
ASTM/ASME	B/SB-135	—	32	C23000	32.1	Seamless Tube
ASTM/ASME	B/SB-148	—	35	C95200	35	Castings
ASTM/ASME	B/SB-148	—	35	C95300	35	Castings
ASTM/ASME	B/SB-148	—	35	C95400	35	Castings
ASTM/ASME	B/SB-148	—	35	C95410	35	Castings
ASTM/ASME	B/SB-148	—	35	C95500	35	Castings
ASTM/ASME	B/SB-148	—	35	C95600	35	Castings
ASTM/ASME	B/SB-148	—	35	C95700	35	Castings
ASTM/ASME	B/SB-148	—	35	C95800	35	Castings
ASTM/ASME	B/SB-148	—	35	C95820	35	Castings
ASTM/ASME	B/SB-150	—	35	C61300	35	Rod (Round)
ASTM/ASME	B/SB-150	—	35	C61300	35	Bar & Rod (Hex, Oct)
ASTM/ASME	B/SB-150	—	35	C61400	35	Bar & Rod
ASTM/ASME	B/SB-150	—	35	C61900	35	Shapes
ASTM/ASME	B/SB-150	—	35	C61900	35	Rod (Round)
ASTM/ASME	B/SB-150	—	35	C62300	35	Rod (Round)
ASTM/ASME	B/SB-150	—	35	C62300	35	Shapes
ASTM/ASME	B/SB-150	—	35	C62300	35	Bar & Rod (Hex, Oct)
ASTM/ASME	B/SB-150	—	35	C62400	35	Shapes
ASTM/ASME	B/SB-150	—	35	C62400	35	Bar & Rod (Hex, Oct)
ASTM/ASME	B/SB-150	—	35	C62400	35	Rod (Round)

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-150	—	35	C63000	35	Bar & Rod
ASTM/ASME	B/SB-150	—	35	C63000	35	Shapes
ASTM/ASME	B/SB-150	—	35	C63020	35	Bar & Rod
ASTM/ASME	B/SB-150	—	35	C63200	35	Bar, Rod & Shapes
ASTM/ASME	B/SB-150	—	35	C64200	35	Shapes
ASTM/ASME	B/SB-150	—	35	C64200	35	Bar & Rod
ASTM/ASME	B/SB-151	—	34	C70600	34	Rod & Bar
ASTM/ASME	B/SB-151	—	34	C70620	34	Rod & Bar
ASTM/ASME	B/SB-151	—	34	C71500	34	Sq Bar & Rod (Rnd, Hex, Oct)
ASTM/ASME	B/SB-151	—	34	C71500	34	Bar (Rect.) & Shapes
ASTM/ASME	B/SB-152	—	31	C10100	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C10200	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C10300	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C10400	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C10500	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C10700	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C10800	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C11000	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C12000	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C12200	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C12300	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C14200	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-152	—	31	C14420	31	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-160	—	41	N02200	41	Rod & Bar
ASTM/ASME	B/SB-160	—	41	N02201	41	Rod & Bar
ASTM/ASME	B/SB-161	—	41	N02200	41	Seamless Pipe, Tube
ASTM/ASME	B/SB-161	—	41	N02201	41	Seamless Pipe, Tube
ASTM/ASME	B/SB-162	—	41	N02200	41	Plate, Sheet & Strip
ASTM/ASME	B/SB-162	—	41	N02201	41	Plate, Sheet & Strip
ASTM/ASME	B/SB-163	—	41	N02200	41	Seamless Tube
ASTM/ASME	B/SB-163	—	41	N02201	41	Seamless Tube
ASTM/ASME	B/SB-163	—	42	N04400	42	Seamless Tube
ASTM/ASME	B/SB-163	—	43	N06025	43	Seamless Tube
ASTM/ASME	B/SB-163	—	46	N06045	45	Seamless Tube
ASTM/ASME	B/SB-163	—	43	N06600	43	Seamless Tube
ASTM/ASME	B/SB-163	—	43	N06601	43	Seamless Tube
ASTM/ASME	B/SB-163	—	43	N06690	43	Seamless Tube
ASTM/ASME	B/SB-163	—	45	N08120	45	Seamless Tube
ASTM/ASME	B/SB-163	—	45	N08800	45	Seamless Tube
ASTM/ASME	B/SB-163	—	45	N08801	45	Seamless Tube
ASTM/ASME	B/SB-163	—	45	N08810	45	Seamless Tube
ASTM/ASME	B/SB-163	—	45	N08811	45	Seamless Tube
ASTM/ASME	B/SB-163	—	45	N08825	45	Seamless Tube
ASTM/ASME	B/SB-164	—	42	N04400	42	Rod, Bar & Wire

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-164	—	42	N04405	42	Rod, Bar & Wire
ASTM/ASME	B/SB-165	—	42	N04400	42	Seamless Pipe & Tube
ASTM/ASME	B/SB-166	—	43	N06025	43	Rod, Bar & Wire
ASTM/ASME	B/SB-166	—	46	N06045	45	Rod, Bar & Wire
ASTM/ASME	B/SB-166	—	43	N06600	43	Rod, Bar & Wire
ASTM/ASME	B/SB-166	—	43	N06601	43	Rod, Bar & Wire
ASTM/ASME	B/SB-166	—	43	N06617	46	Rod, Bar & Wire
ASTM/ASME	B/SB-166	—	43	N06690	43	Rod, Bar & Wire
ASTM/ASME	B/SB-167	—	43	N06025	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-167	—	46	N06045	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-167	—	43	N06600	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-167	—	43	N06601	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-167	—	43	N06617	46	Seamless Pipe & Tube
ASTM/ASME	B/SB-167	—	43	N06690	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-168	—	43	N06025	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-168	—	46	N06045	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-168	—	43	N06600	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-168	—	43	N06601	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-168	—	43	N06617	46	Plate, Sheet & Strip
ASTM/ASME	B/SB-168	—	43	N06690	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-169	—	35	C61300	35	Plate, Sheet, Strip & Bar
ASTM/ASME	B/SB-169	—	35	C61400	35	Plate, Sheet, Strip & Bar
ASTM	B170	1	31	C10100	31	Shapes
ASTM	B170	2	31	C10200	31	Shapes
ASTM/ASME	B/SB-171	—	32	C44300	32.2	Plate & Sheet
ASTM/ASME	B/SB-171	—	32	C44400	32.2	Plate & Sheet
ASTM/ASME	B/SB-171	—	32	C44500	32.2	Plate & Sheet
ASTM/ASME	B/SB-171	—	32	C46400	32.2	Plate & Sheet
ASTM/ASME	B/SB-171	—	32	C46500	32.2	Plate & Sheet
ASTM/ASME	B/SB-171	—	35	C61300	35	Plate & Sheet
ASTM/ASME	B/SB-171	—	35	C61400	35	Plate & Sheet
ASTM/ASME	B/SB-171	—	35	C63000	35	Plate & Sheet
ASTM/ASME	B/SB-171	—	35	C63200	35	Plate & Sheet
ASTM/ASME	B/SB-171	—	34	C70600	34	Plate & Sheet
ASTM/ASME	B/SB-171	—	34	C70620	34	Plate & Sheet
ASTM/ASME	B/SB-171	—	34	C71500	34	Plate & Sheet
ASTM/ASME	B/SB-171	—	34	C71520	34	Plate & Sheet
ASTM/ASME	B/SB-171	—	34	C72200	34	Plate & Sheet
ASTM/ASME	B/SB-187	—	31	C10100	31	Rod & Bar
ASTM/ASME	B/SB-187	—	31	C10200	31	Rod & Bar
ASTM/ASME	B/SB-187	—	31	C10300	31	Rod & Bar
ASTM/ASME	B/SB-187	—	31	C10400	31	Rod & Bar
ASTM/ASME	B/SB-187	—	31	C10700	31	Rod & Bar
ASTM/ASME	B/SB-187	—	31	C10940	31	Rod & Bar

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-187	—	31	C11000	31	Rod & Bar
ASTM/ASME	B/SB-187	—	31	C14420	31	Rod & Bar
ASTM	B199	AM100A	83	M10100	—	Castings
ASTM	B199	AZ91C, F	83	M11914	—	Castings
ASTM	B199	AZ92A, F	83	M11920	—	Castings
ASTM/ASME	B/SB-209	Alclad 3003	21	—	—	Plate & Sheet
ASTM/ASME	B/SB-209	Alclad 3004	22	—	—	Plate & Sheet
ASTM/ASME	B/SB-209	Alclad 6061	23	—	—	Plate & Sheet
ASTM/ASME	B/SB-209	Alclad 2014	24	A82014	—	Plate & Sheet
ASTM/ASME	B/SB-209	Alclad 2219	24	A82219	—	Plate & Sheet
ASTM/ASME	B/SB-209	Alclad 3003	21	A83003	—	Plate & Sheet
ASTM/ASME	B/SB-209	Alclad 6061	23	A86061	—	Plate & Sheet
ASTM/ASME	B/SB-209	1060	21	A91060	21	Plate & Sheet
ASTM/ASME	B/SB-209	1100	21	A91100	21	Plate & Sheet
ASTM/ASME	B/SB-209	2014	24	A92014	26	Plate & Sheet
ASTM/ASME	B/SB-209	2219	24	A92219	26	Plate & Sheet
ASTM/ASME	B/SB-209	3003	21	A93003	22.1	Plate & Sheet
ASTM/ASME	B/SB-209	3004	22	A93004	22.2	Plate & Sheet
ASTM/ASME	B/SB-209	3005	22	A93005	22.2	Plate & Sheet
ASTM/ASME	B/SB-209	3105	22	A93105	22.2	Plate & Sheet
ASTM/ASME	B/SB-209	5005	22	A95005	22.2	Plate & Sheet
ASTM/ASME	B/SB-209	5010	22	A95010	22.2	Plate & Sheet
ASTM/ASME	B/SB-209	5050	21	A95050	22.2	Plate & Sheet
ASTM/ASME	B/SB-209	5052	22	A95052	22.3	Plate & Sheet
ASTM/ASME	B/SB-209	5083	25	A95083	22.4	Plate & Sheet
ASTM/ASME	B/SB-209	5086	25	A95086	22.4	Plate & Sheet
ASTM/ASME	B/SB-209	5154	22	A95154	22.4	Plate & Sheet
ASTM/ASME	B/SB-209	5252	22	A95252	22.3	Plate & Sheet
ASTM/ASME	B/SB-209	5254	22	A95254	22.4	Plate & Sheet
ASTM/ASME	B/SB-209	5454	22	A95454	22.3	Plate & Sheet
ASTM/ASME	B/SB-209	5456	25	A95456	22.4	Plate & Sheet
ASTM/ASME	B/SB-209	5457	22	A95457	22.2	Plate & Sheet
ASTM/ASME	B/SB-209	5652	22	A95652	22.3	Plate & Sheet
ASTM/ASME	B/SB-209	6061	23	A96061	23.1	Plate & Sheet
ASTM/ASME	B/SB-210	Alclad 3003	21	—	—	Seamless Tube
ASTM	B210	Alclad 3102	21	—	—	Seamless Tube
ASTM	B210	Alclad 3303	21	—	—	Seamless Tube
ASTM	B210	Alclad 3003	21	A83003	—	Seamless Tube
ASTM/ASME	B/SB-210	1060	21	A91060	21	Seamless Tube
ASTM	B210	1100	21	A91100	21	Seamless Tube
ASTM	B210	2014	24	A92014	26	Seamless Tube
ASTM/ASME	B/SB-210	3003	21	A93003	22.1	Seamless Tube
ASTM	B210	3102	21	A93102	22.1	Seamless Tube
ASTM	B210	3303	21	A93303	—	Seamless Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM	B210	5005	22	A95005	22.2	Seamless Tube
ASTM	B210	5050	21	A95050	22.2	Seamless Tube
ASTM/ASME	B/SB-210	5052	22	A95052	22.3	Seamless Tube
ASTM	B210	5083	25	A95083	22.4	Seamless Tube
ASTM	B210	5086	25	A95086	22.4	Seamless Tube
ASTM/ASME	B/SB-210	5154	22	A95154	22.4	Seamless Tube
ASTM	B210	5456	25	A95456	22.4	Seamless Tube
ASTM/ASME	B/SB-210	6061	23	A96061	23.1	Seamless Tube
ASTM/ASME	B/SB-210	6063	23	A96063	23.1	Seamless Tube
ASTM/ASME	B/SB-211	Alclad 5056	25	—	—	Bar, Rod & Wire
ASTM/ASME	B/SB-211	1060	21	A91060	21	Bar, Rod & Wire
ASTM/ASME	B/SB-211	1100	21	A91100	21	Bar, Rod & Wire
ASTM/ASME	B/SB-211	2014	24	A92014	26	Bar, Rod & Wire
ASTM/ASME	B/SB-211	2219	24	A92219	26	Bar, Rod & Wire
ASTM/ASME	B/SB-211	3003	21	A93003	22.1	Bar, Rod & Wire
ASTM/ASME	B/SB-211	5052	22	A95052	22.3	Bar, Rod & Wire
ASTM/ASME	B/SB-211	5056	25	A95056	22.4	Bar, Rod & Wire
ASTM/ASME	B/SB-211	5154	22	A95154	22.4	Bar, Rod & Wire
ASTM/ASME	B/SB-211	6061	23	A96061	23.1	Bar, Rod & Wire
ASTM/ASME	B/SB-221	Alclad 3003	21	A83003	—	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	1060	21	A91060	21	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	1100	21	A91100	21	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	2014	24	A92014	26	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	2219	24	A92219	26	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	3003	21	A93003	22.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	3004	22	A93004	22.2	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	3102	21	A93102	22.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	5052	22	A95052	22.3	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	5083	25	A95083	22.4	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	5086	25	A95086	22.4	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	5154	22	A95154	22.4	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	5454	22	A95454	22.3	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	5456	25	A95456	22.4	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	6005	23	A96005	23.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	6005A	23	A96005	23.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	6061	23	A96061	23.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	6063	23	A96063	23.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	6105	23	A96105	23.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	6162	23	A96162	23.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	6351	23	A96351	23.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	6463	23	A96463	23.1	Bar, Rod & Shapes
ASTM/ASME	B/SB-221	7005	27	A97005	23.2	Bar, Rod & Shapes
ASTM	B230	1350	21	A91350	21	Wire
ASTM/ASME	B/SB-234	Alclad 3003	21	—	—	Seamless Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-234	Alclad 3003	21	A83003	—	Seamless Tube
ASTM/ASME	B/SB-234	1060	21	A91060	21	Seamless Tube
ASTM/ASME	B/SB-234	3003	21	A93003	22.1	Seamless Tube
ASTM/ASME	B/SB-234	5052	22	A95052	22.3	Seamless Tube
ASTM/ASME	B/SB-234	5454	22	A95454	22.3	Seamless Tube
ASTM/ASME	B/SB-234	6061	23	A96061	23.1	Seamless Tube
ASTM	B236	1350	21	A91350	21	Bar
ASTM/ASME	B/SB-241	Alclad 3003	21	—	—	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	Alclad 3003	21	A83003	—	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	1060	21	A91060	21	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	1100	21	A91100	21	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	2014	24	A92014	26	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	2219	24	A92219	26	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	3003	21	A93003	22.1	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	5052	22	A95052	22.3	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	5083	25	A95083	22.4	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	5086	25	A95086	22.4	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	5454	22	A95454	22.3	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	5456	25	A95456	22.4	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	6061	23	A96061	23.1	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	6063	23	A96063	23.1	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	6162	23	A96162	23.1	Seamless Pipe & Tube
ASTM/ASME	B/SB-241	6351	23	A96351	23.1	Seamless Pipe & Tube
ASTM/ASME	B/SB-247	1100	21	A91100	21	Forgings
ASTM/ASME	B/SB-247	2014	24	A92014	26	Forgings
ASTM/ASME	B/SB-247	2219	24	A92219	26	Forgings
ASTM/ASME	B/SB-247	3003	21	A93003	22.1	Forgings
ASTM/ASME	B/SB-247	5083	25	A95083	22.4	Forgings
ASTM/ASME	B/SB-247	6061	23	A96061	23.1	Forgings
ASTM/ASME	B/SB-247	6151	23	A96151	23.1	Forgings
ASTM/ASME	B/SB-265	1	51	R50250	51.1	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	2	51	R50400	51.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	2H	51	R50400	51.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	3	52	R50550	51.3	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	4	53	R50700	51.4	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	11	51	R52250	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	17	51	R52252	51.1	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	27	51	R52254	51.1	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	7	51	R52400	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	7H	51	R52400	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	16	51	R52402	51.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	16H	51	R52402	51.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	26	51	R52404	51.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	26H	51	R52404	51.2	Plate, Sheet & Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-265	12	52	R53400	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	13	51	R53413	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	14	52	R53414	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	15	52	R53415	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	33	51	R53442	54	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	34	52	R53445	54	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	30	51	R53530	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	31	52	R53532	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	38	54	R54250	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	6	54	R54520	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	32	53	R55111	52	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	9	53	R56320	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	18	53	R56322	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	28	53	R56323	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	35	54	R56340	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	5	54	R56400	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	25	54	R56403	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	29	54	R56404	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	24	54	R56405	53	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	21	53	R58210	54	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	19	53	R58640	54	Plate, Sheet & Strip
ASTM/ASME	B/SB-265	20	53	R58645	54	Plate, Sheet & Strip
ASTM/ASME	B/SB-271	—	35	C95200	35	Castings
ASTM/ASME	B/SB-271	—	35	C95300	35	Castings
ASTM/ASME	B/SB-271	—	35	C95400	35	Castings
ASTM/ASME	B/SB-271	—	35	C95410	35	Castings
ASTM/ASME	B/SB-271	—	35	C95500	35	Castings
ASTM	B280	102	31	C10200	31	Seamless Tube
ASTM	B280	120	31	C12000	31	Seamless Tube
ASTM	B280	122	31	C12200	31	Seamless Tube
ASTM/ASME	B/SB-283	—	35	C64200	35	Forgings
ASTM/ASME	B/SB-283	—	33	C65500	31	Forgings
ASTM/ASME	B/SB-283	—	34	C70620	34	Forgings
ASTM/ASME	B/SB-283	—	34	C71520	34	Forgings
ASTM	B302	—	31	C12000	31	Pipe
ASTM	B302	—	31	C12200	31	Pipe
ASTM/ASME	B/SB-308	6061	23	A96061	23.1	Shapes
ASTM	B313	Alclad 3004	22	—	—	Welded Tube
ASTM	B313	1100	21	A91100	21	Welded Tube
ASTM	B313	3003	21	A93003	22.1	Welded Tube
ASTM	B313	3004	22	A93004	22.2	Welded Tube
ASTM	B313	3005	22	A93005	22.2	Welded Tube
ASTM	B313	5050	21	A95050	22.2	Welded Tube
ASTM	B313	5052	22	A95052	22.3	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM	B313	5086	25	A95086	22.4	Welded Tube
ASTM	B313	5154	22	A95154	22.4	Welded Tube
ASTM	B313	6061	23	A96061	23.1	Welded Tube
ASTM/ASME	B/SB-315	—	35	C61300	35	Seamless Pipe & Tube
ASTM/ASME	B/SB-315	—	35	C61400	35	Seamless Pipe & Tube
ASTM/ASME	B/SB-315	—	33	C65100	37	Seamless Pipe & Tube
ASTM/ASME	B/SB-315	—	33	C65500	33	Seamless Pipe & Tube
ASTM	B317	6101	23	A96101	23.1	Bar, Rod, Shapes & Tube
ASTM	B324	1350	21	A91350	21	Wire
ASTM/ASME	B/SB-333	—	44	N10001	44	Plate, Sheet & Strip
ASTM/ASME	B/SB-333	—	44	N10624	44	Plate, Sheet & Strip
ASTM/ASME	B/SB-333	—	44	N10629	44	Plate, Sheet & Strip
ASTM/ASME	B/SB-333	—	44	N10665	44	Plate, Sheet & Strip
ASTM/ASME	B/SB-333	—	44	N10675	44	Plate, Sheet & Strip
ASTM/ASME	B/SB-335	—	44	N10001	44	Rod
ASTM/ASME	B/SB-335	—	44	N10624	44	Rod
ASTM/ASME	B/SB-335	—	44	N10629	44	Rod
ASTM/ASME	B/SB-335	—	44	N10665	44	Rod
ASTM/ASME	B/SB-335	—	44	N10675	44	Rod
ASTM	B337	1	51	R50250	51	Seamless & Welded Pipe
ASTM	B337	2	51	R50400	51	Seamless & Welded Pipe
ASTM	B337	3	52	R50550	52	Seamless & Welded Pipe
ASTM	B337	11	51	R52250	51	Seamless & Welded Pipe
ASTM	B337	7	51	R52400	51	Seamless & Welded Pipe
ASTM	B337	12	52	R53400	52	Seamless & Welded Pipe
ASTM	B337	9	53	R56320	53	Seamless & Welded Pipe
ASTM/ASME	B/SB-338	1	51	R50250	51.1	Seamless & Welded Tube
ASTM/ASME	B/SB-338	2	51	R50400	51.2	Seamless & Welded Tube
ASTM/ASME	B/SB-338	2H	51	R50400	51.2	Seamless & Welded Tube
ASTM/ASME	B/SB-338	3	52	R50550	51.3	Seamless & Welded Tube
ASTM/ASME	B/SB-338	11	51	R52250	51	Seamless & Welded Tube
ASTM/ASME	B/SB-338	17	51	R52252	51	Seamless & Welded Tube
ASTM/ASME	B/SB-338	27	51	R52254	51	Seamless & Welded Tube
ASTM/ASME	B/SB-338	7	51	R52400	52	Seamless & Welded Tube
ASTM/ASME	B/SB-338	7H	51	R52400	52	Seamless & Welded Tube
ASTM/ASME	B/SB-338	16	51	R52402	51.2	Seamless & Welded Tube
ASTM/ASME	B/SB-338	16H	51	R52402	51.2	Seamless & Welded Tube
ASTM/ASME	B/SB-338	26	51	R52404	51.2	Seamless & Welded Tube
ASTM/ASME	B/SB-338	26H	51	R52404	51.2	Seamless & Welded Tube
ASTM/ASME	B/SB-338	12	52	R53400	52	Seamless & Welded Tube
ASTM/ASME	B/SB-338	13	51	R53413	52	Seamless & Welded Tube
ASTM/ASME	B/SB-338	14	52	R53414	52	Seamless & Welded Tube
ASTM/ASME	B/SB-338	15	52	R53415	52	Seamless & Welded Tube
ASTM/ASME	B/SB-338	33	51	R53442	54	Seamless & Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-338	34	52	R53445	54	Seamless & Welded Tube
ASTM/ASME	B/SB-338	30	51	R53530	52	Seamless & Welded Tube
ASTM/ASME	B/SB-338	31	52	R53532	52	Seamless & Welded Tube
ASTM/ASME	B/SB-338	38	54	R54250	53	Seamless & Welded Tube
ASTM/ASME	B/SB-338	9	53	R56320	53	Seamless & Welded Tube
ASTM/ASME	B/SB-338	18	53	R56322	53	Seamless & Welded Tube
ASTM/ASME	B/SB-338	28	53	R56323	53	Seamless & Welded Tube
ASTM/ASME	B/SB-338	35	54	R56340	53	Seamless & Welded Tube
ASTM	B345	Alclad 3003	21	A83003	—	Seamless Pipe & Tube
ASTM	B345	1060	21	A91060	21	Seamless Pipe & Tube
ASTM	B345	3003	21	A93003	22.1	Seamless Pipe & Tube
ASTM	B345	5083	25	A95083	22.4	Seamless Pipe & Tube
ASTM	B345	5086	25	A95086	22.4	Seamless Pipe & Tube
ASTM	B345	6061	23	A96061	23.1	Seamless Pipe & Tube
ASTM	B345	6063	23	A96063	23.1	Seamless Pipe & Tube
ASTM	B345	6351	23	A96351	23.1	Seamless Pipe & Tube
ASTM/ASME	B/SB-348	1	51	R50250	51.1	Bars & Billets
ASTM/ASME	B/SB-348	2	51	R50400	51.2	Bars & Billets
ASTM/ASME	B/SB-348	2H	51	R50400	51.2	Bars & Billets
ASTM/ASME	B/SB-348	3	52	R50550	51.3	Bars & Billets
ASTM/ASME	B/SB-348	4	53	R50700	51.4	Bars & Billets
ASTM/ASME	B/SB-348	11	51	R52250	51	Bars & Billets
ASTM/ASME	B/SB-348	17	51	R52252	51	Bars & Billets
ASTM/ASME	B/SB-348	7	51	R52400	52	Bars & Billets
ASTM/ASME	B/SB-348	7H	51	R52400	52	Bars & Billets
ASTM/ASME	B/SB-348	16	51	R52402	51.2	Bars & Billets
ASTM/ASME	B/SB-348	16H	51	R52402	51.2	Bars & Billets
ASTM/ASME	B/SB-348	26	51	R52404	51.2	Bars & Billets
ASTM/ASME	B/SB-348	26H	51	R52404	51.2	Bars & Billets
ASTM/ASME	B/SB-348	12	52	R53400	52	Bars & Billets
ASTM/ASME	B/SB-348	13	51	R53413	52	Bars & Billets
ASTM/ASME	B/SB-348	14	52	R53414	52	Bars & Billets
ASTM/ASME	B/SB-348	15	52	R53415	52	Bars & Billets
ASTM/ASME	B/SB-348	33	51	R53442	54	Bars & Billets
ASTM/ASME	B/SB-348	34	52	R53445	54	Bars & Billets
ASTM/ASME	B/SB-348	30	51	R53530	52	Bars & Billets
ASTM/ASME	B/SB-348	31	52	R53532	52	Bars & Billets
ASTM/ASME	B/SB-348	38	54	R54250	53	Bars & Billets
ASTM/ASME	B/SB-348	6	54	R54520	52	Bars & Billets
ASTM/ASME	B/SB-348	32	53	R55111	52	Bars & Billets
ASTM/ASME	B/SB-348	9	53	R56320	53	Bars & Billets
ASTM/ASME	B/SB-348	18	53	R56322	53	Bars & Billets
ASTM/ASME	B/SB-348	28	53	R56323	53	Bars & Billets
ASTM/ASME	B/SB-348	35	54	R56340	53	Bars & Billets

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-348	5	54	R56400	53	Bars & Billets
ASTM/ASME	B/SB-348	25	54	R56403	53	Bars & Billets
ASTM/ASME	B/SB-348	24	54	R56405	53	Bars & Billets
ASTM/ASME	B/SB-348	23	54	R56407	53	Bars & Billets
ASTM/ASME	B/SB-348	21	53	R58210	54	Bars & Billets
ASTM/ASME	B/SB-348	19	53	R58640	54	Bars & Billets
ASTM/ASME	B/SB-348	20	53	R58645	54	Bars & Billets
ASTM	B351	R60001	61	R60001	61	Bar, Rod & Wire
ASTM	B351	R60802	61	R60802	61	Bar, Rod & Wire
ASTM	B351	R60804	61	R60804	61	Bar, Rod & Wire
ASTM	B351	R60901	62	R60901	62	Bar, Rod & Wire
ASTM	B353	R60001	61	R60001	61	Plate, Sheet & Strip
ASTM	B352	R60802	61	R60802	61	Plate, Sheet & Strip
ASTM	B352	R60804	61	R60804	61	Sheet & Strip
ASTM	B352	R60804	61	R60804	61	Plate
ASTM	B352	R60901	62	R60901	62	Plate, Sheet & Strip
ASTM	B353	R60001	61	R60001	61	Seamless & Welded Tube
ASTM	B353	R60802	61	R60802	61	Seamless & Welded Tube
ASTM	B353	R60804	61	R60804	61	Seamless & Welded Tube
ASTM	B353	R60901	62	R60901	62	Seamless & Welded Tube
ASTM	B353	R60904	62	R60904	62	Seamless & Welded Tube
ASTM	B359	—	31	C10100	31	Seamless Tube
ASTM	B359	—	31	C10200	31	Seamless Tube
ASTM	B359	—	31	C10300	31	Seamless Tube
ASTM	B359	—	31	C10800	31	Seamless Tube
ASTM	B359	—	31	C12000	31	Seamless Tube
ASTM/ASME	B/SB-359	—	31	C12200	31	Seamless Tube
ASTM	B359	—	31	C14200	31	Seamless Tube
ASTM	B359	—	31	C19200	31	Seamless Tube
ASTM	B359	—	32	C23000	32.1	Seamless Tube
ASTM/ASME	B/SB-359	—	32	C44300	32.2	Seamless Tube
ASTM/ASME	B/SB-359	—	32	C44400	32.2	Seamless Tube
ASTM/ASME	B/SB-359	—	32	C44500	32.2	Seamless Tube
ASTM	B359	—	35	C60800	35	Seamless Tube
ASTM	B359	—	32	C68700	32.2	Seamless Tube
ASTM	B359	—	34	C70400	34	Seamless Tube
ASTM/ASME	B/SB-359	—	34	C70600	34	Seamless Tube
ASTM/ASME	B/SB-359	—	34	C70620	34	Seamless Tube
ASTM/ASME	B/SB-359	—	34	C71000	34	Seamless Tube
ASTM/ASME	B/SB-359	—	34	C71500	34	Seamless Tube
ASTM/ASME	B/SB-359	—	34	C71520	34	Seamless Tube
ASTM	B359	—	34	C72200	34	Seamless Tube
ASTM	B361	WP Alclad 3003	21	A83003	—	Fittings
ASTM	B361	WP1060	21	A91060	21	Fittings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM	B361	WP1100	21	A91100	21	Fittings
ASTM	B361	WP3003	21	A93003	22.1	Fittings
ASTM	B361	5083	25	A95083	22.4	Fittings
ASTM	B361	5154	22	A95154	22.3	Fittings
ASTM	B361	WP6061	23	A96061	23.1	Fittings
ASTM	B361	WP6063	23	A96063	23.1	Fittings
ASTM/ASME	B/SB-363	WPT 1	51	R50250	51.1	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 2	51	R50400	51.2	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 3	52	R50550	51.3	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 11	51	R52250	51	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 17	51	R52252	51	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 7	51	R52400	52	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 7H	51	R52400	52	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 16	51	R52402	51.2	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 16H	51	R52402	51.2	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 26	51	R52404	51.2	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 26H	51	R52404	51.2	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 12	52	R53400	52	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 13	51	R53413	52	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 14	52	R53414	52	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 15	52	R53415	52	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 30	51	R53530	52	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT38	54	R54250	53	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 9	53	R56320	53	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 18	53	R56322	53	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 28	53	R56323	53	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 25	54	R56403	53	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 24	54	R56405	53	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 23	54	R56407	53	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 21	53	R58210	54	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 19	53	R58640	54	Seamless & Welded Fittings
ASTM/ASME	B/SB-363	WPT 20	53	R58645	54	Seamless & Welded Fittings
ASTM/ASME	B/SB-366	—	41	N02200	41	Fittings
ASTM/ASME	B/SB-366	—	41	N02201	41	Fittings
ASTM/ASME	B/SB-366	—	42	N04400	42	Fittings
ASTM/ASME	B/SB-366	—	43	N06002	43	Fittings
ASTM/ASME	B/SB-366	—	45	N06007	43	Fittings
ASTM/ASME	B/SB-366	—	43	N06022	44	Fittings
ASTM/ASME	B/SB-366	—	43	N06025	43	Fittings
ASTM/ASME	B/SB-366	—	45	N06030	45	Fittings
ASTM/ASME	B/SB-366	—	43	N06035	43	Fittings
ASTM/ASME	B/SB-366	—	46	N06045	45	Fittings
ASTM/ASME	B/SB-366	—	43	N06059	43	Fittings
ASTM/ASME	B/SB-366	—	43	N06200	43	Fittings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-366	—	43	N06210	43	Fittings
ASTM/ASME	B/SB-366	—	43	N06230	43	Fittings
ASTM/ASME	B/SB-366	—	43	N06455	43	Fittings
ASTM/ASME	B/SB-366	—	43	N06600	43	Fittings
ASTM/ASME	B/SB-366	—	43	N06603	43	Fittings
ASTM/ASME	B/SB-366	—	43	N06625	43	Fittings
ASTM/ASME	B/SB-366	—	45	N06985	45	Fittings
ASTM/ASME	B/SB-366	—	45	N08020	45	Fittings
ASTM/ASME	B/SB-366	—	45	N08031	45	Fittings
ASTM/ASME	B/SB-366	—	45	N08120	45	Fittings
ASTM/ASME	B/SB-366	—	46	N08330	45	Fittings
ASTM/ASME	B/SB-366	—	45	N08367	8.2	Fittings
ASTM/ASME	B/SB-366	—	45	N08800	45	Fittings
ASTM/ASME	B/SB-366	—	45	N08810	45	Fittings
ASTM/ASME	B/SB-366	—	45	N08811	45	Fittings
ASTM/ASME	B/SB-366	—	45	N08825	45	Fittings
ASTM/ASME	B/SB-366	—	45	N08904	8.2	Fittings
ASTM/ASME	B/SB-366	—	45	N08925	8.2	Fittings
ASTM/ASME	B/SB-366	—	45	N08926	8.2	Fittings
ASTM/ASME	B/SB-366	—	44	N10001	44	Fittings
ASTM/ASME	B/SB-366	—	44	N10003	44	Fittings
ASTM/ASME	B/SB-366	—	44	N10242	44	Fittings
ASTM/ASME	B/SB-366	—	43	N10276	43	Fittings
ASTM/ASME	B/SB-366	—	43	N10362	43	Fittings
ASTM/ASME	B/SB-366	—	44	N10624	44	Fittings
ASTM/ASME	B/SB-366	—	44	N10629	44	Fittings
ASTM/ASME	B/SB-366	—	44	N10665	44	Fittings
ASTM/ASME	B/SB-366	—	44	N10675	44	Fittings
ASTM/ASME	B/SB-366	—	46	N12160	46	Fittings
ASTM/ASME	B/SB-366	—	45	R20033	45	Fittings
ASTM/ASME	B/SB-366	—	45	R30556	45	Fittings
ASTM/ASME	B/SB-367	C-7	51	—	51	Castings
ASTM/ASME	B/SB-367	C-8	52	—	52	Castings
ASTM/ASME	B/SB-367	C-17	51	R52252	51	Castings
ASTM/ASME	B/SB-367	C-16	51	R52402	51	Castings
ASTM/ASME	B/SB-367	C-2	51	R52550	51.4	Castings
ASTM/ASME	B/SB-367	C-3	52	R52550	51.4	Castings
ASTM/ASME	B/SB-367	C-6	54	R54520	52	Castings
ASTM/ASME	B/SB-367	C-5	54	R56400	53	Castings
ASTM/ASME	B/SB-369	—	34	C96200	34	Castings
ASTM/ASME	B/SB-381	F-1	51	R50250	51.1	Forgings
ASTM/ASME	B/SB-381	F-2	51	R50400	51.2	Forgings
ASTM/ASME	B/SB-381	F-2H	51	R50400	51.2	Forgings
ASTM/ASME	B/SB-381	F-3	52	R50550	51.3	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-381	F-4	53	R50700	51.4	Forgings
ASTM/ASME	B/SB-381	F-11	51	R52250	51	Forgings
ASTM/ASME	B/SB-381	F-17	51	R52252	51	Forgings
ASTM/ASME	B/SB-381	F-7	51	R52400	52	Forgings
ASTM/ASME	B/SB-381	F-7H	51	R52400	52	Forgings
ASTM/ASME	B/SB-381	F-16	51	R52402	51.2	Forgings
ASTM/ASME	B/SB-381	F-16H	51	R52402	51.2	Forgings
ASTM/ASME	B/SB-381	F-26	51	R52404	51.2	Forgings
ASTM/ASME	B/SB-381	F-26H	51	R52404	51.2	Forgings
ASTM/ASME	B/SB-381	F-12	52	R53400	52	Forgings
ASTM/ASME	B/SB-381	F-13	51	R53413	52	Forgings
ASTM/ASME	B/SB-381	F-14	52	R53414	52	Forgings
ASTM/ASME	B/SB-381	F-15	52	R53415	52	Forgings
ASTM/ASME	B/SB-381	F-30	51	R53530	52	Forgings
ASTM/ASME	B/SB-381	F-31	52	R53532	52	Forgings
ASTM/ASME	B/SB-381	F-38	54	R54250	53	Forgings
ASTM/ASME	B/SB-381	F-6	54	R54520	52	Forgings
ASTM/ASME	B/SB-381	F-9	53	R56320	53	Forgings
ASTM/ASME	B/SB-381	F-18	53	R56322	53	Forgings
ASTM/ASME	B/SB-381	F-28	53	R56323	53	Forgings
ASTM/ASME	B/SB-381	F-5	54	R56400	53	Forgings
ASTM/ASME	B/SB-381	F-25	54	R56403	53	Forgings
ASTM/ASME	B/SB-381	F-24	54	R56405	53	Forgings
ASTM/ASME	B/SB-381	F-23	54	R56407	53	Forgings
ASTM/ASME	B/SB-381	F-21	53	R58210	54	Forgings
ASTM/ASME	B/SB-381	F-19	53	R58640	54	Forgings
ASTM/ASME	B/SB-381	F-20	53	R58645	54	Forgings
ASTM/ASME	B/SB-395	—	31	C10200	31	Seamless Tube
ASTM/ASME	B/SB-395	—	31	C10300	31	Seamless Tube
ASTM/ASME	B/SB-395	—	31	C10800	31	Seamless Tube
ASTM/ASME	B/SB-395	—	31	C12000	31	Seamless Tube
ASTM/ASME	B/SB-395	—	31	C12200	31	Seamless Tube
ASTM/ASME	B/SB-395	—	31	C14200	31	Seamless Tube
ASTM/ASME	B/SB-395	—	31	C19200	31	Seamless Tube
ASTM/ASME	B/SB-395	—	32	C23000	32.1	Seamless Tube
ASTM/ASME	B/SB-395	—	32	C44300	32.2	Seamless Tube
ASTM/ASME	B/SB-395	—	32	C44400	32.2	Seamless Tube
ASTM/ASME	B/SB-395	—	32	C44500	32.2	Seamless Tube
ASTM/ASME	B/SB-395	—	35	C60800	35	Seamless Tube
ASTM/ASME	B/SB-395	—	32	C68700	32.2	Seamless Tube
ASTM/ASME	B/SB-395	—	34	C70400	34	Seamless Tube
ASTM/ASME	B/SB-395	—	34	C70600	34	Seamless Tube
ASTM/ASME	B/SB-395	—	34	C71000	34	Seamless Tube
ASTM/ASME	B/SB-395	—	34	C71500	34	Seamless Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-395	—	34	C72200	34	Seamless Tube
ASTM	B396	5005	22	A95005	22.2	Wire
ASTM	B403	AM100A, F	83	M10100	—	Castings
ASTM	B403	AZ91C, F	83	M11914	—	Castings
ASTM	B403	AZ92A, F	83	M11920	—	Castings
ASTM	B403	K1A	83	M18010	—	Castings
ASTM/ASME	B/SB-407	—	45	N08120	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-407	—	45	N08800	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-407	—	45	N08801	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-407	—	45	N08810	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-407	—	45	N08811	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-408	—	45	N08120	45	Rod & Bar
ASTM/ASME	B/SB-408	—	45	N08800	45	Rod & Bar
ASTM/ASME	B/SB-408	—	45	N08810	45	Rod & Bar
ASTM/ASME	B/SB-408	—	45	N08811	45	Rod & Bar
ASTM/ASME	B/SB-409	—	45	N08120	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-409	—	45	N08800	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-409	—	45	N08810	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-409	—	45	N08811	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-423	—	45	N08221	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-423	—	45	N08825	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-424	—	45	N08221	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-424	—	45	N08825	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-425	—	45	N08221	45	Rod & Bar
ASTM/ASME	B/SB-425	—	45	N08825	45	Rod & Bar
ASTM	B429	6061	23	A96061	23.1	Pipe & Tube
ASTM	B429	6063	23	A96063	23.1	Pipe & Tube
ASTM/ASME	B/SB-434	—	44	N10003	44	Plate, Sheet & Strip
ASTM/ASME	B/SB-434	—	44	N10242	44	Plate, Sheet & Strip
ASTM/ASME	B/SB-435	—	43	N06002	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-435	—	43	N06230	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-435	—	46	N12160	46	Plate, Sheet & Strip
ASTM/ASME	B/SB-435	—	45	R30556	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-443	1	43	N06625	43	Plate, Hot-Rolled Sheet
ASTM/ASME	B/SB-443	1	43	N06625	43	Cold Rolled Sheet Strip
ASTM/ASME	B/SB-443	2	43	N06625	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-444	1	43	N06625	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-444	2	43	N06625	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-446	1	43	N06625	43	Rod & Bar
ASTM/ASME	B/SB-446	2	43	N06625	43	Rod & Bar
ASTM/ASME	B/SB-462	—	43	N06022	44	Forgings
ASTM/ASME	B/SB-462	—	45	N06030	45	Forgings
ASTM/ASME	B/SB-462	—	43	N06035	43	Forgings
ASTM/ASME	B/SB-462	—	46	N06045	45	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-462	—	43	N06059	43	Forgings
ASTM/ASME	B/SB-462	—	43	N06200	43	Forgings
ASTM/ASME	B/SB-462	—	43	N06686	43	Forgings
ASTM/ASME	B/SB-462	—	45	N08020	45	Forgings
ASTM/ASME	B/SB-462	—	45	N08024	45	Forgings
ASTM/ASME	B/SB-462	—	45	N08026	45	Forgings
ASTM/ASME	B/SB-462	—	45	N08031	45	Forgings
ASTM/ASME	B/SB-462	—	45	N08367	8.2	Forgings
ASTM/ASME	B/SB-462	—	43	N10276	43	Forgings
ASTM/ASME	B/SB-462	—	43	N10362	43	Forgings
ASTM/ASME	B/SB-462	—	44	N10629	44	Forgings
ASTM/ASME	B/SB-462	—	44	N10665	44	Forgings
ASTM/ASME	B/SB-462	—	44	N10675	44	Forgings
ASTM/ASME	B/SB-462	—	45	R20033	45	Forgings
ASTM/ASME	B/SB-463	—	45	N08020	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-463	—	45	N08024	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-463	—	45	N08026	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-464	—	45	N08020	45	Welded Pipe
ASTM/ASME	B/SB-464	—	45	N08024	45	Welded Pipe
ASTM/ASME	B/SB-464	—	45	N08026	45	Welded Pipe
ASTM/ASME	B/SB-466	—	34	C70400	34	Seamless Pipe & Tube
ASTM/ASME	B/SB-466	—	34	C70600	34	Seamless Pipe & Tube
ASTM/ASME	B/SB-466	—	34	C70620	34	Seamless Pipe & Tube
ASTM/ASME	B/SB-466	—	34	C71000	34	Seamless Pipe & Tube
ASTM/ASME	B/SB-466	—	34	C71500	34	Seamless Pipe & Tube
ASTM/ASME	B/SB-466	—	34	C71520	34	Seamless Pipe & Tube
ASTM/ASME	B/SB-466	—	34	C72200	34	Seamless Pipe & Tube
ASTM/ASME	B/SB-467	—	34	C70600	34	Welded Pipe
ASTM/ASME	B/SB-467	—	34	C70620	34	Welded Pipe
ASTM/ASME	B/SB-467	—	34	C70620	34	Plate & Sheet
ASTM/ASME	B/SB-467	—	34	C71500	34	Welded Pipe
ASTM/ASME	B/SB-467	—	34	C71520	34	Plate & Sheet
ASTM/ASME	B/SB-468	—	45	N08020	45	Welded Tube
ASTM/ASME	B/SB-468	—	45	N08024	45	Welded Tube
ASTM/ASME	B/SB-468	—	45	N08026	45	Welded Tube
ASTM/ASME	B/SB-473	—	45	N08020	45	Bar
ASTM/ASME	B/SB-473	—	45	N08024	45	Bar
ASTM/ASME	B/SB-473	—	45	N08026	45	Bar
ASTM	B483	1060	21	A91060	21	Tube
ASTM	B483	1100	21	A91100	21	Tube
ASTM	B483	1435	21	A91435	21	Tube
ASTM	B483	3003	21	A93003	22.1	Tube
ASTM	B483	3102	21	A93102	22.1	Tube
ASTM	B483	5005	22	A95005	22.2	Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM	B483	5050	21	A95050	22.2	Tube
ASTM	B483	5052	22	A95052	22.3	Tube
ASTM	B483	6061	23	A96061	23.1	Tube
ASTM	B483	6063	23	A96063	23.1	Tube
ASTM	B491	1050	21	A91050	21	Extruded Tube
ASTM	B491	1100	21	A91100	21	Extruded Tube
ASTM	B491	1200	21	A91200	21	Extruded Tube
ASTM	B491	1235	21	A91235	21	Extruded Tube
ASTM	B491	3003	21	A93003	22.1	Extruded Tube
ASTM	B491	3102	21	A93102	22.1	Extruded Tube
ASTM	B491	6063	23	A96063	23.1	Extruded Tube
ASTM/ASME	B/SB-493	R60702	61	R60702	61	Forgings
ASTM/ASME	B/SB-493	R60704	62	R60704	62	Forgings
ASTM/ASME	B/SB-493	R60705	62	R60705	62	Forgings
ASTM/ASME	B/SB-505	—	35	C95200	35	Castings
ASTM/ASME	B/SB-511	—	46	N08330	45	Bars & Shapes
ASTM/ASME	B/SB-511	—	46	N08332	45	Bars & Shapes
ASTM	B512	—	46	N08330	45	Bars & Billets
ASTM/ASME	B/SB-514	—	45	N08120	45	Welded Pipe
ASTM/ASME	B/SB-514	—	45	N08800	45	Welded Pipe
ASTM/ASME	B/SB-514	—	45	N08810	45	Welded Pipe
ASTM/ASME	B/SB-515	—	45	N08120	45	Welded Tube
ASTM/ASME	B/SB-515	—	45	N08800	45	Welded Tube
ASTM/ASME	B/SB-515	—	45	N08810	45	Welded Tube
ASTM/ASME	B/SB-515	—	45	N08811	45	Welded Tube
ASTM/ASME	B/SB-516	—	43	N06025	43	Welded Tube
ASTM/ASME	B/SB-516	—	46	N06045	45	Welded Tube
ASTM/ASME	B/SB-516	—	43	N06600	43	Welded Tube
ASTM/ASME	B/SB-516	—	43	N06603	43	Welded Tube
ASTM/ASME	B/SB-517	—	43	N06025	43	Welded Pipe
ASTM/ASME	B/SB-517	—	46	N06045	45	Welded Pipe
ASTM/ASME	B/SB-517	—	43	N06600	43	Welded Pipe
ASTM/ASME	B/SB-517	—	43	N06603	43	Welded Pipe
ASTM/ASME	B/SB-523	R60702	61	R60702	61	Seamless & Welded Tube
ASTM/ASME	B/SB-523	R60704	62	R60704	62	Seamless & Welded Tube
ASTM/ASME	B/SB-523	R60705	62	R60705	62	Seamless & Welded Tube
ASTM/ASME	B/SB-535	—	46	N08330	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-535	—	46	N08332	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-536	—	46	N08330	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-536	—	46	N08332	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-543	—	31	C10800	31	Welded Tube
ASTM/ASME	B/SB-543	—	31	C12200	31	Welded Tube
ASTM/ASME	B/SB-543	—	31	C19400	31	Welded Tube
ASTM/ASME	B/SB-543	—	32	C23000	32.1	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-543	—	32	C44300	32.2	Welded Tube
ASTM/ASME	B/SB-543	—	32	C44400	32.2	Welded Tube
ASTM/ASME	B/SB-543	—	32	C44500	32.2	Welded Tube
ASTM/ASME	B/SB-543	—	32	C68700	32.2	Welded Tube
ASTM/ASME	B/SB-543	—	34	C70400	34	Welded Tube
ASTM/ASME	B/SB-543	—	34	C70600	34	Welded Tube
ASTM/ASME	B/SB-543	—	34	C70620	34	Welded Tube
ASTM	B543	—	34	C71000	34	Welded Tube
ASTM/ASME	B/SB-543	—	34	C71500	34	Welded Tube
ASTM/ASME	B/SB-543	—	34	C71520	34	Welded Tube
ASTM/ASME	B/SB-543	—	34	C71640	34	Welded Tube
ASTM	B543	—	34	C72200	34	Welded Tube
ASTM	B547	Alclad 3004	22	—	—	Welded Tube
ASTM	B547	Alclad 3003	21	A83003	—	Welded Tube
ASTM	B547	1100	21	A91100	21	Welded Tube
ASTM	B547	3003	21	A93003	22.1	Welded Tube
ASTM	B547	3004	22	A93004	22.2	Welded Tube
ASTM	B547	5050	21	A95050	22.2	Welded Tube
ASTM	B547	5052	22	A95052	22.3	Welded Tube
ASTM	B547	5083	25	A95083	22.4	Welded Tube
ASTM	B547	5086	25	A95086	22.4	Welded Tube
ASTM	B547	5154	22	A95154	22.4	Welded Tube
ASTM	B547	5454	22	A95454	22.3	Welded Tube
ASTM	B547	6061	23	A96061	23.1	Welded Tube
ASTM/ASME	B/SB-550	R60702	61	R60702	61	Bar & Wire
ASTM/ASME	B/SB-550	R60704	62	R60704	62	Bar & Wire
ASTM/ASME	B/SB-550	R60705	62	R60705	62	Bar & Wire
ASTM/ASME	B/SB-551	R60702	61	R60702	61	Plate, Sheet & Strip
ASTM/ASME	B/SB-551	R60704	62	R60704	62	Plate, Sheet & Strip
ASTM/ASME	B/SB-551	R60705	62	R60705	62	Plate, Sheet & Strip
ASTM/ASME	B/SB-551	R60706	62	R60706	62	Plate, Sheet & Strip
ASTM/ASME	B/SB-564	—	41	N02200	41	Forgings
ASTM/ASME	B/SB-564	—	42	N04400	42	Forgings
ASTM/ASME	B/SB-564	—	43	N06022	44	Forgings
ASTM/ASME	B/SB-564	—	43	N06025	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06035	43	Forgings
ASTM/ASME	B/SB-564	—	46	N06045	45	Forgings
ASTM/ASME	B/SB-564	—	43	N06059	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06110	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06200	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06210	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06230	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06600	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06603	43	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-564	—	43	N06617	46	Forgings
ASTM/ASME	B/SB-564	—	43	N06625	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06686	43	Forgings
ASTM/ASME	B/SB-564	—	43	N06690	43	Forgings
ASTM/ASME	B/SB-564	—	45	N08031	45	Forgings
ASTM/ASME	B/SB-564	—	45	N08120	45	Forgings
ASTM/ASME	B/SB-564	—	45	N08367	8.2	Forgings
ASTM/ASME	B/SB-564	—	45	N08800	45	Forgings
ASTM/ASME	B/SB-564	—	45	N08810	45	Forgings
ASTM/ASME	B/SB-564	—	45	N08811	44	Forgings
ASTM/ASME	B/SB-564	—	45	N08825	45	Forgings
ASTM/ASME	B/SB-564	—	44	N10242	44	Forgings
ASTM/ASME	B/SB-564	—	43	N10276	43	Forgings
ASTM/ASME	B/SB-564	—	43	N10362	43	Forgings
ASTM/ASME	B/SB-564	—	44	N10624	44	Forgings
ASTM/ASME	B/SB-564	—	44	N10629	44	Forgings
ASTM/ASME	B/SB-564	—	44	N10665	44	Forgings
ASTM/ASME	B/SB-564	—	44	N10675	44	Forgings
ASTM/ASME	B/SB-564	—	46	N12160	46	Forgings
ASTM/ASME	B/SB-564	—	45	R20033	45	Forgings
ASTM/ASME	B/SB-572	—	43	N06002	43	Rod
ASTM/ASME	B/SB-572	—	43	N06230	43	Rod
ASTM/ASME	B/SB-572	—	46	N12160	46	Rod
ASTM/ASME	B/SB-572	—	45	R30556	45	Rod
ASTM/ASME	B/SB-573	—	44	N10003	44	Rod
ASTM/ASME	B/SB-573	—	44	N10242	44	Rod
ASTM/ASME	B/SB-574	—	43	N06022	43	Rod
ASTM/ASME	B/SB-574	—	43	N06035	43	Rod
ASTM/ASME	B/SB-574	—	43	N06059	43	Rod
ASTM/ASME	B/SB-574	—	43	N06200	43	Rod
ASTM/ASME	B/SB-574	—	43	N06210	43	Rod
ASTM/ASME	B/SB-574	—	43	N06455	43	Rod
ASTM/ASME	B/SB-574	—	43	N06686	43	Rod
ASTM/ASME	B/SB-574	—	43	N10276	43	Rod
ASTM/ASME	B/SB-574	—	43	N10362	43	Rod
ASTM/ASME	B/SB-575	—	43	N06022	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-575	—	43	N06035	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-575	—	43	N06059	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-575	—	43	N06200	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-575	—	43	N06210	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-575	—	43	N06455	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-575	—	43	N06686	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-575	—	43	N10276	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-575	—	43	N10362	43	Plate, Sheet & Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-581	—	45	N06007	43	Rod
ASTM/ASME	B/SB-581	—	45	N06030	45	Rod
ASTM/ASME	B/SB-581	—	45	N06975	45	Rod
ASTM/ASME	B/SB-581	—	45	N06985	45	Rod
ASTM/ASME	B/SB-581	—	45	N08031	45	Rod
ASTM/ASME	B/SB-582	—	45	N06007	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-582	—	45	N06030	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-582	—	45	N06975	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-582	—	45	N06985	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-599	—	45	N08700	8.2	Plate, Sheet & Strip
ASTM	B608	—	35	C61300	35	Welded Pipe
ASTM	B608	—	35	C61400	35	Welded Pipe
ASTM	B608	—	34	C70620	34	Welded Pipe
ASTM	B608	—	34	C71520	34	Welded Pipe
ASTM	B609	1350	21	A91350	21	Wire
ASTM	B618	208	26	A02080	25	Castings
ASTM	B618	319	26	A03190	25	Castings
ASTM	B618	328	26	A03280	25	Castings
ASTM	B618	356	26	A03560	24.2	Castings
ASTM	B618	443	26	A04430	24.1	Castings
ASTM	B618	514	26	A05140	23.1	Castings
ASTM	B618	535	26	A05350	—	Castings
ASTM	B618	A356.0	26	A13560	24.2	Castings
ASTM	B618	B443.0	26	A24430	24.1	Castings
ASTM/ASME	B/SB-619	—	43	N06002	43	Welded Pipe
ASTM/ASME	B/SB-619	—	45	N06007	43	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N06022	44	Welded Pipe
ASTM/ASME	B/SB-619	—	45	N06030	45	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N06035	43	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N06059	43	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N06200	43	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N06210	43	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N06230	43	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N06455	43	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N06686	43	Welded Pipe
ASTM/ASME	B/SB-619	—	45	N06975	45	Welded Pipe
ASTM/ASME	B/SB-619	—	45	N06985	45	Welded Pipe
ASTM/ASME	B/SB-619	—	45	N08031	45	Welded Pipe
ASTM/ASME	B/SB-619	—	45	N08320	8.2	Welded Pipe
ASTM/ASME	B/SB-619	—	44	N10001	44	Welded Pipe
ASTM/ASME	B/SB-619	—	44	N10242	44	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N10276	43	Welded Pipe
ASTM/ASME	B/SB-619	—	43	N10362	43	Welded Pipe
ASTM/ASME	B/SB-619	—	44	N10624	44	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-619	—	44	N10629	44	Welded Pipe
ASTM/ASME	B/SB-619	—	44	N10665	44	Welded Pipe
ASTM/ASME	B/SB-619	—	44	N10675	44	Welded Pipe
ASTM/ASME	B/SB-619	—	46	N12160	46	Welded Pipe
ASTM/ASME	B/SB-619	—	45	R20033	45	Welded Pipe
ASTM/ASME	B/SB-619	—	45	R30556	45	Welded Pipe
ASTM/ASME	B/SB-620	—	45	N08320	8.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-621	—	45	N08320	8.2	Rod
ASTM/ASME	B/SB-622	—	43	N06002	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	N06007	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06022	44	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	N06030	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06035	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06059	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06060	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06200	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06210	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06230	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06250	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06255	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06455	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N06686	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	N06975	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	N06985	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	N08031	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	N08135	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	N08320	8.2	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	N08535	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	44	N10001	44	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	44	N10242	44	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N10276	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	43	N10362	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	44	N10624	44	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	44	N10629	44	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	44	N10665	44	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	44	N10675	44	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	46	N12160	46	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	R20033	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-622	—	45	R30556	45	Seamless Pipe & Tube
ASTM/ASME	B/SB-625	—	45	N08031	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-625	—	45	N08904	8.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-625	—	45	N08925	8.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-625	—	45	N08926	8.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-625	—	45	N08932	8.2	Plate, Sheet & Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-625	—	45	R20033	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-626	—	43	N06002	43	Welded Tube
ASTM/ASME	B/SB-626	—	45	N06007	43	Welded Tube
ASTM/ASME	B/SB-626	—	43	N06022	44	Welded Tube
ASTM/ASME	B/SB-626	—	45	N06030	45	Welded Tube
ASTM/ASME	B/SB-626	—	43	N06035	43	Welded Tube
ASTM/ASME	B/SB-626	—	43	N06059	43	Welded Tube
ASTM/ASME	B/SB-626	—	43	N06200	43	Welded Tube
ASTM/ASME	B/SB-626	—	43	N06210	43	Welded Tube
ASTM/ASME	B/SB-626	—	43	N06230	43	Welded Tube
ASTM/ASME	B/SB-626	—	43	N06455	43	Welded Tube
ASTM/ASME	B/SB-626	—	43	N06686	43	Welded Tube
ASTM/ASME	B/SB-626	—	45	N06975	45	Welded Tube
ASTM/ASME	B/SB-626	—	45	N06985	45	Welded Tube
ASTM/ASME	B/SB-626	—	45	N08031	45	Welded Tube
ASTM/ASME	B/SB-626	—	45	N08320	8.2	Welded Tube
ASTM/ASME	B/SB-626	—	44	N10001	44	Welded Tube
ASTM/ASME	B/SB-626	—	44	N10242	44	Welded Tube
ASTM/ASME	B/SB-626	—	43	N10276	43	Welded Tube
ASTM/ASME	B/SB-626	—	43	N10362	43	Welded Tube
ASTM/ASME	B/SB-626	—	44	N10624	44	Welded Tube
ASTM/ASME	B/SB-626	—	44	N10629	44	Welded Tube
ASTM/ASME	B/SB-626	—	44	N10665	44	Welded Tube
ASTM/ASME	B/SB-626	—	44	N10675	44	Welded Tube
ASTM/ASME	B/SB-626	—	46	N12160	46	Welded Tube
ASTM/ASME	B/SB-626	—	45	R20033	45	Welded Tube
ASTM/ASME	B/SB-626	—	45	R30556	45	Welded Tube
ASTM/ASME	B/SB-649	—	45	N08031	45	Bar & Wire
ASTM/ASME	B/SB-649	—	45	N08904	8.2	Bar & Wire
ASTM/ASME	B/SB-649	—	45	N08925	8.2	Bar & Wire
ASTM/ASME	B/SB-649	—	45	N08926	8.2	Bar & Wire
ASTM/ASME	B/SB-649	—	45	R20033	45	Bar & Wire
ASTM/ASME	B/SB-653	R60702	61	R60702	61	Seamless & Welded Fittings
ASTM/ASME	B/SB-658	R60702	61	R60702	61	Seamless & Welded Pipe
ASTM/ASME	B/SB-658	R60704	62	R60704	62	Seamless & Welded Pipe
ASTM/ASME	B/SB-658	R60705	62	R60705	62	Seamless & Welded Pipe
ASTM/ASME	B/SB-668	—	45	N08028	45	Seamless Tube
ASTM/ASME	B/SB-672	—	45	N08700	8.2	Bar & Wire
ASTM/ASME	B/SB-673	—	45	N08904	8.2	Welded Pipe
ASTM/ASME	B/SB-673	—	45	N08925	8.2	Welded Pipe
ASTM/ASME	B/SB-673	—	45	N08926	8.2	Welded Pipe
ASTM/ASME	B/SB-674	—	45	N08904	8.2	Welded Tube
ASTM/ASME	B/SB-674	—	45	N08925	8.2	Welded Tube
ASTM/ASME	B/SB-674	—	45	N08926	8.2	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-675	—	45	N08367	8.2	Welded Pipe
ASTM/ASME	B/SB-676	—	45	N08367	8.2	Welded Tube
ASTM/ASME	B/SB-677	—	45	N08904	8.2	Seamless Pipe & Tube
ASTM/ASME	B/SB-677	—	45	N08925	8.2	Seamless Pipe & Tube
ASTM/ASME	B/SB-677	—	45	N08926	8.2	Seamless Pipe & Tube
ASTM	B686	A356.0	26	A13560	24.2	Castings
ASTM/ASME	B/SB-688	—	45	N08366	8.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-688	—	45	N08367	8.2	Plate, Sheet & Strip
ASTM/ASME	B/SB-690	—	45	N08366	8.2	Seamless Pipe & Tube
ASTM/ASME	B/SB-690	—	45	N08367	8.2	Seamless Pipe & Tube
ASTM/ASME	B/SB-691	—	45	N08366	8.2	Rod, Bar & Wire
ASTM/ASME	B/SB-691	—	45	N08367	8.2	Rod, Bar & Wire
ASTM/ASME	B/SB-704	1	43	N06625	43	Welded Tube
ASTM/ASME	B/SB-704	2	43	N06625	43	Welded Tube
ASTM/ASME	B/SB-704	—	45	N08825	45	Welded Tube
ASTM/ASME	B/SB-705	1	43	N06625	43	Welded Pipe
ASTM/ASME	B/SB-705	2	43	N06625	43	Welded Pipe
ASTM/ASME	B/SB-705	—	45	N08825	45	Welded Pipe
ASTM/ASME	B/SB-709	—	45	N08028	45	Plate, Sheet & Strip
ASTM/ASME	B/SB-710	—	46	N08330	45	Welded Pipe
ASTM/ASME	B/SB-710	—	46	N08332	45	Welded Pipe
ASTM	B718	—	45	N06333	43	Plate, Sheet & Strip
ASTM	B719	—	45	N06333	43	Bar
ASTM	B720	—	45	N08310	—	Seamless Tube
ASTM	B722	—	45	N06333	43	Seamless Pipe & Tube
ASTM	B723	—	45	N06333	43	Welded Pipe
ASTM	B725	—	41	N02200	41	Welded Pipe
ASTM	B725	—	41	N02201	41	Welded Pipe
ASTM	B725	—	42	N04400	42	Welded Pipe
ASTM	B726	—	45	N06333	43	Welded Tube
ASTM/ASME	B/SB-729	—	45	N08020	45	Seamless Pipe & Tube
ASTM	B730	—	41	N02200	41	Welded Tube
ASTM	B730	—	41	N02201	41	Welded Tube
ASTM	B730	—	42	N04400	42	Welded Tube
ASTM	B755	—	43	N06110	43	Plate, Sheet & Strip
ASTM	B756	—	43	N06110	43	Rod & Bar
ASTM	B757	—	43	N06110	43	Welded Pipe
ASTM	B758	—	43	N06110	43	Welded Tube
ASTM	B759	—	43	N06110	43	Seamless Pipe & Tube
ASTM/ASME	B/SB-804	—	45	N08367	8.2	Welded Pipe
ASTM	B814	—	45	N06920	43	Plate, Sheet & Strip
ASTM/ASME	B/SB-815	—	49	R31233	—	Rod
ASTM/ASME	B/SB-818	—	49	R31233	—	Plate, Sheet & Strip
ASTM/ASME	B/SB-861	1	51	R50250	51.1	Seamless Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-861	2	51	R50400	51.2	Seamless Pipe
ASTM/ASME	B/SB-861	2H	51	R50400	51.2	Seamless Pipe
ASTM/ASME	B/SB-861	3	52	R50550	51.3	Seamless Pipe
ASTM/ASME	B/SB-861	11	51	R52250	51	Seamless Pipe
ASTM/ASME	B/SB-861	17	51	R52252	51	Seamless Pipe
ASTM/ASME	B/SB-861	7	51	R52400	52	Seamless Pipe
ASTM/ASME	B/SB-861	7H	51	R52400	52	Seamless Pipe
ASTM/ASME	B/SB-861	16	51	R52402	51.2	Seamless Pipe
ASTM/ASME	B/SB-861	16H	51	R52402	51.2	Seamless Pipe
ASTM/ASME	B/SB-861	26	51	R52404	51.2	Seamless Pipe
ASTM/ASME	B/SB-861	26H	51	R52404	51.2	Seamless Pipe
ASTM/ASME	B/SB-861	12	52	R53400	52	Seamless Pipe
ASTM/ASME	B/SB-861	13	51	R53413	52	Seamless Pipe
ASTM/ASME	B/SB-861	14	52	R53414	52	Seamless Pipe
ASTM/ASME	B/SB-861	15	52	R53415	52	Seamless Pipe
ASTM/ASME	B/SB-861	33	51	R53442	54	Seamless Pipe
ASTM/ASME	B/SB-861	34	52	R53445	54	Seamless Pipe
ASTM/ASME	B/SB-861	38	54	R54250	53	Seamless Pipe
ASTM/ASME	B/SB-861	9	53	R56320	53	Seamless Pipe
ASTM/ASME	B/SB-861	18	53	R56322	53	Seamless Pipe
ASTM/ASME	B/SB-861	28	53	R56323	53	Seamless Pipe
ASTM/ASME	B/SB-861	35	54	R56340	53	Seamless Pipe
ASTM/ASME	B/SB-861	5	54	R56400	53	Seamless Pipe
ASTM/ASME	B/SB-861	25	54	R56403	53	Seamless Pipe
ASTM/ASME	B/SB-861	29	54	R56404	53	Seamless Pipe
ASTM/ASME	B/SB-861	24	54	R56405	53	Seamless Pipe
ASTM/ASME	B/SB-861	23	54	R56407	53	Seamless Pipe
ASTM/ASME	B/SB-861	21	53	R58210	54	Seamless Pipe
ASTM/ASME	B/SB-861	19	53	R58640	54	Seamless Pipe
ASTM/ASME	B/SB-861	20	53	R58645	54	Seamless Pipe
ASTM/ASME	B/SB-862	1	51	R50250	51.1	Welded Pipe
ASTM/ASME	B/SB-862	2	51	R50400	51.2	Welded Pipe
ASTM/ASME	B/SB-862	2H	51	R50400	51.2	Welded Pipe
ASTM/ASME	B/SB-862	3	52	R50550	51.3	Welded Pipe
ASTM/ASME	B/SB-862	11	51	R52250	51	Welded Pipe
ASTM/ASME	B/SB-862	17	51	R52252	51	Welded Pipe
ASTM/ASME	B/SB-862	27	51	R52254	51	Welded Pipe
ASTM/ASME	B/SB-862	7	51	R52400	52	Welded Pipe
ASTM/ASME	B/SB-862	7H	51	R52400	52	Welded Pipe
ASTM/ASME	B/SB-862	16	51	R52402	51.2	Welded Pipe
ASTM/ASME	B/SB-862	16H	51	R52402	51.2	Welded Pipe
ASTM/ASME	B/SB-862	26	51	R52404	51.2	Welded Pipe
ASTM/ASME	B/SB-862	26H	51	R52404	51.2	Welded Pipe
ASTM/ASME	B/SB-862	12	52	R53400	52	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Nonferrous Alloys

Standard	Base Metal Specification	Type, Grade, or Alloy Designation	Material Number	UNS Number	ISO 15608 Group	Product Form
ASTM/ASME	B/SB-862	13	51	R53413	52	Welded Pipe
ASTM/ASME	B/SB-862	14	52	R53414	52	Welded Pipe
ASTM/ASME	B/SB-862	15	52	R53415	52	Welded Pipe
ASTM/ASME	B/SB-862	33	51	R53442	54	Welded Pipe
ASTM/ASME	B/SB-862	34	52	R53445	54	Welded Pipe
ASTM/ASME	B/SB-862	38	54	R54250	53	Welded Pipe
ASTM/ASME	B/SB-862	9	53	R56320	53	Welded Pipe
ASTM/ASME	B/SB-862	18	53	R56322	53	Welded Pipe
ASTM/ASME	B/SB-862	28	53	R56323	53	Welded Pipe
ASTM/ASME	B/SB-862	35	54	R56340	53	Welded Pipe
ASTM/ASME	B/SB-862	5	54	R56400	53	Welded Pipe
ASTM/ASME	B/SB-862	25	54	R56403	53	Welded Pipe
ASTM/ASME	B/SB-862	29	54	R56404	53	Welded Pipe
ASTM/ASME	B/SB-862	24	54	R56405	53	Welded Pipe
ASTM/ASME	B/SB-862	23	54	R56407	53	Welded Pipe
ASTM/ASME	B/SB-862	21	53	R58210	54	Welded Pipe
ASTM/ASME	B/SB-862	19	53	R58640	54	Welded Pipe
ASTM/ASME	B/SB-862	20	53	R58645	54	Welded Pipe
ASTM/ASME	B/SB-928	5083	25	A95083	22.4	Plate & Sheet
ASTM/ASME	B/SB-928	5086	25	A95086	22.4	Plate & Sheet
ASTM/ASME	B/SB-928	5456	25	A95456	22.4	Plate & Sheet
ASTM/ASME	B/SB-956	—	34	C70600	34	Finned Welded Tube
ASTM/ASME	B/SB-956	—	34	C70620	34	Finned Welded Tube
ASTM/ASME	B/SB-956	—	34	C71500	34	Finned Welded Tube
ASTM/ASME	B/SB-956	—	34	C71520	34	Finned Welded Tube
ISO	209	6082, T4, T6	23	A96082	23.1	Bar, Rod, Shapes & Tube
ISO	209	7020, T5	27	A97020	23.2	Bar, Rod, Shapes & Tube
NACE	MR 01-75	100	45	N06950	43	Pipe
NACE	MR 01-75	110	45	N06950	43	Pipe
NACE	MR 01-75	125	45	N06950	43	Pipe
NACE	MR 01-75	140	45	N06950	43	Pipe

Table C.2
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Steel and Steel Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
1	1	11.1	AAR	A	—		60/30 [415/205]		Castings	C-Mn-Si
1	1	1.1	ABS	E	K01801		58/34 [400/235]		Plate, Bar & Shapes	C-Si
1	1	1.1	ABS	D	K02101		58/34 [400/235]		Plate, Bar & Shapes	C-Si
1	1	1.1	ABS	B	K02102		58/34 [400/235]		Plate, Bar & Shapes	C
1	1	1.1	ABS	A	K02300		58/34 [400/235]		Plate, Bar & Shapes	C
1	1	1.2	ABS	AH32	K11846		64/46 [440/315]		Plate, Bar & Shapes	C-Mn-Si
1	1	1.2	ABS	DH32	K11846		64/46 [440/315]		Plate, Bar & Shapes	C-Mn-Si
1	1	1.2	ABS	EH32	K11846		64/46 [440/315]		Plate, Bar & Shapes	C-Mn-Si
1	1	1.2	ABS	FH32	K11846		64/46 [440/315]		Plate, Bar & Shapes	C-Mn-Si
1	1	1.2	API	42	—		62/42 [425/290]		Plate	C-Mn
1	1	1.2	API	50	—		65/50 [450/345]		Plate	C-Mn
1	1	1.2	API	50	—		65/50 [450/345]		Plate	C-Mn
1	1	1.2	API	42	—		62/42 [425/290]		Plate	C-Mn
1	1	1.2	API	50	—		65/50 [450/345]		Plate	C-Mn
1	1	1.1	API	A	—		49/30 [340/205]		Seamless & Welded Pipe	C-Mn
1	1	1.1	API	A25	—		45/25 [310/175]		Seamless & Welded Pipe	C-Mn
1	1	1.1	API	A25, Cl. I	—		45/25 [310/170]		Seamless & Wld. Pipe & Tube	C-Mn
1	1	1.1	API	A25, Cl. II	—		45/25 [310/170]		Seamless & Wld. Pipe & Tube	C-Mn
1	1	1.1	API	A25P	—		45/25 [310/175]		Seamless & Welded Pipe	C-Mn
1	1	11.1	API	B	—		60/35 [415/240]		Seamless & Welded Pipe	C-Mn
1	1	1.1	API	BM	—		60/35 [415/240]		Welded Pipe	C-Mn
1	1	1.1	API	BMO	—		60/35 [415/240]		Welded Pipe	C-Mn
1	1	1.1	API	BMS	—		60/35 [415/240]		Welded Pipe	C-Mn
1	1	1.1	API	BN	—		60/35 [415/240]		Seamless & Welded Pipe	C-Mn
1	1	1.1	API	BNO	—		60/35 [415/240]		Seamless & Welded Pipe	C-Mn
1	1	1.1	API	BNS	—		60/35 [415/240]		Seamless & Welded Pipe	C-Mn
1	1	1.1	API	BQ	—		60/35 [415/240]		Seamless & Welded Pipe	C-Mn
1	1	1.1	API	BQO	—		60/35 [415/240]		Seamless & Welded Pipe	C-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Steel and Steel Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
1	1	1.1	API 5L	BQS	—		60/35 [415/240]		Seamless & Welded Pipe	C-Mn
1	1	1.1	API 5L	BR	—		60/35 [415/240]		Seamless & Welded Pipe	C-Mn
1	1	11.1	API 5L	X42	—		60/42 [415/290]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X42M	—		60/42 [415/290]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X42MO	—		60/42 [415/290]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X42MS	—		60/42 [415/290]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X42N	—		60/42 [415/290]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X42NO	—		60/42 [415/290]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X42NS	—		60/42 [415/290]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X42Q	—		60/42 [415/290]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X42QO	—		60/42 [415/290]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X42QS	—		60/42 [415/290]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X42R	—		60/42 [415/290]		Seamless & Welded Pipe	C-Mn
1	1	11.1	API 5L	X46	—		63/46 [435/315]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X46M	—		63/46 [435/315]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X46MO	—		63/46 [435/315]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X46MS	—		63/46 [435/315]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X46N	—		63/46 [435/315]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X46NO	—		63/46 [435/315]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X46NS	—		63/46 [435/315]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X46Q	—		63/46 [435/315]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X46QO	—		63/46 [435/315]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X46QS	—		63/46 [435/315]		Seamless & Welded Pipe	C-Mn
1	1	11.1	API 5L	X52	—		67/52 [460/360]		Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X52M	—		67/52 [460/360]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X52MO	—		67/52 [460/360]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X52MS	—		67/52 [460/360]		Welded Pipe	C-Mn
1	1	1.2	API 5L	X52N	—		67/52 [460/360]		Seamless & Welded Pipe	C-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Mechanical Properties		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]	Elongation at Break, %		
Steel and Steel Alloys										
1	1	1.2	API 5L	X52NO	—	—	67/52 [460/360]	—	Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X52NS	—	—	67/52 [460/360]	—	Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X52Q	—	—	67/52 [460/360]	—	Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X52QO	—	—	67/52 [460/360]	—	Seamless & Welded Pipe	C-Mn
1	1	1.2	API 5L	X52QS	—	—	67/52 [460/360]	—	Seamless & Welded Pipe	C-Mn
1	1	11.1	API 5LS	X46	—	—	63/46 [435/315]	—	Spiral Welded Pipe	C-Mn
1	1	1.1	AS 1448	K3	—	—	59.5/33 [410/230]	—	Forgings	C-Si
1	1	1.2	AS 1448	K8	—	—	69.5/43.5 [480/300]	—	Forgings	C-Mn-Si
1	1	1.1	AS 1448	S1	—	—	58/32 [400/220]	—	Forgings	C-Si
1	1	1.1	AS 1448	S3	—	—	59.5/33 [410/230]	—	Forgings	C-Si
1	1	1.2	AS 1548	7-430	—	—	62.5/43.5 [430/300]	—	Plate	C
1	1	1.2	AS 1548	7-460	—	—	66.5/44 [460/305]	—	Plate	C
1	1	1.2	AS 1548	PT430	—	—	62.5/43.5 [430/300]	—	Plate	C
1	1	1.2	AS 1548	PT460	—	—	66.5/44 [460/305]	—	Plate	C
1	1	1.1	AS 4728	200 L0	—	—	46.5/29 [320/200]	—	E.R.W. Pipe	C-Mn
1	1	1.1	AS 4728	240 L0	—	—	55/35 [380/240]	—	E.R.W. Pipe	C-Mn
1	1	1.2	AS 4728	290 L0	—	—	60/42 [415/290]	—	E.R.W. Pipe	C-Mn
1	1	1.1	AS/NZS 1594	HA1	—	—	48/29 [330/200]	—	Plate, Sheet & Strip	C
1	1	1.1	AS/NZS 1594	HA3	—	—	43.5/29 [300/200]	—	Plate, Sheet & Strip	C
1	1	1.1	AS/NZS 1594	HA4N	—	—	40.5/25 [280/170]	—	Plate, Sheet & Strip	C
1	1	1.1	AS/NZS 1594	HA200	—	—	43.5/29 [300/200]	—	Plate, Sheet & Strip	C
1	1	1.1	AS/NZS 1594	HA250	—	—	51/36 [350/250]	—	Plate, Sheet & Strip	C
1	1	1.1	AS/NZS 1594	HA250/1	—	—	55/36 [380/250]	—	Plate, Sheet & Strip	C
1	1	1.2	AS/NZS 1594	HA300	—	—	58/43.5 [400/300]	—	Plate, Sheet & Strip	C-Mn
1	1	1.2	AS/NZS 1594	HA300/1	—	—	62.5/43.5 [430/300]	—	Plate, Sheet & Strip	C-Mn
1	1	1.2	AS/NZS 1594	HA350	—	—	62.5/51 [430/350]	—	Plate, Sheet & Strip	C-Mn
1	1	2.1	AS/NZS 1594	HA400	—	—	67/55 [460/380]	—	Plate, Sheet & Strip	C-Mn
1	1	1.1	AS/NZS 1594	HU250	—	—	51/36 [350/250]	—	Plate, Sheet & Strip	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	1	1.2	AS/NZS	1594	HU300	—	58/43.5 [400/300]	Plate, Sheet & Strip	C-Mn
1	1	1.2	AS/NZS	1594	HU300/1	—	62.5/43.5 [430/300]	Plate, Sheet & Strip	C-Mn
1	1	1.4	AS/NZS	1594	HW350	—	65/50 [450/340]	Plate, Sheet & Strip	C-Mn-Cr-Ni-Cu
1	1	1.2	AS/NZS	1594	XF300	—	64/43.5 [440/300]	Plate, Sheet & Strip	C-Mn
1	1	2.1	AS/NZS	1594	XF400	—	67/55 [460/380]	Plate, Sheet & Strip	C-Mn
1	1	1.1	AS/NZS	3678	200	—	43.5/29 [300/200]	Plate	C-Mn
1	1	1.2	AS/NZS	3678	250	—	59.5/40.5 [410/280]	Plate	C-Mn
1	1	1.2	AS/NZS	3678	250L15	—	59.5/40.5 [410/280]	Plate	C-Mn
1	1	1.1	AS/NZS	3679.1	250	—	59.5/38 [410/260]	Bar & Sections	C-Mn
1	1	1.1	AS/NZS	3679.1	250L0	—	59.5/38 [410/260]	Bar & Sections	C-Mn
1	1	1.1	AS/NZS	3679.1	250L15	—	59.5/38 [410/260]	Bar & Sections	C-Mn
1	1	11.1	ASTM	A27	60-30	J03000	60/30 [415/205]	Castings	C
1	1	1.1	ASTM	A27	U-60-30	J03000	60/30 [415/205]	Castings	C
1	1	11.1	ASTM	A27	65-35	J03001	65/35 [450/240]	Castings	C
1	1	11.1	ASTM/ASME	A/SA-31	B	K03100	58/29 [400/200]	Rivets	C
1	1	11.1	ASTM/ASME	A/SA-36	—	—	58/36 [400/250]	Bar	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-36	—	K02595	>4 [>100]	Plates	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-36	—	K02596	>2.5 and ≤4 [>65 and ≤100]	Plates	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-36	—	K02597	>1.5 and ≤2.5 [>40 and ≤65]	Plates	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-36	—	K02598	>0.75 and ≤1.5 [>20 and ≤40]	Plates	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-36	—	K02599	≤0.75 [≤20]	Plates	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-36	—	K02600	58/36 [400/250]	Shapes	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-53	E, A	K02504	48/30 [330/205]	Resistance Welded Pipe	C
1	1	1.1	ASTM/ASME	A/SA-53	S, A	K02504	48/30 [330/205]	Seamless Pipe	C
1	1	11.1	ASTM/ASME	A/SA-53	E, B	K03005	60/35 [415/240]	Resistance Welded Pipe	C-Mn
1	1	11.1	ASTM/ASME	A/SA-53	F	K03005	48/30 [330/205]	Furnace Welded Pipe	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys								
1	1	11.1	ASTM/ASME A/SA-53	S, B	K03005	60/35 [415/240]	Seamless Pipe	C-Mn
1	1	1.1	ASTM/ASME A/SA-106	A	K02501	48/30 [330/205]	Seamless Pipe	C-Si
1	1	11.1	ASTM/ASME A/SA-106	B	K03006	60/35 [415/240]	Seamless Pipe	C-Mn-Si
1	1	1.1	ASTM A108	1015	G10150	-/- [-/-]	Bar	C
1	1	1.1	ASTM A108	1018	G10180	-/- [-/-]	Bar	C
1	1	1.1	ASTM A108	1020	G10200	-/- [-/-]	Bar	C
1	1	1.1	ASTM A131	A	—	58/34 [400/235]	Plate, Shapes, Bar & Rivets	C
1	1	1.1	ASTM A131	B	—	58/34 [400/235]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	1	1.1	ASTM A131	CS	—	58/34 [400/235]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	1	1.1	ASTM A131	D	—	58/34 [400/235]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	1	1.1	ASTM A131	DS	—	58/34 [400/235]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	1	1.1	ASTM/ASME A/SA-134	SA283, A	K01400	45/24 [310/165]	Welded Pipe	C
1	1	1.1	ASTM/ASME A/SA-134	SA285, A	K01700	45/24 [310/165]	Welded Pipe	C
1	1	1.1	ASTM/ASME A/SA-134	SA283, B	K01702	50/27 [345/185]	Welded Pipe	C
1	1	1.1	ASTM/ASME A/SA-134	SA285, B	K02200	50/27 [345/185]	Welded Pipe	C
1	1	1.1	ASTM/ASME A/SA-134	SA283, C	K02401	55/30 [380/205]	Welded Pipe	C
1	1	1.1	ASTM/ASME A/SA-134	SA36	K02599	58/36 [400/250]	Welded Pipe	C
1	1	11.1	ASTM/ASME A/SA-134	SA283, D	K02702	60/33 [415/230]	Welded Pipe	C
1	1	11.1	ASTM/ASME A/SA-134	SA285, C	K02801	55/30 [380/205]	Welded Pipe	C
1	1	1.1	ASTM/ASME A/SA-135	A	K02509	48/30 [330/205]	E.R.W. Pipe	C
1	1	11.1	ASTM/ASME A/SA-135	B	K03018	60/35 [415/240]	E.R.W. Pipe	C
1	1	1.1	ASTM A139	A	K02508	48/30 [330/205]	Welded Pipe	C
1	1	11.1	ASTM A139	B	K03003	60/35 [415/240]	Welded Pipe	C
1	1	11.1	ASTM A139	C	K03004	60/42 [415/290]	Welded Pipe	C
1	1	11.1	ASTM A139	D	K03010	60/46 [415/315]	Welded Pipe	C
1	1	11.1	ASTM A139	E	K03012	66/52 [455/360]	Welded Pipe	C
1	1	—	ASTM A161	Low Carbon	K01504	47/26 [325/180]	Tube	C
1	1	1.1	ASTM/ASME A/SA-178	A	K01200	47/26 [325/180]	E.R.W. Tube	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	1	11.1	ASTM/ASME	A/SA-178	C	K03503	60/37 [415/255]	E.R.W. Tube	C
1	1	1.1	ASTM/ASME	A/SA-179	—	K01200	47/26 [325/180]	Seamless Tube	C
1	1	11.1	ASTM/ASME	A/SA-181	Cl. 60	K03502	60/30 [415/205]	Pipe Flange & Fittings	C-Si
1	1	1.1	ASTM/ASME	A/SA-192	—	K01201	47/26 [325/180]	Seamless Tube	C-Si
1	1	11.1	ASTM/ASME	A/SA-210	A-1	K02707	60/37 [415/255]	Seamless Tube	C-Si
1	1	1.1	ASTM	A211	A570-30	K02502	49/30 [340/205]	Welded Pipe	C
1	1	1.1	ASTM	A211	A570-33	K02502	52/33 [360/230]	Welded Pipe	C
1	1	1.1	ASTM	A211	A570-40	K02502	55/40 [380/275]	Welded Pipe	C
1	1	1.1	ASTM/ASME	A/SA-214	—	K01807	47/26 [325/180]	E.R.W. Tube	C
1	1	1.1	ASTM/ASME	A/SA-216	WCA	J02502	60/30 [415/205]	Castings	C-Si
1	1	1.1	ASTM	A226	—	K01201	47/26 [325/180]	E.R.W. Tube	C-Si
1	1	11.1	ASTM/ASME	A/SA-234	WPB	K03006	60/35 [415/240]	Piping Fittings	C-Mn-Si
1	1	—	ASTM	A252	1	—	50/30 [345/205]	Pipe Piles	C
1	1	—	ASTM	A252	2	—	60/35 [415/240]	Pipe Piles	C
1	1	—	ASTM	A252	3	—	66/45 [455/310]	Pipe Piles	C
1	1	11.1	ASTM/ASME	A/SA-266	1	K03506	60/30 [415/205]	Forgings	C-Si
1	1	1.1	ASTM/ASME	A/SA-283	A	K01400	45/24 [310/165]	Plate	C
1	1	1.1	ASTM/ASME	A/SA-283	B	K01702	50/27 [345/185]	Plate	C
1	1	1.1	ASTM/ASME	A/SA-283	C	K02401	55/30 [380/205]	Plate	C
1	1	1.1	ASTM/ASME	A/SA-283	D	K02702	60/33 [415/230]	Plate	C
1	1	1.1	ASTM/ASME	A/SA-285	A	K01700	45/24 [310/165]	Plate	C
1	1	1.1	ASTM/ASME	A/SA-285	B	K02200	50/27 [345/185]	Plate	C
1	1	11.1	ASTM/ASME	A/SA-285	C	K02801	55/30 [380/205]	Plate	C
1	1	11.1	ASTM/ASME	A/SA-333	6	K03006	60/35 [415/240]	Seamless & Welded Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-333	1	K03008	55/30 [380/205]	Seamless & Welded Pipe	C-Mn
1	1	11.1	ASTM/ASME	A/SA-334	6	K03006	60/35 [415/240]	Welded Tube	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-334	1	K03008	55/30 [380/205]	Welded Tube	C-Mn
1	1	11.1	ASTM/ASME	A/SA-350	LF1	K03009	60/30 [415/205]	Forgings	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys								
1	1	1.2	ASTM/ASME A/SA-350	LF6, Cl.1	K12202	66/52 [455/360]	Forgings	C-Mn-Si-V
1	1	11.1	ASTM/ASME A/SA-352	LCA	J02504	60/30 [415/205]	Castings	C-Si
1	1	1.1	ASTM/ASME A/SA-352	LCB	J03003	65/35 [450/240]	Castings	C-Si
1	1	1.1	ASTM A366	CS	—	43/20 [295/140]	Sheet	C
1	1	1.1	ASTM/ASME A/SA-369	FPA	K02501	48/30 [330/205]	Forged Pipe	C-Si
1	1	1.1	ASTM/ASME A/SA-369	FPB	K03006	60/35 [415/240]	Forged Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME A/SA-372	A	K03002	60/35 [415/240]	Forgings	C-Si
1	1	11.1	ASTM A381	Y35	—	60/35 [415/240]	Welded Pipe	C
1	1	11.1	ASTM A381	Y42	—	60/42 [415/290]	Welded Pipe	C
1	1	11.1	ASTM A381	Y46	—	63/46 [435/315]	Welded Pipe	C
1	1	11.1	ASTM A381	Y48	—	62/48 [425/330]	Welded Pipe	C
1	1	11.1	ASTM A381	Y50	—	64/50 [440/345]	Welded Pipe	C
1	1	1.1	ASTM/ASME A/SA-414	A	K01501	45/25 [310/170]	Sheet	C
1	1	1.1	ASTM/ASME A/SA-414	B	K02201	50/30 [345/205]	Sheet	C
1	1	1.1	ASTM/ASME A/SA-414	C	K02503	55/33 [380/230]	Sheet	C
1	1	1.1	ASTM/ASME A/SA-414	D	K02505	60/35 [415/240]	Sheet	C-Mn
1	1	11.1	ASTM/ASME A/SA-414	E	K02704	65/38 [450/260]	Sheet	C-Mn
1	1	11.1	ASTM/ASME A/SA-420	WPL6	K03006	60/35 [415/240]	Piping Fittings	C-Mn-Si
1	1	1.2	ASTM A500	C	K02705	62/46 [425/315]	Seamless & Welded Tube	C
1	1	11.1	ASTM A500	A	K03000	45/33 [310/230]	Seamless & Welded Tube	C
1	1	11.1	ASTM A500	B	K03000	58/42 [400/290]	Seamless & Welded Tube	C
1	1	11.1	ASTM A500	D	K03000	58/36 [400/250]	Seamless & Welded Tube	C
1	1	11.1	ASTM A501	A	K03000	58/36 [400/250]	Seamless & Welded Tube	C
1	1	1.2	ASTM A501	B	K03000	70/50 [485/345]	Seamless & Welded Tube	C
1	1	1.1	ASTM A512	MTX 1015	—	40/20 [275/140]	Tube	C
1	1	1.1	ASTM A512	MTX 1020	—	50/30 [345/205]	Tube	C
1	1	1.1	ASTM A512	1008	G10080	40/20 [275/140]	Tube	C
1	1	1.1	ASTM A512	1010	G10100	40/20 [275/140]	Tube	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	1	1.1	ASTM	A512	MT 1010	G10100	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	1012	G10120	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	1015	G10150	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	MT 1015	G10150	43/25 [295/170]	Tube	C
1	1	—	ASTM	A512	1016	G10160	40/20 [275/140]	Tube	C
1	1	1.1	ASTM	A512	1018	G10180	43/25 [295/170]	Tube	C
1	1	—	ASTM	A512	1019	G10190	43/25 [295/170]	Tube	C
1	1	1.1	ASTM	A512	1020	G10200	50/30 [345/205]	Tube	C
1	1	1.1	ASTM	A512	MT 1020	G10200	50/30 [345/205]	Tube	C
1	1	—	ASTM	A512	1021	G10210	50/30 [345/205]	Tube	C
1	1	11.1	ASTM	A512	1026	G10260	55/35 [380/240]	Tube	C
1	1	—	ASTM/ASME	A/SA-513	MTX 1015	—	—/— [—/—]	Tube	C
1	1	—	ASTM/ASME	A/SA-513	MTX 1020	—	—/— [—/—]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	1008	G10080	42/30 [290/205]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	1010	G10100	45/32 [310/220]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	MT 1010	G10100	45/32 [310/220]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	1015	G10150	48/35 [330/240]	Tube	C
1	1	1.1	ASTM	A513	1015 CW	G10150	—/— [—/—]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	MT 1015	G10150	—/— [—/—]	Tube	C
1	1	—	ASTM/ASME	A/SA-513	1017	G10170	48/35 [330/240]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	1018	G10180	48/35 [330/240]	Tube	C
1	1	—	ASTM/ASME	A/SA-513	1019	G10190	48/35 [330/240]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	1020	G10200	52/38 [360/260]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	MT 1020	G10200	—/— [—/—]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	1021	G10210	54/40 [370/275]	Tube	C
1	1	1.1	ASTM/ASME	A/SA-513	1022	G10220	52/38 [360/260]	Tube	C
1	1	—	ASTM/ASME	A/SA-513	1023	G10230	52/38 [360/260]	Tube	C
1	1	—	ASTM/ASME	A/SA-513	1024	G10240	52/38 [360/260]	Tube	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	1	11.1	ASTM/ASME A/SA-513	1026	G10260		62/45 [425/310]	Tube	C
1	1	11.1	ASTM/ASME A/SA-515	60	—	>1 [≥25]	60/32 [415/220]	Plate	C-Si
1	1	1.1	ASTM A515	55	K02001		55/30 [380/205]	Plate	C-Si
1	1	1.1	ASTM/ASME A/SA-515	60	K02401		60/32 [415/220]	Plate	C
1	1	11.1	ASTM/ASME A/SA-515	65	K02800	≤1 [≤25]	65/35 [450/240]	Plate	C-Si
1	1	1.1	ASTM/ASME A/SA-516	55	K01800		55/30 [380/205]	Plate	C-Si
1	1	1.1	ASTM/ASME A/SA-516	60	K02100		60/32 [415/220]	Plate	C-Mn-Si
1	1	1.1	ASTM/ASME A/SA-516	65	K02403		65/35 [450/240]	Plate	C-Mn-Si
1	1	—	ASTM A519	MTX 1015	—		40/20 [275/140]	Tube	C
1	1	—	ASTM A519	MTX 1020	—		50/30 [345/205]	Tube	C
1	1	1.1	ASTM A519	1008	G10080		40/20 [275/140]	Tube	C
1	1	1.1	ASTM A519	MT 1010	G10100		40/20 [275/140]	Tube	C
1	1	1.1	ASTM A519	1012	G10120		40/20 [275/140]	Tube	C
1	1	1.1	ASTM A519	1015	G10150		40/20 [275/140]	Tube	C
1	1	1.1	ASTM A519	MT 1015	G10150		43/25 [295/170]	Tube	C
1	1	—	ASTM A519	1016	G10160		40/20 [275/140]	Tube	C
1	1	—	ASTM A519	1017	G10170		40/20 [275/140]	Tube	C
1	1	1.1	ASTM A519	1018	G10180		43/25 [295/170]	Tube	C
1	1	1.1	ASTM A519	1018 HR	G10180		—/— [—/—]	Tube	C
1	1	—	ASTM A519	1019	G10190		50/30 [345/205]	Tube	C
1	1	1.1	ASTM A519	1020	G10200		48/28 [330/195]	Tube	C
1	1	1.1	ASTM A519	1020 HR	G10200		—/32 [—/220]	Tube	C
1	1	1.1	ASTM A519	MT 1020	G10200		50/30 [345/205]	Tube	C
1	1	—	ASTM A519	1021	G10210		50/30 [345/205]	Tube	C
1	1	1.1	ASTM A519	1022	G10220		50/30 [345/205]	Tube	C
1	1	1.1	ASTM A519	1022 HR	G10220		—/— [—/—]	Tube	C
1	1	1.1	ASTM A519	1025 HR	G10250		—/35 [—/240]	Tube	C
1	1	—	ASTM A519	1026	G10260		55/35 [380/240]	Tube	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	1	11.1	ASTM	A519	1026 HR	G10260	—/— [—/—]	Tube	C
1	1	—	ASTM	A521	CC	—	60/30 [415/205]	Die Forging	C
1	1	—	ASTM	A521	CC1	—	66/33 [455/230]	Die Forging	C
1	1	1.1	ASTM	A523	A	K02504	48/30 [330/205]	Pipe	C-Mn
1	1	11.1	ASTM	A523	B	K03005	60/35 [415/240]	Pipe	C-Mn
1	1	1.1	ASTM/ASME	A/SA-524	I	K02104	60/35 [415/240]	Seamless Pipe	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-524	II	K02104	55/30 [380/205]	Seamless Pipe	C-Mn-Si
1	1	—	ASTM	A526	II	—	42/25 [290/170]	Galvanized Sheet	
1	1	—	ASTM	A527	II	—	42/25 [290/170]	Galvanized Sheet	
1	1	11.1	ASTM	A529	42	K02703	60/42 [415/290]	Plate, Bar & Shapes	C-Mn
1	1	—	ASTM	A539	—	K01506	45/35 [310/240]	Coiled Tube	C
1	1	1.1	ASTM/ASME	A/SA-556	A2	K01807	47/26 [325/180]	Seamless Tube	C
1	1	11.1	ASTM/ASME	A/SA-556	B2	K02707	60/37 [415/255]	Seamless Tube	C-Si
1	1	1.1	ASTM/ASME	A/SA-557	A2	K01807	47/26 [325/180]	E.R.W. Tube	C
1	1	11.1	ASTM/ASME	A/SA-557	B2	K03007	60/37 [415/255]	E.R.W. Tube	C
1	1	1.1	ASTM/ASME	A/SA-562	—	K11224	55/30 [380/205]	Plate	C-Mn-Ti
1	1	1.1	ASTM	A569	30	K02502	49/30 [340/205]	Sheet & Strip	C
1	1	1.1	ASTM	A569	33	K02502	52/33 [360/230]	Sheet & Strip	C
1	1	1.1	ASTM	A569	36	K02502	53/36 [365/250]	Sheet & Strip	C
1	1	1.1	ASTM	A569	40	K02502	55/40 [380/275]	Sheet & Strip	C
1	1	1.2	ASTM	A569	45	K02502	60/45 [415/310]	Sheet & Strip	C
1	1	1.2	ASTM	A569	50	K02502	65/50 [450/345]	Sheet & Strip	C
1	1	1.1	ASTM	A570	30	K02502	49/30 [340/205]	Sheet & Strip	C
1	1	1.1	ASTM	A570	33	K02502	52/33 [360/230]	Sheet & Strip	C
1	1	1.1	ASTM	A570	36	K02502	53/36 [365/250]	Sheet & Strip	C
1	1	1.1	ASTM	A570	40	K02502	55/40 [380/275]	Sheet & Strip	C
1	1	1.2	ASTM	A570	45	K02502	60/45 [415/310]	Sheet & Strip	C
1	1	1.2	ASTM	A570	50	K02502	65/50 [450/345]	Sheet & Strip	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Specification							
Steel and Steel Alloys										
1	1	1.3	ASTM	A570	55	K02502		70/55 [485/380]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-572	42	—		60/42 [415/290]	Plate & Shapes	C-Mn-Si
1	1	1.2	ASTM/ASME	A/SA-572	50	—		65/50 [450/345]	Plate & Shapes	C-Mn-Si
1	1	11.1	ASTM	A573	58	—		58/32 [400/220]	Plate	C
1	1	11.1	ASTM	A573	65	—		65/35 [450/240]	Plate	C
1	1	1.1	ASTM	A575	M1008	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A575	M1010	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A575	M1012	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A575	M1015	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A575	M1017	—		—/— [—/—]	Bar	C
1	1	11.1	ASTM	A575	M1020	—		—/— [—/—]	Bar	C
1	1	11.1	ASTM	A575	M1023	—		—/— [—/—]	Bar	C
1	1	11.1	ASTM	A575	M1025	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10080	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10100	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10120	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10150	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10160	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10170	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10180	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10190	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM	A576	G10200	—		—/— [—/—]	Bar	C
1	1	11.1	ASTM	A576	G10210	—		—/— [—/—]	Bar	C
1	1	11.1	ASTM	A576	G10220	—		—/— [—/—]	Bar	C
1	1	11.1	ASTM	A576	G10230	—		—/— [—/—]	Bar	C
1	1	11.1	ASTM	A576	G10250	—		—/— [—/—]	Bar	C
1	1	1.1	ASTM/ASME	A/SA-587	A2	K01807		47/26 [325/180]	E.R.W. Tube	C
1	1	—	ASTM/ASME	A/SA-587	B2	K03007		60/37 [415/255]	E.R.W. Tube	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	1	1.1	ASTM/ASME A/SA-587	—	K11500		48/30 [330/205]	E.R.W. Pipe	C
1	1	—	ASTM A607	45	—		65/45 [450/310]	Sheet & Strip	C-Mn-Cb-V
1	1	—	ASTM A607	50	—		65/50 [450/345]	Sheet & Strip	C-Mn-Cb-V
1	1	1.1	ASTM A611	D	G10120		52/40 [360/275]	Sheet & Strip	C
1	1	—	ASTM A611	A	G10170		42/25 [290/170]	Sheet & Strip	C
1	1	—	ASTM A611	B	G10170		45/30 [310/205]	Sheet & Strip	C
1	1	—	ASTM A611	C	G10170		48/33 [330/230]	Sheet & Strip	C
1	1	1.2	ASTM A618	III	K12700		65/50 [450/345]	Tube	Mn-V
1	1	1.1	ASTM A620	A	K00040		40/22 [275/150]	Sheet	C
1	1	1.1	ASTM A620	B	K00040		40/22 [275/150]	Sheet	C
1	1	1.1	ASTM A633	A	K01802		63/42 [435/290]	Plate	Mn-Cb
1	1	1.1	ASTM A633	C	K12000	>2.5 and ≤4 [>64 and ≤102]	65/46 [450/315]	Plate	Mn-Cb
1	1	1.1	ASTM A633	D	K12037	>2.5 and ≤4 [>64 and ≤102]	65/46 [450/315]	Plate	C-Mn-Si
1	1	—	ASTM A653	33	—		45/33 [310/230]	Galvanized Sheet	
1	1	—	ASTM A653	37	—		52/37 [360/255]	Galvanized Sheet	
1	1	—	ASTM A653	40	—		55/40 [380/275]	Galvanized Sheet	
1	1	—	ASTM A653	80	—		82/80 [565/550]	Galvanized Sheet	
1	1	1.2	ASTM/ASME A/SA-656	T3, 50	—		60/50 [415/345]	Plate	C-Mn-Si-V-Cb
1	1	1.2	ASTM/ASME A/SA-656	T7, 50	—		60/50 [415/345]	Plate	C-Mn-Si-V-Cb
1	1	1.2	ASTM/ASME A/SA-656	50	K11804	≤2 [≤50]	60/50 [415/345]	Plate	C-Mn-V
1	1	1.3	ASTM/ASME A/SA-656	60	K11804	≤1.5 [≤40]	70/60 [485/415]	Plate	C-Mn-V
1	1	1.1	ASTM A659	1015	G10150		—/— [—/—]	Sheet & Strip	C
1	1	—	ASTM A659	1016	G10160		—/— [—/—]	Sheet & Strip	C
1	1	—	ASTM A659	1017	G10170		—/— [—/—]	Sheet & Strip	C
1	1	1.1	ASTM A659	1018	G10180		—/— [—/—]	Sheet & Strip	C
1	1	1.1	ASTM A659	1020	G10200		—/— [—/—]	Sheet & Strip	C
1	1	—	ASTM A659	1021	G10210		—/— [—/—]	Sheet & Strip	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy	Base Metal		Thickness or Diameter Limitations, in [mm]	UNS Number	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification					
Steel and Steel Alloys									
1	1	—	ASTM	A659	1023	G10230	—/— [—/—]	Sheet & Strip	C
1	1	11.1	ASTM/ASME	A/SA-660	WCA	J02504	60/30 [415/205]	Centrifugal Cast Pipe	C-Si
1	1	1.1	ASTM/ASME	A/SA-662	A	K01701	58/40 [400/275]	Plate	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-662	B	K02203	65/40 [450/275]	Plate	C-Mn-Si
1	1	—	ASTM	A663	—	—	—/— [—/—]	Bar	C
1	1	—	ASTM	A663	45	—	45/25 [310/175]	Bars & Shapes	C
1	1	—	ASTM	A663	50	—	50/28 [345/195]	Bars & Shapes	C
1	1	—	ASTM	A663	55	—	55/30 [380/205]	Bars & Shapes	C
1	1	—	ASTM	A663	60	—	60/33 [415/230]	Bars & Shapes	C
1	1	—	ASTM	A663	65	—	65/36 [450/250]	Bars & Shapes	C
1	1	1.1	ASTM	A668	B	G10200	60/30 [415/205]	Forgings	C
1	1	1.1	ASTM/ASME	A/SA-671	CC60	K02100	60/32 [415/220]	Fusion Welded Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-671	CE55	K02202	55/30 [380/205]	Fusion Welded Pipe	C
1	1	1.1	ASTM/ASME	A/SA-671	CB60	K02401	60/32 [415/220]	Fusion Welded Pipe	C
1	1	11.1	ASTM/ASME	A/SA-671	CE60	K02402	60/32 [415/220]	Fusion Welded Pipe	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-671	CC65	K02403	65/35 [450/240]	Fusion Welded Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-671	CB65	K02800	65/35 [450/240]	Fusion Welded Pipe	C-Si
1	1	11.1	ASTM/ASME	A/SA-671	CA55	K02801	55/30 [380/205]	Fusion Welded Pipe	C
1	1	1.1	ASTM/ASME	A/SA-672	A45	K01700	45/24 [310/165]	Fusion Welded Pipe	C
1	1	1.1	ASTM/ASME	A/SA-672	C55	K01800	55/30 [380/205]	Fusion Welded Pipe	C-Si
1	1	1.1	ASTM/ASME	A/SA-672	B55	K02001	55/30 [380/205]	Fusion Welded Pipe	C-Si
1	1	1.1	ASTM/ASME	A/SA-672	C60	K02100	60/32 [415/220]	Fusion Welded Pipe	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-672	A50	K02200	50/27 [345/185]	Fusion Welded Pipe	C
1	1	11.1	ASTM/ASME	A/SA-672	E55	K02202	55/30 [380/205]	Fusion Welded Pipe	C
1	1	1.1	ASTM/ASME	A/SA-672	B60	K02401	60/32 [415/220]	Fusion Welded Pipe	C
1	1	11.1	ASTM/ASME	A/SA-672	E60	K02402	60/32 [415/220]	Fusion Welded Pipe	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-672	C65	K02403	65/35 [450/240]	Fusion Welded Pipe	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-672	B65	K02800	65/35 [450/240]	Fusion Welded Pipe	C-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Mechanical Properties		Product Form	Nominal Composition
			Specification					Strength, ksi [MPa]	Minimum Tensile/Yield		
Steel and Steel Alloys											
1	1	11.1	ASTM/ASME	A/SA-672	A55	K02801		55/30 [380/205]		Fusion Welded Pipe	C
1	1	11.1	ASTM/ASME	A/SA-675	45	—		45/23 [310/160]		Bar	C
1	1	11.1	ASTM/ASME	A/SA-675	50	—		50/25 [345/170]		Bar	C
1	1	11.1	ASTM/ASME	A/SA-675	55	—		55/27 [380/185]		Bar	C
1	1	11.1	ASTM/ASME	A/SA-675	60	—		60/30 [415/205]		Bar	C
1	1	11.1	ASTM/ASME	A/SA-675	65	—		65/32 [450/220]		Bar	C
1	1	11.1	ASTM	A694	F42	K03014		60/42 [415/290]		Forgings	C-Mn
1	1	11.1	ASTM	A694	F46	K03014		60/46 [415/315]		Forgings	C-Mn
1	1	11.1	ASTM	A694	F48	K03014		62/48 [425/330]		Forgings	C-Mn
1	1	11.1	ASTM	A694	F50	K03014		64/50 [440/345]		Forgings	C-Mn
1	1	11.1	ASTM	A694	F52	K03014		66/52 [455/360]		Forgings	C-Mn
1	1	11.1	ASTM/ASME	A/SA-695	B, 35	K03504		60/35 [415/240]		Bar	C
1	1	11.1	ASTM/ASME	A/SA-696	B	K03200		60/35 [415/240]		Bar	C-Mn-Si
1	1	1.2	ASTM	A707	L1, Cl. 1	K02302		60/42 [415/290]		Forgings	C-Mn
1	1	1.2	ASTM	A707	L1, Cl. 2	K02302		66/52 [455/360]		Forgings	C-Mn
1	1	11.1	ASTM	A707	L2, Cl. 1	K03301		60/42 [415/290]		Forgings	C-Mn
1	1	11.1	ASTM	A707	L2, Cl. 2	K03301		66/52 [455/360]		Forgings	C-Mn
1	1	—	ASTM	A707	L4, Cl. 1	K12089		60/42 [415/290]		Forgings	1.8Ni-0.6Mn-0.3Mo
1	1	—	ASTM	A707	L4, Cl. 2	K12089		66/52 [455/360]		Forgings	1.8Ni-0.6Mn-0.3Mo
1	1	1.2	ASTM	A707	L3, Cl. 1	K12510		60/42 [415/290]		Forgings	C-Mn-V-N
1	1	1.2	ASTM	A707	L3, Cl. 2	K12510		66/52 [455/360]		Forgings	C-Mn-V-N
1	1	—	ASTM	A707	L5, Cl. 1	K20934		60/42 [415/290]		Forgings	1.1.2Cu-1Ni-0.7Cr-0.5Mn
1	1	—	ASTM	A707	L5, Cl. 2	K20934		66/52 [455/360]		Forgings	1.2Cu-1Ni-0.7Cr-0.5Mn
1	1	11.1	ASTM	A709	36	—		58/36 [400/250]		Plate, Bar & Shapes	C-Mn
1	1	1.2	ASTM	A709	50	—		65/50 [450/345]		Plate, Bar & Shapes	C-Mn
1	1	1.2	ASTM	A709	50S	—		65/50 [450/345]		Plate, Bar & Shapes	C-Mn
1	1	11.1	ASTM/ASME	A/SA-727	—	K02506		60/36 [415/250]		Forgings	C-Mn-Si
1	1	11.1	ASTM/ASME	A/SA-765	I	K03046		60/30 [415/205]		Forgings	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	1	ASTM	A795	E, A	—		60/— [415/—]	Resistance Welded Pipe	C-Mn
1	1	ASTM	A795	E, B	—		60/— [415/—]	Resistance Welded Pipe	C-Mn
1	1	ASTM	A795	F	—		60/— [415/—]	Furnace Welded Pipe	
1	1	ASTM	A795	S, A	—		60/— [415/—]	Seamless Pipe	C-Mn
1	1	ASTM	A795	S, B	—		60/— [415/—]	Seamless Pipe	C-Mn
1	1	ASTM	A808	—	K11852	≤2.5 [≤64]	60/42 [415/290]	Plate	C-Mn-Cb-V
1	1	ASTM	A830	1006	G10060		40/20 [275/140]	Plate	C
1	1	ASTM	A830	1008	G10080		40/20 [275/140]	Plate	C
1	1	ASTM	A830	1009	G10090		40/20 [275/140]	Plate	C
1	1	ASTM	A830	1010	G10100		40/20 [275/140]	Plate	C
1	1	ASTM	A830	1012	G10120		40/20 [275/140]	Plate	C
1	1	ASTM	A830	1015	G10150		40/20 [275/140]	Plate	C
1	1	ASTM	A830	1016	G10160		40/20 [275/140]	Plate	C
1	1	ASTM	A830	1017	G10170		40/20 [275/140]	Plate	C
1	1	ASTM	A830	1018	G10180		43/25 [295/170]	Plate	C
1	1	ASTM	A830	1019	G10190		43/25 [295/170]	Plate	C
1	1	ASTM	A830	1020	G10200		43/25 [295/170]	Plate	C
1	1	ASTM	A830	1021	G10210		43/25 [295/170]	Plate	C
1	1	ASTM	A830	1022	G10220		43/25 [295/170]	Plate	C
1	1	ASTM	A830	1023	G10230		43/25 [295/170]	Plate	C
1	1	ASTM/ASME	A/SA-836	—	—		55/25 [380/175]	Forgings	C-Si-Ti
1	1	ASTM	A857	25	—		38/25 [260/170]	Sheet & Strip	C
1	1	ASTM	A857	30	—		49/30 [340/205]	Sheet & Strip	C
1	1	ASTM	A857	33	—		52/33 [360/230]	Sheet & Strip	C
1	1	ASTM	A857	36	—		53/36 [365/250]	Sheet & Strip	C
1	1	ASTM	A860	WPHY 42	—		60/42 [415/290]	Seamless & Welded Fittings	C-Mn
1	1	ASTM	A860	WPHY 46	—		63/46 [435/315]	Seamless & Welded Fittings	C-Mn
1	1	ASTM	A860	WPHY 52	—		66/52 [455/360]	Seamless & Welded Fittings	C-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Specification							
Steel and Steel Alloys										
1	1	1.2	ASTM	A935	45 Cl. 1	—		60/45 [415/310]	Sheet & Strip	C-Mn-Cb-V
1	1	1.2	ASTM	A935	45 Cl. 2	—		55/45 [380/310]	Sheet & Strip	C-Mn-Cb-V
1	1	1.2	ASTM	A935	50 Cl. 1	—		65/50 [450/345]	Sheet & Strip	C-Mn-Cb-V
1	1	1.2	ASTM	A935	50 Cl. 2	—		60/50 [415/345]	Sheet & Strip	C-Mn-Cb-V
1	1	1.3	ASTM	A935	55 Cl. 2	—		65/55 [450/380]	Sheet & Strip	C-Mn-Cb-V
1	1	1.1	ASTM	A984	35	—		60/35 [415/240]	Pipe	C
1	1	1.2	ASTM	A992	—	—		65/50 [450/345]	Shapes	C-Mn-Si
1	1	1.1	ASTM/ASME	A/SA-1008	CS, A	—		40/20 [275/140]	Sheet	C
1	1	1.1	ASTM/ASME	A/SA-1008	CS, B	—		40/20 [275/140]	Sheet	C
1	1	1.1	ASTM	A1008	CS, C	—		40/20 [275/140]	Sheet	C
1	1	1.1	ASTM	A1008	DS, A	—		40/22 [275/150]	Sheet	C
1	1	1.1	ASTM/ASME	A/SA-1008	DS, B	—		40/22 [275/150]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS 45 Cl. 1	—		60/45 [415/310]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS 45 Cl. 2	—		55/45 [380/310]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS 50 Cl. 1	—		65/50 [450/345]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS 50 Cl. 2	—		60/50 [415/345]	Sheet	C
1	1	1.3	ASTM	A1008	HSLAS 55 Cl. 2	—		65/55 [450/380]	Sheet	C
1	1	1.2	ASTM	A1008	HSLAS-F 50	—		60/50 [415/345]	Sheet	C
1	1	1.1	ASTM	A1008	SS 25	—		42/25 [290/170]	Sheet	C
1	1	1.1	ASTM	A1008	SS 30	—		45/30 [310/205]	Sheet	C
1	1	1.1	ASTM	A1008	SS 33, 1	—		48/33 [330/230]	Sheet	C
1	1	1.1	ASTM	A1008	SS 33, 2	—		48/33 [330/230]	Sheet	C
1	1	1.1	ASTM	A1008	SS 40, 1	—		52/40 [360/275]	Sheet	C
1	1	1.1	ASTM	A1008	SS 40, 2	—		52/40 [360/275]	Sheet	C
1	1	1.1	ASTM	A1011	CS, A	—		40/30 [275/205]	Sheet & Strip	C
1	1	1.1	ASTM/ASME	A/SA-1011	CS, B	—		40/30 [275/205]	Sheet & Strip	C
1	1	1.1	ASTM	A1011	CS, C	—		40/30 [275/205]	Sheet & Strip	C
1	1	1.1	ASTM	A1011	CS, D	—		40/30 [275/205]	Sheet & Strip	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Specification							
Steel and Steel Alloys										
1	1	1.1	ASTM	A1011	DS, A	—		40/30 [275/205]	Sheet & Strip	C
1	1	1.1	ASTM/ASME	A/SA-1011	DS, B	—		40/30 [275/205]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-1011	HSLAS 45 Cl. 1	—		60/45 [415/310]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-1011	HSLAS 45 Cl. 2	—		55/45 [380/310]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-1011	HSLAS 50 Cl. 1	—		65/50 [450/345]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-1011	HSLAS 50 Cl. 2	—		60/50 [415/345]	Sheet & Strip	C
1	1	1.3	ASTM/ASME	A/SA-1011	HSLAS 55 Cl. 2	—		65/55 [450/380]	Sheet & Strip	C
1	1	1.2	ASTM	A1011	HSLAS-F 50	—		60/50 [415/345]	Sheet & Strip	C
1	1	1.1	ASTM	A1011	SS 30	—		49/30 [340/205]	Sheet & Strip	C
1	1	1.1	ASTM/ASME	A/SA-1011	SS 33	—		52/33 [360/230]	Sheet & Strip	C
1	1	1.1	ASTM/ASME	A/SA-1011	SS 36, 1	—		53/36 [365/250]	Sheet & Strip	C
1	1	1.1	ASTM/ASME	A/SA-1011	SS 36, 2	—		58/36 [400/250]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-1011	SS 40	—		55/40 [380/275]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-1011	SS 45	—		60/45 [415/310]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-1011	SS 45, 1	—		60/45 [415/310]	Sheet & Strip	C
1	1	1.2	ASTM	A1011	SS 45, 2	—		60/45 [415/310]	Sheet & Strip	C
1	1	1.2	ASTM/ASME	A/SA-1011	SS 50	—		65/50 [450/345]	Sheet & Strip	C
1	1	1.2	ASTM	A1018	HSLAS 45 Cl. 1	—		60/45 [415/310]	Sheet & Strip	C
1	1	1.2	ASTM	A1018	HSLAS 45 Cl. 2	—		55/45 [380/310]	Sheet & Strip	C
1	1	1.2	ASTM	A1018	HSLAS 50 Cl. 1	—		65/50 [450/345]	Sheet & Strip	C
1	1	1.2	ASTM	A1018	HSLAS 50 Cl. 2	—		60/50 [415/345]	Sheet & Strip	C
1	1	1.3	ASTM	A1018	HSLAS 55 Cl. 2	—		65/55 [450/380]	Sheet & Strip	C
1	1	1.2	ASTM	A1018	HSLAS-F 50	—		60/50 [415/345]	Sheet & Strip	C
1	1	1.1	ASTM	A1018	SS 30	—		49/30 [340/205]	Sheet & Strip	C
1	1	1.1	ASTM	A1018	SS 33	—		52/33 [360/230]	Sheet & Strip	C
1	1	1.1	ASTM	A1018	SS 36, 1	—		53/36 [365/250]	Sheet & Strip	C
1	1	1.1	ASTM	A1018	SS 36, 2	—		58/36 [400/250]	Sheet & Strip	C
1	1	1.1	ASTM	A1018	SS 40	—		55/40 [380/275]	Sheet & Strip	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Specification							
Steel and Steel Alloys										
1	1	11.1	ASTM	A1085	—	—		65/50 [450/345]	Structural Sections	C-Mn-Si
1	1	1.1	CSA	G40.21	260W	—		60/38 [415/260]	Plate, Bar & Shapes	C-Mn
1	1	1.1	CSA	G40.21	260WT	—		60/38 [415/260]	Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	1	1.2	CSA	G40.21	300W	—		65/44 [450/305]	Plate, Bar & Shapes	C-Mn
1	1	1.2	CSA	G40.21	300WT	—		65/44 [450/305]	Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	1	1.2	CSA	G40.21	350W	—		65/50 [450/345]	Plate, Bar & Shapes	C-Mn
1	1	11.1	CSA	Z245.1	172	—		45/25 [310/170]	Pipe	C
1	1	11.1	CSA	Z245.1	207	—		48/30 [330/205]	Pipe	C
1	1	11.1	CSA	Z245.1	241	—		60/35 [415/240]	Seamless & Welded Pipe	C-Mn
1	1	11.1	CSA	Z245.1	290	—		60/42 [415/290]	Seamless & Welded Pipe	C-Mn
1	1	11.1	CSA	Z245.1	359	—		66/52 [455/360]	Seamless & Welded Pipe	C-Mn
1	1	11.1	CSA	Z245.11	207	—		48/30 [330/205]	Fittings	C-Mn-Si
1	1	11.1	CSA	Z245.11	241	—		60/35 [415/240]	Fittings	C-Mn-Si
1	1	11.1	CSA	Z245.11	290	—		60/42 [415/290]	Fittings	C-Mn-Si
1	1	11.1	CSA	Z245.12	248	—		60/36 [415/250]	Flanges	C-Mn-Si
1	1	11.1	CSA	Z245.12	290	—		60/42 [415/290]	Flanges	C-Mn-Si
1	1	11.1	MSS	SP-75	WPHY-42	—		60/42 [415/290]	Seamless & Welded Fittings	C-Mn
1	1	11.1	MSS	SP-75	WPHY-46	—		63/46 [435/315]	Seamless & Welded Fittings	C-Mn
1	1	11.1	MSS	SP-75	WPHY-52	—		66/52 [455/360]	Seamless & Welded Fittings	C-Mn
1	2	11.1	AAR	M201	B	—		70/38 [485/260]	Castings	C-Mn-Si
1	2	1.2	ABS	ABS	AH36	K11852		71/51 [490/350]	Plate, Bar & Shapes	C-Mn-Si
1	2	1.2	ABS	ABS	DH36	K11852		71/51 [490/350]	Plate, Bar & Shapes	C-Mn-Si
1	2	1.2	ABS	ABS	EH36	K11852		71/51 [490/350]	Plate, Bar & Shapes	C-Mn-Si
1	2	1.2	ABS	ABS	FH36	K11852		71/51 [490/350]	Plate, Bar & Shapes	C-Mn-Si
1	2	1.3	ABS	ABS	AH40	K11857		74/57 [510/395]	Plate, Bar & Shapes	C-Mn-Si
1	2	1.3	ABS	ABS	DH40	K11857		74/57 [510/395]	Plate, Bar & Shapes	C-Mn-Si
1	2	1.3	ABS	ABS	EH40	K11857		74/57 [510/395]	Plate, Bar & Shapes	C-Mn-Si
1	2	1.3	ABS	ABS	FH40	K11857		74/57 [510/395]	Plate, Bar & Shapes	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	2	1.2	API	2H	50	—		70/50 [485/345]	Plate	C-Mn
1	2	1.3	API	2W	60	—		75/60 [515/415]	Plate	C-Mn
1	2	1.2	API	2Y	50T	—		70/50 [485/345]	Plate	C-Mn
1	2	1.3	API	2Y	60	—		75/60 [515/415]	Plate	C-Mn
1	2	11.1	API	5L	X56	—		71/56 [490/385]	Seamless & Welded Pipe	C-Mn
1	2	2.1	API	5L	X56M	—		71/56 [490/385]	Welded Pipe	C-Mn
1	2	2.1	API	5L	X56MO	—		71/56 [490/385]	Welded Pipe	C-Mn
1	2	2.1	API	5L	X56MS	—		71/56 [490/385]	Welded Pipe	C-Mn
1	2	1.3	API	5L	X56N	—		71/56 [490/385]	Seamless & Welded Pipe	C-Mn
1	2	3.1	API	5L	X56Q	—		71/56 [490/385]	Seamless & Welded Pipe	C-Mn
1	2	3.1	API	5L	X56QO	—		71/56 [490/385]	Seamless & Welded Pipe	C-Mn
1	2	3.1	API	5L	X56QS	—		71/56 [490/385]	Seamless & Welded Pipe	C-Mn
1	2	11.1	API	5L	X60	—		75/60 [515/415]	Seamless & Welded Pipe	C-Mn
1	2	2.1	API	5L	X60M	—		75/60 [515/415]	Welded Pipe	C-Mn
1	2	2.1	API	5L	X60MO	—		75/60 [515/415]	Welded Pipe	C-Mn
1	2	2.1	API	5L	X60MS	—		75/60 [515/415]	Welded Pipe	C-Mn
1	2	1.3	API	5L	X60N	—		75/60 [515/415]	Seamless & Welded Pipe	C-Mn
1	2	3.1	API	5L	X60Q	—		75/60 [515/415]	Seamless & Welded Pipe	C-Mn
1	2	3.1	API	5L	X60QO	—		75/60 [515/415]	Seamless & Welded Pipe	C-Mn
1	2	3.1	API	5L	X60QS	—		75/60 [515/415]	Seamless & Welded Pipe	C-Mn
1	2	11.1	API	5L	X65	—		78/65 [540/450]	Seamless & Welded Pipe	C-Mn
1	2	2.1	API	5L	X65M	—		78/65 [540/450]	Welded Pipe	C-Mn
1	2	2.1	API	5L	X65MO	—		78/65 [540/450]	Welded Pipe	C-Mn
1	2	2.1	API	5L	X65MS	—		78/65 [540/450]	Welded Pipe	C-Mn
1	2	3.1	API	5L	X65Q	—		78/65 [540/450]	Seamless & Welded Pipe	C-Mn
1	2	3.1	API	5L	X65QO	—		78/65 [540/450]	Seamless & Welded Pipe	C-Mn
1	2	3.1	API	5L	X65QS	—		78/65 [540/450]	Seamless & Welded Pipe	C-Mn
1	2	1.2	AS ASTM	A945	50	—		70/50 [485/345]	Plate	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO Group	15608 Group	ISO		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Base Metal Specification	Standard						
Steel and Steel Alloys										
1	1	2	1.3	AS ASTM	A945	65	—	78/65 [540/450]	Plate	C-Mn-Si-Ti
1	1	2	11.2	AS	1448	K4	—	72.5/36 [500/250]	Forgings	C-Si
1	1	2	11.2	AS	1448	K5	—	78/39 [540/270]	Forgings	C-Mn-Si
1	1	2	1.2	AS	1448	K9	—	78/43.5 [540/300]	Forgings	C-Mn-Si
1	1	2	11.2	AS	1448	S4	—	72.5/36 [500/250]	Forgings	C-Si
1	1	2	11.2	AS	1448	S5	—	78/39 [540/270]	Forgings	C-Mn
1	1	2	1.2	AS	1548	5-490	—	71/52 [490/360]	Plate	C
1	1	2	1.2	AS	1548	7-490	—	71/46 [490/320]	Plate	C
1	1	2	1.2	AS	1548	PT490	—	71/46 [490/320]	Plate	C
1	1	2	1.2	AS/NZS	3678	300	—	62.5/46 [430/320]	Plate	C-Mn
1	1	2	1.2	AS/NZS	3678	300L15	—	62.5/46 [430/320]	Plate	C-Mn
1	1	2	1.2	AS/NZS	3678	350	—	65/52 [450/360]	Plate	C-Mn
1	1	2	1.2	AS/NZS	3678	350L15	—	65/52 [450/360]	Plate	C-Mn
1	1	2	1.3	AS/NZS	3678	400	—	70/58 [485/400]	Plate	C-Mn
1	1	2	1.3	AS/NZS	3678	400L15	—	69.5/58 [480/400]	Plate	C-Mn
1	1	2	1.3	AS/NZS	3678	450	—	75.5/65 [520/450]	Plate	C-Mn
1	1	2	1.3	AS/NZS	3678	450L15	—	75.5/65 [520/450]	Plate	C-Mn
1	1	2	1.2	AS/NZS	3679.1	300	—	64/46 [440/320]	Bar & Sections	C-Mn
1	1	2	1.2	AS/NZS	3679.1	300L0	—	64/46 [440/320]	Bar & Sections	C-Mn
1	1	2	1.2	AS/NZS	3679.1	300L15	—	64/46 [440/320]	Bar & Sections	C-Mn
1	1	2	1.2	AS/NZS	3679.1	350	—	70/52 [485/360]	Bar & Sections	C-Mn
1	1	2	1.2	AS/NZS	3679.1	350L0	—	69.5/52 [480/360]	Bar & Sections	C-Mn
1	1	2	1.2	AS/NZS	3679.1	350L15	—	69.5/52 [480/360]	Bar & Sections	C-Mn
1	1	2	1.3	AS/NZS	3679.1	400	—	75.5/58 [520/400]	Bar & Sections	C-Mn
1	1	2	1.3	AS/NZS	3679.1	400L0	—	75.5/58 [520/400]	Bar & Sections	C-Mn
1	1	2	1.3	AS/NZS	3679.1	400L15	—	75.5/58 [520/400]	Bar & Sections	C-Mn
1	1	2	1.1	ASTM	A27	70-40	J02501	70/40 [485/275]	Castings	C
1	1	2	11.1	ASTM	A27	70-36	J03501	70/36 [485/250]	Castings	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
1	2	11.1	ASTM/ASME	A/SA-105	—	K03504		70/36 [485/250]	Flanges & Fittings	C
1	2	11.1	ASTM/ASME	A/SA-106	C	K03501		70/40 [485/275]	Seamless Pipe	C-Mn-Si
1	2	1.2	ASTM	A131	AH32	—		64/46 [440/315]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	2	1.2	ASTM	A131	AH36	—		71/51 [490/350]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	2	1.2	ASTM	A131	DH32	—		64/46 [440/315]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	2	1.2	ASTM	A131	DH36	—		71/51 [490/350]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	2	1.1	ASTM	A131	E	—		58/34 [400/235]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	2	1.2	ASTM	A131	EH32	—		64/46 [440/315]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	2	1.2	ASTM	A131	EH36	—		71/51 [490/350]	Plate, Shapes, Bar & Rivets	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-178	D	K02709		70/40 [485/275]	E.R.W. Tube	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-181	Cl. 70	K03502		70/36 [485/250]	Pipe Flange & Fittings	C-Si
1	2	11.1	ASTM/ASME	A/SA-210	C	K03501		70/40 [485/275]	Seamless Tube	C-Mn-Si
1	2	1.1	ASTM/ASME	A/SA-216	WCC	J02503		70/40 [485/275]	Castings	C-Mn-Si
1	2	1.1	ASTM/ASME	A/SA-216	WCB	J03002		70/36 [485/250]	Castings	C-Si
1	2	11.1	ASTM/ASME	A/SA-234	WPC	K03501		70/40 [485/275]	Piping Fittings	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-266	4	K03017		70/36 [485/250]	Forgings	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-266	2	K03506		70/36 [485/250]	Forgings	C-Si
1	2	11.2	ASTM/ASME	A/SA-266	3	K05001		75/37.5 [515/260]	Forgings	C-Si
1	2	11.1	ASTM/ASME	A/SA-299	A	K02803		75/40 [515/275]	Plate	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-350	LF2	K03011		70/36 [485/250]	Forgings	C-Mn-Si
1	2	1.3	ASTM/ASME	A/SA-350	LF6, Cl.3	K12202		75/60 [515/415]	Forgings	C-Mn-Si-V
1	2	3.3	ASTM/ASME	A/SA-350	LF787, Cl.2	K20747		65/55 [450/380]	Forgings	1Ni-1Cu-0.75Cr-Mo-Nb
1	2	11.1	ASTM/ASME	A/SA-352	LCC	J02505		70/40 [485/275]	Castings	C-Mn-Si
1	2	11.1	ASTM	A356	1	J03502		70/36 [485/250]	Castings	C-Si
1	2	11.1	ASTM/ASME	A/SA-372	B	K04001		75/45 [515/310]	Forgings	C-Mn-Si
1	2	11.1	ASTM	A381	Y52	—		66/52 [455/360]	Welded Pipe	C
1	2	11.1	ASTM	A381	Y56	—		71/56 [490/385]	Welded Pipe	C
1	2	11.1	ASTM	A381	Y60	—		75/60 [515/415]	Welded Pipe	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Specification							
Steel and Steel Alloys										
1	2	11.1	ASTM/ASME	A/SA-414	F	K03102		70/42 [485/290]	Sheet	C-Mn
1	2	11.1	ASTM/ASME	A/SA-414	G	K03103		75/45 [515/310]	Sheet	C-Mn
1	2	—	ASTM	A441	Group 1	—		70/50 [485/345]	Shapes	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	Group 2	—		70/50 [485/345]	Shapes	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	Group 3	—		67/46 [460/315]	Shapes	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	Group 4	—		63/42 [435/290]	Shapes	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	Group 5	—		63/42 [435/290]	Shapes	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	—	K12211	>4 and ≤8 >100 and ≤200]	60/40 [415/275]	Plate & Bar	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	—	K12211	>1.5 and ≤4 >40 and ≤100]	63/42 [435/290]	Plate & Bar	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	—	K12211	>0.75 and <1.5 >20 and <40]	67/46 [460/315]	Plate & Bar	C-Mn-Si-Cb-V
1	2	—	ASTM	A441	—	K12211	≤0.75 [≤20]	70/50 [485/345]	Plate & Bar	C-Mn-Si-Cb-V
1	2	11.2	ASTM/ASME	A/SA-455	—	K03300	>0.580 and <0.750 >15 and <19]	70/35 [485/240]	Plate	C-Mn-Si
1	2	11.2	ASTM/ASME	A/SA-455	—	K03300	>0.375 and <0.580 >10 and <15]	73/37 [505/255]	Plate	C-Mn-Si
1	2	11.2	ASTM/ASME	A/SA-455	—	K03300	≤0.375 [≤10]	75/38 [515/260]	Plate	C-Mn-Si
1	2	1.1	ASTM/ASME	A/SA-487	16, Cl. A	J31200		70/40 [485/275]	Castings	Low C-Mn-Ni
1	2	11.1	ASTM/ASME	A/SA-508	1	K13502		70/36 [485/250]	Forgings	C
1	2	11.1	ASTM/ASME	A/SA-508	1A	K13502		70/36 [485/250]	Forgings	C
1	2	11.1	ASTM	A512	1025	G10250		55/35 [380/240]	Tube	C
1	2	11.1	ASTM	A512	1030	G10300		65/40 [450/275]	Tube	C
1	2	1.1	ASTM	A513	1020 CW	G10200		—/— [—/—]	Tube	C
1	2	11.1	ASTM/ASME	A/SA-513	1025	G10250		56/40 [385/275]	Tube	C
1	2	1.2	ASTM	A513	1025 CW	G10250		—/— [—/—]	Tube	C
1	2	11.1	ASTM/ASME	A/SA-513	1030	G10300		62/45 [425/310]	Tube	C
1	2	11.1	ASTM/ASME	A/SA-515	70	K03101		70/38 [485/260]	Plate	C-Si
1	2	11.1	ASTM/ASME	A/SA-516	70	K02700		70/38 [485/260]	Plate	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	2	1.1	ASTM	A519	1018 CW	G10180	—/— [—/—]	Tube	C
1	2	1.1	ASTM	A519	1020 CW	G10200	—60 [—/415]	Tube	C
1	2	1.1	ASTM	A519	1022 CW	G10220	—/— [—/—]	Tube	C
1	2	11.1	ASTM	A519	1025	G10250	53/30 [365/205]	Tube	C
1	2	1.2	ASTM	A519	1025 CW	G10250	—/65 [—/450]	Tube	C
1	2	11.1	ASTM	A519	1026 CW	G10260	—/— [—/—]	Tube	C
1	2	—	ASTM	A519	1030	G10300	75/55 [515/380]	Tube	C
1	2	—	ASTM	A521	CE	—	75/37 [515/255]	Die Forging	C
1	2	11.1	ASTM	A529	50	—	70/50 [485/345]	Plate, Bar & Shapes	C-Mn
1	2	11.1	ASTM	A529	55	—	70/55 [485/380]	Plate, Bar & Shapes	C-Mn
1	2	1.2	ASTM/ASME	A/SA-537	Cl. 1	K12437	>2.5 and ≤4 [>64 and ≤102]	Plate	C-Mn-Si
1	2	1.2	ASTM/ASME	A/SA-537	Cl. 1	K12437	≤2.5 [≤64]	Plate	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-541	1A	K03020	70/36 [485/250]	Forgings	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-541	1	K03506	70/36 [485/250]	Forgings	C-Si
1	2	11.1	ASTM/ASME	A/SA-556	C2	K03006	70/40 [485/275]	Seamless Tube	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-557	C2	K03505	70/40 [485/275]	E.R.W. Tube	C-Mn
1	2	1.3	ASTM	A572	55	—	70/55 [485/380]	Plate, Sheet, Bar & Shapes	C-Mn-Si-Cb-V
1	2	1.3	ASTM/ASME	A/SA-572	55	—	70/55 [485/380]	Plate & Shapes	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-572	60	—	75/60 [515/415]	Plate & Shapes	C-Mn-Si
1	2	11.1	ASTM	A573	70	—	70/42 [485/290]	Plate	C
1	2	11.1	ASTM	A595	A	K02004	65/55 [450/380]	Welded Tube	Low C
1	2	11.1	ASTM	A595	B	K02005	70/60 [485/415]	Welded Tube	Low C
1	2	1.4	ASTM	A606	2, CR, AR	—	65/45 [450/310]	Sheet & Strip	C-Mn
1	2	1.4	ASTM	A606	2, HR, A	—	65/45 [450/310]	Sheet & Strip	C-Mn
1	2	1.4	ASTM	A606	2, HR, AR	—	70/50 [485/345]	Sheet & Strip	C-Mn
1	2	1.4	ASTM	A606	2, HR, N	—	65/45 [450/310]	Sheet & Strip	C-Mn
1	2	—	ASTM	A607	55	—	70/55 [485/380]	Sheet & Strip	C-Mn-Cb-V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO Group Number	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	2	1.2	ASTM	A618	Ia	—	>0.75 and <1.5 [>19 and <38]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	Ia	—	≤0.75 [≤19]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	Ib	—	65/50 [450/345]	Seamless & Welded Tube	C-Mn
1	2	1.2	ASTM	A618	Ib	K02601	>0.75 and <1.5 [>19 and <38]		Tube
1	2	1.2	ASTM	A618	Ib	K02601	70/50 [485/345]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	II	K12609	>0.75 and <1.5 [>19 and <38]	Tube	Mn-Cu-V
1	2	1.2	ASTM	A618	II	K12609	≤0.75 [≤19]	Tube	Mn-Cu-V
1	2	1.1	ASTM	A633	C	K12000	≤2.5 [≤64]	Plate	Mn-Cb
1	2	1.1	ASTM	A633	D	K12037	≤2.5 [≤64]	Plate	C-Mn-Si
1	2	1.3	ASTM/ASME	A/SA-656	T3, 60	—	70/60 [485/415]	Plate	C-Mn-Si-V-Cb
1	2	1.3	ASTM/ASME	A/SA-656	T7, 60	—	70/60 [485/415]	Plate	C-Mn-Si-V-Cb
1	2	1.3	ASTM/ASME	A/SA-656	70	K11804	≤1 [≤25]	Plate	C-Mn-V
1	2	11.1	ASTM/ASME	A/SA-660	WCC	J02505	70/40 [485/275]	Centrifugal Cast Pipe	C-Mn-Si
1	2	1.1	ASTM/ASME	A/SA-660	WCB	J03003	70/36 [485/250]	Centrifugal Cast Pipe	C-Si
1	2	1.1	ASTM/ASME	A/SA-662	C	K02007	70/43 [485/295]	Plate	C-Mn-Si
1	2	—	ASTM	A663	70	—	70/39 [485/270]	Bars & Shapes	C
1	2	—	ASTM	A663	75	—	75/41 [515/285]	Bars & Shapes	C
1	2	11.1	ASTM	A668	C	G10250	66/33 [455/230]	Forgings	C
1	2	11.1	ASTM	A668	D	G10300	75/37 [515/255]	Forgings	C
1	2	11.1	ASTM/ASME	A/SA-671	CC70	K02700	70/38 [485/260]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-671	CK75	K02803	75/40 [515/275]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-671	CB70	K03101	70/38 [485/260]	Fusion Welded Pipe	C-Si
1	2	1.2	ASTM/ASME	A/SA-671	CD70	K12437	70/50 [485/345]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-672	C70	K02700	70/38 [485/260]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-672	N75	K02803	75/40 [515/275]	Fusion Welded Pipe	C-Mn-Si
1	2	11.1	ASTM/ASME	A/SA-672	B70	K03101	70/38 [485/260]	Fusion Welded Pipe	C-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys								
1	2	ASTM/ASME	A/SA-672	D70	K12437	70/45 [485/310]	Fusion Welded Pipe	C-Mn-Si
1	2	ASTM/ASME	A/SA-675	70	—	70/35 [485/240]	Bar	C
1	2	ASTM	A678	A	K01600	70/50 [485/345]	Plate	C-Mn-Si
1	2	ASTM	A690	—	K12249	70/50 [485/345]	Marine Piling-Plate & Bar	0.75Mn-0.6Ni-0.12P
1	2	ASTM/ASME	A/SA-691	CMS-75	K02803	75/40 [515/275]	Fusion Welded Pipe	C-Mn-Si
1	2	ASTM/ASME	A/SA-691	CMSH-70	K12437	65/45 [450/310]	Fusion Welded Pipe	C-Mn-Si
1	2	ASTM/ASME	A/SA-691	CMSH-70	K12437	>2.5 and <4 [>64 and <102]	Fusion Welded Pipe	C-Mn-Si
1	2	ASTM	A694	F56	K03014	68/56 [470/385]	Forgings	C-Mn
1	2	ASTM	A694	F60	K03014	75/60 [515/415]	Forgings	C-Mn
1	2	ASTM	A694	F65	K03014	77/65 [530/450]	Forgings	C-Mn
1	2	ASTM/ASME	A/SA-695	B, 40	K03504	70/40 [485/275]	Bar	C
1	2	ASTM/ASME	A/SA-696	C	K03200	70/40 [485/275]	Bar	C-Mn-Si
1	2	ASTM	A707	L2, Cl. 3	K03301	75/60 [515/415]	Forgings	C-Mn
1	2	ASTM	A707	L4, Cl. 3	K12089	75/60 [515/415]	Forgings	1.8Ni-0.6Mn-0.3Mo
1	2	ASTM	A707	L3, Cl. 3	K12510	75/60 [515/415]	Forgings	C-Mn-V-N
1	2	ASTM	A707	L5, Cl. 3	K20934	75/60 [515/415]	Forgings	1.2Cu-1Ni-0.7Cr-0.5Mn
1	2	ASTM	A709	50W, A	—	70/50 [485/345]	Plate, Bar & Shapes	C-Mn
1	2	ASTM	A709	50W, B	—	70/50 [485/345]	Plate, Bar & Shapes	C-Mn
1	2	ASTM	A709	HPS 50W	—	70/50 [485/345]	Plate, Bar & Shapes	C-Mn
1	2	ASTM/ASME	A/SA-737	B	K12001	70/50 [485/345]	Plate	C-Mn-Si-Cb
1	2	ASTM/ASME	A/SA-738	A	K12447	75/45 [515/310]	Plate	C-Mn-Si
1	2	ASTM/ASME	A/SA-765	II	K03047	70/36 [485/250]	Forgings	C-Mn-Si
1	2	ASTM	A830	1025	G10250	43/25 [295/170]	Plate	C
1	2	ASTM/ASME	A/SA-841	A, Cl. 1	—	65/45 [450/310]	Plate	C-Mn-Si
1	2	ASTM/ASME	A/SA-841	A, Cl. 1	—	70/50 [485/345]	Plate	C-Mn-Si
1	2	ASTM	A860	WPHY 60	—	75/60 [515/415]	Seamless & Welded Fittings	C-Mn
1	2	ASTM	A860	WPHY 65	—	77/65 [530/450]	Seamless & Welded Fittings	C-Mn
1	2	ASTM	A913	50	—	65/50 [450/345]	Shapes	C-Mn-Ni-Cr-Cb-V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1	2	1.3	ASTM	A935	55 Cl. 1	—	70/55 [485/380]	Sheet & Strip	C-Mn-Cb-V
1	2	11.1	ASTM	A935	60 Cl. 1	—	75/60 [515/415]	Sheet & Strip	C-Mn-Cb-V
1	2	1.3	ASTM	A935	60 Cl. 2	—	70/60 [485/415]	Sheet & Strip	C-Mn-Cb-V
1	2	1.3	ASTM	A935	65 Cl. 2	—	75/65 [515/450]	Sheet & Strip	C-Mn-Cb-V
1	2	1.2	ASTM	A984	50	—	70/50 [485/345]	Pipe	C
1	2	1.3	ASTM	A984	60	—	75/60 [515/415]	Pipe	C
1	2	1.3	ASTM	A1008	HSLAS 55 Cl. 1	—	70/55 [485/380]	Sheet	C
1	2	11.1	ASTM	A1008	HSLAS 60 Cl. 1	—	75/60 [515/415]	Sheet	C
1	2	1.3	ASTM	A1008	HSLAS 60 Cl. 2	—	70/60 [485/415]	Sheet	C
1	2	1.3	ASTM	A1008	HSLAS 65 Cl. 2	—	75/65 [515/450]	Sheet	C
1	2	1.3	ASTM	A1008	HSLAS-F 60	—	70/60 [485/415]	Sheet	C
1	2	1.3	ASTM/ASME	A/SA-1011	HSLAS 55 Cl. 1	—	70/55 [485/380]	Sheet & Strip	C
1	2	1.3	ASTM/ASME	A/SA-1011	HSLAS 60 Cl. 1	—	75/60 [515/415]	Sheet & Strip	C
1	2	1.3	ASTM	A1011	HSLAS 60 Cl. 2	—	70/60 [485/415]	Sheet & Strip	C
1	2	1.3	ASTM/ASME	A/SA-1011	HSLAS 60 Cl. 2	—	70/60 [485/415]	Sheet & Strip	C
1	2	1.3	ASTM	A1011	HSLAS 65 Cl. 2	—	75/65 [515/450]	Sheet & Strip	C
1	2	1.3	ASTM	A1011	HSLAS-F 60	—	70/60 [485/415]	Sheet & Strip	C
1	2	1.3	ASTM/ASME	A/SA-1011	SS 55	—	70/55 [485/380]	Sheet & Strip	C
1	2	1.3	ASTM/ASME	A/SA-1011	SS 60	—	75/60 [515/415]	Sheet & Strip	C
1	2	1.3	ASTM	A1018	HSLAS 55 Cl. 1	—	70/55 [485/380]	Sheet & Strip	C
1	2	11.1	ASTM	A1018	HSLAS 60 Cl. 1	—	70/60 [485/415]	Sheet & Strip	C
1	2	1.3	ASTM	A1018	HSLAS 60 Cl. 2	—	70/60 [485/415]	Sheet & Strip	C
1	2	11.1	ASTM	A1018	HSLAS 65 Cl. 1	—	80/65 [550/450]	Sheet & Strip	C
1	2	1.3	ASTM	A1018	HSLAS 65 Cl. 2	—	75/65 [515/450]	Sheet & Strip	C
1	2	1.4	CSA	G40.21	350A	—	70/50 [485/345]	HSLA Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	2	1.4	CSA	G40.21	350AT	—	70/50 [485/345]	HSLA Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	2	1.4	CSA	G40.21	350R	—	70/50 [485/345]	HSLA Plate, Bar & Shapes	C-Mn-P
1	2	1.2	CSA	G40.21	350WT	—	70/50 [485/345]	Plate, Bar & Shapes	C-Mn-Si-Cb-V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Specification							
Steel and Steel Alloys										
1	2	1.3	CSA	G40.21	380W	—		70/55 [485/380]	Plate, Bar & Shapes	C-Mn
1	2	1.3	CSA	G40.21	380WT	—		70/55 [485/380]	Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	2	1.4	CSA	G40.21	400A	—		75/60 [515/415]	HSLA Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	2	1.4	CSA	G40.21	400AT	—		75/60 [515/415]	HSLA Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	2	1.3	CSA	G40.21	400W	—		75/60 [515/415]	HSLA Plate, Bar & Shapes	C-Mn
1	2	1.3	CSA	G40.21	400WT	—		75/60 [515/415]	HSLA Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	2	11.1	CSA	Z245.1	317	—		63/46 [435/315]	Pipe	C-Mn
1	2	11.1	CSA	Z245.1	386	—		71/56 [490/385]	Seamless & Welded Pipe	C-Mn
1	2	11.1	CSA	Z245.1	414	—		75/60 [515/415]	Seamless & Welded Pipe	C-Mn
1	2	11.1	CSA	Z245.1	448	—		77/65 [530/450]	Seamless & Welded Pipe	C-Mn
1	2	11.1	CSA	Z245.11	317	—		63/46 [435/315]	Fittings	C-Mn-Si
1	2	11.1	CSA	Z245.11	359	—		66/52 [455/360]	Fittings	C-Mn-Si
1	2	11.1	CSA	Z245.11	386	—		71/56 [490/385]	Fittings	C-Mn-Si
1	2	11.1	CSA	Z245.12	317	—		63/46 [435/315]	Flanges	C-Mn-Si
1	2	11.1	CSA	Z245.12	359	—		66/52 [455/360]	Flanges	C-Mn-Si
1	2	11.1	CSA	Z245.12	386	—		71/56 [490/385]	Flanges	C-Mn-Si
1	2	11.1	MSS	SP-75	WPHY-56	—		71/56 [490/385]	Seamless & Welded Fittings	C-Mn
1	2	11.1	MSS	SP-75	WPHY-60	—		75/60 [515/415]	Seamless & Welded Fittings	C-Mn
1	2	11.1	MSS	SP-75	WPHY-65	—		77/65 [530/450]	Seamless & Welded Fittings	C-Mn
1	3	11.1	AAR	M201	B+	—		80/50 [550/345]	Castings	C-Mn-Si
1	3	11.1	API	5L	X70	—		83/70 [570/485]	Seamless & Welded Pipe	C-Mn
1	3	2.2	API	5L	X70M	—		83/70 [570/485]	Welded Pipe	C-Mn
1	3	2.2	API	5L	X70MO	—		83/70 [570/485]	Welded Pipe	C-Mn
1	3	2.2	API	5L	X70MS	—		83/70 [570/485]	Welded Pipe	C-Mn
1	3	3.1	API	5L	X70Q	—		83/70 [570/485]	Seamless & Welded Pipe	C-Mn
1	3	3.1	API	5L	X70QO	—		83/70 [570/485]	Seamless & Welded Pipe	C-Mn
1	3	3.1	API	5L	X70QS	—		83/70 [570/485]	Seamless & Welded Pipe	C-Mn
1	3	11.2	AS	1448	K6	—		87/43.5 [600/300]	Forgings	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys								
1	3	11.1 AS	1448 K10	—		84/43.5 [580/300]	Forgings	C-Mn-Si
1	3	11.2 AS	1448 S6	—		87/43.5 [600/300]	Forgings	C-Mn
1	3	2.2 AS/NZS	1594 XF500	—		83/69.5 [570/480]	Plate, Sheet & Strip	C-Mn
1	3	11.1 ASTM/ASME	A/SA-299 B	K02803		80/45 [550/310]	Plate	C-Mn-Si
1	3	11.1 ASTM/ASME	A/SA-333 10	—		80/65 [550/450]	Seamless & Welded Pipe	C-Mn-Si
1	3	4.1 ASTM/ASME	A/SA-350 LF6, Cl.2	K12202		75/60 [515/415]	Forgings	C-Mn-Si-V
1	3	3.3 ASTM/ASME	A/SA-350 LF787, Cl.3	K20747		75/65 [515/450]	Forgings	1Ni-1Cu-0.75Cr-Mo-Nb
1	3	11.1 ASTM	A381 Y65	—		77/65 [530/450]	Welded Pipe	C
1	3	11.1 ASTM	A513 1026 CW	G10260		— [—]	Tube	C
1	3	1.2 ASTM/ASME	A/SA-537 Cl. 2	K12437	>4 and ≤6 >102 and ≤152]	70/46 [485/315]	Plate	C-Mn-Si
1	3	1.2 ASTM/ASME	A/SA-537 Cl. 2	K12437	>2.5 and ≤4 >64 and ≤102]	75/55 [515/380]	Plate	C-Mn-Si
1	3	1.2 ASTM/ASME	A/SA-537 Cl. 2	K12437	≤2.5 [≤64]	80/60 [550/415]	Plate	C-Mn-Si
1	3	1.2 ASTM/ASME	A/SA-537 Cl. 3	K12437	>4 [>102]	70/40 [485/275]	Plate	C-Mn-Si
1	3	1.2 ASTM/ASME	A/SA-537 Cl. 3	K12437	>2.5 and ≤4 >64 and ≤102]	75/50 [515/345]	Plate	C-Mn-Si
1	3	1.2 ASTM/ASME	A/SA-537 Cl. 3	K12437	≤2.5 [≤64]	80/55 [550/380]	Plate	C-Mn-Si
1	3	1.3 ASTM/ASME	A/SA-572 65	—		80/65 [550/450]	Plate & Shapes	C-Mn-Si
1	3	11.1 ASTM	A572 65	—		80/65 [550/450]	Plate, Sheet, Bar & Shapes	C-Mn-Si-Cb-V
1	3	— ASTM	A607 60	—		75/60 [515/415]	Sheet & Strip	C-Mn-Cb-V
1	3	— ASTM	A607 65	—		80/65 [550/450]	Sheet & Strip	C-Mn-Cb-V
1	3	— ASTM	A607 70	—		85/70 [585/485]	Sheet & Strip	C-Mn-Cb-V
1	3	— ASTM	A611 E	G10170		82/80 [565/550]	Sheet & Strip	C
1	3	4.1 ASTM	A633 E	K12202		80/55 [550/380]	Plate	C-Mn-Si-V
1	3	2.2 ASTM/ASME	A/SA-656 T3, 70	—		80/70 [550/485]	Plate	C-Mn-Si-V-Cb
1	3	2.2 ASTM/ASME	A/SA-656 T7, 70	—		80/70 [550/485]	Plate	C-Mn-Si-V-Cb
1	3	1.3 ASTM/ASME	A/SA-656 80	K11804	≤0.75 [≤20]	90/80 [620/550]	Plate	C-Mn-V
1	3	— ASTM	A663 80	—		80/44 [550/305]	Bars & Shapes	C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	3	11.1	ASTM	A668	F	—	>10 and ≤20 [>250 and ≤500]	82/48 [565/330]	Forgings	C
1	3	11.1	ASTM	A668	F	—	>4 and ≤10 [>100 and ≤250]	85/50 [585/345]	Forgings	C
1	3	11.1	ASTM	A668	F	—	≤4 [≤100]	90/55 [620/380]	Forgings	C
1	3	1.2	ASTM/ASME	A/SA-671	CD80	K12437		80/60 [550/415]	Fusion Welded Pipe	C-Mn-Si
1	3	1.2	ASTM/ASME	A/SA-672	D80	K12437		80/46 [550/315]	Fusion Welded Pipe	C-Mn-Si
1	3	—	ASTM/ASME	A/SA-675	80	—		80/40 [550/275]	Bar	C
1	3	1.3	ASTM	A678	B	K02002	≤2.5 [≤65]	80/60 [550/415]	Plate	C-Mn-Si
1	3	1.3	ASTM	A678	C	K02204	>1.5 and ≤2 [>40 and ≤50]	85/65 [585/450]	Plate	C-Mn-Si
1	3	1.2	ASTM/ASME	A/SA-691	CMSH-80	K12437	>2.5 and <4 [>64 and <102]	75/55 [515/380]	Fusion Welded Pipe	C-Mn-Si
1	3	1.2	ASTM/ASME	A/SA-691	CMSH-80	K12437	≤2.5 [≤64]	80/60 [550/415]	Fusion Welded Pipe	C-Mn-Si
1	3	11.1	ASTM	A694	F70	K03014		82/70 [565/485]	Forgings	C-Mn
1	3	4.1	ASTM/ASME	A/SA-737	C	K12202		80/60 [550/415]	Plate	C-Mn-Si-V
1	3	11.1	ASTM/ASME	A/SA-738	C	K02008	>4 and ≤6 [>102 and ≤152]	70/46 [485/315]	Plate	C-Mn-Si
1	3	11.1	ASTM/ASME	A/SA-738	C	K02008	>2.5 and ≤4 [>64 and ≤102]	75/55 [515/380]	Plate	C-Mn-Si
1	3	11.1	ASTM/ASME	A/SA-738	C	K02008	≤2.5 [≤64]	80/60 [550/415]	Plate	C-Mn-Si
1	3	11.1	ASTM/ASME	A/SA-738	B	K12007		85/60 [585/415]	Plate	C-Mn-Si-Cb
1	3	1.1	ASTM/ASME	A/SA-765	IV	K02009		80/50 [550/345]	Forgings	C-Mn-Si
1	3	1.3	ASTM/ASME	A/SA-841	B, Cl. 2	—	>2.5 [>65]	75/55 [515/380]	Plate	C-Mn-Si
1	3	1.3	ASTM/ASME	A/SA-841	B, Cl. 2	—	≤2.5 [≤65]	80/60 [550/415]	Plate	C-Mn-Si
1	3	1.3	ASTM	A860	WPHY 70	—		80/70 [550/485]	Seamless & Welded Fittings	C-Mn-Si
1	3	3.1	ASTM	A913	60	—		75/60 [515/415]	Shapes	C-Mn-Ni-Cr-Cb-V
1	3	3.1	ASTM	A913	65	—		80/65 [550/450]	Shapes	C-Mn-Ni-Cr-Cb-V
1	3	11.1	ASTM	A935	65 Cl. 1	—		80/65 [550/450]	Sheet & Strip	C-Mn-Cb-V
1	3	11.1	ASTM	A935	70 Cl. 1	—		85/70 [585/485]	Sheet & Strip	C-Mn-Cb-V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
1	3	1.3	ASTM	A935	70 Cl. 2	—		80/70 [550/485]	Sheet & Strip	C-Mn-Cb-V
1	3	—	ASTM	A984	70	—		80/70 [550/485]	Pipe	C
1	3	11.1	ASTM	A1008	HSLAS 65 Cl. 1	—		80/65 [550/450]	Sheet	C
1	3	11.1	ASTM	A1008	HSLAS 70 Cl. 1	—		85/70 [585/485]	Sheet	C
1	3	1.3	ASTM	A1008	HSLAS 70 Cl. 2	—		80/70 [550/485]	Sheet	C
1	3	1.3	ASTM	A1008	HSLAS-F 70	—		80/70 [550/485]	Sheet	C
1	3	1.3	ASTM	A1008	SS 80	—		82/80 [565/550]	Sheet	C
1	3	11.1	ASTM	A1011	HSLAS 65 Cl. 1	—		80/65 [550/450]	Sheet & Strip	C
1	3	11.1	ASTM	A1011	HSLAS 70 Cl. 1	—		85/70 [585/485]	Sheet & Strip	C
1	3	1.3	ASTM	A1011	HSLAS 70 Cl. 2	—		80/70 [550/485]	Sheet & Strip	C
1	3	1.3	ASTM	A1011	HSLAS-F 70	—		80/70 [550/485]	Sheet & Strip	C
1	3	1.3	ASTM	A1011	SS 70	—		85/70 [585/485]	Sheet & Strip	C
1	3	11.1	ASTM	A1018	HSLAS 70 Cl. 1	—		80/70 [550/485]	Sheet & Strip	C
1	3	1.3	ASTM	A1018	HSLAS 70 Cl. 2	—		80/70 [550/485]	Sheet & Strip	C
1	3	1.3	ASTM	A1018	HSLAS-F 60	—		70/60 [485/415]	Sheet & Strip	C
1	3	1.3	ASTM	A1018	HSLAS-F 70	—		80/70 [550/485]	Sheet & Strip	C
1	3	1.4	CSA	G40.21	480A	—		85/70 [585/485]	HSLA Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	3	1.4	CSA	G40.21	480AT	—		85/70 [585/485]	HSLA Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	3	11.1	CSA	G40.21	480W	—		85/70 [585/485]	HSLA Plate, Bar & Shapes	C-Mn
1	3	11.1	CSA	G40.21	480WT	—		85/70 [585/485]	HSLA Plate, Bar & Shapes	C-Mn-Si-Cb-V
1	3	11.1	CSA	Z245.1	483	—		82/70 [565/485]	Seamless & Welded Pipe	C-Mn
1	3	11.1	CSA	Z245.11	414	—		75/60 [515/415]	Fittings	C-Mn-Si
1	3	11.1	CSA	Z245.11	448	—		77/65 [530/450]	Fittings	C-Mn-Si
1	3	11.1	CSA	Z245.11	483	—		82/70 [565/485]	Fittings	C-Mn-Si
1	3	11.1	CSA	Z245.12	414	—		75/60 [515/415]	Flanges	C-Mn-Si
1	3	11.1	CSA	Z245.12	448	—		77/65 [530/450]	Flanges	C-Mn-Si
1	3	11.1	CSA	Z245.12	483	—		82/70 [565/485]	Flanges	C-Mn-Si
1	3	11.1	MSS	SP-75	WPHY-70	—		82/70 [565/485]	Seamless & Welded Fittings	C-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO Group Number	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Specification	Standard						
Steel and Steel Alloys										
1	4	AAR	M201		C	—		90/60 [620/415]	Castings	C-Mn-Si
1	4	API	5L		X80M	—		91/80 [625/550]	Welded Pipe	C-Mn
1	4	API	5L		X80MO	—		91/80 [625/550]	Welded Pipe	C-Mn
1	4	API	5L		X80Q	—		91/80 [625/550]	Seamless & Welded Pipe	C-Mn
1	4	API	5L		X80QO	—		91/80 [625/550]	Seamless & Welded Pipe	C-Mn
1	4	ASTM/ASME	A/SA-656		T3, 80	—		90/80 [620/550]	Plate	C-Mn-Si-V-Cb
1	4	ASTM/ASME	A/SA-656		T7, 80	—		90/80 [620/550]	Plate	C-Mn-Si-V-Cb
1	4	ASTM/ASME	A/SA-675		90	—		90/55 [620/380]	Bar	C
1	4	ASTM	A678		C	K02204	>0.75 and ≤1.5 [>20 and ≤40]	90/70 [620/485]	Plate	C-Mn-Si
1	4	ASTM	A678		C	K02204	≤0.75 [≤20]	95/75 [655/515]	Plate	C-Mn-Si
1	4	ASTM	A678		D	K12202	≤3 [≤75]	90/75 [620/515]	Plate	C-Mn-Si-V-N
1	4	ASTM	A707		L5, Cl. 4	K20934		90/75 [620/515]	Forgings	1.2Cu-1Ni-0.7Cr-0.5Mn
1	4	ASTM/ASME	A/SA-724		A	K11831		90/70 [620/485]	Plate	C-Mn-Si
1	4	ASTM/ASME	A/SA-724		B	K12031		95/75 [655/515]	Plate	C-Mn-Si
1	4	ASTM/ASME	A/SA-724		C	K12037		90/70 [620/485]	Plate	C-Mn-Si
1	4	ASTM	A913		70	—		90/70 [620/485]	Shapes	C-Mn-Ni-Cr-Cb-V
1	4	ASTM	A984		80	—		90/80 [620/550]	Pipe	C
1	4	ASTM	A1008		HSLAS-F 80	—		90/80 [620/550]	Sheet	C
1	4	ASTM	A1011		HSLAS-F 80	—		90/80 [620/550]	Sheet & Strip	C
1	4	ASTM	A1011		SS 80	—		90/80 [620/550]	Sheet & Strip	C
1	4	ASTM	A1018		HSLAS-F 80	—		90/80 [620/550]	Sheet & Strip	C
1	4	CSA	G40.21		550A	—		90/80 [620/550]	Plate, Bar & Shapes	C-Mn-Si
1	4	CSA	G40.21		550AT	—		90/80 [620/550]	Plate, Bar & Shapes	C-Mn-Si
1	4	CSA	G40.21		550W	—		90/80 [620/550]	Plate, Bar & Shapes	C-Mn
1	4	CSA	G40.21		550WT	—		90/80 [620/550]	Plate, Bar & Shapes	C-Mn-Si
1	4	CSA	Z245.1		550	—		90/80 [620/550]	Seamless & Welded Pipe	C-Mn
1	4	CSA	Z245.1		620	—		100/90 [690/620]	Seamless & Welded Pipe	C-Mn
1	4	CSA	Z245.11		550	—		90/80 [620/550]	Fittings	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
1A	4	—	ASTM	A615	40	—	60/40 [415/275]	Rebar	C
1A	4	—	ASTM	A615	60	—	90/60 [620/415]	Rebar	C
1A	4	1.3	ASTM	A706	60	—	80/60 [550/415]	Rebar	C
1A	4	—	CSA	G30.18	300R	—	60/40 [415/275]	Rebar	C
1A	4	—	CSA	G30.18	400R	—	78.5/58 [540/400]	Rebar	C
1A	4	11.1	CSA	G30.18	400W	—	78.5/58 [540/400]	Rebar	C
1A	4	—	CSA	G30.18	500R	—	98/72.5 [675/500]	Rebar	C
1A	4	11.1	CSA	G30.18	500W	—	90.5/72.5 [625/500]	Rebar	C
3	1	1.4	AS/NZS	3678	WR350	—	65/50 [450/340]	Plate	C-Mn-Cr-Ni-Cu
3	1	1.4	AS/NZS	3678	WR350L0	—	65/50 [450/340]	Plate	C-Mn-Cr-Ni-Cu
3	1	1.1	ASTM	A161	T1	K11522	55/30 [380/205]	Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-204	A	K11820	65/37 [450/255]	Plate	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-209	T1b	K11422	53/28 [365/195]	Seamless Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-209	T1	K11522	55/30 [380/205]	Seamless Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-209	T1a	K12023	60/32 [415/220]	Seamless Tube	C-0.5Mo
3	1	4.2	ASTM/ASME	A/SA-213	T2	K11547	60/30 [415/205]	Seamless Tube	0.5Cr-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-217	WC1	J12524	65/35 [450/240]	Castings	C-0.5Mo
3	1	11.2	ASTM/ASME	A/SA-234	WP1	K12821	55/30 [380/205]	Piping Fittings	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-250	T1b	K11422	53/28 [365/195]	E.R.W. Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-250	T1	K11522	55/30 [380/205]	E.R.W. Tube	C-0.5Mo
3	1	4.2	ASTM/ASME	A/SA-250	T2	K11547	60/30 [415/205]	E.R.W. Tube	0.5Cr-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-250	T1a	K12023	60/32 [415/220]	E.R.W. Tube	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-335	P1	K11522	55/30 [380/205]	Seamless Pipe	C-0.5Mo
3	1	4.2	ASTM/ASME	A/SA-335	P2	K11547	55/30 [380/205]	Seamless Pipe	0.5Cr-0.5Mo
3	1	—	ASTM/ASME	A/SA-335	P15	K11578	60/30 [415/205]	Seamless Pipe	1.5Si-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-352	LC1	J12522	65/35 [450/240]	Castings	C-0.5Mo
3	1	1.1	ASTM	A356	2	J12523	65/35 [450/240]	Castings	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-369	FP1	K11522	55/30 [380/205]	Forged Pipe	C-0.5Mo

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Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
3	1	4.2	ASTM/ASME	A/SA-369	FP2	K11547		55/30 [380/205]	Forged Pipe	0.5Cr-0.5Mo
3	1	4.2	ASTM/ASME	A/SA-387	2, Cl. 1	K12143		55/33 [380/230]	Plate	0.5Cr-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-426	CP15	J11522		60/30 [415/205]	Centrifugal Cast Pipe	C-0.5Mo-Si
3	1	4.2	ASTM/ASME	A/SA-426	CP2	J11547		60/30 [415/205]	Centrifugal Cast Pipe	0.5Cr-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-426	CP1	J12521		65/35 [450/240]	Centrifugal Cast Pipe	C-0.5Mo
3	1	1.4	ASTM	A588	K	—	>5 and ≤8 >125 and ≤200]	63/42 [435/290]	Plate & Bar	Mn-0.6Cr-0.4Cu-Si-Nb
3	1	1.4	ASTM	A588	K	—	>4 and ≤5 >100 and ≤125]	67/46 [460/315]	Plate & Bar	Mn-0.6Cr-0.4Cu-Si-Nb
3	1	1.4	ASTM	A588	K	—		70/50 [485/345]	Shapes	Mn-0.6Cr-0.4Cu-Si-Nb
3	1	1.4	ASTM	A588	K	—	≤4 [≤100]	70/50 [485/345]	Plate & Bar	Mn-0.6Cr-0.4Cu-Si-Nb
3	1	1.4	ASTM	A588	A	K11430	>5 and ≤8 >125 and ≤200]	63/42 [435/290]	Plate & Bar	Mn-0.5Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	A	K11430	>4 and ≤5 >100 and ≤125]	67/46 [460/315]	Plate & Bar	Mn-0.5Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	A	K11430		70/50 [485/345]	Shapes	Mn-0.5Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	A	K11430	≤4 [≤100]	70/50 [485/345]	Plate & Bar	Mn-0.5Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	C	K11538	>5 and ≤8 >125 and ≤200]	63/42 [435/290]	Plate & Bar	Mn-0.4Cr-0.4Cu-Si-V
3	1	1.4	ASTM	A588	C	K11538	>4 and ≤5 >100 and ≤125]	67/46 [460/315]	Plate & Bar	Mn-0.4Cr-0.4Cu-Si-V
3	1	1.4	ASTM	A588	C	K11538		70/50 [485/345]	Shapes	Mn-0.4Cr-0.4Cu-Si-V
3	1	1.4	ASTM	A588	C	K11538	≤4 [≤100]	70/50 [485/345]	Plate & Bar	Mn-0.4Cr-0.4Cu-Si-V
3	1	1.4	ASTM	A588	B	K12043	>5 and ≤8 >125 and ≤200]	63/42 [435/290]	Plate & Bar	Mn-0.6Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	B	K12043	>4 and ≤5 >100 and ≤125]	67/46 [460/315]	Plate & Bar	Mn-0.6Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	B	K12043		70/50 [485/345]	Shapes	Mn-0.6Cr-0.3Cu-Si-V
3	1	1.4	ASTM	A588	B	K12043	≤4 [≤100]	70/50 [485/345]	Plate & Bar	Mn-0.6Cr-0.3Cu-Si-V
3	1	11.1	ASTM	A595	C	K11526		70/60 [485/415]	Welded Tube	Low C

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
3	1	1.1	ASTM/ASME	A/SA-672	L65	K11820		65/37 [450/255]	Fusion Welded Pipe	C-0.5Mo
3	1	1.1	ASTM/ASME	A/SA-691	CM-65	K11820		65/37 [450/255]	Fusion Welded Pipe	C-0.5Mo
3	1	4.2	ASTM/ASME	A/SA-691	0.5Cr, Cl. 1	K12143		55/33 [380/230]	Fusion Welded Pipe	0.5Cr-0.5Mo
3	1	—	ASTM	A707	L6, Cl. 1	K02902		60/42 [415/290]	Forgings	2Mn-0.3Mo-Cb
3	1	—	ASTM	A707	L6, Cl. 2	K02902		66/52 [455/360]	Forgings	2Mn-0.3Mo-Cb
3	1	1.2	ASTM	A1066	50	—		65/50 [450/345]	Plate	Mn-Ni-Cr-Mo
3	2	4.2	ASTM/ASME	A/SA-182	F2	K12122		70/40 [485/275]	Forgings	0.5Cr-0.5Mo
3	2	1.1	ASTM/ASME	A/SA-182	F1	K12822		70/40 [485/275]	Forgings	C-0.5Mo
3	2	1.1	ASTM/ASME	A/SA-204	B	K12020		70/40 [485/275]	Plate	C-0.5Mo
3	2	1.2	ASTM/ASME	A/SA-204	C	K12320		75/43 [515/295]	Plate	C-0.5Mo
3	2	1.1	ASTM/ASME	A/SA-336	F1	K12520		70/40 [485/275]	Forgings	C-0.5Mo
3	2	4.2	ASTM/ASME	A/SA-387	2, Cl. 2	K12143		70/45 [485/310]	Plate	0.5Cr-0.5Mo
3	2	1.2	ASTM/ASME	A/SA-672	L70	K12020		70/40 [485/275]	Fusion Welded Pipe	C-0.5Mo
3	2	1.1	ASTM/ASME	A/SA-672	H75	K12021		75/45 [515/310]	Fusion Welded Pipe	Mn-0.5Mo
3	2	1.2	ASTM/ASME	A/SA-672	L75	K12320		75/43 [515/295]	Fusion Welded Pipe	C-0.5Mo
3	2	1.2	ASTM/ASME	A/SA-691	CM-70	K12020		70/40 [485/275]	Fusion Welded Pipe	C-0.5Mo
3	2	4.2	ASTM/ASME	A/SA-691	0.5Cr, Cl. 2	K12143		70/45 [485/310]	Fusion Welded Pipe	0.5Cr-0.5Mo
3	2	1.2	ASTM/ASME	A/SA-691	CM-75	K12320		75/43 [515/295]	Fusion Welded Pipe	C-0.5Mo
3	2	—	ASTM	A707	L6, Cl. 3	K02902		75/60 [515/415]	Forgings	2Mn-0.3Mo-Cb
3	2	4.2	ASTM	A871	60	—		75/60 [515/415]	Plate	C-Mn-Ni-Cr-Cu-V
3	2	2.1	ASTM	A1066	60	—		75/60 [515/415]	Plate	Mn-Ni-Cr-Mo
3	3	4.1	ASTM	A108	8620	G86200		— [—]	Bar	0.5Ni-0.5Cr-Mo
3	3	2.1	ASTM/ASME	A/SA-487	2, Cl. A	J13005		85/53 [585/365]	Castings	Mn-0.25Mo-V
3	3	2.1	ASTM/ASME	A/SA-487	2, Cl. B	J13005		90/65 [620/450]	Castings	Mn-0.25Mo-V
3	3	3.1	ASTM/ASME	A/SA-487	4, Cl. A	J13047		90/60 [620/415]	Castings	0.5Ni-0.5Cr-0.25Mo-V
3	3	3.1	ASTM/ASME	A/SA-487	4, Cl. C	J13047		90/60 [620/415]	Castings	0.5Ni-0.5Cr-0.25Mo-V
3	3	3.1	ASTM/ASME	A/SA-508	3, Cl. 1	K12042		80/50 [550/345]	Forgings	0.75Ni-0.5Mo-Cr-V
3	3	3.1	ASTM/ASME	A/SA-508	3, Cl. 2	K12042		90/65 [620/450]	Forgings	0.75Ni-0.5Mo-Cr-V

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Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Mechanical Properties		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]	Elongation, %		
Steel and Steel Alloys										
3	3	3.1	ASTM/ASME A/SA-508	2, Cl.1	K12766		80/50 [550/345]	15	Forgings	0.75Ni-0.5Mo-0.3Cr-V
3	3	3.1	ASTM/ASME A/SA-508	2, Cl.2	K12766		90/65 [620/450]	15	Forgings	0.75Ni-0.5Mo-0.3Cr-V
3	3	3.1	ASTM/ASME A/SA-508	4N, Cl.3	K22375		90/70 [620/485]	15	Forgings	3.5Ni-1.75Cr-0.5Mo-V
3	3	3.1	ASTM/ASME A/SA-533	A, Cl. 1	K12521		80/50 [550/345]	15	Plate	Mn-0.5Mo
3	3	3.1	ASTM/ASME A/SA-533	A, Cl. 2	K12521		90/70 [620/485]	15	Plate	Mn-0.5Mo
3	3	3.1	ASTM/ASME A/SA-533	D, Cl. 1	K12529		80/50 [550/345]	15	Plate	Mn-0.5Mo-0.25Ni
3	3	3.1	ASTM/ASME A/SA-533	D, Cl. 2	K12529		90/70 [620/485]	15	Plate	Mn-0.5Mo-0.25Ni
3	3	3.1	ASTM/ASME A/SA-533	B, Cl. 1	K12539		80/50 [550/345]	15	Plate	Mn-0.5Mo-0.5Ni
3	3	3.1	ASTM/ASME A/SA-533	B, Cl. 2	K12539		90/70 [620/485]	15	Plate	Mn-0.5Mo-0.5Ni
3	3	3.1	ASTM/ASME A/SA-533	C, Cl. 1	K12554		80/50 [550/345]	15	Plate	Mn-0.5Mo-0.75Ni
3	3	3.1	ASTM/ASME A/SA-533	C, Cl. 2	K12554		90/70 [620/485]	15	Plate	Mn-0.5Mo-0.75Ni
3	3	3.1	ASTM/ASME A/SA-533	E, Cl. 1	K12554		80/50 [550/345]	15	Plate	Mn-0.5Mo-0.75Ni
3	3	3.1	ASTM/ASME A/SA-533	E, Cl. 2	K12554		90/70 [620/485]	15	Plate	Mn-0.5Mo-0.75Ni
3	3	4.1	ASTM/ASME A/SA-541	3, Cl.1	K12045		80/50 [550/345]	15	Forgings	0.5Ni-0.5Mo-V
3	3	4.1	ASTM/ASME A/SA-541	3, Cl.2	K12045		90/65 [620/450]	15	Forgings	0.5Ni-0.5Mo-V
3	3	4.2	ASTM/ASME A/SA-541	2, Cl.1	K12765		80/50 [550/345]	15	Forgings	0.75Ni-0.5Mo-0.3Cr-V
3	3	4.2	ASTM/ASME A/SA-541	2, Cl.2	K12765		90/65 [620/450]	15	Forgings	0.75Ni-0.5Mo-0.3Cr-V
3	3	3.1	ASTM/ASME A/SA-543	C Cl. 3	—		90/70 [620/485]	15	Plate	2.75Ni-1.5Cr-0.5Mo
3	3	3.1	ASTM/ASME A/SA-543	B Cl. 3	K42339		90/70 [620/485]	15	Plate	3Ni-1.75Cr-0.5Mo
3	3	3.1	ASTM/ASME A/SA-672	J80	—		80/50 [550/345]	15	Fusion Welded Pipe	Mn-0.5Mo-0.75Ni
3	3	3.1	ASTM/ASME A/SA-672	J90	—		90/70 [620/485]	15	Fusion Welded Pipe	Mn-0.5Mo-0.75Ni
3	3	1.2	ASTM/ASME A/SA-672	H80	K12022		80/50 [550/345]	15	Fusion Welded Pipe	Mn-0.5Mo
3	3	2.2	ASTM/ASME A/SA-841	F, Cl. 6	—		82/70 [565/485]	15	Plate	Mn-0.85Ni-0.30Cr-0.50Mo
3	3	2.2	ASTM/ASME A/SA-841	F, Cl. 7	—		86/75 [595/515]	15	Plate	Mn-0.85Ni-0.30Cr-0.50Mo
3	3	4.2	ASTM A871	65	—		80/65 [550/450]	15	Plate	C-Mn-Ni-Cr-Cu-V
3	3	2.1	ASTM A1066	65	—		80/65 [550/450]	15	Plate	Mn-Ni-Cr-Mo
3	3	2.2	ASTM A1066	70	—		85/70 [585/485]	15	Plate	Mn-Ni-Cr-Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
							Minimum Tensile/Yield			
Steel and Steel Alloys										
3	3	2.2	ASTM	A1066	80	—	90/80	[620/550]	Plate	Mn-Ni-Cr-Mo
3	4	—	ASTM	A707	L6, Cl. 4	K02902	90/75	[620/515]	Forgings	2Mn-0.3Mo-Cb
4	1	5.1	ASTM/ASME	A/SA-182	F12, Cl.1	K11562	60/32	[415/220]	Forgings	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-182	F12, Cl.2	K11564	70/40	[485/275]	Forgings	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-182	F11, Cl.2	K11572	70/40	[485/275]	Forgings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-182	F11, Cl.3	K11572	75/45	[515/310]	Forgings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-182	F11, Cl.1	K11597	60/30	[415/205]	Forgings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM	A199	T11	K11597	60/25	[415/170]	Seamless Tube	1.25Cr-0.5Mo-Si
4	1	4.2	ASTM/ASME	A/SA-202	A	K11742	75/45	[515/310]	Plate	0.5Cr-1.25Mn-Si
4	1	4.2	ASTM/ASME	A/SA-202	B	K12542	85/47	[585/325]	Plate	0.5Cr-1.25Mn-Si
4	1	5.1	ASTM/ASME	A/SA-213	T12	K11562	60/32	[415/220]	Seamless Tube	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-213	T11	K11597	60/30	[415/205]	Seamless Tube	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-217	WC6	J12072	70/40	[485/275]	Castings	1.25Cr-0.5Mo
4	1	9.1	ASTM/ASME	A/SA-217	WC4	J12082	70/40	[485/275]	Castings	1Ni-0.5Cr-0.5Mo
4	1	4.2	ASTM/ASME	A/SA-217	WC5	J22000	70/40	[485/275]	Castings	0.75Ni-1Mo-0.75Cr
4	1	5.1	ASTM/ASME	A/SA-234	WP11, Cl.1	—	60/30	[415/205]	Piping Fittings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-234	WP11, Cl.2	—	70/40	[485/275]	Piping Fittings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-234	WP11, Cl.3	—	75/45	[515/310]	Piping Fittings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-234	WP12, Cl.1	K12062	60/32	[415/220]	Piping Fittings	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-234	WP12, Cl.2	K12062	70/40	[485/275]	Piping Fittings	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-250	T12	K11562	60/32	[415/220]	E.R.W. Tube	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-250	T11	K11597	60/30	[415/205]	E.R.W. Tube	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-335	P12	K11562	60/32	[415/220]	Seamless Pipe	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-335	P11	K11597	60/30	[415/205]	Seamless Pipe	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-336	F12	K11564	70/40	[485/275]	Forgings	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-336	F11, Cl.2	K11572	70/40	[485/275]	Forgings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-336	F11, Cl.3	K11572	75/45	[515/310]	Forgings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-336	F11, Cl.1	K11597	60/30	[415/205]	Forgings	1.25Cr-0.5Mo-Si

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Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
							Minimum Tensile/Yield			
Steel and Steel Alloys										
4	1	6.2	ASTM	A356	8	J11697	80/50	[550/345]	Castings	1Cr-1Mo-V
4	1	5.1	ASTM	A356	6	J12073	70/45	[485/310]	Castings	1.25Cr-0.5Mo
4	1	6.2	ASTM	A356	9	J21610	85/60	[585/415]	Castings	1Cr-1Mo-V
4	1	5.1	ASTM/ASME	A/SA-369	FP12	K11562	60/32	[415/220]	Forged Pipe	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-369	FP11	K11597	60/30	[415/205]	Forged Pipe	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-387	12, Cl. 1	K11757	55/33	[380/230]	Plate	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-387	12, Cl. 2	K11757	65/40	[450/275]	Plate	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-387	11, Cl. 1	K11789	60/35	[415/240]	Plate	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-387	11, Cl. 2	K11789	75/45	[515/310]	Plate	1.25Cr-0.5Mo-Si
4	1	6.2	ASTM	A389	C23	J12080	70/40	[485/275]	Castings	1.25Cr-0.5Mo-V
4	1	6.2	ASTM	A389	C24	J12092	80/50	[550/345]	Castings	1Cr-1Mo-V
4	1	6.2	ASTM	A405	P24	K11591	80/50	[550/345]	Seamless Pipe	1.25Cr-Mo
4	1	5.1	ASTM/ASME	A/SA-426	CP12	J11562	60/30	[415/205]	Centrifugal Cast Pipe	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-426	CP11	J12072	70/40	[485/275]	Centrifugal Cast Pipe	1.25Cr-0.5Mo
4	1	5.2	ASTM/ASME	A/SA-541	11, Cl. 4	K11572	80/50	[550/345]	Forgings	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-691	1CR, Cl. 1	K11757	55/33	[380/230]	Fusion Welded Pipe	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-691	1CR, Cl. 2	K11757	65/40	[450/275]	Fusion Welded Pipe	1Cr-0.5Mo
4	1	5.1	ASTM/ASME	A/SA-691	1.25CR, Cl. 1	K11789	60/35	[415/240]	Fusion Welded Pipe	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-691	1.25CR, Cl. 2	K11789	75/45	[515/310]	Fusion Welded Pipe	1.25Cr-0.5Mo-Si
4	1	5.1	ASTM/ASME	A/SA-739	B11	K11797	70/45	[485/310]	Bar	1.25Cr-0.5Mo
4	2	4.1	ASTM/ASME	A/SA-333	4	K11267	60/35	[415/240]	Seamless & Welded Pipe	0.75Cr-0.75Ni-Cu-Al
4	2	5.1	ASTM/ASME	A/SA-423	1	K11535	60/37	[415/255]	Seamless & Welded Tube	0.75Cr-0.5Ni-Cu
4	2	5.1	ASTM/ASME	A/SA-423	2	K11540	60/37	[415/255]	Seamless & Welded Tube	0.75Ni-0.5Cu-Mo
4	3	—	ASTM	A148	90-60	D50600	90/60	[620/415]	Castings	C
5A	1	5.2	ASTM/ASME	A/SA-182	F22, Cl.1	K21590	60/30	[415/205]	Forgings	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-182	F22, Cl.3	K21590	75/45	[515/310]	Forgings	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-182	F21	K31545	75/45	[515/310]	Forgings	3Cr-1Mo
5A	1	5.2	ASTM	A199	T22	K21590	60/25	[415/170]	Seamless Tube	2.25Cr-1Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
								Minimum Tensile/Yield			
Steel and Steel Alloys											
5A	1	—	ASTM	A199	T4	K31509		60/25 [415/170]		Seamless Tube	2.25Cr-0.5Mo-0.75Si
5A	1	—	ASTM	A199	T21	K31545		60/25 [415/170]		Seamless Tube	3Cr-1Mo
5A	1	5.2	ASTM	A200	T22	K21590		60/25 [415/170]		Tube	2.25Cr-1Mo
5A	1	—	ASTM	A200	T4	K31509		60/25 [415/170]		Tube	2.25Cr-0.5Mo-0.75Si
5A	1	—	ASTM	A200	T21	K31545		60/25 [415/170]		Tube	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-213	T22	K21590		60/30 [415/205]		Seamless Tube	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-213	T21	K31545		60/30 [415/205]		Seamless Tube	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-217	WC9	J21890		70/40 [485/275]		Castings	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-234	WP22, Cl.1	K21590		60/30 [415/205]		Piping Fittings	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-234	WP22, Cl.3	K21590		75/45 [515/310]		Piping Fittings	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-250	T22	K21590		60/30 [415/205]		E.R.W. Tube	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-335	P22	K21590		60/30 [415/205]		Seamless Pipe	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-335	P21	K31545		60/30 [415/205]		Seamless Pipe	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-336	F22, Cl.1	K21590		60/30 [415/205]		Forgings	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-336	F22, Cl.3	K21590		75/45 [515/310]		Forgings	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-336	F21, Cl.1	K31545		60/30 [415/205]		Forgings	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-336	F21, Cl.3	K31545		75/45 [515/310]		Forgings	3Cr-1Mo
5A	1	5.2	ASTM	A356	10	J22090		85/55 [585/380]		Castings	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-369	FP22	K21590		60/30 [415/205]		Forged Pipe	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-369	FP21	K31545		60/30 [415/205]		Forged Pipe	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-387	22, Cl. 1	K21590		60/30 [415/205]		Plate	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-387	22, Cl. 2	K21590		75/45 [515/310]		Plate	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-387	21, Cl. 1	K31545		60/30 [415/205]		Plate	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-387	21, Cl. 2	K31545		75/45 [515/310]		Plate	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-426	CP22	J21890		70/40 [485/275]		Centrifugal Cast Pipe	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-426	CP21	J31545		60/30 [415/205]		Centrifugal Cast Pipe	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-691	2.25CR, Cl. 1	K21590		60/30 [415/205]		Fusion Welded Pipe	2.25Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-691	2.25CR, Cl. 2	K21590		75/45 [515/310]		Fusion Welded Pipe	2.25Cr-1Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
							Minimum Tensile/Yield			
Steel and Steel Alloys										
5A	1	5.2	ASTM/ASME	A/SA-691	3CR, Cl. 1	K31545		60/30 [415/205]	Fusion Welded Pipe	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-691	3CR, Cl. 2	K31545		75/45 [515/310]	Fusion Welded Pipe	3Cr-1Mo
5A	1	5.2	ASTM/ASME	A/SA-739	B22	K21390		75/45 [515/310]	Bar	2.25Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-182	F5	K41545		70/40 [485/275]	Forgings	5Cr-0.5Mo
5B	1	5.3	ASTM/ASME	A/SA-182	F5a	K42544		90/65 [620/450]	Forgings	5Cr-0.5Mo
5B	1	5.4	ASTM/ASME	A/SA-182	F9	K90941		85/55 [585/380]	Forgings	9Cr-1Mo
5B	1	5.3	ASTM	A199	T5	K41545		60/25 [415/170]	Seamless Tube	5Cr-0.5Mo
5B	1	5.4	ASTM	A199	T9	K81590		60/25 [415/170]	Seamless Tube	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-213	T5c	K41245		60/30 [415/205]	Seamless Tube	5Cr-0.5Mo-Ti
5B	1	5.3	ASTM/ASME	A/SA-213	T5	K41545		60/30 [415/205]	Seamless Tube	5Cr-0.5Mo
5B	1	5.3	ASTM/ASME	A/SA-213	T5b	K51545		60/30 [415/205]	Seamless Tube	5Cr-0.5Mo-Si
5B	1	5.4	ASTM/ASME	A/SA-213	T9	K90941		60/30 [415/205]	Seamless Tube	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-217	C5	J42045		90/60 [620/415]	Castings	5Cr-0.5Mo
5B	1	5.4	ASTM/ASME	A/SA-217	C12	J82090		90/60 [620/415]	Castings	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-234	WP5, Cl.1	K41545		60/30 [415/205]	Piping Fittings	5Cr-0.5Mo
5B	1	5.3	ASTM/ASME	A/SA-234	WP5, Cl.3	K41545		75/45 [515/310]	Piping Fittings	5Cr-0.5Mo
5B	1	5.4	ASTM/ASME	A/SA-234	WP9, Cl.1	K90941		60/30 [415/205]	Piping Fittings	9Cr-1Mo
5B	1	5.4	ASTM/ASME	A/SA-234	WP9, Cl.3	K90941		75/45 [515/310]	Piping Fittings	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-335	P5c	K41245		60/30 [415/205]	Seamless Pipe	5Cr-0.5Mo-Ti
5B	1	5.3	ASTM/ASME	A/SA-335	P5	K41545		60/30 [415/205]	Seamless Pipe	5Cr-0.5Mo
5B	1	5.3	ASTM/ASME	A/SA-335	P5b	K51545		60/30 [415/205]	Seamless Pipe	5Cr-0.5Mo-Si
5B	1	5.4	ASTM/ASME	A/SA-335	P9	K90941		60/30 [415/205]	Seamless Pipe	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-336	F5	K41545		60/36 [415/250]	Forgings	5Cr-0.5Mo
5B	1	5.3	ASTM/ASME	A/SA-336	F5A	K42544		80/50 [550/345]	Forgings	5Cr-0.5Mo
5B	1	5.4	ASTM/ASME	A/SA-336	F9	K90941		85/55 [585/380]	Forgings	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-369	FP5	K41545		60/30 [415/205]	Forged Pipe	5Cr-0.5Mo
5B	1	5.4	ASTM/ASME	A/SA-369	FP9	K90941		60/30 [415/205]	Forged Pipe	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-387	5, Cl. 1	K41545		60/30 [415/205]	Plate	5Cr-0.5Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
5B	1	5.3	ASTM/ASME	A/SA-387	5, Cl. 2	K41545		75/45 [515/310]	Plate	5Cr-0.5Mo
5B	1	5.4	ASTM/ASME	A/SA-387	9, Cl. 1	K90941		60/30 [415/205]	Plate	9Cr-1Mo
5B	1	5.4	ASTM/ASME	A/SA-387	9, Cl. 2	K90941		75/45 [515/310]	Plate	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-426	CP5	J42045		90/60 [620/415]	Centrifugal Cast Pipe	5Cr-0.5Mo
5B	1	5.3	ASTM/ASME	A/SA-426	CP5b	J51545		60/30 [415/205]	Centrifugal Cast Pipe	5Cr-1.5Si-0.5Mo
5B	1	5.4	ASTM/ASME	A/SA-426	CP9	J82090		90/60 [620/415]	Centrifugal Cast Pipe	9Cr-1Mo
5B	1	5.3	ASTM/ASME	A/SA-691	5CR, Cl. 1	K41545		60/30 [415/205]	Fusion Welded Pipe	5Cr-0.5Mo
5B	1	5.3	ASTM/ASME	A/SA-691	5CR, Cl. 2	K41545		75/45 [515/310]	Fusion Welded Pipe	5Cr-0.5Mo
5C	1	6.2	ASTM/ASME	A/SA-182	F3VCb	K31390		85/60 [585/415]	Forgings	3Cr-1Mo-0.25V-Cb-Ca
5C	1	6.2	ASTM/ASME	A/SA-182	F3V	K31830		85/60 [585/415]	Forgings	3Cr-1Mo-V-Ti-B
5C	1	6.2	ASTM/ASME	A/SA-182	F22V	K31835		85/60 [585/415]	Forgings	2.25Cr-1Mo-V
5C	1	6.2	ASTM/ASME	A/SA-336	F3VCb	K31390		85/60 [585/415]	Forgings	3Cr-1Mo-0.25V-Cb-Ca
5C	1	6.2	ASTM/ASME	A/SA-336	F3V	K31830		85/60 [585/415]	Forgings	3Cr-1Mo-V-Ti-B
5C	1	6.2	ASTM/ASME	A/SA-336	F22V	K31835		85/60 [585/415]	Forgings	2.25Cr-1Mo-V
5C	1	5.2	ASTM/ASME	A/SA-487	8, Cl. A	J22091		85/55 [585/380]	Castings	2.25Cr-1Mo
5C	1	5.2	ASTM/ASME	A/SA-508	22, Cl. 3	K21590		85/55 [585/380]	Forgings	2.25Cr-1Mo
5C	1	6.2	ASTM/ASME	A/SA-508	3VCb	K31390		85/60 [585/415]	Forgings	3Cr-1Mo-0.25V-Cb-Ca
5C	1	6.2	ASTM/ASME	A/SA-508	3V	K31830		85/60 [585/415]	Forgings	3Cr-1Mo-V-Ti-B
5C	1	5.2	ASTM/ASME	A/SA-541	22, Cl. 3	K21390		85/55 [585/380]	Forgings	2.25Cr-1Mo
5C	1	6.2	ASTM/ASME	A/SA-541	3VCb	K31390		85/60 [585/415]	Forgings	3Cr-1Mo-0.25V-Cb-Ca
5C	1	6.2	ASTM/ASME	A/SA-541	3V	K31830		85/60 [585/415]	Forgings	3Cr-1Mo-V-Ti-B
5C	1	5.2	ASTM/ASME	A/SA-541	22V	K31835		85/60 [585/415]	Forgings	2.25Cr-1Mo-V
5C	1	5.2	ASTM/ASME	A/SA-542	A, Cl. 4	K21590		85/55 [585/380]	Plate	2.25Cr-1Mo
5C	1	5.2	ASTM/ASME	A/SA-542	A, Cl. 4a	K21590		85/60 [585/415]	Plate	2.25Cr-1Mo
5C	1	5.2	ASTM/ASME	A/SA-542	B, Cl. 4	K21590		85/55 [585/380]	Plate	2.25Cr-1Mo
5C	1	5.2	ASTM/ASME	A/SA-542	B, Cl. 4a	K21590		85/60 [585/415]	Plate	2.25Cr-1Mo
5C	1	6.2	ASTM/ASME	A/SA-542	E, Cl. 4a	K31390		85/60 [585/415]	Plate	3Cr-1Mo-0.25V-Cb-Ca
5C	1	6.2	ASTM/ASME	A/SA-542	C, Cl. 4	K31830		85/55 [585/380]	Plate	3Cr-1Mo-V-Ti-B

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys								
5C	1	6.2	ASTM/ASME A/SA-542	C, Cl. 4a	K31830	85/60 [585/415]	Plate	3Cr-1Mo-V-Ti-B
5C	1	6.3	ASTM/ASME A/SA-542	D, Cl. 4a	K31835	85/60 [585/415]	Plate	2.25Cr-1Mo-V
5C	1	6.2	ASTM/ASME A/SA-832	23V	—	85/60 [585/415]	Plate	3Cr-1Mo-0.25V-Cb-Ca
5C	1	6.2	ASTM/ASME A/SA-832	21V	K31830	85/60 [585/415]	Plate	3Cr-1Mo-V-Ti-B
5C	1	6.2	ASTM/ASME A/SA-832	22V	K31835	85/60 [585/415]	Plate	2.25Cr-1Mo-V
5C	3	5.2	ASTM/ASME A/SA-542	A, Cl. 3	K21590	95/75 [655/515]	Plate	2.25Cr-1Mo
5C	3	5.2	ASTM/ASME A/SA-542	B, Cl. 3	K21590	95/75 [655/515]	Plate	2.25Cr-1Mo
5C	3	6.2	ASTM/ASME A/SA-542	C, Cl. 3	K31830	95/75 [655/515]	Plate	3Cr-1Mo-V-Ti-B
5C	4	5.2	ASTM/ASME A/SA-487	8, Cl. B	J22091	105/85 [725/585]	Castings	2.25Cr-1Mo
5C	4	5.2	ASTM/ASME A/SA-487	8, Cl. C	J22091	100/75 [690/515]	Castings	2.25Cr-1Mo
5C	4	5.2	ASTM/ASME A/SA-541	22, Cl. 4	K21390	105/85 [725/585]	Forgings	2.25Cr-1Mo
5C	4	5.2	ASTM/ASME A/SA-542	A, Cl. 1	K21590	105/85 [725/585]	Plate	2.25Cr-1Mo
5C	4	5.2	ASTM/ASME A/SA-542	B, Cl. 1	K21590	105/85 [725/585]	Plate	2.25Cr-1Mo
5C	4	6.2	ASTM/ASME A/SA-542	C, Cl. 1	K31830	105/85 [725/585]	Plate	3Cr-1Mo-V-Ti-B
5C	5	5.2	ASTM/ASME A/SA-541	22, Cl. 5	K21390	115/100 [795/690]	Forgings	2.25Cr-1Mo
5C	5	5.2	ASTM/ASME A/SA-542	A, Cl. 2	K21590	115/100 [795/690]	Plate	2.25Cr-1Mo
5C	5	5.2	ASTM/ASME A/SA-542	B, Cl. 2	K21590	115/100 [795/690]	Plate	2.25Cr-1Mo
5C	5	6.2	ASTM/ASME A/SA-542	C, Cl. 2	K31830	115/100 [795/690]	Plate	3Cr-1Mo-V-Ti-B
6	1	7.2	ASTM/ASME A/SA-182	F6a, Cl.1	S41000	70/40 [485/275]	Forgings	13Cr
6	1	7.2	ASTM/ASME A/SA-240	410	S41000	65/30 [450/205]	Plate, Sheet & Strip	13Cr
6	1	7.2	ASTM/ASME A/SA-268	TP410	S41000	60/30 [415/205]	Seamless & Welded Tube	13Cr
6	1	7.2	ASTM/ASME A/SA-276	TP410	S41000	70/40 [485/275]	Bar	13Cr
6	1	7.1	ASTM A473	403	S40300	70/40 [485/275]	Forgings	12Cr
6	1	7.2	ASTM A473	410	S41000	70/40 [485/275]	Forgings	13Cr
6	1	7.1	ASTM/ASME A/SA-479	403	S40300	70/40 [485/275]	Bars & Shapes	12Cr
6	1	7.2	ASTM/ASME A/SA-479	410	S41000	70/40 [485/275]	Bars & Shapes	13Cr
6	1	7.2	ASTM/ASME A/SA-479	XM-30	S41040	70/40 [485/275]	Bars & Shapes	13Cr-Cb
6	2	7.2	ASTM/ASME A/SA-182	F429	S42900	60/35 [415/240]	Forgings	15Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
Steel and Steel Alloys										
6	2	7.2	ASTM/ASME A/SA-240	429	S42900		65/30 [450/205]		Plate, Sheet & Strip	15Cr
6	2	7.2	ASTM/ASME A/SA-268	TP429	S42900		60/35 [415/240]		Seamless & Welded Tube	15Cr
6	2	7.2	ASTM A473	420	S42000		70/35 [485/240]		Forgings	13Cr
6	2	7.2	ASTM A473	429	S42900		65/35 [450/240]		Forgings	15Cr
6	3	7.2	ASTM/ASME A/SA-182	F6a, Cl.2	S41000		85/55 [585/380]		Forgings	13Cr
6	3	7.2	ASTM/ASME A/SA-182	F6a, Cl.3	S41000		110/85 [760/585]		Forgings	13Cr
6	3	7.2	ASTM/ASME A/SA-182	F6a, Cl.4	S41000		130/110 [895/760]		Forgings	13Cr
6	3	7.2	ASTM/ASME A/SA-182	F6b	S41026		110/90 [760/620]		Forgings	13Cr-0.5Mo
6	3	7.2	ASTM/ASME A/SA-217	CA15	J91150		90/65 [620/450]		Castings	13Cr
6	3	7.2	ASTM/ASME A/SA-336	F6	S41000		85/55 [585/380]		Forgings	13Cr
6	3	7.2	ASTM/ASME A/SA-426	CPCA15	J91150		90/65 [620/450]		Centrifugal Cast Pipe	13Cr
6	3	7.2	ASTM/ASME A/SA-487	CA15 Cl. C	J91150		90/60 [620/415]		Castings	13Cr
6	3	7.2	ASTM/ASME A/SA-487	CA15M Cl. A	J91151		90/65 [620/450]		Castings	13Cr-Mo
6	3	7.2	ASTM/ASME A/SA-487	CA15 Cl. B	J91171		90/65 [620/450]		Castings	13Cr
6	3	7.2	ASTM/ASME A/SA-487	CA15 Cl. D	J91171		100/75 [690/515]		Castings	13Cr
6	3	7.2	ASTM A743	CA15	J91150		90/65 [620/450]		Castings	13Cr
6	3	7.2	ASTM A743	CA15M	J91151		90/65 [620/450]		Castings	13Cr-Mo
6	4	7.2	ASTM/ASME A/SA-182	F6NM	S41500		115/90 [795/620]		Forgings	13Cr-4.5Ni-Mo
6	4	7.2	ASTM/ASME A/SA-240	S41500	S41500		115/90 [795/620]		Plate, Sheet & Strip	13Cr-4.5Ni-Mo
6	4	7.2	ASTM/ASME A/SA-268	S41500	S41500		115/90 [795/620]		Seamless & Welded Tube	13Cr-4.5Ni-Mo
6	4	7.2	ASTM/ASME A/SA-352	CA6NM	J91540		110/80 [760/550]		Castings	13Cr-4Ni
6	4	7.2	ASTM A473	414	S41400		65/35 [450/240]		Forgings	12.5Cr-2Ni-Si
6	4	7.2	ASTM/ASME A/SA-479	414	S41400		115/90 [795/620]		Bars & Shapes	12.5Cr-2Ni-Si
6	4	7.2	ASTM/ASME A/SA-479	S41500	S41500		115/90 [795/620]		Bars & Shapes	13Cr-4.5Ni-Mo
6	4	7.2	ASTM/ASME A/SA-487	CA6NM Cl. A	J91540		110/80 [760/550]		Castings	13Cr-4Ni
6	4	7.2	ASTM/ASME A/SA-487	CA6NM Cl. B	J91540		100/75 [690/515]		Castings	13Cr-4Ni
6	4	7.2	ASTM/ASME A/SA-731	S41500	S41500		115/90 [795/620]		Seamless & Welded Pipe	13Cr-4.5Ni-Mo
6	4	7.2	ASTM A743	CA40	J91153		100/70 [690/485]		Castings	13Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
			Standard	Specification							
Steel and Steel Alloys											
6	4	7.2	ASTM	A743	CA6NM	J91540		110/80 [760/550]		Castings	13Cr-4Ni
6	4	7.2	ASTM	A743	CB6	J91804		115/85 [795/585]		Castings	17Cr-5Ni
6	4	7.2	ASTM/ASME	A/SA-815	S41500	S41500		110/90 [760/620]		Fittings	13Cr-4.5Ni-Mo
7	1	7.1	ASTM/ASME	A/SA-240	405	S40500		60/25 [415/170]		Plate, Sheet & Strip	12Cr-Al
7	1	7.1	ASTM/ASME	A/SA-240	409	S40910		55/25 [380/170]		Plate, Sheet & Strip	11Cr-Ti
7	1	7.1	ASTM/ASME	A/SA-240	409	S40920		55/25 [380/170]		Plate, Sheet & Strip	11Cr-Ti
7	1	7.1	ASTM/ASME	A/SA-240	409	S40930		55/25 [380/170]		Plate, Sheet & Strip	11Cr-Ti
7	1	7.2	ASTM/ASME	A/SA-240	410S	S41008		60/30 [415/205]		Plate, Sheet & Strip	13Cr
7	1	7.1	ASTM/ASME	A/SA-268	TP405	S40500		60/30 [415/205]		Seamless & Welded Tube	12Cr-Al
7	1	7.1	ASTM/ASME	A/SA-268	S40800	S40800		55/30 [380/205]		Seamless & Welded Tube	12Cr-Ti
7	1	7.1	ASTM/ASME	A/SA-268	TP409	S40900		55/25 [380/170]		Seamless & Welded Tube	11Cr-Ti
7	1	7.1	ASTM	A473	405	S40500		60/30 [415/205]		Forgings	12Cr-Al
7	1	7.1	ASTM/ASME	A/SA-479	405	S40500		60/25 [415/170]		Bars & Shapes	12Cr-Al
7	1	7.1	ASTM	A743	CC50	J92615		55/- [380/-]		Castings	28Cr-3Ni
7	1	7.2	ASTM/ASME	A/SA-1010	40	S41003		66/40 [455/275]		Plate, Sheet & Strip	12Cr-1Ni
7	1	7.2	ASTM/ASME	A/SA-1010	50	S41003		70/50 [485/350]		Plate, Sheet & Strip	12Cr-1Ni
7	2	7.1	ASTM/ASME	A/SA-182	F430	S43000		60/35 [415/240]		Forgings	17Cr
7	2	7.1	ASTM/ASME	A/SA-240	430	S43000		65/30 [450/205]		Plate, Sheet & Strip	17Cr
7	2	7.1	ASTM/ASME	A/SA-240	439	S43035		60/30 [415/205]		Plate, Sheet & Strip	18Cr-Ti
7	2	7.1	ASTM/ASME	A/SA-240	S43932	S43932		60/30 [415/205]		Plate, Sheet & Strip	18Cr-Ti-Cb
7	2	7.1	ASTM/ASME	A/SA-240	S43940	S43940		62/36 [425/250]		Plate, Sheet & Strip	18Cr-Ti-Cb
7	2	7.1	ASTM/ASME	A/SA-240	—	S44100		60/35 [415/241]		Plate, Sheet & Strip	18Cr-Cb-Ti
7	2	7.1	ASTM/ASME	A/SA-240	S44400	S44400		60/40 [415/275]		Plate, Sheet & Strip	18Cr-2Mo
7	2	7.1	ASTM/ASME	A/SA-268	TP430	S43000		60/35 [415/240]		Seamless & Welded Tube	17Cr
7	2	7.1	ASTM/ASME	A/SA-268	TP439	S43035		60/30 [415/205]		Seamless & Welded Tube	18Cr-Ti
7	2	7.1	ASTM/ASME	A/SA-268	TP430Ti	S43036		60/35 [415/240]		Seamless & Welded Tube	18Cr-Ti
7	2	7.1	ASTM/ASME	A/SA-268	18Cr-2Mo	S44400		60/40 [415/275]		Seamless & Welded Tube	18Cr-2Mo
7	2	7.1	ASTM	A473	430	S43000		70/35 [485/240]		Forgings	17Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
7	2	7.1	ASTM/ASME	A/SA-479	430	S43000		70/40 [485/275]	Bars & Shapes	17Cr
7	2	7.1	ASTM/ASME	A/SA-479	439	S43035		70/40 [485/275]	Bars & Shapes	18Cr-Ti
7	2	7.1	ASTM/ASME	A/SA-479	S44400	S44400		60/45 [415/310]	Bars & Shapes	18Cr-2Mo
7	2	7.1	ASTM/ASME	A/SA-731	TP439	S43035		60/30 [415/205]	Seamless & Welded Pipe	18Cr-Ti
7	2	7.1	ASTM/ASME	A/SA-731	18Cr-2Mo	S44400		60/40 [415/275]	Seamless & Welded Pipe	18Cr-2Mo
7	2	7.1	ASTM/ASME	A/SA-803	TP439	S43035		60/30 [415/205]	Welded Tube	18Cr-Ti
8	1	8.1	ASTM	A167	302B	S30215		75/30 [515/205]	Plate, Sheet & Strip	18Cr-8Ni-2Si
8	1	8.1	ASTM/ASME	A/SA-182	F304	S30400	>5 [>127]	70/30 [485/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-182	F304	S30400		75/30 [515/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-182	F304L	S30403	>5 [>127]	65/25 [450/170]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-182	F304L	S30403		70/25 [485/170]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-182	F304H	S30409	>5 [>127]	70/30 [485/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-182	F304H	S30409		75/30 [515/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-182	F304N	S30451		80/35 [550/240]	Forgings	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-182	F304LN	S30453	>5 [>127]	70/30 [485/205]	Forgings	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-182	F304LN	S30453		75/30 [515/205]	Forgings	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-182	F46	S30600		78/35 [540/240]	Forgings	18Cr-15Ni-4Si
8	1	8.1	ASTM/ASME	A/SA-182	F316	S31600	>5 [>127]	70/30 [485/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-182	F316	S31600		75/30 [515/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-182	F316L	S31603	>5 [>127]	65/25 [450/170]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-182	F316L	S31603		70/25 [485/170]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-182	F316H	S31609	>5 [>127]	70/30 [485/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-182	F316H	S31609		75/30 [515/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-182	F316N	S31651		80/35 [550/240]	Forgings	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-182	F316LN	S31653	>5 [>127]	70/30 [485/205]	Forgings	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-182	F316LN	S31653		75/30 [515/205]	Forgings	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-182	F317	S31700	>5 [>127]	70/30 [485/205]	Forgings	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-182	F317	S31700		75/30 [515/205]	Forgings	18Cr-13Ni-3Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition	
Steel and Steel Alloys										
8	1	8.1	ASTM/ASME	A/SA-182	F317L	S31703	>5 [>127]	65/25 [450/170]	Forgings	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-182	F317L	S31703		70/25 [485/170]	Forgings	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-182	F321	S32100	>5 [>127]	70/30 [485/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-182	F321	S32100		75/30 [515/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-182	F321H	S32109	>5 [>127]	70/30 [485/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-182	F321H	S32109		75/30 [515/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-182	F347	S34700	>5 [>127]	70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-182	F347	S34700		75/30 [515/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-182	F347H	S34709	>5 [>127]	70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-182	F347H	S34709		75/30 [515/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-182	F348	S34800	>5 [>127]	70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-182	F348	S34800		75/30 [515/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-182	F348H	S34809	>5 [>127]	70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-182	F348H	S34809		75/30 [515/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-213	TP304	S30400		75/30 [515/205]	Seamless Tube	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-213	TP304L	S30403		70/25 [485/170]	Seamless Tube	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-213	TP304H	S30409		75/30 [515/205]	Seamless Tube	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-213	—	S30432		86/34 [595/235]	Seamless Tube	18Cr-9Ni-3Cu-Cb-N
8	1	8.1	ASTM/ASME	A/SA-213	TP304N	S30451		80/35 [550/240]	Seamless Tube	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-213	TP304LN	S30453		75/30 [515/205]	Seamless Tube	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-213	TP316	S31600		75/30 [515/205]	Seamless Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-213	TP316L	S31603		70/25 [485/170]	Seamless Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-213	TP316H	S31609		75/30 [515/205]	Seamless Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-213	TP316Ti	S31635		75/30 [515/205]	Seamless Tube	16Cr-12Ni-2Mo-Ti
8	1	8.1	ASTM/ASME	A/SA-213	TP316N	S31651		80/35 [550/240]	Seamless Tube	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-213	TP316LN	S31653		75/30 [515/205]	Seamless Tube	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-213	TP317	S31700		75/30 [515/205]	Seamless Tube	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-213	TP317L	S31703		75/30 [515/205]	Seamless Tube	18Cr-13Ni-3Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	ISO		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Base Metal Specification						
Steel and Steel Alloys										
8	1	8.1	ASTM/ASME	A/SA-213	TP321	S32100		75/30 [515/205]	Seamless Tube	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-213	TP321H	S32109		75/30 [515/205]	Seamless Tube	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-213	S32615	S32615		80/32 [550/220]	Seamless Tube	18Cr-20Ni-5.5Si
8	1	8.1	ASTM/ASME	A/SA-213	TP347	S34700		75/30 [515/205]	Seamless Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-213	TP347H	S34709		75/30 [515/205]	Seamless Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-213	TP347HFG	S34710		80/30 [550/205]	Seamless Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-213	TP347LN	S34751		75/30 [515/205]	Seamless Tube	18Cr-10Ni-Cb-N
8	1	8.1	ASTM/ASME	A/SA-213	TP348	S34800		75/30 [515/205]	Seamless Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-213	TP348H	S34809		75/30 [515/205]	Seamless Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-213	XM-15	S38100		75/30 [515/205]	Seamless Tube	18Cr-18Ni-2Si
8	1	8.1	ASTM/ASME	A/SA-213	—	S38815		78/37 [540/255]	Seamless Tube	14Cr-16Ni--6Si-Cu-Mo
8	1	8.1	ASTM/ASME	A/SA-240	301	S30100		75/30 [515/205]	Plate, Sheet & Strip	17Cr-7Ni
8	1	8.1	ASTM/ASME	A/SA-240	302	S30200		75/30 [515/205]	Plate, Sheet & Strip	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-240	304	S30400		75/30 [515/205]	Plate, Sheet & Strip	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-240	304L	S30403		70/25 [485/170]	Plate, Sheet & Strip	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-240	304H	S30409		75/30 [515/205]	Plate, Sheet & Strip	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-240	304N	S30451		80/35 [550/240]	Plate, Sheet & Strip	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-240	XM-21	S30452		85/40 [585/275]	Plate	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-240	XM-21	S30452		90/50 [620/345]	Sheet & Strip	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-240	304LN	S30453		75/30 [515/205]	Plate, Sheet & Strip	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-240	305	S30500		70/25 [485/170]	Plate, Sheet & Strip	18Cr-11Ni
8	1	8.1	ASTM/ASME	A/SA-240	S30600	S30600		78/35 [540/240]	Plate, Sheet & Strip	18Cr-15Ni-4Si
8	1	8.1	ASTM/ASME	A/SA-240	S30601	S30601		78/37 [540/255]	Plate, Sheet & Strip	17.5Cr-17.5Ni-5.3Si
8	1	8.1	ASTM/ASME	A/SA-240	316	S31600		75/30 [515/205]	Plate, Sheet & Strip	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-240	316L	S31603		70/25 [485/170]	Plate, Sheet & Strip	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-240	316H	S31609		75/30 [515/205]	Plate, Sheet & Strip	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-240	316Ti	S31635		75/30 [515/205]	Plate, Sheet & Strip	16Cr-12Ni-2Mo-Ti
8	1	8.1	ASTM/ASME	A/SA-240	316Cb	S31640		75/30 [515/205]	Plate, Sheet & Strip	16Cr-12Ni-2Mo-Cb

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	ISO		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Base Metal Specification	Standard						
Steel and Steel Alloys										
8	1	8.1	ASTM/ASME	A/SA-240	316N	S31651		80/35 [550/240]	Plate, Sheet & Strip	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-240	316LN	S31653		75/30 [515/205]	Plate, Sheet & Strip	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-240	317	S31700		75/30 [515/205]	Plate, Sheet & Strip	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-240	317L	S31703		75/30 [515/205]	Plate, Sheet & Strip	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-240	S31753	S31753		80/35 [550/240]	Plate, Sheet & Strip	18Cr-13Ni-3Mo-N
8	1	8.1	ASTM/ASME	A/SA-240	321	S32100		75/30 [515/205]	Plate, Sheet & Strip	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-240	321H	S32109		75/30 [515/205]	Plate, Sheet & Strip	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-240	S32615	S32615		80/32 [550/220]	Plate, Sheet & Strip	18Cr-20Ni-5.5Si
8	1	8.1	ASTM/ASME	A/SA-240	347	S34700		75/30 [515/205]	Plate, Sheet & Strip	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-240	347H	S34709		75/30 [515/205]	Plate, Sheet & Strip	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-240	348	S34800		75/30 [515/205]	Plate, Sheet & Strip	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-240	348H	S34809		75/30 [515/205]	Plate, Sheet & Strip	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-240	XM-15	S38100		75/30 [515/205]	Plate, Sheet & Strip	18Cr-18Ni-2Si
8	1	8.1	ASTM/ASME	A/SA-240	—	S38815		78/37 [540/255]	Plate, Sheet & Strip	14Cr-16Ni--6Si-Cu-Mo
8	1	8.1	ASTM/ASME	A/SA-249	—	S38815		78/37 [540/255]	Welded Tube	14Cr-16Ni--6Si-Cu-Mo
8	1	8.1	ASTM/ASME	A/SA-249	TP304	S30400		75/30 [515/205]	Welded Tube	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-249	TP304L	S30403		70/25 [485/170]	Welded Tube	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-249	TP304H	S30409		75/30 [515/205]	Welded Tube	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-249	TP304N	S30451		80/35 [550/240]	Welded Tube	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-249	TP304LN	S30453		75/30 [515/205]	Welded Tube	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-249	TP316	S31600		75/30 [515/205]	Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-249	TP316L	S31603		70/25 [485/170]	Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-249	TP316H	S31609		75/30 [515/205]	Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-249	TP316N	S31651		80/35 [550/240]	Welded Tube	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-249	TP316LN	S31653		75/30 [515/205]	Welded Tube	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-249	TP317	S31700		75/30 [515/205]	Welded Tube	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-249	TP317L	S31703		75/30 [515/205]	Welded Tube	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-249	TP321	S32100		75/30 [515/205]	Welded Tube	18Cr-10Ni-Ti

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Thicknes or Diameter Limitations, in [mm]		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]	Strength, ksi [MPa]		
Steel and Steel Alloys										
8	1	8.1	ASTM/ASME A/SA-249	TP321H	S32109		75/30 [515/205]		Welded Tube	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME A/SA-249	TP347	S34700		75/30 [515/205]		Welded Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME A/SA-249	TP347H	S34709		75/30 [515/205]		Welded Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME A/SA-249	TP348	S34800		75/30 [515/205]		Welded Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME A/SA-249	TP348H	S34809		75/30 [515/205]		Welded Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME A/SA-249	TP XM-15	S38100		75/30 [515/205]		Welded Tube	18Cr-18Ni-2Si
8	1	8.1	ASTM A269	TP304	S30400		—/— [—/—]		Seamless & Welded Tube	18Cr-8Ni
8	1	8.1	ASTM A269	TP304L	S30403		—/— [—/—]		Seamless & Welded Tube	18Cr-8Ni
8	1	8.1	ASTM A269	TP304LN	S30453		75/30 [515/205]		Seamless & Welded Tube	18Cr-8Ni-N
8	1	8.1	ASTM A269	TP316	S31600		—/— [—/—]		Seamless & Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM A269	TP316L	S31603		—/— [—/—]		Seamless & Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM A269	TP316LN	S31653		75/30 [515/205]		Seamless & Welded Tube	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM A269	TP317	S31700		75/30 [515/205]		Seamless & Welded Tube	18Cr-13Ni-3Mo
8	1	8.1	ASTM A269	TP321	S32100		75/30 [515/205]		Seamless & Welded Tube	18Cr-10Ni-Ti
8	1	8.1	ASTM A269	TP347	S34700		75/30 [515/205]		Seamless & Welded Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM A269	TP348	S34800		75/30 [515/205]		Seamless & Welded Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM A270	TP304	S30400		75/30 [515/205]		Seamless & Welded Tube	18Cr-8Ni
8	1	8.1	ASTM A271	TP304	S30400		75/30 [515/205]		Seamless Tube	18Cr-8Ni
8	1	8.1	ASTM A271	TP304H	S30409		75/30 [515/205]		Seamless Tube	18Cr-8Ni
8	1	8.1	ASTM A271	TP316	S31600		75/30 [515/205]		Seamless Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM A271	TP316H	S31609		75/30 [515/205]		Seamless Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM A271	TP321	S32100		75/30 [515/205]		Seamless Tube	18Cr-10Ni-Ti
8	1	8.1	ASTM A271	TP321H	S32109		75/30 [515/205]		Seamless Tube	18Cr-10Ni-Ti
8	1	8.1	ASTM A271	TP347	S34700		75/30 [515/205]		Seamless Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM A271	TP347H	S34709		75/30 [515/205]		Seamless Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME A/SA-276	TP304	S30400		75/30 [515/205]		Bar	18Cr-8Ni
8	1	8.1	ASTM/ASME A/SA-276	TP304L	S30403		70/25 [485/170]		Bar	18Cr-8Ni
8	1	8.1	ASTM/ASME A/SA-276	TP316	S31600		75/30 [515/205]		Bar	16Cr-12Ni-2Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys								
8	1	8.1	ASTM/ASME	A/SA-276	TP316L	S31603	Bar	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-312	TP304	S30400	Seamless & Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-312	TP304L	S30403	Seamless & Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-312	TP304H	S30409	Seamless & Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-312	TP304N	S30451	Seamless & Welded Pipe	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-312	TP304LN	S30453	Seamless & Welded Pipe	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-312	S30600	S30600	Seamless & Welded Pipe	18Cr-15Ni-4Si
8	1	8.1	ASTM/ASME	A/SA-312	TP316	S31600	Seamless & Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-312	TP316L	S31603	Seamless & Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-312	TP316H	S31609	Seamless & Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-312	TP316Ti	S31635	Seamless & Welded Pipe	16Cr-12Ni-2Mo-Ti
8	1	8.1	ASTM/ASME	A/SA-312	TP316N	S31651	Seamless & Welded Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-312	TP316LN	S31653	Seamless & Welded Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-312	TP317	S31700	Seamless & Welded Pipe	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-312	TP317L	S31703	Seamless & Welded Pipe	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-312	TP321	S32100	Seamless Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-312	TP321	S32100	Seamless Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-312	TP321H	S32109	Seamless Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-312	TP321H	S32109	Seamless Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-312	S32615	S32615	Seamless & Welded Pipe	18Cr-20Ni-5.5Si
8	1	8.1	ASTM/ASME	A/SA-312	TP347	S34700	Seamless & Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-312	TP347H	S34709	Seamless & Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-312	TP347LN	S34751	Seamless & Welded Pipe	18Cr-10Ni-Cb-N
8	1	8.1	ASTM/ASME	A/SA-312	TP348	S34800	Seamless & Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-312	TP348H	S34809	Seamless & Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-312	TP XM-15	S38100	Seamless & Welded Pipe	18Cr-18Ni-2Si
8	1	8.1	ASTM/ASME	A/SA-336	F304	S30400	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-336	F304L	S30403	Forgings	18Cr-8Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
							Minimum Tensile/Yield			
Steel and Steel Alloys										
8	1	8.1	ASTM/ASME	A/SA-336	F304H	S30409		70/30 [485/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-336	F304N	S30451		80/35 [550/240]	Forgings	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-336	F304LN	S30453		70/30 [485/205]	Forgings	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-336	F46	S30600		78/32 [540/220]	Forgings	18Cr-15Ni-4Si
8	1	8.1	ASTM/ASME	A/SA-336	F316	S31600		70/30 [485/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-336	F316L	S31603		65/25 [450/170]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-336	F316H	S31609		70/30 [485/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-336	F316N	S31651		80/35 [550/240]	Forgings	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-336	F316LN	S31653		70/30 [485/205]	Forgings	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-336	F321	S32100		70/30 [485/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-336	F321H	S32109		70/30 [485/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-336	F347	S34700		70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-336	F347H	S34709		70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-336	F348	S34800		70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-336	F348H	S34809		65/25 [450/170]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-351	CF3	J92500		70/30 [485/205]	Castings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-351	CF3A	J92500		77/35 [530/240]	Castings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-351	CF10	J92590		70/30 [485/205]	Castings	19Cr-9Ni-0.5Mo
8	1	8.1	ASTM/ASME	A/SA-351	CF8	J92600		70/30 [485/205]	Castings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-351	CF8A	J92600		77/35 [530/240]	Castings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-351	CF8C	J92710		70/30 [485/205]	Castings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-351	CF3M	J92800		70/30 [485/205]	Castings	18Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-351	CF8M	J92900		70/30 [485/205]	Castings	18Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-351	CF10M	J92901		70/30 [485/205]	Castings	19Cr-9Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-351	CF10MC	J92971		70/30 [485/205]	Castings	16Cr-14Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-351	CG8M	J93000		75/35 [515/240]	Castings	19Cr-10Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-358	304	S30400		75/30 [515/205]	Fusion Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-358	304L	S30403		70/25 [485/170]	Fusion Welded Pipe	18Cr-8Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]		Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
8	1	ASTM/ASME	A/SA-358	304H	S30409		75/30 [515/205]	Fusion Welded Pipe	18Cr-8Ni
8	1	ASTM/ASME	A/SA-358	304N	S30451		80/35 [550/240]	Fusion Welded Pipe	18Cr-8Ni-N
8	1	ASTM/ASME	A/SA-358	304LN	S30453		75/30 [515/205]	Fusion Welded Pipe	18Cr-8Ni-N
8	1	ASTM/ASME	A/SA-358	316	S31600		75/30 [515/205]	Fusion Welded Pipe	16Cr-12Ni-2Mo
8	1	ASTM/ASME	A/SA-358	316L	S31603		70/25 [485/170]	Fusion Welded Pipe	16Cr-12Ni-2Mo
8	1	ASTM/ASME	A/SA-358	316H	S31609		75/30 [515/205]	Fusion Welded Pipe	16Cr-12Ni-2Mo
8	1	ASTM/ASME	A/SA-358	316N	S31651		80/35 [550/240]	Fusion Welded Pipe	16Cr-12Ni-2Mo-N
8	1	ASTM/ASME	A/SA-358	316LN	S31653		75/30 [515/205]	Fusion Welded Pipe	16Cr-12Ni-2Mo-N
8	1	ASTM/ASME	A/SA-358	321	S32100		75/30 [515/205]	Fusion Welded Pipe	18Cr-10Ni-Ti
8	1	ASTM/ASME	A/SA-358	347	S34700		75/30 [515/205]	Fusion Welded Pipe	18Cr-10Ni-Cb
8	1	ASTM/ASME	A/SA-358	348	S34800		75/30 [515/205]	Fusion Welded Pipe	18Cr-10Ni-Cb
8	1	ASTM/ASME	A/SA-376	16-8-2H	S16800		75/30 [515/205]	Seamless Pipe	16Cr-8Ni-2Mo
8	1	ASTM/ASME	A/SA-376	TP304	S30400	≤0.812 [≤21]	70/30 [485/205]	Seamless Pipe	18Cr-8Ni
8	1	ASTM/ASME	A/SA-376	TP304	S30400	<0.812 [<21]	75/30 [515/205]	Seamless Pipe	18Cr-8Ni
8	1	ASTM/ASME	A/SA-376	TP304H	S30409		75/30 [515/205]	Seamless Pipe	18Cr-8Ni
8	1	ASTM/ASME	A/SA-376	TP304N	S30451		80/35 [550/240]	Seamless Pipe	18Cr-8Ni-N
8	1	ASTM/ASME	A/SA-376	TP304LN	S30453		75/30 [515/205]	Seamless Pipe	18Cr-8Ni-N
8	1	ASTM/ASME	A/SA-376	TP316	S31600		75/30 [515/205]	Seamless Pipe	16Cr-12Ni-2Mo
8	1	ASTM/ASME	A/SA-376	TP316H	S31609		75/30 [515/205]	Seamless Pipe	16Cr-12Ni-2Mo
8	1	ASTM/ASME	A/SA-376	TP316N	S31651		80/35 [550/240]	Seamless Pipe	16Cr-12Ni-2Mo-N
8	1	ASTM/ASME	A/SA-376	TP316LN	S31653		75/30 [515/205]	Seamless Pipe	16Cr-12Ni-2Mo-N
8	1	ASTM/ASME	A/SA-376	TP321	S32100	>0.375 [>10]	70/25 [485/170]	Seamless Pipe	18Cr-10Ni-Ti
8	1	ASTM/ASME	A/SA-376	TP321	S32100	≤0.375 [≤10]	75/30 [515/205]	Seamless Pipe	18Cr-10Ni-Ti
8	1	ASTM/ASME	A/SA-376	TP321H	S32109	>0.375 [>10]	70/25 [485/170]	Seamless Pipe	18Cr-10Ni-Ti
8	1	ASTM/ASME	A/SA-376	TP321H	S32109	≤0.375 [≤10]	75/30 [515/205]	Seamless Pipe	18Cr-10Ni-Ti
8	1	ASTM/ASME	A/SA-376	TP347	S34700		75/30 [515/205]	Seamless Pipe	18Cr-10Ni-Cb
8	1	ASTM/ASME	A/SA-376	TP347H	S34709		75/30 [515/205]	Seamless Pipe	18Cr-10Ni-Cb
8	1	ASTM/ASME	A/SA-376	TP348	S34800		75/30 [515/205]	Seamless Pipe	18Cr-10Ni-Cb

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
						Minimum Tensile/Yield			
Steel and Steel Alloys									
8	1	ASTM/ASME A/SA-403	WP304	S30400		75/30 [515/205]		Wrought Piping Fittings	18Cr-8Ni
8	1	ASTM/ASME A/SA-403	WP304L	S30403		70/25 [485/170]		Wrought Piping Fittings	18Cr-8Ni
8	1	ASTM/ASME A/SA-403	WP304H	S30409		75/30 [515/205]		Wrought Piping Fittings	18Cr-8Ni
8	1	ASTM/ASME A/SA-403	WP304N	S30451		80/35 [550/240]		Wrought Piping Fittings	18Cr-8Ni-N
8	1	ASTM/ASME A/SA-403	WP304LN	S30453		75/30 [515/205]		Wrought Piping Fittings	18Cr-8Ni-N
8	1	ASTM/ASME A/SA-403	WP316	S31600		75/30 [515/205]		Wrought Piping Fittings	16Cr-12Ni-2Mo
8	1	ASTM/ASME A/SA-403	WP316L	S31603		70/25 [485/170]		Wrought Piping Fittings	16Cr-12Ni-2Mo
8	1	ASTM/ASME A/SA-403	WP316H	S31609		75/30 [515/205]		Wrought Piping Fittings	16Cr-12Ni-2Mo
8	1	ASTM/ASME A/SA-403	WP316N	S31651		80/35 [550/240]		Wrought Piping Fittings	16Cr-12Ni-2Mo-N
8	1	ASTM/ASME A/SA-403	WP316LN	S31653		75/30 [515/205]		Wrought Piping Fittings	16Cr-12Ni-2Mo-N
8	1	ASTM/ASME A/SA-403	WP317	S31700		75/30 [515/205]		Wrought Piping Fittings	18Cr-13Ni-3Mo
8	1	ASTM/ASME A/SA-403	WP317L	S31703		75/30 [515/205]		Wrought Piping Fittings	18Cr-13Ni-3Mo
8	1	ASTM/ASME A/SA-403	WP321	S32100		75/30 [515/205]		Wrought Piping Fittings	18Cr-10Ni-Ti
8	1	ASTM/ASME A/SA-403	WP321H	S32109		75/30 [515/205]		Wrought Piping Fittings	18Cr-10Ni-Ti
8	1	ASTM/ASME A/SA-403	WP347	S34700		75/30 [515/205]		Wrought Piping Fittings	18Cr-10Ni-Cb
8	1	ASTM/ASME A/SA-403	WP347H	S34709		75/30 [515/205]		Wrought Piping Fittings	18Cr-10Ni-Cb
8	1	ASTM/ASME A/SA-403	WP348	S34800		75/30 [515/205]		Wrought Piping Fittings	18Cr-10Ni-Cb
8	1	ASTM/ASME A/SA-403	WP348H	S34809		75/30 [515/205]		Wrought Piping Fittings	18Cr-10Ni-Cb
8	1	ASTM/ASME A/SA-403	WP S38815	S38815		78/37 [540/255]		Wrought Piping Fittings	14Cr-16Ni--6Si-Cu-Mo
8	1	ASTM/ASME A/SA-409	TP304	S30400		75/30 [515/205]		Welded Pipe	18Cr-8Ni
8	1	ASTM/ASME A/SA-409	TP304L	S30403		70/25 [485/170]		Welded Pipe	18Cr-8Ni
8	1	ASTM/ASME A/SA-409	TP316	S31600		75/30 [515/205]		Welded Pipe	16Cr-12Ni-2Mo
8	1	ASTM/ASME A/SA-409	TP316L	S31603		70/25 [485/170]		Welded Pipe	16Cr-12Ni-2Mo
8	1	ASTM/ASME A/SA-409	TP317	S31700		75/30 [515/205]		Welded Pipe	18Cr-13Ni-3Mo
8	1	ASTM/ASME A/SA-409	TP321	S32100		75/30 [515/205]		Welded Pipe	18Cr-10Ni-Ti
8	1	ASTM/ASME A/SA-409	TP347	S34700		75/30 [515/205]		Welded Pipe	18Cr-10Ni-Cb
8	1	ASTM/ASME A/SA-409	TP348	S34800		75/30 [515/205]		Welded Pipe	18Cr-10Ni-Cb
8	1	ASTM A430	FP16-8-2H	S16800		70/30 [485/205]		Forged Pipe	16Cr-8Ni-2Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Steel and Steel Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
8	1	8.1	ASTM	FP304	S30400			70/30 [485/205]	Forged Pipe	18Cr-8Ni
8	1	8.1	ASTM	FP304H	S30409			70/30 [485/205]	Forged Pipe	18Cr-8Ni
8	1	8.1	ASTM	FP304N	S30451			75/35 [515/240]	Forged Pipe	18Cr-8Ni-N
8	1	8.1	ASTM	FP316	S31600			70/30 [485/205]	Forged Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM	FP316H	S31609			70/30 [485/205]	Forged Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM	FP316N	S31651			75/35 [515/240]	Forged Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM	FP321	S32100			70/30 [485/205]	Forged Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM	FP321H	S32109			70/30 [485/205]	Forged Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM	FP347	S34700			70/30 [485/205]	Forged Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM	FP347H	S34709			70/30 [485/205]	Forged Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-451	CPF3	J92500		70/30 [485/205]	Centrifugal Cast Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-451	CPF3A	J92500		77/35 [530/240]	Centrifugal Cast Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-451	CPF8	J92600		70/30 [485/205]	Centrifugal Cast Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-451	CPF8A	J92600		77/35 [530/240]	Centrifugal Cast Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-451	CPF8C	J92710		70/30 [485/205]	Centrifugal Cast Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-451	CPF3M	J92800		70/30 [485/205]	Centrifugal Cast Pipe	18Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-451	CPF8M	J92900		70/30 [485/205]	Centrifugal Cast Pipe	18Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-451	CPF10MC	J92971		70/30 [485/205]	Centrifugal Cast Pipe	16Cr-14Ni-2Mo
8	1	8.1	ASTM	TP304H	S30409			75/30 [515/205]	Centrifugal Cast Pipe	18Cr-8Ni
8	1	8.1	ASTM	TP316H	S31609			75/30 [515/205]	Centrifugal Cast Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM	TP347H	S34709			75/30 [515/205]	Centrifugal Cast Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM	302	S30200			75/30 [515/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM	302B	S30215		>5 [>127]	75/30 [515/205]	Forgings	18Cr-8Ni-2Si
8	1	8.1	ASTM	304	S30400			70/30 [485/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM	304	S30400		≤5 [≤127]	75/30 [515/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM	304L	S30403			65/25 [450/170]	Forgings	18Cr-8Ni
8	1	8.1	ASTM	305	S30500			75/30 [515/205]	Forgings	18Cr-11Ni
8	1	8.1	ASTM	316	S31600		>5 [>127]	70/30 [485/205]	Forgings	16Cr-12Ni-2Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition			
Steel and Steel Alloys										
8	1	8.1	ASTM	A473	316	S31600	≤5 [≤127]	75/30 [515/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM	A473	316L	S31603		65/25 [450/170]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM	A473	317	S31700		75/30 [515/205]	Forgings	18Cr-13Ni-3Mo
8	1	8.1	ASTM	A473	321	S32100		75/30 [515/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM	A473	347	S34700		75/30 [515/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM	A473	348	S34800		75/30 [515/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-479	302	S30200		75/30 [515/205]	Bars & Shapes	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-479	304	S30400		75/30 [515/205]	Bars & Shapes	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-479	304L	S30403		70/25 [485/170]	Bars & Shapes	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-479	304H	S30409		75/30 [515/205]	Bars & Shapes	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-479	304N	S30451		80/35 [550/240]	Bars & Shapes	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-479	304LN	S30453		75/30 [515/205]	Bars & Shapes	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-479	S30600	S30600		78/35 [540/240]	Bars & Shapes	18Cr-15Ni-4Si
8	1	8.1	ASTM/ASME	A/SA-479	316	S31600		75/30 [515/205]	Bars & Shapes	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-479	316L	S31603		70/25 [485/170]	Bars & Shapes	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-479	316H	S31609		75/30 [515/205]	Bars & Shapes	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-479	316Ti	S31635		75/30 [515/205]	Bars & Shapes	16Cr-12Ni-2Mo-Ti
8	1	8.1	ASTM/ASME	A/SA-479	316Cb	S31640		75/30 [515/205]	Bars & Shapes	16Cr-12Ni-2Mo-Cb
8	1	8.1	ASTM/ASME	A/SA-479	316N	S31651		80/35 [550/240]	Bars & Shapes	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-479	316LN	S31653		75/30 [515/205]	Bars & Shapes	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-479	321	S32100		75/30 [515/205]	Bars & Shapes	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-479	321H	S32109		75/30 [515/205]	Bars & Shapes	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-479	S32615	S32615		80/32 [550/220]	Bars & Shapes	18Cr-20Ni-5.5Si
8	1	8.1	ASTM/ASME	A/SA-479	347	S34700		75/30 [515/205]	Bars & Shapes	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-479	347H	S34709		75/30 [515/205]	Bars & Shapes	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-479	348	S34800		75/30 [515/205]	Bars & Shapes	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-479	348H	S34809		75/30 [515/205]	Bars & Shapes	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-479	—	S38815		78/37 [540/255]	Bars & Shapes	14Cr-16Ni--6Si-Cu-Mo

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Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
							Minimum Tensile/Yield			
Steel and Steel Alloys										
8	1	8.1	ASTM	A511	MT 302	S30200	75/30 [515/205]		Seamless Tube	18Cr-8Ni
8	1	8.1	ASTM	A511	MT 304	S30400	75/30 [515/205]		Seamless Tube	18Cr-8Ni
8	1	8.1	ASTM	A511	MT 304L	S30403	75/30 [515/205]		Seamless Tube	18Cr-8Ni
8	1	8.1	ASTM	A511	MT 316	S31600	75/30 [515/205]		Seamless Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM	A511	MT 316L	S31603	75/30 [515/205]		Seamless Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM	A511	MT 317	S31700	75/30 [515/205]		Seamless Tube	18Cr-13Ni-3Mo
8	1	8.1	ASTM	A511	MT 321	S32100	75/30 [515/205]		Seamless Tube	18Cr-10Ni-Ti
8	1	8.1	ASTM	A511	MT 347	S34700	75/30 [515/205]		Seamless Tube	18Cr-10Ni-Cb
8	1	8.1	A554	A554	MT 302	S30200	75/30 [515/205]		Welded Tube	18Cr-8Ni
8	1	8.1	A554	A554	MT 304	S30400	75/30 [515/205]		Welded Tube	18Cr-8Ni
8	1	8.1	A554	A554	MT 304L	S30403	70/25 [485/170]		Welded Tube	18Cr-8Ni
8	1	8.1	A554	A554	MT 316	S31600	75/30 [515/205]		Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	A554	A554	MT 316L	S31603	70/25 [485/170]		Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	A554	A554	MT 317	S31700	75/30 [515/205]		Welded Tube	18Cr-13Ni-3Mo
8	1	8.1	A554	A554	MT 321	S32100	75/30 [515/205]		Welded Tube	18Cr-10Ni-Ti
8	1	8.1	A554	A554	MT 347	S34700	75/30 [515/205]		Welded Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-666	302	S30200	75/30 [515/205]		Plate, Sheet & Strip	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-666	304	S30400	75/30 [515/205]		Plate, Sheet & Strip	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-666	304L	S30403	70/25 [485/170]		Plate, Sheet & Strip	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-666	304N	S30451	80/35 [550/240]		Plate, Sheet & Strip	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-666	304LN	S30453	75/30 [515/205]		Plate, Sheet & Strip	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-666	316	S31600	75/30 [515/205]		Plate, Sheet & Strip	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-666	316L	S31603	70/25 [485/170]		Plate, Sheet & Strip	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-666	316N	S31651	80/35 [550/240]		Plate, Sheet & Strip	16Cr-12Ni-2Mo-N
8	1	—	ASTM/ASME	A/SA-680	80	S46953	80/— [550/—]		Seamless & Welded Fitting	9Cr-25Ni-9Mo-43Fe-11W-20Cb
8	1	8.1	ASTM/ASME	A/SA-688	TP304	S30400	75/30 [515/205]		Welded Tube	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-688	TP304L	S30403	70/25 [485/170]		Welded Tube	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-688	TP304N	S30451	80/35 [550/240]		Welded Tube	18Cr-8Ni-N

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Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy Designation	Base Metal		Thickness or Diameter Limitations, in [mm]	UNS Number	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification					
Steel and Steel Alloys									
8	1	8.1	ASTM/ASME	A/SA-688	TP304LN	S30453	75/30 [515/205]	Welded Tube	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-688	TP316	S31600	75/30 [515/205]	Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-688	TP316L	S31603	70/25 [485/170]	Welded Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-688	TP316N	S31651	80/35 [550/240]	Welded Tube	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-688	TP316LN	S31653	75/30 [515/205]	Welded Tube	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM	A743	CF3	J92500	70/30 [485/205]	Castings	18Cr-8Ni
8	1	8.1	ASTM	A743	CF8	J92600	70/30 [485/205]	Castings	18Cr-8Ni
8	1	8.2	ASTM	A743	CF16F	J92701	70/30 [485/205]	Castings	20Cr-11Ni-0.3Se
8	1	8.1	ASTM	A743	CF8C	J92710	70/30 [485/205]	Castings	18Cr-10Ni-Cb
8	1	8.1	ASTM	A743	CF3M	J92800	70/30 [485/205]	Castings	18Cr-12Ni-2Mo
8	1	8.2	ASTM	A743	CF3MN	J92804	75/37 [515/255]	Castings	20Cr-11Ni-3Mo-N
8	1	8.1	ASTM	A743	CF8M	J92900	70/30 [485/205]	Castings	18Cr-12Ni-2Mo
8	1	8.1	ASTM	A743	CF10SMnN	J92972	85/42 [585/290]	Castings	17Cr-9Ni-8Mn-4Si-N
8	1	8.2	ASTM	A743	CG3M	J92999	75/35 [515/240]	Castings	19Cr-11Ni-4Mo
8	1	8.1	ASTM	A743	CG8M	J93000	75/35 [515/240]	Castings	19Cr-10Ni-3Mo
8	1	8.1	ASTM	A774	304L	S30403	70/25 [485/170]	Wrought Piping Fittings	18Cr-8Ni
8	1	8.1	ASTM	A774	316L	S31603	70/25 [485/170]	Wrought Piping Fittings	16Cr-12Ni-2Mo
8	1	8.1	ASTM	A774	F317L	S31703	75/30 [515/205]	Wrought Piping Fittings	18Cr-13Ni-3Mo
8	1	8.1	ASTM	A774	321	S32100	75/30 [515/205]	Wrought Piping Fittings	18Cr-10Ni-Ti
8	1	8.1	ASTM	A774	347	S34700	75/30 [515/205]	Wrought Piping Fittings	18Cr-10Ni-Cb
8	1	8.1	ASTM	A778	304L	S30403	70/25 [485/170]	Welded Unannealed Tube	18Cr-8Ni
8	1	8.1	ASTM	A778	316L	S31603	70/25 [485/170]	Welded Unannealed Tube	16Cr-12Ni-2Mo
8	1	8.1	ASTM	A778	F317L	S31703	75/30 [515/205]	Welded Unannealed Tube	18Cr-13Ni-3Mo
8	1	8.1	ASTM	A778	321	S32100	75/30 [515/205]	Welded Unannealed Tube	18Cr-10Ni-Ti
8	1	8.1	ASTM	A778	347	S34700	75/30 [515/205]	Welded Unannealed Tube	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-813	TP304	S30400	75/30 [515/205]	Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-813	TP304L	S30403	70/25 [485/170]	Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-813	TP304H	S30409	75/30 [515/205]	Welded Pipe	18Cr-8Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
								Tensile	Yield		
Steel and Steel Alloys											
8	1	8.1	ASTM/ASME	A/SA-813	TP304N	S30451		80/35	[550/240]	Welded Pipe	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-813	TP304LN	S30453		75/30	[515/205]	Welded Pipe	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-813	TP316	S31600		75/30	[515/205]	Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-813	TP316L	S31603		70/25	[485/170]	Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-813	TP316H	S31609		75/30	[515/205]	Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-813	TP316N	S31651		80/35	[550/240]	Welded Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-813	TP316LN	S31653		75/30	[515/205]	Welded Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-813	TP317	S31700		75/30	[515/205]	Welded Pipe	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-813	TP317L	S31703		75/30	[515/205]	Welded Pipe	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-813	TP321	S32100		75/30	[515/205]	Welded Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-813	TP321H	S32109		75/30	[515/205]	Welded Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-813	TP347	S34700		75/30	[515/205]	Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-813	TP347H	S34709		75/30	[515/205]	Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-813	TP348	S34800		75/30	[515/205]	Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-813	TP348H	S34809		75/30	[515/205]	Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-813	TPXM-15	S38100		75/30	[515/205]	Welded Pipe	18Cr-18Ni-2Si
8	1	8.1	ASTM/ASME	A/SA-814	TP304	S30400		75/30	[515/205]	Cold Worked Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-814	TP304L	S30403		70/25	[485/170]	Cold Worked Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-814	TP304H	S30409		75/30	[515/205]	Cold Worked Welded Pipe	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-814	TP304N	S30451		80/35	[550/240]	Cold Worked Welded Pipe	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-814	TP304LN	S30453		75/30	[515/205]	Cold Worked Welded Pipe	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-814	TP316	S31600		75/30	[515/205]	Cold Worked Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-814	TP316L	S31603		70/25	[485/170]	Cold Worked Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-814	TP316H	S31609		75/30	[515/205]	Cold Worked Welded Pipe	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-814	TP316N	S31651		80/35	[550/240]	Cold Worked Welded Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-814	TP316LN	S31653		75/30	[515/205]	Cold Worked Welded Pipe	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-814	TP317	S31700		75/30	[515/205]	Cold Worked Welded Pipe	18Cr-13Ni-3Mo
8	1	8.1	ASTM/ASME	A/SA-814	TP317L	S31703		75/30	[515/205]	Cold Worked Welded Pipe	18Cr-13Ni-3Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
							Minimum Tensile/Yield			
Steel and Steel Alloys										
8	1	8.1	ASTM/ASME	A/SA-814	TP321	S32100		75/30 [515/205]	Cold Worked Welded Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-814	TP321H	S32109		75/30 [515/205]	Cold Worked Welded Pipe	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-814	TP347	S34700		75/30 [515/205]	Cold Worked Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-814	TP347H	S34709		75/30 [515/205]	Cold Worked Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-814	TP348	S34800		75/30 [515/205]	Cold Worked Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-814	TP348H	S34809		75/30 [515/205]	Cold Worked Welded Pipe	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-814	TPXM-15	S38100		75/30 [515/205]	Cold Worked Welded Pipe	18Cr-18Ni-2Si
8	1	8.1	ASTM/ASME	A/SA-965	F304	S30400		70/30 [485/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-965	F304L	S30403		65/25 [450/170]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-965	F304H	S30409		70/30 [485/205]	Forgings	18Cr-8Ni
8	1	8.1	ASTM/ASME	A/SA-965	F304N	S30451		80/35 [550/240]	Forgings	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-965	F304LN	S30453		70/30 [485/205]	Forgings	18Cr-8Ni-N
8	1	8.1	ASTM/ASME	A/SA-965	F46	S30600		78/32 [540/220]	Forgings	18Cr-15Ni-4Si
8	1	8.1	ASTM/ASME	A/SA-965	F316	S31600		70/30 [485/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-965	F316L	S31603		65/25 [450/170]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-965	F316H	S31609		70/30 [485/205]	Forgings	16Cr-12Ni-2Mo
8	1	8.1	ASTM/ASME	A/SA-965	F316N	S31651		80/35 [550/240]	Forgings	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-965	F316LN	S31653		70/30 [485/205]	Forgings	16Cr-12Ni-2Mo-N
8	1	8.1	ASTM/ASME	A/SA-965	F321	S32100		70/30 [485/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-965	F321H	S32109		70/30 [485/205]	Forgings	18Cr-10Ni-Ti
8	1	8.1	ASTM/ASME	A/SA-965	F347	S34700		70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-965	F347H	S34709		70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-965	F348	S34800		70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	1	8.1	ASTM/ASME	A/SA-965	F348H	S34809		70/30 [485/205]	Forgings	18Cr-10Ni-Cb
8	2	8.2	ASTM	A167	308	S30800		75/30 [515/205]	Plate, Sheet & Strip	20Cr-10Ni
8	2	8.2	ASTM	A167	309	S30900		75/30 [515/205]	Plate, Sheet & Strip	23Cr-12Ni
8	2	8.2	ASTM	A167	310	S31000		75/30 [515/205]	Plate, Sheet & Strip	25Cr-20Ni
8	2	8.2	ASTM/ASME	A/SA-182	F45	S30815		87/45 [600/310]	Forgings	21Cr-11Ni-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Steel and Steel Alloys		Product Form	Nominal Composition
								Minimum Tensile/Yield Strength, ksi [MPa]			
8	8.2	2	ASTM/ASME	A/SA-182	F310	S31000	>5 [>127]	70/30 [485/205]		Forgings	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-182	F310	S31000		75/30 [515/205]		Forgings	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-182	F310H	S31009	>5 [>127]	70/30 [485/205]		Forgings	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-182	F310H	S31009		75/30 [515/205]		Forgings	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-182	F310MoLN	S31050		78/37 [540/255]		Forgings	25Cr-22Ni-2Mo-N
8	8.1	2	ASTM/ASME	A/SA-182	F10	S33100		80/30 [550/205]		Forgings	20Ni-8Cr
8	8.2	2	ASTM/ASME	A/SA-213	S30815	S30815		87/45 [600/310]		Seamless Tube	21Cr-11Ni-N
8	8.2	2	ASTM/ASME	A/SA-213	TP309S	S30908		75/30 [515/205]		Seamless Tube	23Cr-12Ni
8	8.2	2	ASTM/ASME	A/SA-213	TP309H	S30909		75/30 [515/205]		Seamless Tube	23Cr-12Ni
8	8.2	2	ASTM/ASME	A/SA-213	TP309Cb	S30940		75/30 [515/205]		Seamless Tube	23Cr-12Ni-Cb
8	8.2	2	ASTM/ASME	A/SA-213	TP309HCb	S30941		75/30 [515/205]		Seamless Tube	23Cr-12Ni-Cb
8	8.2	2	ASTM/ASME	A/SA-213	310	S31000		75/30 [515/205]		Seamless Tube	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-213	TP310S	S31008		75/30 [515/205]		Seamless Tube	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-213	TP310H	S31009		75/30 [515/205]		Seamless Tube	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-213	TP310Cb	S31040		75/30 [515/205]		Seamless Tube	25Cr-20Ni-Cb
8	8.2	2	ASTM/ASME	A/SA-213	TP310HCb	S31041		75/30 [515/205]		Seamless Tube	25Cr-20Ni-Cb
8	8.2	2	ASTM/ASME	A/SA-213	TP310MoLN	S31050	>0.25 [>6]	78/37 [540/255]		Seamless Tube	25Cr-22Ni-2Mo-N
8	8.2	2	ASTM/ASME	A/SA-213	TP310MoLN	S31050	≤0.25 [≤6]	84/39 [580/270]		Seamless Tube	25Cr-22Ni-2Mo-N
8	8.2	2	ASTM/ASME	A/SA-240	S30815	S30815		87/45 [600/310]		Plate, Sheet & Strip	21Cr-11Ni-N
8	8.2	2	ASTM/ASME	A/SA-240	309S	S30908		75/30 [515/205]		Plate, Sheet & Strip	23Cr-12Ni
8	8.2	2	ASTM/ASME	A/SA-240	309H	S30909		75/30 [515/205]		Plate, Sheet & Strip	23Cr-12Ni
8	8.2	2	ASTM/ASME	A/SA-240	309Cb	S30940		75/30 [515/205]		Plate, Sheet & Strip	23Cr-12Ni-Cb
8	8.2	2	ASTM/ASME	A/SA-240	309HCb	S30941		75/30 [515/205]		Plate, Sheet & Strip	23Cr-12Ni-Cb
8	8.2	2	ASTM/ASME	A/SA-240	310S	S31008		75/30 [515/205]		Plate, Sheet & Strip	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-240	310H	S31009		75/30 [515/205]		Plate, Sheet & Strip	25Cr-20Ni
8	8.2	2	ASTM/ASME	A/SA-240	310Cb	S31040		75/30 [515/205]		Plate, Sheet & Strip	25Cr-20Ni-Cb
8	8.2	2	ASTM/ASME	A/SA-240	310HCb	S31041		75/30 [515/205]		Plate, Sheet & Strip	25Cr-20Ni-Cb
8	8.2	2	ASTM/ASME	A/SA-240	310MoLN	S31050	>0.25 [>6]	78/37 [540/255]		Plate, Sheet & Strip	25Cr-22Ni-2Mo-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
8	2	8.2	ASTM/ASME	A/SA-240	310MoLN	S31050	≤0.25 [≤6]	84/39 [580/270]	Plate, Sheet & Strip	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A/SA-249	S30815	S30815		87/45 [600/310]	Welded Tube	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A/SA-249	TP309	S30900		75/30 [515/205]	Welded Tube	23Cr-12Ni
8	2	8.2	ASTM/ASME	A/SA-249	TP309S	S30908		75/30 [515/205]	Welded Tube	23Cr-12Ni
8	2	8.2	ASTM/ASME	A/SA-249	TP309H	S30909		75/30 [515/205]	Welded Tube	23Cr-12Ni
8	2	8.2	ASTM/ASME	A/SA-249	TP309Cb	S30940		75/30 [515/205]	Welded Tube	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A/SA-249	TP309HCb	S30941		75/30 [515/205]	Welded Tube	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A/SA-249	TP310S	S31008		75/30 [515/205]	Welded Tube	25Cr-20Ni
8	2	8.2	ASTM/ASME	A/SA-249	TP310H	S31009		75/30 [515/205]	Welded Tube	25Cr-20Ni
8	2	8.2	ASTM/ASME	A/SA-249	TP310Cb	S31040		75/30 [515/205]	Welded Tube	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A/SA-249	TP310HCb	S31041		75/30 [515/205]	Welded Tube	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A/SA-249	TP310MoLN	S31050	>0.25 [>6]	78/37 [540/255]	Welded Tube	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A/SA-249	TP310MoLN	S31050	≤0.25 [≤6]	84/39 [580/270]	Welded Tube	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME	A/SA-276	314	S31400		75/30 [515/205]	Hot-finished Bar	24Cr-20Ni-Si
8	2	8.2	ASTM	A297	HF	J92603		70/35 [485/240]	Castings	21Cr-10Ni-2Mn-2Si
8	2	8.2	ASTM	A297	HE	J93403		85/40 [585/275]	Castings	28Cr-10Ni-2Mn-2Si
8	2	8.2	ASTM	A297	HH	J93503		75/35 [515/240]	Castings	26Cr-13Ni-2Mn-2Si
8	2	8.2	ASTM	A297	HI	J94003		70/35 [485/240]	Castings	28Cr-16Ni-2Mn-2Si
8	2	8.2	ASTM	A297	HK	J94224		65/35 [450/240]	Castings	26Cr-20Ni-2Mn-2Si
8	2	8.2	ASTM/ASME	A/SA-312	S30815	S30815		87/45 [600/310]	Seamless & Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A/SA-312	TP309S	S30908		75/30 [515/205]	Seamless & Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A/SA-312	TP309H	S30909		75/30 [515/205]	Seamless & Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A/SA-312	TP309Cb	S30940		75/30 [515/205]	Seamless & Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A/SA-312	TP309HCb	S30941		75/30 [515/205]	Seamless & Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A/SA-312	TP310S	S31008		75/30 [515/205]	Seamless & Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME	A/SA-312	TP310H	S31009		75/30 [515/205]	Seamless & Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME	A/SA-312	TP310Cb	S31040		75/30 [515/205]	Seamless & Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME	A/SA-312	TP310HCb	S31041		75/30 [515/205]	Seamless & Welded Pipe	25Cr-20Ni-Cb

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys								
8	2	8.2	ASTM/ASME A/SA-312	TP310MoLN	S31050	>0.25 [>6]	Seamless & Welded Pipe	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME A/SA-312	TP310MoLN	S31050	≤0.25 [≤6]	Seamless & Welded Pipe	25Cr-22Ni-2Mo-N
8	2	8.2	ASTM/ASME A/SA-336	F310	S31000	78/37 [540/255]	Forgings	25Cr-20Ni
8	2	8.2	ASTM/ASME A/SA-351	CE20N	J92802	84/39 [580/270]	Castings	25Cr-8Ni-N
8	2	8.2	ASTM/ASME A/SA-351	CH8	J93400	75/30 [515/205]	Castings	25Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-351	CH10	J93401	80/40 [550/275]	Castings	25Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-351	CH20	J93402	65/28 [450/195]	Castings	25Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-351	CK20	J94202	70/30 [485/205]	Castings	25Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-351	HK30	J94203	65/28 [450/195]	Castings	25Cr-20Ni
8	2	8.2	ASTM/ASME A/SA-351	HK40	J94204	65/35 [450/240]	Castings	25Cr-20Ni-0.5Mo
8	2	8.2	ASTM/ASME A/SA-358	S30815	S30815	62/35 [425/240]	Castings	25Cr-20Ni-0.5Mo
8	2	8.2	ASTM/ASME A/SA-358	309	S30900	87/45 [600/310]	Fusion Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME A/SA-358	309S	S30908	75/30 [515/205]	Fusion Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-358	309Cb	S30940	75/30 [515/205]	Fusion Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME A/SA-358	310	S31000	75/30 [515/205]	Fusion Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-358	310S	S31008	75/30 [515/205]	Fusion Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME A/SA-358	310Cb	S31040	75/30 [515/205]	Fusion Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME A/SA-403	WP309	S30900	75/30 [515/205]	Wrought Piping Fittings	23Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-403	WP310	S31000	75/30 [515/205]	Wrought Piping Fittings	23Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-403	WP310S	S31008	75/30 [515/205]	Wrought Piping Fittings	25Cr-20Ni
8	2	8.2	ASTM/ASME A/SA-409	S30815	S30815	87/45 [600/310]	Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME A/SA-409	TP309S	S30908	75/30 [515/205]	Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-409	TP309Cb	S30940	75/30 [515/205]	Welded Pipe	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME A/SA-409	TP310S	S31008	75/30 [515/205]	Welded Pipe	25Cr-20Ni
8	2	8.2	ASTM/ASME A/SA-409	TP310Cb	S31040	75/30 [515/205]	Welded Pipe	25Cr-20Ni-Cb
8	2	8.2	ASTM/ASME A/SA-451	CPE20N	J92802	75/30 [515/205]	Centrifugal Cast Pipe	25Cr-8Ni-N
8	2	8.2	ASTM/ASME A/SA-451	CPH8	J93400	80/40 [550/275]	Centrifugal Cast Pipe	25Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-451	CPH10	J93402	65/28 [450/195]	Centrifugal Cast Pipe	25Cr-12Ni
8	2	8.2	ASTM/ASME A/SA-451	CPH10	J93402	70/30 [485/205]	Centrifugal Cast Pipe	25Cr-12Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Thicknes		Product Form	Nominal Composition
								Minimum Tensile/Yield Strength, ksi [MPa]			
Steel and Steel Alloys											
8	2	8.2	ASTM/ASME	A/SA-451	CPH20	J93402		70/30 [485/205]		Centrifugal Cast Pipe	25Cr-12Ni
8	2	8.2	ASTM/ASME	A/SA-451	CPK20	J94202		65/28 [450/195]		Centrifugal Cast Pipe	25Cr-20Ni
8	2	8.2	ASTM	A473	308	S30800		75/30 [515/205]		Forgings	20Cr-10Ni
8	2	8.2	ASTM	A473	S30815	S30815		87/45 [600/310]		Forgings	21Cr-11Ni-N
8	2	8.2	ASTM	A473	309	S30900		75/30 [515/205]		Forgings	23Cr-12Ni
8	2	8.2	ASTM	A473	309S	S30908		75/30 [515/205]		Forgings	23Cr-12Ni
8	2	8.2	ASTM	A473	310	S31000		75/30 [515/205]		Forgings	25Cr-20Ni
8	2	8.2	ASTM	A473	310S	S31008		75/30 [515/205]		Forgings	25Cr-20Ni
8	2	8.2	ASTM	A473	314	S31400		75/30 [515/205]		Forgings	25Cr-21Ni-S
8	2	8.2	ASTM/ASME	A/SA-479	S30815	S30815		87/45 [600/310]		Bars & Shapes	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A/SA-479	309S	S30908		75/30 [515/205]		Bars & Shapes	23Cr-12Ni
8	2	8.2	ASTM/ASME	A/SA-479	309Cb	S30940		75/30 [515/205]		Bars & Shapes	23Cr-12Ni-Cb
8	2	8.2	ASTM/ASME	A/SA-479	310S	S31008		75/30 [515/205]		Bars & Shapes	25Cr-20Ni
8	2	8.2	ASTM/ASME	A/SA-479	310Cb	S31040		75/30 [515/205]		Bars & Shapes	25Cr-20Ni-Cb
8	2	8.2	ASTM	A511	MT 309S	S30908		75/30 [515/205]		Seamless Tube	23Cr-12Ni
8	2	8.2	ASTM	A511	MT 310S	S31008		75/30 [515/205]		Seamless Tube	25Cr-20Ni
8	2	8.2	ASTM	A554	MT 309S	S30908		75/30 [515/205]		Welded Tube	23Cr-12Ni
8	2	8.2	ASTM	A554	MT 309S-Cb	S30940		75/30 [515/205]		Welded Tube	23Cr-12Ni-Cb
8	2	8.2	ASTM	A554	MT 310S	S31008		75/30 [515/205]		Welded Tube	25Cr-20Ni
8	2	8.2	ASTM	A743	CF20	J92602		70/30 [485/205]		Castings	20Cr-10Ni
8	2	8.2	ASTM	A743	CG12	J93001		70/28 [485/195]		Castings	22Cr-12Ni
8	2	8.2	ASTM	A743	CH10	J93401		70/30 [485/205]		Castings	25Cr-12Ni
8	2	8.2	ASTM	A743	CH20	J93402		70/30 [485/205]		Castings	25Cr-12Ni
8	2	8.2	ASTM	A743	CE30	J93423		80/40 [550/275]		Castings	29Cr-9Ni-2Mn-2Si
8	2	8.2	ASTM	A743	CN3M	J94652		63/25 [435/170]		Castings	25Ni-21Cr-5Mo
8	2	8.2	ASTM/ASME	A/SA-813	S30815	S30815		87/45 [600/310]		Welded Pipe	21Cr-11Ni-N
8	2	8.2	ASTM/ASME	A/SA-813	TP309S	S30908		75/30 [515/205]		Welded Pipe	23Cr-12Ni
8	2	8.2	ASTM/ASME	A/SA-813	TP309Cb	S30940		75/30 [515/205]		Welded Pipe	23Cr-12Ni-Cb

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Strength, ksi [MPa]		Product Form	Nominal Composition
							Minimum Tensile/Yield			
Steel and Steel Alloys										
8	2	ASTM/ASME	A/SA-813	TP310S	S31008		75/30 [515/205]		Welded Pipe	25Cr-20Ni
8	2	ASTM/ASME	A/SA-813	TP310Cb	S31040		75/30 [515/205]		Welded Pipe	25Cr-20Ni-Cb
8	2	ASTM/ASME	A/SA-814	S30815	S30815		87/45 [600/310]		Cold Worked Welded Pipe	21Cr-11Ni-N
8	2	ASTM/ASME	A/SA-814	TP309S	S30908		75/30 [515/205]		Cold Worked Welded Pipe	23Cr-12Ni
8	2	ASTM/ASME	A/SA-814	TP309Cb	S30940		75/30 [515/205]		Cold Worked Welded Pipe	23Cr-12Ni-Cb
8	2	ASTM/ASME	A/SA-814	TP310S	S31008		75/30 [515/205]		Cold Worked Welded Pipe	25Cr-20Ni
8	2	ASTM/ASME	A/SA-814	TP310Cb	S31040		75/30 [515/205]		Cold Worked Welded Pipe	25Cr-20Ni-Cb
8	2	ASTM/ASME	A/SA-965	F310	S31000		75/30 [515/205]		Forgings	25Cr-20Ni
8	3	ASTM/ASME	A/SA-182	FXM-19	S20910		100/55 [690/380]		Forgings	22Cr-13Ni-5Mn
8	3	ASTM/ASME	A/SA-182	FXM-11	S21904		90/50 [620/345]		Forgings	21Cr-6Ni-9Mn
8	3	ASTM/ASME	A/SA-213	TP201	S20100		95/38 [655/260]		Seamless Tube	17Cr-4Ni-6Mn
8	3	ASTM/ASME	A/SA-213	TP202	S20200		90/45 [620/310]		Seamless Tube	18Cr-5Ni-9Mn
8	3	ASTM/ASME	A/SA-213	XM-19	S20910		100/55 [690/380]		Seamless Tube	22Cr-13Ni-5Mn
8	3	ASTM/ASME	A/SA-213	TP310HCbN	S31042		95/43 [655/295]		Seamless Tube	25Cr-20Ni-Cb-N
8	3	ASTM/ASME	A/SA-240	201-1	S20100		75/38 [515/260]		Plate, Sheet & Strip	17Cr-4Ni-6Mn
8	3	ASTM/ASME	A/SA-240	201-2	S20100		95/45 [655/310]		Plate, Sheet & Strip	17Cr-4Ni-6Mn
8	3	ASTM/ASME	A/SA-240	201LN	S20153		95/45 [655/310]		Plate, Sheet & Strip	16Cr-4Ni-6Mn
8	3	ASTM/ASME	A/SA-240	202	S20200		90/38 [620/260]		Plate, Sheet & Strip	18Cr-5Ni-9Mn
8	3	ASTM/ASME	A/SA-240	—	S20400		95/48 [655/330]		Plate, Sheet & Strip	16Cr-9Mn-2Ni-N
8	3	ASTM/ASME	A/SA-240	XM-19	S20910		100/55 [690/380]		Plate	22Cr-13Ni-5Mn
8	3	ASTM/ASME	A/SA-240	XM-19	S20910		105/60 [725/415]		Sheet & Strip	22Cr-13Ni-5Mn
8	3	ASTM/ASME	A/SA-240	XM-17	S21600		90/50 [620/345]		Plate	19Cr-8Mn-6Ni-Mo-N
8	3	ASTM/ASME	A/SA-240	XM-17	S21600		100/60 [690/415]		Sheet & Strip	19Cr-8Mn-6Ni-Mo-N
8	3	ASTM/ASME	A/SA-240	XM-18	S21603		90/50 [620/345]		Plate	19Cr-8Mn-6Ni-Mo-N
8	3	ASTM/ASME	A/SA-240	XM-18	S21603		100/60 [690/415]		Sheet & Strip	19Cr-8Mn-6Ni-Mo-N
8	3	ASTM/ASME	A/SA-240	S21800	S21800		95/50 [655/345]		Plate, Sheet & Strip	18Cr-8Ni-4Si-N
8	3	ASTM/ASME	A/SA-240	XM-29	S24000		100/55 [690/380]		Plate, Sheet & Strip	18Cr-3Ni-12Mn
8	3	ASTM/ASME	A/SA-249	TP 201	S20100		95/38 [655/260]		Welded Tube	17Cr-4Ni-6Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO Group 15608 Group Number	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
8	3	8.3	ASTM/ASME	A/SA-249	TP 202	S20200	90/38 [620/260]	Welded Tube	18Cr-5Ni-9Mn
8	3	8.3	ASTM/ASME	A/SA-249	TP XM-19	S20910	100/55 [690/380]	Welded Tube	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A/SA-249	TP XM-29	S24000	100/55 [690/380]	Welded Tube	18Cr-3Ni-12Mn
8	3	8.3	ASTM	A269	TPXM-19	S20910	100/55 [690/380]	Seamless & Welded Tube	22Cr-13Ni-5Mn
8	3	8.3	ASTM	A269	TPXM-10	S21900	90/50 [620/345]	Seamless & Welded Tube	20Cr-6Ni-9Mn
8	3	8.3	ASTM	A269	TPXM-11	S21904	90/50 [620/345]	Seamless & Welded Tube	21Cr-6Ni-9Mn
8	3	8.3	ASTM	A269	TPXM-29	S24000	100/55 [690/380]	Seamless & Welded Tube	18Cr-3Ni-12Mn
8	3	8.3	ASTM	A269	TPXM-15	S38100	90/50 [620/345]	Seamless & Welded Tube	18Cr-18Ni-2Si
8	3	8.3	ASTM/ASME	A/SA-312	TP XM-19	S20910	100/55 [690/380]	Seamless & Welded Pipe	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A/SA-312	TP XM-11	S21904	90/50 [620/345]	Seamless & Welded Pipe	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A/SA-312	TP XM-29	S24000	100/55 [690/380]	Seamless & Welded Pipe	18Cr-3Ni-12Mn
8	3	8.3	ASTM/ASME	A/SA-336	FXM-19	S20910	100/55 [690/380]	Forgings	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A/SA-336	FXM-11	S21904	90/50 [620/345]	Forgings	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A/SA-351	CG6MMN	J93790	85/42 [585/290]	Castings	22Cr-12Ni-5Mn
8	3	8.3	ASTM/ASME	A/SA-358	XM-19	S20910	100/55 [690/380]	Fusion Welded Pipe	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A/SA-358	XM-29	S24000	100/55 [690/380]	Fusion Welded Pipe	18Cr-3Ni-12Mn
8	3	8.3	ASTM/ASME	A/SA-403	WPXM-19	S20910	100/55 [690/380]	Wrought Piping Fittings	22Cr-13Ni-5Mn
8	3	8.3	ASTM	A473	201	S20100	75/30 [515/205]	Forgings	17Cr-4Ni-6Mn
8	3	8.3	ASTM	A473	202	S20200	90/45 [620/310]	Forgings	18Cr-5Ni-9Mn
8	3	8.3	ASTM	A473	XM-10	S21900	90/50 [620/345]	Forgings	20Cr-6Ni-9Mn
8	3	8.3	ASTM	A473	XM-11	S21904	90/50 [620/345]	Forgings	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A/SA-479	XM-19	S20910	100/55 [690/380]	Bars & Shapes	22Cr-13Ni-5Mn
8	3	8.3	ASTM/ASME	A/SA-479	XM-17	S21600	90/50 [620/345]	Bars & Shapes	19Cr-8Mn-6Ni-Mo-N
8	3	8.3	ASTM/ASME	A/SA-479	XM-18	S21603	90/50 [620/345]	Bars & Shapes	19Cr-8Mn-6Ni-Mo-N
8	3	8.1	ASTM/ASME	A/SA-479	S21800	S21800	95/50 [655/345]	Bars & Shapes	18Cr-8Ni-4Si-N
8	3	8.3	ASTM/ASME	A/SA-479	XM-11	S21904	90/50 [620/345]	Bars & Shapes	21Cr-6Ni-9Mn
8	3	8.3	ASTM/ASME	A/SA-479	XM-29	S24000	100/55 [690/380]	Bars & Shapes	18Cr-3Ni-12Mn
8	3	8.3	ASTM/ASME	A/SA-666	201-1	S20100	75/38 [515/260]	Plate, Sheet & Strip	17Cr-4Ni-6Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
8	8.3	3	ASTM/ASME	A/SA-666	201-2	S20100		95/45 [655/310]	Plate, Sheet & Strip	17Cr-4Ni-6Mn
8	8.3	3	ASTM/ASME	A/SA-666	XM-11	S21904		90/50 [620/345]	Plate, Sheet & Strip	21Cr-6Ni-9Mn
8	8.3	3	ASTM/ASME	A/SA-688	XM-29	S24000		100/55 [690/380]	Welded Tube	18Cr-3Ni-12Mn
8	8.3	3	ASTM/ASME	A/SA-813	TPXM-19	S20910		100/55 [690/380]	Welded Pipe	22Cr-13Ni-5Mn
8	8.3	3	ASTM/ASME	A/SA-813	TPXM-11	S21904		90/50 [620/345]	Welded Pipe	21Cr-6Ni-9Mn
8	8.3	3	ASTM/ASME	A/SA-813	TPXM-29	S24000		100/55 [690/380]	Welded Pipe	18Cr-3Ni-12Mn
8	8.3	3	ASTM/ASME	A/SA-814	TPXM-19	S20910		100/55 [690/380]	Cold Worked Welded Pipe	22Cr-13Ni-5Mn
8	8.3	3	ASTM/ASME	A/SA-814	TPXM-11	S21904		90/50 [620/345]	Cold Worked Welded Pipe	21Cr-6Ni-9Mn
8	8.3	3	ASTM/ASME	A/SA-814	TPXM-29	S24000		100/55 [690/380]	Cold Worked Welded Pipe	18Cr-3Ni-12Mn
8	8.3	3	ASTM/ASME	A/SA-965	FXM-19	S20910		100/55 [690/380]	Forgings	22Cr-13Ni-5Mn
8	8.3	3	ASTM/ASME	A/SA-965	FXM-11	S21904		90/50 [620/345]	Forgings	21Cr-6Ni-9Mn
8	8.2	4	ASTM/ASME	A/SA-182	F44	S31254		94/44 [650/305]	Forgings	20Cr-18Ni-6Mo
8	8.2	4	ASTM/ASME	A/SA-182	—	S32053		93/43 [640/295]	Forgings	23Cr-25Ni-5.5Mo-N
8	8.3	4	ASTM/ASME	A/SA-182	F49	S34565		115/60 [795/415]	Forgings	24Cr-17Ni-6Mn-4.5Mo-N
8	8.2	4	ASTM/ASME	A/SA-213	—	S31254	>0.1875 [>5]	95/45 [655/310]	Seamless Tube	20Cr-18Ni-6Mo
8	8.2	4	ASTM/ASME	A/SA-213	—	S31254	≤0.1875 [≤5]	98/45 [675/310]	Seamless Tube	20Cr-18Ni-6Mo
8	8.1	4	ASTM/ASME	A/SA-213	TP317LM	S31725		75/30 [515/205]	Seamless Tube	19Cr-15Ni-4Mo
8	8.1	4	ASTM/ASME	A/SA-213	TP317LMN	S31726		80/35 [550/240]	Seamless Tube	19Cr-15.5Ni-4Mo
8	8.3	4	ASTM/ASME	A/SA-213	S34565	S34565		115/60 [795/415]	Seamless Tube	24Cr-17Ni-6Mn-4.5Mo-N
8	8.2	4	ASTM/ASME	A/SA-240	S31254	S31254		95/45 [655/310]	Plate	20Cr-18Ni-6Mo
8	8.2	4	ASTM/ASME	A/SA-240	S31254	S31254		100/45 [690/310]	Sheet & Strip	20Cr-18Ni-6Mo
8	8.1	4	ASTM/ASME	A/SA-240	S31725	S31725		75/30 [515/205]	Plate, Sheet & Strip	19Cr-15Ni-4Mo
8	8.1	4	ASTM/ASME	A/SA-240	S31726	S31726		80/35 [550/240]	Plate, Sheet & Strip	19Cr-15.5Ni-4Mo
8	8.2	4	ASTM/ASME	A/SA-240	—	S32053		93/43 [640/295]	Plate, Sheet & Strip	23Cr-25Ni-5.5Mo-N
8	8.2	4	ASTM/ASME	A/SA-240	—	S32654		109/62 [750/430]	Plate, Sheet & Strip	24Cr-22Ni-7Mo-3Mn
8	8.3	4	ASTM/ASME	A/SA-240	S34565	S34565		115/60 [795/415]	Plate, Sheet & Strip	24Cr-17Ni-6Mn-4.5Mo-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
8	4	8.2	ASTM/ASME	A/SA-249	S31254	S31254	>0.1875 [>5]	95/45 [655/310]	Welded Tube	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A/SA-249	S31254	S31254	≤ 0.1875 [≤ 5]	98/45 [675/310]	Welded Tube	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A/SA-249	S31725	S31725		75/30 [515/205]	Welded Tube	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A/SA-249	S31726	S31726		80/35 [550/240]	Welded Tube	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A/SA-249	—	S32053		93/43 [640/295]	Welded Tube	23Cr-25Ni-5.5Mo-N
8	4	8.2	ASTM/ASME	A/SA-312	S31254	S31254	>0.1875 [>5]	95/45 [655/310]	Seamless & Welded Pipe	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A/SA-312	S31254	S31254	≤ 0.1875 [≤ 5]	98/45 [675/310]	Seamless & Welded Pipe	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A/SA-312	S31725	S31725		75/30 [515/205]	Seamless & Welded Pipe	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A/SA-312	S31726	S31726		80/35 [550/240]	Seamless & Welded Pipe	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A/SA-312	—	S32053		93/43 [640/295]	Seamless & Welded Pipe	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A/SA-312	S34565	S34565		115/60 [795/415]	Seamless & Welded Pipe	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A/SA-351	CK3MCuN	J93254		80/38 [550/260]	Castings	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A/SA-358	S31254	S31254	≤ 0.1875 [≤ 5]	95/45 [655/310]	Fusion Welded Pipe	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A/SA-358	S31254	S31254	<0.1875 [<5]	100/45 [690/310]	Fusion Welded Pipe	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A/SA-358	S31725	S31725		75/30 [515/205]	Fusion Welded Pipe	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A/SA-358	S31726	S31726		80/35 [550/240]	Fusion Welded Pipe	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A/SA-358	—	S32053		93/43 [640/295]	Fusion Welded Pipe	23Cr-25Ni-5.5Mo-N
8	4	8.1	ASTM/ASME	A/SA-376	S31725	S31725		75/30 [515/205]	Seamless Pipe	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A/SA-376	S31726	S31726		80/35 [550/240]	Seamless Pipe	19Cr-15.5Ni-4Mo
8	4	8.3	ASTM/ASME	A/SA-376	S34565	S34565		115/60 [795/415]	Seamless Pipe	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A/SA-403	—	S31254		94/44 [650/305]	Wrought Piping Fittings	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A/SA-403	WP S31726	S31726		80/35 [550/240]	Wrought Piping Fittings	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A/SA-403	—	S32053		93/43 [640/295]	Wrought Piping Fittings	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A/SA-403	S34565	S34565		115/60 [795/415]	Wrought Piping Fittings	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A/SA-409	S31254	S31254		94/44 [650/305]	Welded Pipe	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A/SA-409	S31725	S31725		75/30 [515/205]	Welded Pipe	19Cr-15Ni-4Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Specification							
Steel and Steel Alloys										
8	4	8.1	ASTM/ASME	A/SA-409	S31726	S31726		80/35 [550/240]	Welded Pipe	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A/SA-409	—	S32053		93/43 [640/295]	Welded Pipe	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A/SA-409	S34565	S34565		115/60 [795/415]	Welded Pipe	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM/ASME	A/SA-479	S31254	S31254		95/44 [655/305]	Bars & Shapes	20Cr-18Ni-6Mo
8	4	8.1	ASTM/ASME	A/SA-479	S31725	S31725		75/30 [515/205]	Bars & Shapes	19Cr-15Ni-4Mo
8	4	8.1	ASTM/ASME	A/SA-479	S31726	S31726		80/35 [550/240]	Bars & Shapes	19Cr-15.5Ni-4Mo
8	4	8.2	ASTM/ASME	A/SA-479	—	S32053		93/43 [640/295]	Bars & Shapes	23Cr-25Ni-5.5Mo-N
8	4	8.3	ASTM/ASME	A/SA-479	—	S34565		115/60 [795/415]	Bars & Shapes	24Cr-17Ni-6Mn-4.5Mo-N
8	4	8.2	ASTM	A743	CK3MCuN	J93254		80/38 [550/260]	Castings	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A/SA-813	S31254	S31254		94/44 [650/305]	Welded Pipe	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A/SA-813	—	S32053		93/43 [640/295]	Welded Pipe	23Cr-25Ni-5.5Mo-N
8	4	8.2	ASTM/ASME	A/SA-814	S31254	S31254		94/44 [650/305]	Cold Worked Welded Pipe	20Cr-18Ni-6Mo
8	4	8.2	ASTM/ASME	A/SA-814	—	S32053		93/43 [640/295]	Cold Worked Welded Pipe	23Cr-25Ni-5.5Mo-N
9A	1	9.1	ASTM/ASME	A/SA-182	FR	K22035		63/46 [435/315]	Forgings	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A/SA-203	A	K21703		65/37 [450/255]	Plate	2.25Ni
9A	1	9.1	ASTM/ASME	A/SA-203	B	K22103		70/40 [485/275]	Plate	2.25Ni
9A	1	9.1	ASTM/ASME	A/SA-234	WPR	K22035		63/46 [435/315]	Piping Fittings	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A/SA-333	7	K21903		65/35 [450/240]	Seamless & Welded Pipe	2.5Ni
9A	1	9.1	ASTM/ASME	A/SA-333	9	K22035		63/46 [435/315]	Seamless & Welded Pipe	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A/SA-334	7	K21903		65/35 [450/240]	Welded Tube	2.5Ni
9A	1	9.1	ASTM/ASME	A/SA-334	9	K22035		63/46 [435/315]	Welded Tube	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A/SA-350	LF5 Cl.1	K13050		60/30 [415/205]	Forgings	1.5Ni
9A	1	9.1	ASTM/ASME	A/SA-350	LF5 Cl.2	K13050		70/37.5 [485/260]	Forgings	1.5Ni
9A	1	9.1	ASTM/ASME	A/SA-350	LF9	K22036		63/46 [435/315]	Forgings	2Ni-1Cu
9A	1	9.1	ASTM/ASME	A/SA-352	LC2	J22500		70/40 [485/275]	Castings	2.5Ni
9A	1	9.1	ASTM/ASME	A/SA-420	WPL9	K22035		63/46 [435/315]	Piping Fittings	2Ni-1Cu
9A	1	9.1	ASTM	A714	V	K22035		65/46 [450/315]	Seamless & Welded Pipe	2Ni-1Cu

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
9A	1	9.1	ASTM	A714	V, E	K22035		65/46 [450/315]	Seamless & Welded Pipe	2Ni-1Cu
9B	1	9.2	ASTM/ASME	A/SA-203	F	—	>2 [>51]	75/50 [515/345]	Plate	3.5Ni
9B	1	9.2	ASTM/ASME	A/SA-203	F	—	≤2 [≤51]	80/55 [550/380]	Plate	3.5Ni
9B	1	9.2	ASTM/ASME	A/SA-203	D	K31718		65/37 [450/255]	Plate	3.5Ni
9B	1	9.2	ASTM/ASME	A/SA-203	E	K32018		70/40 [485/275]	Plate	3.5Ni
9B	1	9.2	ASTM/ASME	A/SA-333	3	K31918		65/35 [450/240]	Seamless & Welded Pipe	3.5Ni
9B	1	9.2	ASTM/ASME	A/SA-334	3	K31918		65/35 [450/240]	Welded Tube	3.5Ni
9B	1	9.2	ASTM/ASME	A/SA-350	LF3	K32025		70/37.5 [485/260]	Forgings	3.5Ni
9B	1	9.3	ASTM/ASME	A/SA-352	LC3	J31550		70/40 [485/275]	Castings	3.5Ni
9B	1	9.2	ASTM/ASME	A/SA-420	WPL3	K31918		65/35 [450/240]	Piping Fittings	3.5Ni
9B	1	—	ASTM	A707	L7, Cl. 1	K32218		60/42 [415/290]	Forgings	3.5Ni
9B	1	—	ASTM	A707	L7, Cl. 2	K32218		66/52 [455/360]	Forgings	3.5Ni
9B	1	—	ASTM	A707	L8, Cl. 1	K42247		60/42 [415/290]	Forgings	3.5Ni-1.8Cr-0.5Mo- 0.3Mn
9B	1	—	ASTM	A707	L8, Cl. 2	K42247		66/52 [455/360]	Forgings	3.5Ni-1.8Cr-0.5Mo- 0.3Mn
9B	1	—	ASTM	A707	L8, Cl. 3	K42247		75/60 [515/415]	Forgings	3.5Ni-1.8Cr-0.5Mo- 0.3Mn
9B	1	—	ASTM	A707	L8, Cl. 4	K42247		90/75 [620/515]	Forgings	3.5Ni-1.8Cr-0.5Mo- 0.3Mn
9B	1	9.2	ASTM/ASME	A/SA-765	III	K32026		70/37.5 [485/260]	Forgings	3.5Ni
9C	1	9.3	ASTM/ASME	A/SA-352	LC4	J41500		70/40 [485/275]	Castings	4.5Ni
10A	1	2.1	ASTM/ASME	A/SA-225	D	K12004	>3 [>76]	75/55 [515/380]	Plate	Mn-0.5Ni-V
10A	1	2.1	ASTM/ASME	A/SA-225	D	K12004	≤3 [≤76]	80/60 [550/415]	Plate	Mn-0.5Ni-V
10A	1	4.1	ASTM/ASME	A/SA-225	C	K12524		105/70 [725/485]	Plate	Mn-0.5Ni-V
10A	1	2.1	ASTM/ASME	A/SA-487	1, Cl. A	J13002		85/55 [585/380]	Castings	Mn-V
10A	1	2.1	ASTM/ASME	A/SA-487	1, Cl. B	J13002		90/65 [620/450]	Castings	Mn-V
10B	1	4.1	ASTM/ASME	A/SA-213	T17	K12047		60/30 [415/205]	Seamless Tube	1Cr-V
10C	1	11.1	AAR	TC128	B	—		81/50 [560/345]	Plate	C-Mn-Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys										
10C	1	1.3	ASTM/ASME	A/SA-612	—	K02900	>0.5 and <1 [>13 and <25]	81/50 [560/345]	Plate	C-Mn-Si
10C	1	1.3	ASTM/ASME	A/SA-612	—	K02900	≤0.5 [≤13]	83/50 [570/345]	Plate	C-Mn-Si
10H	1	10.2	ASTM/ASME	A/SA-182	F50	S31200		100/65 [690/450]	Forgings	25Cr-6Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-182	F51	S31803		90/65 [620/450]	Forgings	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-182	—	S32202		94/65 [650/450]	Forgings	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-182	F60	S32205		95/70 [655/485]	Forgings	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM/ASME	A/SA-182	F61	S32550		109/80 [750/550]	Forgings	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A/SA-182	F53	S32750		116/80 [800/550]	Forgings	25Cr-7Ni-4Mo-N
10H	1	10.1	ASTM/ASME	A/SA-182	F55	S32760		109/80 [750/550]	Forgings	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A/SA-182	F54	S39274		116/80 [800/550]	Forgings	25Cr-7Ni-3Mo-2W-Cu-N
10H	1	10.2	ASTM/ASME	A/SA-240	S31200	S31200		100/65 [690/450]	Plate, Sheet & Strip	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A/SA-240	S31260	S31260		100/70 [690/485]	Plate, Sheet & Strip	25Cr-6.5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	S31803	S31803		90/65 [620/450]	Plate, Sheet & Strip	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S32003		90/65 [620/450]	Plate, Sheet & Strip	21Cr-3.5Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S32101	>0.187 [>5]	95/65 [655/450]	Plate, Sheet & Strip	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S32101	≤0.187 [≤5]	101/77 [700/530]	Plate, Sheet & Strip	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S32202		94/65 [650/450]	Plate, Sheet & Strip	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	2205	S32205		95/65 [655/450]	Plate, Sheet & Strip	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S32304		87/58 [600/400]	Plate, Sheet & Strip	23Cr-4Ni-Mo-Cu-N
10H	1	10.2	ASTM/ASME	A/SA-240	S32550	S32550		110/80 [760/550]	Plate, Sheet & Strip	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A/SA-240	S32750	S32750		116/80 [800/550]	Plate, Sheet & Strip	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A/SA-240	S32760	S32760		108/80 [745/550]	Plate, Sheet & Strip	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A/SA-240	329	S32900		90/70 [620/485]	Plate, Sheet & Strip	26Cr-4Ni-Mo
10H	1	10.2	ASTM/ASME	A/SA-240	S32906	S32906	≤0.40 [≤10]	109/80 [750/550]	Plate, Sheet & Strip	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A/SA-240	S32906	S32906	<0.40 [<10]	116/94 [800/650]	Plate, Sheet & Strip	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A/SA-240	S32950	S32950		100/70 [690/485]	Plate, Sheet & Strip	26Cr-4Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S82012	>0.187 [>5]	94/58 [650/400]	Plate, Sheet & Strip	20Cr-1Ni-Mo-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
10H	1	10.1	ASTM/ASME	A/SA-240	—	S82012	≤0.187 [≤5]	102/73 [705/500]	Plate, Sheet & Strip	20Cr-1Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S82031	>0.187 [>5]	94/58 [650/400]	Plate, Sheet & Strip	21Cr-3Ni-1Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S82031	≤0.187 [≤5]	102/73 [705/500]	Plate, Sheet & Strip	21Cr-3Ni-1Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S82441	≤0.40 [≤10]	99/70 [680/480]	Seamless & Welded Tube	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A/SA-240	—	S82441	<0.40 [<10]	107/78 [740/540]	Seamless & Welded Tube	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM	A276	—	S32101		94/65 [650/450]	Bar	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-276	S32205	S32205		95/65 [655/450]	Bar	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-276	—	S32550		94/65 [650/450]	Bars & Shapes	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A/SA-351	CE8MN	J93345		95/65 [655/450]	Castings	24Cr-10Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A/SA-351	CD4MCu	J93370		100/70 [690/485]	Castings	26Cr-5Ni-2Mo-3Cu
10H	1	10.2	ASTM/ASME	A/SA-351	CD3MWCuN	J93380		100/65 [690/450]	Castings	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-479	—	S31803		90/65 [620/450]	Bars & Shapes	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-479	—	S32101		94/65 [650/450]	Bars & Shapes	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-479	—	S32202		94/65 [650/450]	Bars & Shapes	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-479	—	S32205		95/65 [655/450]	Bars & Shapes	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM/ASME	A/SA-479	S32550	S32550		110/80 [760/550]	Bars & Shapes	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A/SA-479	S32750	S32750		116/80 [800/550]	Bars & Shapes	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A/SA-479	S32906	S32906		109/80 [750/550]	Bars & Shapes	29Cr-6.5Ni-2Mo-N
10H	1	10.1	ASTM/ASME	A/SA-479	—	S82441	≤0.4375 [≤11]	99/70 [680/480]	Bars	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A/SA-479	—	S82441	<0.4375 [<11]	107/78 [740/540]	Bars	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.2	ASTM/ASME	A/SA-789	S31200	S31200		100/65 [690/450]	Seamless & Welded Tube	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A/SA-789	S31260	S31260		100/65 [690/450]	Seamless & Welded Tube	25Cr-6.5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-789	S31500	S31500		92/64 [635/440]	Seamless & Welded Tube	18Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-789	S31803	S31803		90/65 [620/450]	Seamless & Welded Tube	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-789	—	S32003		100/70 [690/485]	Seamless & Welded Tube	21Cr-3.5Ni-Mo-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
10H	1	10.1	ASTM/ASME	A/SA-789	—	S32101	>0.187 [>5]	94/65 [650/450]	Seamless & Welded Tube	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-789	—	S32101	≤ 0.187 [≤ 5]	101/77 [700/530]	Seamless & Welded Tube	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-789	—	S32202		94/65 [650/450]	Seamless & Welded Tube	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-789	—	S32205		95/70 [655/485]	Seamless & Welded Tube	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-789	S32304	S32304	>1 [>25]	87/58 [600/400]	Seamless & Welded Tube	23Cr-4Ni-Mo-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-789	S32304	S32304	≤ 1 [≤ 25]	100/65 [690/450]	Seamless & Welded Tube	23Cr-4Ni-Mo-Cu-N
10H	1	10.2	ASTM/ASME	A/SA-789	S32550	S32550		110/80 [760/550]	Seamless & Welded Tube	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A/SA-789	S32750	S32750		116/80 [800/550]	Seamless & Welded Tube	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A/SA-789	S32760	S32760		109/80 [750/550]	Seamless & Welded Tube	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A/SA-789	S32900	S32900		90/70 [620/485]	Seamless & Welded Tube	26Cr-4Ni-Mo
10H	1	10.2	ASTM/ASME	A/SA-789	S32906	S32906	≤ 0.40 [≤ 10]	109/80 [750/550]	Seamless & Welded Tube	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A/SA-789	S32906	S32906	<0.40 [<10]	116/94 [800/650]	Seamless & Welded Tube	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A/SA-789	S32950	S32950		100/70 [690/485]	Seamless & Welded Tube	26Cr-4Ni-Mo-N
10H	1	10.2	ASTM/ASME	A/SA-789	S32974	S32974		116/80 [800/550]	Seamless & Welded Tube	25Cr-7Ni-3Mo-2W-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-789	—	S82441	≤ 0.40 [≤ 10]	99/70 [680/480]	Seamless & Welded Tube	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A/SA-789	—	S82441	<0.40 [<10]	107/78 [740/540]	Seamless & Welded Tube	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.2	ASTM/ASME	A/SA-790	S31200	S31200		100/65 [690/450]	Seamless & Welded Pipe	25Cr-6Ni-Mo-N
10H	1	10.2	ASTM/ASME	A/SA-790	S31260	S31260		100/65 [690/450]	Seamless & Welded Pipe	25Cr-6.5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-790	S31500	S31500		92/64 [635/440]	Seamless & Welded Pipe	18Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-790	S31803	S31803		90/65 [620/450]	Seamless & Welded Pipe	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-790	—	S32003		90/65 [620/450]	Seamless & Welded Pipe	21Cr-3.5Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-790	—	S32101	>0.187 [>5]	94/65 [650/450]	Seamless & Welded Pipe	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-790	—	S32101	≤ 0.187 [≤ 5]	101/77 [700/530]	Seamless & Welded Pipe	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-790	—	S32202		94/65 [650/450]	Seamless & Welded Pipe	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-790	2205	S32205		95/65 [655/450]	Seamless & Welded Pipe	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-790	S32304	S32304		87/58 [600/400]	Seamless & Welded Pipe	23Cr-4Ni-Mo-Cu-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	ISO			Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Base Metal Specification	UNS						
10H	1	10.2	ASTM/ASME	A/SA-790	S32550	S32550	S32550		110/80 [760/550]	Seamless & Welded Pipe	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A/SA-790	S32750	S32750	S32750		116/80 [800/550]	Seamless & Welded Pipe	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A/SA-790	S32760	S32760	S32760		109/80 [750/550]	Seamless & Welded Pipe	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A/SA-790	S32900	S32900	S32900		90/70 [620/485]	Seamless & Welded Pipe	26Cr-4Ni-Mo
10H	1	10.2	ASTM/ASME	A/SA-790	S32906	S32906	S32906	≤0.40 [≤10]	109/80 [750/550]	Seamless & Welded Pipe	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A/SA-790	S32906	S32906	S32906	<0.40 [<10]	116/94 [800/650]	Seamless & Welded Pipe	29Cr-6.5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A/SA-790	S32950	S32950	S32950		100/70 [690/485]	Seamless & Welded Pipe	26Cr-4Ni-Mo-N
10H	1	10.2	ASTM/ASME	A/SA-790	S39274	S39274	S39274		116/80 [800/550]	Seamless & Welded Pipe	25Cr-7Ni-3Mo-2W-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-790	—	—	S82441	≤0.40 [≤10]	99/70 [680/480]	Seamless & Welded Pipe	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A/SA-790	—	—	S82441	<0.40 [<10]	107/78 [740/540]	Seamless & Welded Pipe	24Cr-4Ni-3Mn-1.5Mo-N
10H	1	10.1	ASTM/ASME	A/SA-815	S31803	S31803	S31803		90/65 [620/450]	Fittings	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM/ASME	A/SA-815	—	—	S32101		94/65 [650/450]	Fittings	21Cr-5Mn-1.5Ni-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-815	—	—	S32202		94/65 [650/450]	Fittings	22Cr-2Ni-Mo-N
10H	1	10.1	ASTM/ASME	A/SA-815	S32205	S32205	S32205		95/65 [655/450]	Fittings	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM/ASME	A/SA-815	S32550	S32550	S32550		110/80 [760/550]	Fittings	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A/SA-815	S32750	S32750	S32750		116/80 [800/550]	Fittings	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A/SA-815	S32760	S32760	S32760		109/80 [750/550]	Fittings	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.1	ASTM	A890	4A	4A	J92205		90/60 [620/415]	Castings	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM	A890	2A	2A	J93345		95/65 [655/450]	Castings	24Cr-10Ni-4Mo-N
10H	1	10.2	ASTM	A890	1A	1A	J93370		100/70 [690/485]	Castings	26Cr-5Ni-2Mo-3Cu
10H	1	10.2	ASTM	A890	3A	3A	J93371		95/65 [655/450]	Castings	25Cr-5Ni-2Mo-N
10H	1	10.2	ASTM	A890	1B	1B	J93372		100/70 [690/485]	Castings	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM	A890	1C	1C	J93373		100/65 [690/450]	Castings	25Cr-6Ni-3Mo-Cu-N
10H	1	10.2	ASTM	A890	6A	6A	J93380		100/65 [690/450]	Castings	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM	A890	5A	5A	J93404		100/75 [690/515]	Castings	25Cr-7Ni-4Mo-N
10H	1	10.1	ASTM	A928	S31803	S31803	S31803		90/65 [620/450]	Welded Pipe	22Cr-5Ni-3Mo-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition	
Steel and Steel Alloys										
10H	1	10.1	ASTM	A928	S32003	S32003	>3 [>5]	95/65 [655/450]	Welded Pipe	21Cr-3.5Ni-Mo-N
10H	1	10.1	ASTM	A928	S32003	S32003	≤ 0.1875 [≤ 5]	100/70 [690/485]	Welded Pipe	21Cr-3.5Ni-Mo-N
10H	1	10.1	ASTM	A928	2205	S32205		95/65 [655/450]	Welded pipe	22Cr-5Ni-3Mo-N
10H	1	10.1	ASTM	A928	2304	S32304		87/58 [600/400]	Welded Pipe	23Cr-4Ni-Mo-Cu-N
10H	1	10.2	ASTM	A928	255	S32550		110/80 [760/550]	Welded pipe	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM	A928	2507	S32750		116/80 [800/550]	Welded Pipe	25Cr-7Ni-4Mo-N
10H	1	10.2	ASTM	A928	—	S32760		108/80 [745/550]	Welded pipe	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.1	ASTM/ASME	A/SA-995	4A	J92205		90/60 [620/415]	Castings	22Cr-5Ni-3Mo-N
10H	1	10.2	ASTM/ASME	A/SA-995	2A	J93345		95/65 [655/450]	Castings	24Cr-10Ni-4Mo-N
10H	1	10.2	ASTM/ASME	A/SA-995	3A	J93371		95/65 [655/450]	Castings	25Cr-5Ni-2Mo-N
10H	1	10.2	ASTM/ASME	A/SA-995	1B	J93372		100/70 [690/485]	Castings	25Cr-5Ni-3Mo-2Cu
10H	1	10.2	ASTM/ASME	A/SA-995	6A	J93380		100/65 [690/450]	Castings	25Cr-8Ni-3Mo-W-Cu-N
10H	1	10.2	ASTM/ASME	A/SA-995	5A	J93404		100/75 [690/515]	Castings	25Cr-7Ni-4Mo-N
10I	1	7.1	ASTM/ASME	A/SA-182	FXM-27Cb	S44627		60/35 [415/240]	Forgings	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A/SA-240	XM-33	S44626		68/45 [470/310]	Plate, Sheet & Strip	27Cr-1Mo-Ti
10I	1	7.1	ASTM/ASME	A/SA-240	XM-27	S44627		65/40 [450/275]	Plate, Sheet & Strip	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A/SA-240	S44635	S44635		90/75 [620/515]	Plate, Sheet & Strip	25Cr-4Ni-4Mo-Ti
10I	1	7.1	ASTM/ASME	A/SA-268	TP 446-1	S44600		70/40 [485/275]	Seamless & Welded Tube	27Cr
10I	1	7.1	ASTM/ASME	A/SA-268	TP 446-2	S44600		65/40 [450/275]	Seamless & Welded Tube	27Cr
10I	1	7.1	ASTM/ASME	A/SA-268	TP XM-33	S44626		68/45 [470/310]	Seamless & Welded Tube	27Cr-1Mo-Ti
10I	1	7.1	ASTM/ASME	A/SA-268	TP XM-27	S44627		65/40 [450/275]	Seamless & Welded Tube	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A/SA-268	25-4-4	S44635		90/75 [620/515]	Seamless & Welded Tube	25Cr-4Ni-4Mo-Ti
10I	1	7.1	ASTM/ASME	A/SA-336	FXM-27Cb	S44627		60/35 [415/240]	Forgings	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A/SA-479	XM-27	S44627		65/40 [450/275]	Bars & Shapes	27Cr-1Mo
10I	1	7.1	ASTM/ASME	A/SA-731	TPXM-33	S44626		65/40 [450/275]	Seamless & Welded Pipe	27Cr-1Mo-Ti
10I	1	7.1	ASTM/ASME	A/SA-731	TPXM-27	S44627		65/40 [450/275]	Seamless & Welded Pipe	27Cr-1Mo
10J	1	7.1	ASTM/ASME	A/SA-240	S44700	S44700		80/60 [550/415]	Plate, Sheet & Strip	29Cr-4Mo
10J	1	7.1	ASTM/ASME	A/SA-268	29-4	S44700		80/60 [550/415]	Seamless & Welded Tube	29Cr-4Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
10J	1	7.1	ASTM/ASME	A/SA-268	S44735	S44735		75/60 [515/415]	Seamless & Welded Tube	29Cr-4Mo-Ti
10J	1	7.1	ASTM/ASME	A/SA-479	S44700	S44700		70/55 [485/380]	Bars & Shapes	29Cr-4Mo
10J	1	7.1	ASTM/ASME	A/SA-731	S44700	S44700		80/60 [550/415]	Seamless & Welded Pipe	29Cr-4Mo
10K	1	7.1	ASTM/ASME	A/SA-240	S44660	S44660		85/65 [585/450]	Plate, Sheet & Strip	26Cr-3Ni-3Mo
10K	1	7.1	ASTM/ASME	A/SA-240	S44800	S44800		80/60 [550/415]	Plate, Sheet & Strip	29Cr-4Mo-2Ni
10K	1	7.1	ASTM/ASME	A/SA-268	26-3-3	S44660		85/65 [585/450]	Seamless & Welded Tube	26Cr-3Ni-3Mo
10K	1	7.1	ASTM/ASME	A/SA-268	29-4-2	S44800		80/60 [550/415]	Seamless & Welded Tube	29Cr-4Mo-2Ni
10K	1	7.1	ASTM/ASME	A/SA-479	S44800	S44800		70/55 [485/380]	Bars & Shapes	29Cr-4Mo-2Ni
10K	1	7.1	ASTM/ASME	A/SA-731	S44660	S44660		85/65 [585/450]	Seamless & Welded Pipe	26Cr-3Ni-3Mo
10K	1	7.1	ASTM/ASME	A/SA-731	S44800	S44800		80/60 [550/415]	Seamless & Welded Pipe	29Cr-4Mo-2Ni
10K	1	7.1	ASTM/ASME	A/SA-803	26-3-3	S44660		85/65 [585/450]	Welded Tube	26Cr-3Ni-3Mo
11A	1	9.3	ASTM/ASME	A/SA-333	8	K81340		100/75 [690/515]	Seamless & Welded Pipe	9Ni
11A	1	9.3	ASTM/ASME	A/SA-334	8	K81340		100/75 [690/515]	Welded Tube	9Ni
11A	1	9.3	ASTM/ASME	A/SA-353	—	K81340		100/75 [690/515]	Plate	9Ni
11A	1	9.3	ASTM/ASME	A/SA-420	WPL8	K81340		100/75 [690/515]	Piping Fittings	9Ni
11A	1	9.3	ASTM/ASME	A/SA-522	II	K71340		100/75 [690/515]	Forgings	8Ni
11A	1	9.3	ASTM/ASME	A/SA-522	I	K81340		100/75 [690/515]	Forgings	9Ni
11A	1	9.2	ASTM/ASME	A/SA-553	III	—		100/85 [690/585]	Plate	7Ni
11A	1	9.3	ASTM/ASME	A/SA-553	II	K71340		100/85 [690/585]	Plate	8Ni
11A	1	9.3	ASTM/ASME	A/SA-553	I	K81340		100/85 [690/585]	Plate	9Ni
11A	1	9.3	ASTM	A844	—	K81340		100/85 [690/585]	Plate	9Ni
11A	2	9.2	ASTM/ASME	A/SA-645	A	K41583		95/65 [655/450]	Plate	5Ni-0.25Mo
11A	2	3.1	ASTM	A734	A	K21205		77/65 [530/450]	Plate	C-Mn-1Ni-1Cr-0.3Mo
11A	3	3.1	ASTM/ASME	A/SA-487	4, Cl. B	J13047		105/85 [725/585]	Castings	0.5Ni-0.5Cr-0.25Mo-V
11A	3	3.1	ASTM/ASME	A/SA-487	4, Cl. E	J13047		115/95 [795/655]	Castings	0.5Ni-0.5Cr-0.25Mo-V
11A	4	3.1	ASTM/ASME	A/SA-533	A, Cl. 3	K12521		100/83 [690/570]	Plate	Mn-0.5Mo
11A	4	3.1	ASTM/ASME	A/SA-533	D, Cl. 3	K12529		100/83 [690/570]	Plate	Mn-0.5Mo-0.25Ni
11A	4	3.2	ASTM/ASME	A/SA-533	B, Cl. 3	K12539		100/83 [690/570]	Plate	Mn-0.5Mo-0.5Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Group Number	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
11A	4	3.2	ASTM/ASME	A/SA-533	C, Cl. 3	K12554		100/83 [690/570]	Plate	Mn-0.5Mo-0.75Ni
11A	4	3.2	ASTM/ASME	A/SA-672	J100	K12521		100/83 [690/570]	Fusion Welded Pipe	Mn-0.5Mo
11A	5	9.2	ASTM/ASME	A/SA-352	LC2-1	J42215		105/80 [725/550]	Castings	3Ni-1.5Cr-0.5Mo
11A	5	3.1	ASTM/ASME	A/SA-508	4N, Cl.1	K22375		105/85 [725/585]	Forgings	3.5Ni-1.75Cr-0.5Mo-V
11A	5	3.1	ASTM/ASME	A/SA-508	5, Cl.1	K42365		105/85 [725/585]	Forgings	3.5Ni-1.75Cr-0.5Mo-V
11A	5	3.1	ASTM/ASME	A/SA-543	C Cl.1	—		105/85 [725/585]	Plate	2.75Ni-1.5Cr-0.5Mo
11A	5	3.1	ASTM/ASME	A/SA-543	B Cl.1	K42339		105/85 [725/585]	Plate	3Ni-1.75Cr-0.5Mo
11B		3.1	AS/NZS	3597	700PV	—		120/109 [830/750]	Plate	C-Mn-1Cr-25Mo
11B	1	3.1	ASTM	A514	A	K11856	≤1.25 [≤32]	110/100 [760/690]	Plate	0.5Cr-0.25Mo-Si
11B	1	3.1	ASTM/ASME	A/SA-517	A	K11856	≤1.25 [≤32]	115/100 [795/690]	Plate	0.5Cr-0.25Mo-Si
11B	1	3.1	ASTM/ASME	A/SA-592	A	K11856	≤1.5 [≤38]	115/100 [795/690]	Forgings	0.5Cr-0.25Mo-Si
11B	2	3.1	ASTM	A514	E	K21604	>2.5 and ≤6 [>64 and ≤152]	100/90 [690/620]	Plate	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM	A514	E	K21604	≤2.5 [≤64]	110/100 [760/690]	Plate	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM/ASME	A/SA-517	E	K21604	>2.5 and ≤6 [>64 and ≤152]	105/90 [725/620]	Plate	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM/ASME	A/SA-517	E	K21604	≤2.5 [≤64]	115/100 [795/690]	Plate	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM/ASME	A/SA-592	E	K11695	≤2.5 and ≤4 [≤64 and ≤102]	105/90 [725/620]	Forgings	1.75Cr-0.5Mo-Cu
11B	2	3.1	ASTM/ASME	A/SA-592	E	K11695	≤2.5 [≤64]	115/100 [795/690]	Forgings	1.75Cr-0.5Mo-Cu
11B	3	3.1	ASTM	A514	F	K11576	≤2.5 [≤64]	110/100 [760/690]	Plate	0.75Ni-0.5Cr-0.5Mo-V
11B	3	3.1	ASTM	A514	H	K11646	≤2 [≤50]	110/100 [760/690]	Plate	0.5Ni-0.5Cr-0.25Mo-V
11B	3	3.1	ASTM/ASME	A/SA-517	F	K11576	≤2.5 [≤64]	115/100 [795/690]	Plate	0.75Ni-0.5Cr-0.5Mo-V
11B	3	3.1	ASTM/ASME	A/SA-517	H	K11646	≤2 [≤50]	115/100 [795/690]	Plate	0.5Ni-0.5Cr-0.25Mo-V
11B	3	3.1	ASTM/ASME	A/SA-592	F	K11576	≤2.5 and ≤4 [≤64 and ≤102]	105/90 [725/620]	Forgings	0.75Ni-0.5Cr-0.5Mo-V
11B	3	3.1	ASTM/ASME	A/SA-592	F	K11576	≤2.5 [≤64]	115/100 [795/690]	Forgings	0.75Ni-0.5Cr-0.5Mo-V
11B	4	3.1	ASTM	A514	B	K11630	≤1.25 [≤32]	110/100 [760/690]	Plate	0.5Cr-0.2Mo-V
11B	4	3.1	ASTM/ASME	A/SA-517	B	K11630	≤1.25 [≤32]	115/100 [795/690]	Plate	0.5Cr-0.2Mo-V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group Number	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Steel and Steel Alloys									
11B	4	—	ASTM	A782	I	—	97/80 [670/550]	Plate	1Mn-1Cr-1Si-0.5Mo-Zr
11B	4	—	ASTM	A782	I	—	107/90 [740/620]	Plate	1Mn-1Cr-1Si-0.5Mo-Zr
11B	4	—	ASTM	A782	I	—	115/100 [795/690]	Plate	1Mn-1Cr-1Si-0.5Mo-Zr
11B	6	3.1	ASTM	A514	S	—	110/100 [760/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A514	T	—	100/90 [690/620]	Plate	Mn-Mo-B
						>2.5 and ≤6 [>64 and ≤152]			
11B	6	3.1	ASTM	A514	T	—	110/100 [760/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A514	C	K11511	100/90 [690/620]	Plate	1.2Mn-0.2Mo
						>2.5 and ≤6 [>64 and ≤152]			
11B	6	3.1	ASTM	A514	C	K11511	110/100 [760/690]	Plate	1.2Mn-0.2Mo
11B	6	3.1	ASTM	A514	K	K11523	100/90 [690/620]	Plate	Mn-Mo-B
						>2.5 and ≤6 [>64 and ≤152]			
11B	6	3.1	ASTM	A514	K	K11523	110/100 [760/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A514	J	K11625	100/90 [690/620]	Plate	C-0.5Mo
						>2.5 and ≤6 [>64 and ≤152]			
11B	6	3.1	ASTM	A514	J	K11625	110/100 [760/690]	Plate	C-0.5Mo
11B	6	3.1	ASTM/ASME	A/SA-517	S	—	115/100 [795/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A517	T	—	115/100 [795/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A517	K	K11523	115/100 [795/690]	Plate	Mn-Mo-B
11B	6	3.1	ASTM	A517	J	K11625	115/100 [795/690]	Plate	C-0.5Mo
11B	8	3.1	ASTM	A514	P	K21650	100/90 [690/620]	Plate	1.25Ni-1Cr-0.5Mo
						>2.5 and ≤6 [>64 and ≤152]			
11B	8	3.1	ASTM	A514	P	K21650	110/100 [760/690]	Plate	1.25Ni-1Cr-0.5Mo
11B	8	3.1	ASTM/ASME	A/SA-517	P	K21650	105/90 [725/620]	Plate	1.25Ni-1Cr-0.5Mo
						>2.5 and ≤4 [>64 and ≤102]			
11B	8	3.1	ASTM/ASME	A/SA-517	P	K21650	115/100 [795/690]	Plate	1.25Ni-1Cr-0.5Mo
11B	9	3.1	ASTM	A514	Q	—	100/90 [690/620]	Plate	1.3Ni-1.3Cr-0.5Mo-V
						>2.5 and ≤6 [>64 and ≤152]			
11B	9	3.1	ASTM	A514	Q	—	110/100 [760/690]	Plate	1.3Ni-1.3Cr-0.5Mo-V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group Number	ISO Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Standard	Specification						
Steel and Steel Alloys										
11B	9	3.1	ASTM/ASME	A/SA-517	Q	—	>2.5 and ≤6 [>64 and ≤152]	105/90 [725/620]	Plate	1.3Ni-1.3Cr-0.5Mo-V
11B	9	3.1	ASTM/ASME	A/SA-517	Q	—	≤2.5 [≤64]	115/100 [795/690]	Plate	1.3Ni-1.3Cr-0.5Mo-V
11B	9	—	ASTM	A519	4130	G41300		75/55 [515/380]	Tube	1Cr-0.2Mo
11B	9	—	ASTM	A519	8630	G86300		75/55 [515/380]	Tube	0.5Ni-0.5Cr-0.2Mo
11B	10	3.1	ASTM/ASME	A/SA-508	4N, Cl.2	K22375		115/100 [795/690]	Forgings	3.5Ni-1.75Cr-0.5Mo-V
11B	10	3.1	ASTM/ASME	A/SA-508	5, Cl.2	K42365		115/100 [795/690]	Forgings	3.5Ni-1.75Cr-0.5Mo-V
11B	10	3.1	ASTM	A514	M	K11683	>2.5 and ≤6 [>64 and ≤152]	100/90 [690/620]	Plate	1.3Ni-0.5Mo
11B	10	3.1	ASTM	A514	M	K11683	>2 and ≤2.5 [>50 and ≤64]	110/100 [760/690]	Plate	1.3Ni-0.5Mo
11B	10	3.1	ASTM	A514	M	K11683	≤2 [≤50]	115/100 [795/690]	Plate	1.3Ni-0.5Mo
11B	10	3.1	ASTM	A517	M	K11683	≤2 [≤50]	115/100 [795/690]	Plate	1.3Ni-0.5Mo
11B	10	3.1	ASTM/ASME	A/SA-543	C Cl. 2	—		115/100 [795/690]	Plate	2.75Ni-1.5Cr-0.5Mo
11B	10	3.1	ASTM/ASME	A/SA-543	B Cl. 2	K42339		115/100 [795/690]	Plate	3Ni-1.75Cr-0.5Mo
11B	11	1.4	ASTM	A709	HPS 70W	—		85/70 [585/485]	Plate, Bar & Shapes	C-Mn
11B	11	4.2	ASTM	A852	—	K12043		90/70 [620/485]	Plate	C-Mn
11B	12	3.1	ASTM	A514	R	—	>2.5 and ≤6 [>64 and ≤152]	100/90 [690/620]	Plate	C-Mn-Ni-Cu-V
11B	12	3.1	ASTM	A514	R	—	≤2.5 [≤64]	110/100 [760/690]	Plate	C-Mn-Ni-Cu-V
11B	14	3.1	ASTM	A517	C	K11511	<1.25 [≤32]	115/100 [795/690]	Plate	1.2Mn-0.2Mo
11C	1	3.3	ASTM	A859	A Cl.1	K20747		65/55 [450/380]	Forgings	1Ni-1Cu-0.75Cr-Mo-Nb
11C	1	3.3	ASTM	A859	A Cl.2	K20747		75/65 [515/450]	Forgings	1Ni-1Cu-0.75Cr-Mo-Nb
12A	1	3.3	ASTM	A710	A Cl.2	K20747	>2 [≥51]	60/50 [415/345]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12A	1	3.3	ASTM	A710	A Cl.2	K20747	≤2 [≤51]	72/60 [495/415]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12B	1	3.3	ASTM	A710	A Cl.3	K20747	>2 [≥51]	75/60 [515/415]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12B	1	3.3	ASTM	A710	A Cl.3	K20747	≤2 [≤51]	85/75 [585/515]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
12C	1	3.3	ASTM	A710	A Cl.1	K20747	≤0.75 [≤19]	90/80 [620/550]	Plate	1Ni-1Cu-0.75Cr-Mo-Nb
15E	1	6.4	ASTM/ASME	A/SA-182	F91	K90901		90/60 [620/415]	Forgings	9Cr-1Mo-V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Ferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	Group Number	ISO 15608 Group	Steel and Steel Alloys					Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Type, Grade, or Alloy Designation		UNS Number	Thickness or Diameter Limitations, in [mm]				
			Base Metal Specification	Standard						
15E	1	6.4	ASTM/ASME	A/SA-182	F92	K92460	90/64 [620/440]	Forgings	9Cr-2W	
15E	1	6.4	ASTM	A199	T91	K90901	85/60 [585/415]	Seamless Tube	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-213	T91	K90901	85/60 [585/415]	Seamless Tube	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-213	T92	K92460	90/64 [620/440]	Seamless Tube	9Cr-2W	
15E	1	6.4	ASTM/ASME	A/SA-217	C12A	J84090	85/60 [585/415]	Castings	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-234	WP91	K90901	85/60 [585/415]	Piping Fittings	9Cr-1Mo-V	
15E	1	6.4	ASTM	A234	WP92	K92460	90/64 [620/440]	Piping Fittings	9Cr-2W	
15E	1	6.4	ASTM/ASME	A/SA-335	P91	K90901	85/60 [585/415]	Seamless Pipe	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-335	P92	K92460	90/64 [620/440]	Seamless Pipe	9Cr-2W	
15E	1	6.4	ASTM/ASME	A/SA-336	F91	K90901	90/60 [620/415]	Forgings	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-336	F92	K92460	90/64 [620/440]	Forgings	9Cr-2W	
15E	1	6.4	ASTM	A356	12A	J84090	85/60 [585/415]	Castings	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-369	FP91	K90901	85/60 [585/415]	Forged Pipe	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-369	FP92	K92460	90/64 [620/440]	Forged Pipe	9Cr-2W	
15E	1	6.4	ASTM/ASME	A/SA-387	91, Cl.2	K90901	85/60 [585/415]	Plate	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-691	91	K91560	85/60 [585/415]	Fusion Welded Pipe	9Cr-1Mo-V	
15E	1	6.4	ASTM/ASME	A/SA-1017	92	K92460	90/64 [620/440]	Plate	9Cr-2W	
15E	1	6.4	ASTM	A1091	C91	J84090	85/60 [585/415]	Castings	9Cr-1Mo-V	

Table C.2
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations,	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
						in [mm]			
Aluminum and Aluminum Base Alloys									
21	—	ASTM/ASME	B/SB-209	Alclad 3003	—	>0.05 and <0.5 [>1.3 and <13]	13/4.5 [90/31]	Plate & Sheet	Al-Mn-Cu
21	—	ASTM/ASME	B/SB-209	Alclad 3003	—	≤0.5 and ≤3 [≤13 and ≤76]	14/5 [97/34]	Plate & Sheet	Al-Mn-Cu
21	—	ASTM/ASME	B/SB-209	Alclad 3003	A83003	<0.5 [<13]	13/4.5 [90/31]	Plate & Sheet	Al-Mn-Cu
21	—	ASTM/ASME	B/SB-209	Alclad 3003	A83003	≤0.5 [≤13]	14/5 [97/34]	Plate & Sheet	Al-Mn-Cu
21	21	ASTM/ASME	B/SB-209	1060	A91060		8/2.5 [55/17]	Plate & Sheet	99.60Al
21	21	ASTM/ASME	B/SB-209	1100	A91100		11/3.5 [76/24]	Plate & Sheet	99.0Al-Cu
21	22.1	ASTM/ASME	B/SB-209	3003	A93003		14/5 [97/34]	Plate & Sheet	Al-Mn-Cu
21	22.2	ASTM/ASME	B/SB-209	5050	A95050		18/6 [125/41]	Plate & Sheet	Al-1.5Mg
21	—	ASTM/ASME	B/SB-210	Alclad 3003	—		13/4.5 [90/31]	Seamless Tube	Al-Mn-Cu
21	—	ASTM	B210	Alclad 3102	—		10/3.5 [69/24]	Seamless Tube	Al-0.3Mg
21	—	ASTM	B210	Alclad 3303	—		13/4.5 [90/31]	Seamless Tube	Al-Mn
21	—	ASTM	B210	Alclad 3003	A83003		13/4.5 [90/31]	Seamless Tube	Al-Mn-Cu
21	21	ASTM/ASME	B/SB-210	1060	A91060		8.5/2.5 [59/17]	Seamless Tube	99.60Al
21	21	ASTM	B210	1100	A91100		11/3.5 [76/24]	Seamless Tube	99.0Al-Cu
21	22.1	ASTM/ASME	B/SB-210	3003	A93003		14/5 [97/34]	Seamless Tube	Al-Mn-Cu
21	22.1	ASTM	B210	3102	A93102		12/4 [82/28]	Seamless Tube	Al-0.3Mg
21	—	ASTM	B210	3303	A93303		14/5 [97/34]	Seamless Tube	Al-Mn
21	22.2	ASTM	B210	5050	A95050		18/6 [125/41]	Seamless Tube	Al-1.5Mg
21	21	ASTM/ASME	B/SB-211	1060	A91060		8/2.5 [55/17]	Bar, Rod & Wire	99.60Al
21	21	ASTM/ASME	B/SB-211	1100	A91100		11/3 [76/21]	Bar, Rod & Wire	99.0Al-Cu
21	22.1	ASTM/ASME	B/SB-211	3003	A93003		14/5 [97/34]	Bar, Rod & Wire	Al-Mn-Cu
21	—	ASTM/ASME	B/SB-221	Alclad 3003	A83003		13/4.5 [90/31]	Bar, Rod & Shapes	Al-Mn-Cu
21	21	ASTM/ASME	B/SB-221	1060	A91060		8.5/2.5 [59/17]	Bar, Rod & Shapes	99.60Al
21	21	ASTM/ASME	B/SB-221	1100	A91100		11/3 [76/21]	Bar, Rod & Shapes	99.0Al-Cu
21	22.1	ASTM/ASME	B/SB-221	3003	A93003		14/5 [97/34]	Bar, Rod & Shapes	Al-Mn-Cu
21	22.1	ASTM/ASME	B/SB-221	3102	A93102		12/4 [82/28]	Bar, Rod & Shapes	Al-0.3Mg
21	21	ASTM	B230	1350	A91350		8/— [55/—]	Wire	99.50Al

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys										
21	—	ASTM/ASME	B/SB-234	Alclad 3003	—		13/4.5 [90/31]		Seamless Tube	Al-Mn-Cu
21	—	ASTM/ASME	B/SB-234	Alclad 3003	A83003		13/4.5 [90/31]		Seamless Tube	Al-Mn-Cu
21	21	ASTM/ASME	B/SB-234	1060	A91060		8.5/2.5 [59/17]		Seamless Tube	99.60Al
21	22.1	ASTM/ASME	B/SB-234	3003	A93003		14/5 [97/34]		Seamless Tube	Al-Mn-Cu
21	21	ASTM	B236	1350	A91350		8/— [55/—]		Bar	99.50Al
21	—	ASTM/ASME	B/SB-241	Alclad 3003	—		13/4.5 [90/31]		Seamless Pipe & Tube	Al-Mn-Cu
21	—	ASTM/ASME	B/SB-241	Alclad 3003	A83003		13/4.5 [90/31]		Seamless Pipe & Tube	Al-Mn-Cu
21	21	ASTM/ASME	B/SB-241	1060	A91060		8.5/2.5 [59/17]		Seamless Pipe & Tube	99.60Al
21	21	ASTM/ASME	B/SB-241	1100	A91100		11/3 [76/21]		Seamless Pipe & Tube	99.0Al-Cu
21	22.1	ASTM/ASME	B/SB-241	3003	A93003		14/5 [97/34]		Seamless Pipe & Tube	Al-Mn-Cu
21	21	ASTM/ASME	B/SB-247	1100	A91100		11/4 [76/28]		Forgings	99.0Al-Cu
21	22.1	ASTM/ASME	B/SB-247	3003	A93003		14/5 [97/34]		Forgings	Al-Mn-Cu
21	21	ASTM	B313	1100	A91100		11/3.5 [76/24]		Welded Tube	99.0Al-Cu
21	22.1	ASTM	B313	3003	A93003		14/5 [97/34]		Welded Tube	Al-Mn-Cu
21	22.2	ASTM	B313	5050	A95050		18/6 [125/41]		Welded Tube	Al-1.5Mg
21	21	ASTM	B324	1350	A91350		8.5/— [59/—]		Wire	99.50Al
21	—	ASTM	B345	Alclad 3003	A83003		13/4.5 [90/31]		Seamless Pipe & Tube	Al-Mn-Cu
21	21	ASTM	B345	1060	A91060		8.5/2.5 [59/17]		Seamless Pipe & Tube	99.60Al
21	22.1	ASTM	B345	3003	A93003		14/5 [97/34]		Seamless Pipe & Tube	Al-Mn-Cu
21	—	ASTM	B361	WP Alclad 3003	A83003		13/4.5 [90/31]		Fittings	Al-Mn-Cu
21	21	ASTM	B361	WP1060	A91060		8.5/2.5 [59/17]		Fittings	99.60Al
21	21	ASTM	B361	WP1100	A91100		11/3 [76/21]		Fittings	99.0Al-Cu
21	22.1	ASTM	B361	WP3003	A93003		14/5 [97/34]		Fittings	Al-Mn-Cu
21	21	ASTM	B483	1060	A91060		8.5/2.5 [59/17]		Tube	99.60Al
21	21	ASTM	B483	1100	A91100		11/3.5 [76/24]		Tube	99.0Al-Cu
21	21	ASTM	B483	1435	A91435		9.5/3 [66/21]		Tube	99.35Al-Fe
21	22.1	ASTM	B483	3003	A93003		14/5 [97/34]		Tube	Al-Mn-Cu
21	22.1	ASTM	B483	3102	A93102		11/3.5 [76/24]		Tube	Al-0.3Mg

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Type, Grade, or Alloy		UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
			Base Metal Specification	Designation					
Aluminum and Aluminum Base Alloys									
21	22.2	ASTM	B483	5050	A95050		18/6 [125/41]	Tube	Al-1.5Mg
21	21	ASTM	B491	1050	A91050		8/2.5 [55/17]	Extruded Tube	99.5Al-Fe
21	21	ASTM	B491	1100	A91100		11/3 [76/21]	Extruded Tube	99.0Al-Cu
21	21	ASTM	B491	1200	A91200		11/9.5 [76/66]	Extruded Tube	99.0Al-Si-Fe
21	21	ASTM	B491	1235	A91235		9/3 [62/21]	Extruded Tube	99.5Al-Fe
21	22.1	ASTM	B491	3003	A93003		14/5 [97/34]	Extruded Tube	Al-Mn-Cu
21	22.1	ASTM	B491	3102	A93102		11/3.5 [76/24]	Extruded Tube	Al-0.3Mg
21	—	ASTM	B547	Alclad 3003	A83003		13/4.5 [90/31]	Welded Tube	Al-Mn-Cu
21	21	ASTM	B547	1100	A91100		11/3.5 [76/24]	Welded Tube	99.0Al-Cu
21	22.1	ASTM	B547	3003	A93003		14/5 [97/34]	Welded Tube	Al-Mn-Cu
21	22.2	ASTM	B547	5050	A95050		18/6 [125/41]	Welded Tube	Al-1.5Mg
21	21	ASTM	B609	1350	A91350		8.5/— [59/—]	Wire	99.50Al
22	—	ASTM/ASME	B/SB-209	Alclad 3004	—	>0.05 and <0.5 [>1.3 and <13]	21/8 [145/55]	Plate & Sheet	Al-Mn-Mg
22	—	ASTM/ASME	B/SB-209	Alclad 3004	—	<0.5 [<13]	21/8 [145/55]	Plate & Sheet	Al-Mn-Mg
22	—	ASTM/ASME	B/SB-209	Alclad 3004	—	≤0.5 [≤13]	22/8.5 [150/59]	Plate & Sheet	Al-Mn-Mg
22	—	ASTM/ASME	B/SB-209	Alclad 3004	—	≤0.5 and ≤3 [≤13 and ≤76]	22/8.5 [150/59]	Plate & Sheet	Al-Mn-Mg
22	22.2	ASTM/ASME	B/SB-209	3004	A93004		22/8.5 [150/59]	Plate & Sheet	Al-Mn-Mg
22	22.2	ASTM/ASME	B/SB-209	3005	A93005		17/6.5 [115/45]	Plate & Sheet	Al-Mn-Mg
22	22.2	ASTM/ASME	B/SB-209	3105	A93105		14/5 [97/34]	Plate & Sheet	Al-Mn-Mg
22	22.2	ASTM/ASME	B/SB-209	5005	A95005		15/5 [105/34]	Plate & Sheet	Al-1.5Mg
22	22.2	ASTM/ASME	B/SB-209	5010	A95010		15/5 [105/34]	Plate & Sheet	Al-0.4Mg-0.2Mn
22	22.3	ASTM/ASME	B/SB-209	5052	A95052		25/9.5 [170/66]	Plate & Sheet	Al-2.5Mg
22	22.4	ASTM/ASME	B/SB-209	5154	A95154		30/11 [205/76]	Plate & Sheet	Al-3.5Mg
22	22.3	ASTM/ASME	B/SB-209	5252	A95252		25/9.5 [170/66]	Plate & Sheet	Al-2.5Mg
22	22.4	ASTM/ASME	B/SB-209	5254	A95254		30/11 [205/76]	Plate & Sheet	Al-3.5Mg
22	22.3	ASTM/ASME	B/SB-209	5454	A95454		31/12 [215/83]	Plate & Sheet	Al-2.7Mg-Mn
22	22.2	ASTM/ASME	B/SB-209	5457	A95457		16/— [110/—]	Plate & Sheet	Al-1Mg-0.3Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Standard	Specification						
Aluminum and Aluminum Base Alloys									
22	22.3	ASTM/ASME	B/SB-209	5652	A95652		25/9.5 [170/66]	Plate & Sheet	Al-2.5Mg
22	22.2	ASTM	B210	5005	A95005		15/5 [105/34]	Seamless Tube	Al-1.5Mg
22	22.3	ASTM/ASME	B/SB-210	5052	A95052		25/10 [170/69]	Seamless Tube	Al-2.5Mg
22	22.4	ASTM/ASME	B/SB-210	5154	A95154		30/11 [205/76]	Seamless Tube	Al-3.5Mg
22	22.3	ASTM/ASME	B/SB-211	5052	A95052		25/9.5 [170/66]	Bar, Rod & Wire	Al-2.5Mg
22	22.4	ASTM/ASME	B/SB-211	5154	A95154		30/11 [205/76]	Bar, Rod & Wire	Al-3.5Mg
22	22.2	ASTM/ASME	B/SB-221	3004	A93004		23/8.5 [160/59]	Bar, Rod & Shapes	Al-Mn-Mg
22	22.3	ASTM/ASME	B/SB-221	5052	A95052		25/10 [170/69]	Bar, Rod & Shapes	Al-2.5Mg
22	22.4	ASTM/ASME	B/SB-221	5154	A95154		30/11 [205/76]	Bar, Rod & Shapes	Al-3.5Mg
22	22.3	ASTM/ASME	B/SB-221	5454	A95454		31/12 [215/83]	Bar, Rod & Shapes	Al-2.7Mg-Mn
22	22.3	ASTM/ASME	B/SB-234	5052	A95052		25/10 [170/69]	Seamless Tube	Al-2.5Mg
22	22.3	ASTM/ASME	B/SB-234	5454	A95454		31/12 [215/83]	Seamless Tube	Al-2.7Mg-Mn
22	22.3	ASTM/ASME	B/SB-241	5052	A95052		25/10 [170/69]	Seamless Pipe & Tube	Al-2.5Mg
22	22.3	ASTM/ASME	B/SB-241	5454	A95454		31/12 [215/83]	Seamless Pipe & Tube	Al-2.7Mg-Mn
22	—	ASTM	B313	Alclad 3004	—		21/8 [145/55]	Welded Tube	Al-Mn-Mg
22	22.2	ASTM	B313	3004	A93004		22/8.5 [150/59]	Welded Tube	Al-Mn-Mg
22	22.2	ASTM	B313	3005	A93005		17/6.5 [115/45]	Welded Tube	Al-Mn-Mg
22	22.3	ASTM	B313	5052	A95052		25/9.5 [170/66]	Welded Tube	Al-2.5Mg
22	22.4	ASTM	B313	5154	A95154		30/11 [205/76]	Welded Tube	Al-3.5Mg
22	22.3	ASTM	B361	5154	A95154		30/11 [205/76]	Fittings	Al-3.5Mg
22	22.2	ASTM	B396	5005	A95005		15/5 [105/34]	Wire	Al-1.5Mg
22	22.2	ASTM	B483	5005	A95005		15/5 [105/34]	Tube	Al-1.5Mg
22	22.3	ASTM	B483	5052	A95052		25/9.5 [170/66]	Tube	Al-2.5Mg
22	—	ASTM	B547	Alclad 3004	—		21/8 [145/55]	Welded Tube	Al-Mn-Mg
22	22.2	ASTM	B547	3004	A93004		22/8.5 [150/59]	Welded Tube	Al-Mn-Mg
22	22.3	ASTM	B547	5052	A95052		25/9.5 [170/66]	Welded Tube	Al-2.5Mg
22	22.4	ASTM	B547	5154	A95154		30/11 [205/76]	Welded Tube	Al-3.5Mg
22	22.3	ASTM	B547	5454	A95454		31/12 [215/83]	Welded Tube	Al-2.7Mg-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys										
23	—	ASTM/ASME	B/SB-209	Alclad 6061	—			24/– [165/–]	Plate & Sheet	Al-Mg-Si-Cu
23	—	ASTM/ASME	B/SB-209	Alclad 6061	A86061	<0.5 [<13]		23/– [160/–]	Plate & Sheet	Al-Mg-Si-Cu
23	—	ASTM/ASME	B/SB-209	Alclad 6061	A86061	≤0.5 [≤ 13]		24/– [165/–]	Plate & Sheet	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B/SB-209	6061	A96061			24/– [165/–]	Plate & Sheet	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B/SB-210	6061	A96061			24/– [165/–]	Seamless Tube	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B/SB-210	6063	A96063			17/– [115/–]	Seamless Tube	Al-Mg-Si
23	23.1	ASTM/ASME	B/SB-211	6061	A96061			24/– [165/–]	Bar, Rod & Wire	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B/SB-221	6005	A96005			24/– [165/–]	Bar, Rod & Shapes	Al-Si-Mg
23	23.1	ASTM/ASME	B/SB-221	6005A	A96005			24/– [165/–]	Bar, Rod & Shapes	Al-Si-Mg
23	23.1	ASTM/ASME	B/SB-221	6061	A96061			24/– [165/–]	Bar, Rod & Shapes	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B/SB-221	6063	A96063			17/– [115/–]	Bar, Rod & Shapes	Al-Mg-Si
23	23.1	ASTM/ASME	B/SB-221	6105	A96105			24/– [165/–]	Bar, Rod & Shapes	Al-Si-Mg
23	23.1	ASTM/ASME	B/SB-221	6162	A96162			24/– [165/–]	Bar, Rod & Shapes	Al-Si-Mg
23	23.1	ASTM/ASME	B/SB-221	6351	A96351			24/– [165/–]	Bar, Rod & Shapes	Al-Si-Mg-Mn
23	23.1	ASTM/ASME	B/SB-221	6463	A96463			17/– [115/–]	Bar, Rod & Shapes	Al-Si-Mg
23	23.1	ASTM/ASME	B/SB-234	6061	A96061			24/– [165/–]	Seamless Tube	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B/SB-241	6061	A96061			24/– [165/–]	Seamless Pipe & Tube	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B/SB-241	6063	A96063			17/– [115/–]	Seamless Pipe & Tube	Al-Mg-Si
23	23.1	ASTM/ASME	B/SB-241	6162	A96162			24/– [165/–]	Seamless Pipe & Tube	Al-Si-Mg
23	23.1	ASTM/ASME	B/SB-241	6351	A96351			24/– [165/–]	Seamless Pipe & Tube	Al-Si-Mg-Mn
23	23.1	ASTM/ASME	B/SB-247	6061	A96061			24/– [165/–]	Forgings	Al-Mg-Si-Cu
23	23.1	ASTM/ASME	B/SB-247	6151	A96151			24/– [165/–]	Forgings	Al-Mg-Si-Cr
23	23.1	ASTM/ASME	B/SB-308	6061	A96061			24/– [165/–]	Shapes	Al-Mg-Si-Cu
23	23.1	ASTM	B313	6061	A96061			24/– [165/–]	Welded Tube	Al-Mg-Si-Cu
23	23.1	ASTM	B317	6101	A96101			11/– [76/–]	Bar, Rod, Shapes & Tube	Al-Mg-Si
23	23.1	ASTM	B345	6061	A96061			24/– [165/–]	Seamless Pipe & Tube	Al-Mg-Si-Cu
23	23.1	ASTM	B345	6063	A96063			17/– [115/–]	Seamless Pipe & Tube	Al-Mg-Si
23	23.1	ASTM	B345	6351	A96351			24/– [165/–]	Seamless Pipe & Tube	Al-Si-Mg-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys									
23	23.1	ASTM	B361	WP6061	A96061		24/- [165/-]	Fittings	Al-Mg-Si-Cu
23	23.1	ASTM	B361	WP6063	A96063		17/- [115/-]	Fittings	Al-Mg-Si
23	23.1	ASTM	B429	6061	A96061		24/- [165/-]	Pipe & Tube	Al-Mg-Si-Cu
23	23.1	ASTM	B429	6063	A96063		17/- [115/-]	Pipe & Tube	Al-Mg-Si
23	23.1	ASTM	B483	6061	A96061		24/- [165/-]	Tube	Al-Mg-Si-Cu
23	23.1	ASTM	B483	6063	A96063		17/- [115/-]	Tube	Al-Mg-Si
23	23.1	ASTM	B491	6063	A96063		17/- [115/-]	Extruded Tube	Al-Mg-Si
23	23.1	ASTM	B547	6061	A96061		24/- [165/-]	Welded Tube	Al-Mg-Si-Cu
23	23.1	ISO	209	6082, T4, T6	A96082		24/- [165/-]	Bar, Rod, Shapes & Tube	Al-1Si-Mg-Mn
24	—	ASTM/ASME	B/SB-209	Alclad 2014	A82014		35/- [240/-]	Plate & Sheet	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	—	ASTM/ASME	B/SB-209	Alclad 2219	A82219		35/- [240/-]	Plate & Sheet	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM/ASME	B/SB-209	2014	A92014		35/- [240/-]	Plate & Sheet	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B/SB-209	2219	A92219		35/- [240/-]	Plate & Sheet	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM	B210	2014	A92014		35/- [240/-]	Seamless Tube	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B/SB-211	2014	A92014		35/- [240/-]	Bar, Rod & Wire	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B/SB-211	2219	A92219		35/- [240/-]	Bar, Rod & Wire	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM/ASME	B/SB-221	2014	A92014		35/- [240/-]	Bar, Rod & Shapes	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B/SB-221	2219	A92219		35/- [240/-]	Bar, Rod & Shapes	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM/ASME	B/SB-241	2014	A92014		35/- [240/-]	Seamless Pipe & Tube	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B/SB-241	2219	A92219		35/- [240/-]	Seamless Pipe & Tube	Al-6Cu-0.3Mn-Ti-Zr
24	26	ASTM/ASME	B/SB-247	2014	A92014		35/- [240/-]	Forgings	Al-4.5Cu-1Si-0.8Mn-0.6Mg
24	26	ASTM/ASME	B/SB-247	2219	A92219		35/- [240/-]	Forgings	Al-6Cu-0.3Mn-Ti-Zr
25	22.4	ASTM/ASME	B/SB-209	5083	A95083	>7 and ≤8 [>178 and ≤203]	36/14 [250/97]	Plate & Sheet	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5083	A95083	>5 and ≤7 [>127 and ≤178]	37/15 [255/105]	Plate & Sheet	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5083	A95083	>3 and ≤5 [>76 and ≤127]	38/16 [260/110]	Plate & Sheet	Al-4.4Mg-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Aluminum and Aluminum Base Alloys									
25	22.4	ASTM/ASME	B/SB-209	5083	A95083	>1.5 and ≤3 [>38 and ≤76]	39/17 [270/115]	Plate & Sheet	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5083	A95083	>0.05 and ≤1.5 [>1.3 and ≤38]	40/18 [275/125]	Plate & Sheet	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5086	A95086		35/14 [240/97]	Plate & Sheet	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5456	A95456	>7 and ≤8 [>178 and ≤203]	38/15 [260/105]	Plate & Sheet	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5456	A95456	>5 and ≤7 [>127 and ≤178]	39/16 [270/110]	Plate & Sheet	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5456	A95456	>3 and ≤5 [>76 and ≤127]	40/17 [275/115]	Plate & Sheet	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5456	A95456	>1.5 and ≤3 [>38 and ≤76]	41/18 [285/125]	Plate & Sheet	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B/SB-209	5456	A95456	>0.05 and ≤1.5 [>1.3 and ≤38]	42/19 [290/130]	Plate & Sheet	Al-5.1Mg-Mn
25	22.4	ASTM	B210	5083	A95083		39/16 [270/110]	Seamless Tube	Al-4.4Mg-Mn
25	22.4	ASTM	B210	5086	A95086		35/14 [240/97]	Seamless Tube	Al-4.0Mg-Mn
25	22.4	ASTM	B210	5456	A95456		41/19 [285/130]	Seamless Tube	Al-5.1Mg-Mn
25	—	ASTM/ASME	B/SB-211	Alclad 5056	—		37/— [255/—]	Bar, Rod & Wire	Al-5Mg-Mn-Cr
25	22.4	ASTM/ASME	B/SB-211	5056	A95056		38/— [260/—]	Bar, Rod & Wire	Al-5Mg-Mn-Cr
25	22.4	ASTM/ASME	B/SB-221	5083	A95083		39/16 [270/110]	Bar, Rod & Shapes	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B/SB-221	5086	A95086		35/14 [240/97]	Bar, Rod & Shapes	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B/SB-221	5456	A95456		41/19 [285/130]	Bar, Rod & Shapes	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B/SB-241	5083	A95083		39/16 [270/110]	Seamless Pipe & Tube	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B/SB-241	5086	A95086		35/14 [240/97]	Seamless Pipe & Tube	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B/SB-241	5456	A95456		41/19 [285/130]	Seamless Pipe & Tube	Al-5.1Mg-Mn
25	22.4	ASTM/ASME	B/SB-247	5083	A95083		38/16 [260/110]	Forgings	Al-4.4Mg-Mn
25	22.4	ASTM	B313	5086	A95086		35/14 [240/97]	Welded Tube	Al-4.0Mg-Mn
25	22.4	ASTM	B345	5083	A95083		39/16 [270/110]	Seamless Pipe & Tube	Al-4.4Mg-Mn
25	22.4	ASTM	B345	5086	A95086		35/14 [240/97]	Seamless Pipe & Tube	Al-4.0Mg-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Standard	Specification						
Aluminum and Aluminum Base Alloys									
25	22.4	ASTM	B361	5083	A95083		39/16 [270/110]	Fittings	Al-4.4Mg-Mn
25	22.4	ASTM	B547	5083	A95083		40/18 [275/125]	Welded Tube	Al-4.4Mg-Mn
25	22.4	ASTM	B547	5086	A95086		35/14 [240/97]	Welded Tube	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B/SB-928	5083	A95083	>1.5 and ≤3 [>38 and ≤76]	39/16 [270/110]	Plate & Sheet	Al-4.4Mg-Mn
25	22.4	ASTM/ASME	B/SB-928	5086	A95086	>0.05 and ≤2 [>1.3 and ≤51]	35/14 [240/97]	Plate & Sheet	Al-4.0Mg-Mn
25	22.4	ASTM/ASME	B/SB-928	5456	A95456	>1.5 and ≤3 [>38 and ≤76]	41/19 [285/130]	Plate & Sheet	Al-5.1Mg-Mn
26	25	ASTM/ASME	B/SB-26	208	A02080		19/12 [130/83]	Castings	Al-3Si-4Cu
26	—	ASTM/ASME	B/SB-26	222.0, O	A02220		23/— [160/—]	Castings	Al-Cu-Mg
26	—	ASTM/ASME	B/SB-26	222.0, T61	A02220		30/— [205/—]	Castings	Al-Cu-Mg
26	25	ASTM/ASME	B/SB-26	319.0, F	A03190		23/13 [160/90]	Castings	Al-6Si-3Cu
26	25	ASTM/ASME	B/SB-26	319.0, T5	A03190		23/13 [160/90]	Castings	Al-6Si-3Cu
26	25	ASTM/ASME	B/SB-26	319.0, T6	A03190		31/20 [215/140]	Castings	Al-6Si-3Cu
26	25	ASTM/ASME	B/SB-26	328.0, F	A03280		25/14 [170/97]	Castings	Al-8Si-1Cu-Mn-Mg
26	25	ASTM/ASME	B/SB-26	328.0, T6	A03280		34/21 [235/145]	Castings	Al-8Si-1Cu-Mn-Mg
26	24.2	ASTM/ASME	B/SB-26	356.0, F	A03560		19/9.5 [130/66]	Castings	Al-Si-Mg
26	24.2	ASTM/ASME	B/SB-26	356.0, T6	A03560		30/20 [205/140]	Castings	Al-Si-Mg
26	24.2	ASTM/ASME	B/SB-26	356.0, T7	A03560		31/— [215/—]	Castings	Al-Si-Mg
26	24.2	ASTM/ASME	B/SB-26	356.0, T51	A03560		23/16 [160/110]	Castings	Al-Si-Mg
26	24.2	ASTM/ASME	B/SB-26	356.0, T71	A03560		25/18 [170/125]	Castings	Al-Si-Mg
26	24.1	ASTM/ASME	B/SB-26	443	A04430		17/7 [115/48]	Castings	Al-Si
26	23.1	ASTM/ASME	B/SB-26	512	A05120		17/10 [115/69]	Castings	Al-4Mg-2Si
26	23.1	ASTM/ASME	B/SB-26	514	A05140		22/9 [150/62]	Castings	Al-4Mg-Si
26	—	ASTM/ASME	B/SB-26	535	A05350		35/18 [240/125]	Castings	Al-7Mg-Mn
26	23.2	ASTM/ASME	B/SB-26	705.0, T5	A07050		30/17 [205/115]	Castings	Al-3Zn-Mg-Mn-Cr
26	23.2	ASTM/ASME	B/SB-26	710.0, T5	A07100		32/20 [220/140]	Castings	Al-6Zn-Mg
26	24.2	ASTM/ASME	B/SB-26	A356.0, T6	A13560		34/24 [235/165]	Castings	Al-Si-Mg

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy		UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Base Metal Specification	Standard					
Aluminum and Aluminum Base Alloys								
26	24.2	ASTM/ASME	B/SB-26	A356.0, T61	A13560	35/26 [240/180]	Castings	Al-Si-Mg
26	24.1	ASTM/ASME	B/SB-26	B443.0	A24430	17/6 [115/41]	Castings	Al-Si
26	25	ASTM/ASME	B/SB-108	308	A03080	24/- [165/-]	Castings	Al-5.5Si-4.5Cu
26	25	ASTM/ASME	B/SB-108	319	A03190	27/14 [185/97]	Castings	Al-6Si-3Cu
26	25	ASTM/ASME	B/SB-108	333.0, F	A03330	28/- [195/-]	Castings	Al-9Si-3.5Cu-Mg
26	25	ASTM/ASME	B/SB-108	333.0, T5	A03330	28/- [195/-]	Castings	Al-9Si-3.5Cu-Mg
26	25	ASTM/ASME	B/SB-108	333.0, T6	A03330	28/- [195/-]	Castings	Al-9Si-3.5Cu-Mg
26	25	ASTM/ASME	B/SB-108	333.0, T7	A03330	28/- [195/-]	Castings	Al-9Si-3.5Cu-Mg
26	24.2	ASTM/ASME	B/SB-108	356.0, F	A03560	21/10 [145/69]	Castings	Al-Si-Mg
26	24.2	ASTM/ASME	B/SB-108	356.0, T6	A03560	33/22 [230/150]	Castings	Al-Si-Mg
26	24.2	ASTM/ASME	B/SB-108	356.0, T71	A03560	23/- [160/-]	Castings	Al-Si-Mg
26	24.1	ASTM/ASME	B/SB-108	443	A04430	21/7 [145/48]	Castings	Al-Si
26	23.2	ASTM/ASME	B/SB-108	513	A05130	22/12 [150/83]	Castings	Al-4Mg-Zn
26	—	ASTM/ASME	B/SB-108	535	A05350	35/18 [240/125]	Castings	Al-7Mg-Mn
26	24.2	ASTM/ASME	B/SB-108	A356.0	A13560	28/26 [195/180]	Castings	Al-Si-Mg
26	24.1	ASTM/ASME	B/SB-108	A444.0	A14440	17/- [115/-]	Castings	Al-7Si
26	24.1	ASTM/ASME	B/SB-108	B443.0	A24430	21/6 [145/41]	Castings	Al-Si
26	25	ASTM	B618	208	A02080	19/12 [130/83]	Castings	Al-3Si-4Cu
26	25	ASTM	B618	319	A03190	23/13 [160/90]	Castings	Al-6Si-3Cu
26	25	ASTM	B618	328	A03280	25/14 [170/97]	Castings	Al-8Si-1Cu-Mn-Mg
26	24.2	ASTM	B618	356	A03560	19/- [130/-]	Castings	Al-Si-Mg
26	24.1	ASTM	B618	443	A04430	17/7 [115/48]	Castings	Al-Si
26	23.1	ASTM	B618	514	A05140	22/9 [150/62]	Castings	Al-4Mg-Si
26	—	ASTM	B618	535	A05350	35/18 [240/125]	Castings	Al-7Mg-Mn
26	24.2	ASTM	B618	A356.0	A13560	34/24 [235/165]	Castings	Al-Si-Mg
26	24.1	ASTM	B618	B443.0	A24430	17/6 [115/41]	Castings	Al-Si
26	24.2	ASTM	B686	A356.0	A13560	23/- [160/-]	Castings	Al-Si-Mg
27	23.2	ASTM/ASME	B/SB-221	7005	A97005	-/- [-/-]	Bar, Rod & Shapes	Al-Zn-Mg-Mn-Cr-Ti
27	23.2	ISO	209	7020, T5	A97020	40/- [275/-]	Bar, Rod, Shapes & Tube	Al-4.5Zn-1.2Mg-Mn-Cr-Zr

Table C.2
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Standard	Specification						
Copper and Copper Base Alloys									
31	31	ASTM/ASME	B/SB-42	—	C10200		30/9 [205/62]	Seamless Pipe	99.95Cu-P
31	31	ASTM/ASME	B/SB-42	—	C10300		30/9 [205/62]	Seamless Pipe	99.95Cu-P
31	31	ASTM/ASME	B/SB-42	—	C10800		30/9 [205/62]	Seamless Pipe	99.95Cu-P
31	31	ASTM/ASME	B/SB-42	—	C12000		30/9 [205/62]	Seamless Pipe	99.9Cu-P
31	31	ASTM/ASME	B/SB-42	—	C12200		30/9 [205/62]	Seamless Pipe	99.9Cu-P
31	31	ASTM	B68	—	C10200		30/9 [205/62]	Tube	99.95Cu-P
31	31	ASTM	B68	—	C10300		30/9 [205/62]	Tube	99.95Cu-P
31	31	ASTM	B68	—	C10800		30/9 [205/62]	Tube	99.95Cu-P
31	31	ASTM	B68	—	C12000		30/9 [205/62]	Tube	99.9Cu-P
31	31	ASTM	B68	—	C12200		30/9 [205/62]	Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-75	—	C10100		30/9 [205/62]	Seamless Tube	99.99Cu-P
31	31	ASTM/ASME	B/SB-75	—	C10200		30/9 [205/62]	Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-75	—	C10300		30/9 [205/62]	Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-75	—	C10800		30/9 [205/62]	Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-75	—	C12000		30/9 [205/62]	Seamless Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-75	—	C12200		30/9 [205/62]	Seamless Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-75	—	C14200		30/9 [205/62]	Seamless Tube	99.40Cu-P
31	31	ASTM	B88	—	C10200		30/- [205/-]	Tube	99.95Cu-P
31	31	ASTM	B88	—	C12000		30/- [205/-]	Tube	99.9Cu-P
31	31	ASTM	B88	—	C12200		30/- [205/-]	Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-111	—	C10100		30/9 [205/62]	Seamless Tube	99.99Cu-P
31	31	ASTM/ASME	B/SB-111	—	C10200		30/9 [205/62]	Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-111	—	C10300		30/9 [205/62]	Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-111	—	C10800		30/9 [205/62]	Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-111	—	C12000		30/9 [205/62]	Seamless Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-111	—	C12200		30/9 [205/62]	Seamless Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-111	—	C14200		30/9 [205/62]	Seamless Tube	99.4Cu-As-P
31	31	ASTM/ASME	B/SB-111	—	C19200		30/9 [205/62]	Seamless Tube	99.7Cu-Fe-P
31	31	ASTM/ASME	B/SB-152	—	C10100		30/9 [205/62]	Plate, Sheet, Strip & Bar	99.99Cu-P

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Copper and Copper Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
31	31	ASTM/ASME	B/SB-152	—	C10200		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.95Cu-P
31	31	ASTM/ASME	B/SB-152	—	C10300		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.95Cu-P
31	31	ASTM/ASME	B/SB-152	—	C10400		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.95Cu + Ag
31	31	ASTM/ASME	B/SB-152	—	C10500		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.95Cu + Ag
31	31	ASTM/ASME	B/SB-152	—	C10700		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.95Cu + Ag
31	31	ASTM/ASME	B/SB-152	—	C10800		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.95Cu-P
31	31	ASTM/ASME	B/SB-152	—	C11000		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.90Cu
31	31	ASTM/ASME	B/SB-152	—	C12000		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.9Cu-P
31	31	ASTM/ASME	B/SB-152	—	C12200		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.9Cu-P
31	31	ASTM/ASME	B/SB-152	—	C12300		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.9Cu-P
31	31	ASTM/ASME	B/SB-152	—	C14200		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.4Cu-As-P
31	31	ASTM/ASME	B/SB-152	—	C14420		30/9 [205/62]		Plate, Sheet, Strip & Bar	99.99Cu-Sn-Te
31	31	ASTM	B170	1	C10100		30/9 [205/62]		Shapes	99.99Cu-P
31	31	ASTM	B170	2	C10200		30/9 [205/62]		Shapes	99.95Cu-P
31	31	ASTM/ASME	B/SB-187	—	C10100		28/8 [195/55]		Rod & Bar	99.99Cu-P
31	31	ASTM/ASME	B/SB-187	—	C10200		28/8 [195/55]		Rod & Bar	99.95Cu-P
31	31	ASTM/ASME	B/SB-187	—	C10300		28/8 [195/55]		Rod & Bar	99.95Cu-P
31	31	ASTM/ASME	B/SB-187	—	C10400		28/8 [195/55]		Rod & Bar	99.95Cu + Ag
31	31	ASTM/ASME	B/SB-187	—	C10700		28/8 [195/55]		Rod & Bar	99.95Cu + Ag
31	31	ASTM/ASME	B/SB-187	—	C10940		28/8 [195/55]		Rod & Bar	99.90Cu + Ag
31	31	ASTM/ASME	B/SB-187	—	C11000		28/8 [195/55]		Rod & Bar	99.9Cu
31	31	ASTM/ASME	B/SB-187	—	C14420		28/8 [195/55]		Rod & Bar	99.99Cu-Sn-Te
31	31	ASTM	B280	102	C10200		30/- [205/-]		Seamless Tube	99.95Cu-P
31	31	ASTM	B280	120	C12000		30/- [205/-]		Seamless Tube	99.9Cu-P
31	31	ASTM	B280	122	C12200		30/- [205/-]		Seamless Tube	99.9Cu-P
31	31	ASTM	B302	—	C12000		30/9 [205/62]		Pipe	99.9Cu-P
31	31	ASTM	B302	—	C12200		30/9 [205/62]		Pipe	99.9Cu-P
31	31	ASTM	B359	—	C10100		30/9 [205/62]		Seamless Tube	99.99Cu-P
31	31	ASTM	B359	—	C10200		30/9 [205/62]		Seamless Tube	99.95Cu-P

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Copper and Copper Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
31	31	ASTM	B359	—	C10300		30/9 [205/62]		Seamless Tube	99.95Cu-P
31	31	ASTM	B359	—	C10800		30/9 [205/62]		Seamless Tube	99.95Cu-P
31	31	ASTM	B359	—	C12000		30/9 [205/62]		Seamless Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-359	—	C12200		30/9 [205/62]		Seamless Tube	99.9Cu-P
31	31	ASTM	B359	—	C14200		30/9 [205/62]		Seamless Tube	99.40Cu-P
31	31	ASTM	B359	—	C19200		38/12 [260/83]		Seamless Tube	99.7Cu-Fe-P
31	31	ASTM/ASME	B/SB-395	—	C10200		30/9 [205/62]		Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-395	—	C10300		30/9 [205/62]		Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-395	—	C10800		30/9 [205/62]		Seamless Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-395	—	C12000		30/9 [205/62]		Seamless Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-395	—	C12200		30/9 [205/62]		Seamless Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-395	—	C14200		30/9 [205/62]		Seamless Tube	99.4Cu-As-P
31	31	ASTM/ASME	B/SB-395	—	C19200		38/12 [260/83]		Seamless Tube	99.7Cu-Fe-P
31	31	ASTM/ASME	B/SB-543	—	C10800		30/9 [205/62]		Welded Tube	99.95Cu-P
31	31	ASTM/ASME	B/SB-543	—	C12200		30/9 [205/62]		Welded Tube	99.9Cu-P
31	31	ASTM/ASME	B/SB-543	—	C19400		45/15 [310/105]		Welded Tube	97.5Cu-P
32	32.2	ASTM	B21	—	C46400	>2 [>50]	50/20 [345/140]		Rod & Bar	60Cu-39Zn-Sn
32	32.2	ASTM	B21	—	C46400		52/20 [360/140]		Shapes	60Cu-39Zn-Sn
32	32.2	ASTM	B21	—	C46400	>1 and ≤2 >25 and ≤50]	52/20 [360/140]		Rod & Bar	60Cu-39Zn-Sn
32	32.2	ASTM	B21	—	C46400	≤1 [≤25]	54/20 [370/140]		Rod & Bar	60Cu-39Zn-Sn
32	32.1	ASTM/ASME	B/SB-43	—	C23000		40/12 [275/83]		Seamless Pipe	85Cu-15Zn
32	32.1	ASTM/ASME	B/SB-111	—	C23000		40/12 [275/83]		Seamless Tube	85Cu-15Zn
32	32.1	ASTM/ASME	B/SB-111	—	C28000		50/20 [345/140]		Seamless Tube	60Cu-40Zn
32	32.2	ASTM/ASME	B/SB-111	—	C44300		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B/SB-111	—	C44400		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B/SB-111	—	C44500		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM/ASME	B/SB-111	—	C68700		50/18 [345/125]		Seamless Tube	78Cu-20Zn-2Al
32	32.1	ASTM/ASME	B/SB-135	—	C22000		38/12 [260/83]		Seamless Tube	90Cu-10Zn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Copper and Copper Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
32	32.1	ASTM/ASME	B/SB-135	—	C23000		40/12 [275/83]		Seamless Tube	85Cu-15Zn
32	32.2	ASTM/ASME	B/SB-171	—	C44300		45/15 [310/105]		Plate & Sheet	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B/SB-171	—	C44400		45/15 [310/105]		Plate & Sheet	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B/SB-171	—	C44500		45/15 [310/105]		Plate & Sheet	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM/ASME	B/SB-171	—	C46400		50/18 [345/125]		Plate & Sheet	60Cu-39Zn-Sn
32	32.2	ASTM/ASME	B/SB-171	—	C46500		50/18 [345/125]		Plate & Sheet	60Cu-39Zn-As
32	32.1	ASTM	B359	—	C23000		40/12 [275/83]		Seamless Tube	85Cu-15Zn
32	32.2	ASTM/ASME	B/SB-359	—	C44300		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B/SB-359	—	C44400		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B/SB-359	—	C44500		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM	B359	—	C68700		50/18 [345/125]		Seamless Tube	78Cu-20Zn-2Al
32	32.1	ASTM/ASME	B/SB-395	—	C23000		40/12 [275/83]		Seamless Tube	85Cu-15Zn
32	32.2	ASTM/ASME	B/SB-395	—	C44300		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B/SB-395	—	C44400		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B/SB-395	—	C44500		45/15 [310/105]		Seamless Tube	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM/ASME	B/SB-395	—	C68700		50/18 [345/125]		Seamless Tube	78Cu-20Zn-2Al
32	32.1	ASTM/ASME	B/SB-543	—	C23000		40/12 [275/83]		Welded Tube	85Cu-15Zn
32	32.2	ASTM/ASME	B/SB-543	—	C44300		45/15 [310/105]		Welded Tube	71Cu-28Zn-1Sn-0.06As
32	32.2	ASTM/ASME	B/SB-543	—	C44400		45/15 [310/105]		Welded Tube	71Cu-28Zn-1Sn-0.06Sb
32	32.2	ASTM/ASME	B/SB-543	—	C44500		45/15 [310/105]		Welded Tube	71Cu-28Zn-1Sn-0.06P
32	32.2	ASTM/ASME	B/SB-543	—	C68700		50/18 [345/125]		Welded Tube	78Cu-20Zn-2Al
33	37	ASTM/ASME	B/SB-96	—	C65100		38/— [260/—]		Plate, Sheet, Strip & Bar	98.5Cu-1.5Si
33	37	ASTM/ASME	B/SB-96	—	C65400		65/— [450/—]		Plate, Sheet, Strip & Bar	98.5Cu-3Si-1.5Sn-Cr
33	37	ASTM/ASME	B/SB-96	—	C65500		50/18 [345/125]		Plate, Sheet, Strip & Bar	97Cu-3Si
33	37	ASTM/ASME	B/SB-98	—	C65100		40/12 [275/83]		Rod, Bar & Shapes	98.5Cu-1.5Si
33	37	ASTM/ASME	B/SB-98	—	C65500		52/15 [360/105]		Rod, Bar & Shapes	97Cu-3Si
33	37	ASTM/ASME	B/SB-98	—	C66100		52/15 [360/105]		Rod, Bar & Shapes	94Cu-3Si
33	31	ASTM/ASME	B/SB-283	—	C65500		50/15 [345/105]		Forgings	97Cu-3Si
33	37	ASTM/ASME	B/SB-315	—	C65100		40/10 [275/69]		Seamless Pipe & Tube	98.5Cu-1.5Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Copper and Copper Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]	Minimum Tensile/Yield Strength, ksi [MPa]		
33	33	ASTM/ASME	B/SB-315	—	C65500		50/15 [345/105]	Seamless Pipe & Tube		97Cu-3Si
34	34	ASTM/ASME	B/SB-111	—	C70400		38/12 [260/83]	Seamless Tube		95Cu-5Ni
34	34	ASTM/ASME	B/SB-111	—	C70600		40/15 [275/105]	Seamless Tube		90Cu-10Ni
34	34	ASTM/ASME	B/SB-111	—	C70620		40/15 [275/105]	Seamless Tube		90Cu-10Ni
34	34	ASTM/ASME	B/SB-111	—	C71000		45/16 [310/110]	Seamless Tube		80Cu-20Ni
34	34	ASTM/ASME	B/SB-111	—	C71500		52/18 [360/125]	Seamless Tube		70Cu-30Ni
34	34	ASTM/ASME	B/SB-111	—	C71520		52/18 [360/125]	Seamless Tube		70Cu-30Ni
34	34	ASTM/ASME	B/SB-111	—	C71640		63/25 [435/170]	Seamless Tube		66Cu-30Ni-2Fe-2Mn
34	34	ASTM/ASME	B/SB-111	—	C72200		45/16 [310/110]	Seamless Tube		80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B/SB-151	—	C70600		38/15 [260/105]	Rod & Bar		90Cu-10Ni
34	34	ASTM/ASME	B/SB-151	—	C70620		38/15 [260/105]	Rod & Bar		90Cu-10Ni
34	34	ASTM/ASME	B/SB-151	—	C71500	>1 [≥25]	45/18 [310/125]	Sq Bar & Rod (Rnd, Hex, Oct)		70Cu-30Ni
34	34	ASTM/ASME	B/SB-151	—	C71500		45/15 [310/105]	Bar (Rect.) & Shapes		70Cu-30Ni
34	34	ASTM/ASME	B/SB-151	—	C71500	>0.5 and ≤1 [≥13 and ≤25]	48/18 [330/125]	Sq Bar & Rod (Rnd, Hex, Oct)		70Cu-30Ni
34	34	ASTM/ASME	B/SB-151	—	C71500	≤0.5 [≤13]	52/18 [360/125]	Sq Bar & Rod (Rnd, Hex, Oct)		70Cu-30Ni
34	34	ASTM/ASME	B/SB-171	—	C70600		40/15 [275/105]	Plate & Sheet		90Cu-10Ni
34	34	ASTM/ASME	B/SB-171	—	C70620		40/15 [275/105]	Plate & Sheet		90Cu-10Ni
34	34	ASTM/ASME	B/SB-171	—	C71500	>2.5 and ≤5 [≥64 and ≤127]	45/18 [310/125]	Plate & Sheet		70Cu-30Ni
34	34	ASTM/ASME	B/SB-171	—	C71500	≤2.5 [≤64]	50/20 [345/140]	Plate & Sheet		70Cu-30Ni
34	34	ASTM/ASME	B/SB-171	—	C71520	>2.5 and ≤5 [≥64 and ≤127]	45/18 [310/125]	Plate & Sheet		70Cu-30Ni
34	34	ASTM/ASME	B/SB-171	—	C71520	≤2.5 [≤64]	50/20 [345/140]	Plate & Sheet		70Cu-30Ni
34	34	ASTM/ASME	B/SB-171	—	C72200	≤2.5 [≤64]	42/16 [290/110]	Plate & Sheet		80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B/SB-283	—	C70620	>6 [≥150]	40/15 [275/105]	Forgings		90Cu-10Ni
34	34	ASTM/ASME	B/SB-283	—	C70620	≤6 [≤150]	45/18 [310/125]	Forgings		90Cu-10Ni
34	34	ASTM/ASME	B/SB-283	—	C71520	>6 [≥150]	45/18 [310/125]	Forgings		70Cu-30Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Copper and Copper Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]	Minimum Tensile/Yield Strength, ksi [MPa]		
34	34	ASTM/ASME	B/SB-283	—	C71520	≤6 [≤150]	50/20 [345/140]	Forgings		70Cu-30Ni
34	34	ASTM	B359	—	C70400		38/12 [260/83]	Seamless Tube		95Cu-5Ni
34	34	ASTM/ASME	B/SB-359	—	C70600		40/15 [275/105]	Seamless Tube		90Cu-10Ni
34	34	ASTM/ASME	B/SB-359	—	C70620		40/15 [275/105]	Seamless Tube		90Cu-10Ni
34	34	ASTM/ASME	B/SB-359	—	C71000		45/16 [310/110]	Seamless Tube		80Cu-20Ni
34	34	ASTM/ASME	B/SB-359	—	C71500		52/18 [360/125]	Seamless Tube		70Cu-30Ni
34	34	ASTM/ASME	B/SB-359	—	C71520		52/18 [360/125]	Seamless Tube		70Cu-30Ni
34	34	ASTM	B359	—	C72200		45/16 [310/110]	Seamless Tube		80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B/SB-369	—	C96200		45/25 [310/170]	Castings		87.5Cu-10Ni-Fe-Mn
34	34	ASTM/ASME	B/SB-395	—	C70400		38/12 [260/83]	Seamless Tube		95Cu-5Ni
34	34	ASTM/ASME	B/SB-395	—	C70600		40/15 [275/105]	Seamless Tube		90Cu-10Ni
34	34	ASTM/ASME	B/SB-395	—	C71000		45/16 [310/110]	Seamless Tube		80Cu-20Ni
34	34	ASTM/ASME	B/SB-395	—	C71500		52/18 [360/125]	Seamless Tube		70Cu-30Ni
34	34	ASTM/ASME	B/SB-395	—	C72200		45/16 [310/110]	Seamless Tube		80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B/SB-466	—	C70400		37/12 [255/83]	Seamless Pipe & Tube		95Cu-5Ni
34	34	ASTM/ASME	B/SB-466	—	C70600		38/13 [260/90]	Seamless Pipe & Tube		90Cu-10Ni
34	34	ASTM/ASME	B/SB-466	—	C70620		38/13 [260/90]	Seamless Pipe & Tube		90Cu-10Ni
34	34	ASTM/ASME	B/SB-466	—	C71000		45/16 [310/110]	Seamless Pipe & Tube		80Cu-20Ni
34	34	ASTM/ASME	B/SB-466	—	C71500		52/18 [360/125]	Seamless Pipe & Tube		70Cu-30Ni
34	34	ASTM/ASME	B/SB-466	—	C71520		52/18 [360/125]	Seamless Pipe & Tube		70Cu-30Ni
34	34	ASTM/ASME	B/SB-466	—	C72200		40/14 [275/97]	Seamless Pipe & Tube		80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM/ASME	B/SB-467	—	C70600	>4.5 [≥114]	38/13 [260/90]	Welded Pipe		90Cu-10Ni
34	34	ASTM/ASME	B/SB-467	—	C70600	≤4.5 [≤114]	40/15 [275/105]	Welded Pipe		90Cu-10Ni
34	34	ASTM/ASME	B/SB-467	—	C70620	>4.5 [≥114]	38/13 [260/90]	Welded Pipe		90Cu-10Ni
34	34	ASTM/ASME	B/SB-467	—	C70620	≤4.5 [≤114]	40/15 [275/105]	Plate & Sheet		90Cu-10Ni
34	34	ASTM/ASME	B/SB-467	—	C71500	>4.5 [≥114]	45/15 [310/105]	Welded Pipe		70Cu-30Ni
34	34	ASTM/ASME	B/SB-467	—	C71500	≤4.5 [≤114]	50/20 [345/140]	Welded Pipe		70Cu-30Ni
34	34	ASTM/ASME	B/SB-467	—	C71520	>4.5 [≥114]	45/15 [310/105]	Plate & Sheet		70Cu-30Ni
34	34	ASTM/ASME	B/SB-467	—	C71520	≤4.5 [≤114]	50/20 [345/140]	Plate & Sheet		70Cu-30Ni

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Copper and Copper Base Alloys		
							Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
34	34	ASTM/ASME	B/SB-543	—	C70400		38/12 [260/83]	Welded Tube	95Cu-5Ni
34	34	ASTM/ASME	B/SB-543	—	C70600		40/15 [275/105]	Welded Tube	90Cu-10Ni
34	34	ASTM/ASME	B/SB-543	—	C70620		40/15 [275/105]	Welded Tube	90Cu-10Ni
34	34	ASTM	B543	—	C71000		45/16 [310/110]	Welded Tube	80Cu-20Ni
34	34	ASTM/ASME	B/SB-543	—	C71500		52/18 [360/125]	Welded Tube	70Cu-30Ni
34	34	ASTM/ASME	B/SB-543	—	C71520		52/18 [360/125]	Welded Tube	70Cu-30Ni
34	34	ASTM/ASME	B/SB-543	—	C71640		63/25 [435/170]	Welded Tube	66Cu-30Ni-2Fe-2Mn
34	34	ASTM	B543	—	C72200		45/16 [310/110]	Welded Tube	80Cu-16Ni-0.75Fe-0.5Cr
34	34	ASTM	B608	—	C70620		40/— [275/—]	Welded Pipe	87Cu-10Ni-1.4Fe
34	34	ASTM	B608	—	C71520		50/— [345/—]	Welded Pipe	65Cu-31Ni-0.7Fe
34	34	ASTM/ASME	B/SB-956	—	C70600		40/15 [275/105]	Finned Welded Tube	90Cu-10Ni
34	34	ASTM/ASME	B/SB-956	—	C70620		40/15 [275/105]	Finned Welded Tube	90Cu-10Ni
34	34	ASTM/ASME	B/SB-956	—	C71500		52/18 [360/125]	Finned Welded Tube	70Cu-30Ni
34	34	ASTM/ASME	B/SB-956	—	C71520		52/18 [360/125]	Finned Welded Tube	70Cu-30Ni
35	35	ASTM/ASME	B/SB-111	—	C60800		50/19 [345/130]	Seamless Tube	95Cu-5Al
35	35	ASTM/ASME	B/SB-111	—	C61300		70/30 [485/205]	Seamless Tube	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-111	—	C61400		70/30 [485/205]	Seamless Tube	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-148	—	C95200		65/25 [450/170]	Castings	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-148	—	C95300		65/25 [450/170]	Castings	89Cu-10Al-1Fe
35	35	ASTM/ASME	B/SB-148	—	C95400		75/30 [515/205]	Castings	85Cu-11Al-4Fe
35	35	ASTM/ASME	B/SB-148	—	C95410		75/30 [515/205]	Castings	84Cu-10Al-4Fe-2Ni
35	35	ASTM/ASME	B/SB-148	—	C95500		90/40 [620/275]	Castings	82Cu-11Al-4Fe-3Mn
35	35	ASTM/ASME	B/SB-148	—	C95600		60/28 [415/195]	Castings	90Cu-7Al-3Si
35	35	ASTM/ASME	B/SB-148	—	C95700		90/40 [620/275]	Castings	75Cu-8Al-3Fe-2-Ni-12Mn
35	35	ASTM/ASME	B/SB-148	—	C95800		85/35 [585/240]	Castings	81Cu-9Al-5Ni-4Fe-1Mn
35	35	ASTM/ASME	B/SB-148	—	C95800		85/35 [585/240]	Castings	81Cu-9Al-4.5Ni-4Fe-1.2Mn
35	35	ASTM/ASME	B/SB-148	—	C95820		94/39 [650/270]	Castings	81Cu-9Al-5Ni-5Fe-1Mn
35	35	ASTM/ASME	B/SB-150	—	C61300	>2 and ≤3 [>50 and ≤75]	70/35 [485/240]	Rod (Round)	90Cu-7Al-2.5Fe-Sn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Copper and Copper Base Alloys									
35	35	ASTM/ASME	B/SB-150	—	C61300	>1 and ≤2 [>25 and ≤50]	70/32 [485/220]	Bar & Rod (Hex, Oct)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-150	—	C61300	>1 and ≤2 [>25 and ≤50]	72/40 [495/275]	Rod (Round)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-150	—	C61300	>0.5 and ≤1 [>13 and ≤25]	75/45 [515/310]	Rod (Round)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-150	—	C61300	>0.5 and ≤1 [>13 and ≤25]	75/35 [515/240]	Bar & Rod (Hex, Oct)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-150	—	C61300	≤0.5 [≤13]	80/50 [550/345]	Rod (Round)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-150	—	C61300	≤0.5 [≤13]	80/40 [550/275]	Bar & Rod (Hex, Oct)	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-150	—	C61400	>1 and ≤2 [>25 and ≤50]	70/32 [485/220]	Bar & Rod	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C61400	>2 and ≤3 [>50 and ≤75]	70/30 [485/205]	Bar & Rod	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C61400	>0.5 and ≤1 [>13 and ≤25]	75/35 [515/240]	Bar & Rod	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C61400	≤0.5 [≤13]	80/40 [550/275]	Bar & Rod	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C61900	>3 [>75]	75/30 [515/205]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B/SB-150	—	C61900	>2 and ≤3 [>50 and ≤75]	75/30 [515/205]	Shapes	87Cu-9Al-4Fe
35	35	ASTM/ASME	B/SB-150	—	C61900	>2 and ≤3 [>50 and ≤75]	78/37 [540/255]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B/SB-150	—	C61900	>1 and ≤2 [>25 and ≤50]	85/40 [585/275]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B/SB-150	—	C61900	>0.5 and ≤1 [>13 and ≤25]	88/44 [605/305]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B/SB-150	—	C61900	≤0.5 [≤13]	90/50 [620/345]	Rod (Round)	87Cu-9Al-4Fe
35	35	ASTM/ASME	B/SB-150	—	C62300	>2 [>50]	75/30 [515/205]	Bar & Rod (Hex, Oct)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62300	>3 [>75]	75/30 [515/205]	Shapes	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62300	>3 [>75]	75/30 [515/205]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62300	>2 and ≤3 [>50 and ≤75]	76/37 [525/255]	Rod (Round)	88Cu-9Al-3Fe

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Standard	Specification						
Copper and Copper Base Alloys									
35	35	ASTM/ASME	B/SB-150	—	C62300	>1 and ≤2 [>25 and ≤50]	78/32 [540/220]	Bar & Rod (Hex, Oct)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62300	≤1 [≤25]	80/35 [550/240]	Bar & Rod (Hex, Oct)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62300	>1 and ≤2 [>25 and ≤50]	84/40 [580/275]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62300	>0.5 and ≤1 [>13 and ≤25]	88/44 [605/305]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62300	≤0.5 [≤13]	90/50 [620/345]	Rod (Round)	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62400	>3 and ≤5 [>75 and ≤125]	90/35 [620/240]	Rod (Round)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62400	>2 and ≤3 [>50 and ≤75]	90/40 [620/275]	Rod (Round)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62400	>1 and ≤2 [>25 and ≤50]	90/43 [620/295]	Rod (Round)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62400	>0.5 and ≤5 [>13 and ≤125]	90/35 [620/240]	Bar & Rod (Hex, Oct)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62400	≤1 [≤25]	90/35 [620/240]	Shapes	87Cu-10Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C62400	>4 [≥100]	95/45 [655/310]	Rod (Round)	87Cu-10Al-3Fe
35	35	ASTM/ASME	B/SB-150	—	C63000	>2 and ≤4 [>50 and ≤100]	80/40 [550/275]	Bar & Rod	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B/SB-150	—	C63000		85/42.5 [585/295]	Bar & Rod	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B/SB-150	—	C63000		85/42.5 [585/295]	Shapes	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B/SB-150	—	C63000	>1 and ≤2 [>25 and ≤50]	90/45 [620/310]	Bar & Rod	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B/SB-150	—	C63000	≤0.5 and ≤1 [≤13 and ≤25]	100/50 [690/345]	Bar & Rod	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B/SB-150	—	C63020	>1 and ≤2 [>25 and ≤50]	130/95 [895/655]	Bar & Rod	80Cu-10Al-5Ni-5Fe
35	35	ASTM/ASME	B/SB-150	—	C63020	>2 and ≤4 [>50 and ≤100]	130/90 [895/620]	Bar & Rod	80Cu-10Al-5Ni-5Fe
35	35	ASTM/ASME	B/SB-150	—	C63020	≤1 [≤25]	135/100 [930/690]	Bar & Rod	80Cu-10Al-5Ni-5Fe

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Standard	Specification						
Copper and Copper Base Alloys									
35	35	ASTM/ASME	B/SB-150	—	C63200		90/40 [620/275]	Bar, Rod & Shapes	83Cu-9Al-4Ni-4Fe
35	35	ASTM/ASME	B/SB-150	—	C64200	>3 and ≤4 >75 and ≤100]	70/30 [485/205]	Bar & Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-150	—	C64200	>4 [>100]	70/25 [485/170]	Bar & Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-150	—	C64200		70/30 [485/205]	Shapes	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-150	—	C64200	>2 and ≤3 >50 and ≤75]	75/35 [515/240]	Bar & Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-150	—	C64200	>1 and ≤2 >25 and ≤50]	80/42 [550/290]	Bar & Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-150	—	C64200	>0.5 and ≤1 >13 and ≤25]	85/45 [585/310]	Bar & Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-150	—	C64200	≤0.5 [≤13]	90/45 [620/310]	Bar & Rod	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-169	—	C61300	>2 and ≤ 5 >51 and ≤ 127]	65/28 [450/195]	Plate, Sheet, Strip & Bar	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-169	—	C61300	>0.5 and ≤2 >13 and ≤ 51]	72/32 [485/220]	Plate, Sheet, Strip & Bar	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-169	—	C61300	≤ 0.5 [≤13]	75/36 [515/250]	Plate, Sheet, Strip & Bar	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-169	—	C61400	>2 and ≤ 5 >51 and ≤127]	65/28 [450/195]	Plate, Sheet, Strip & Bar	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-169	—	C61400	>0.5 and ≤2 >13 and ≤51]	70/30 [485/205]	Plate, Sheet, Strip & Bar	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-169	—	C61400	≤ 0.5 [≤13]	72/32 [495/220]	Plate, Sheet, Strip & Bar	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-171	—	C61300	>3 and ≤5 >80 and ≤130]	65/28 [450/195]	Plate & Sheet	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-171	—	C61300	>2 and ≤3 >50 and ≤80]	70/30 [485/205]	Plate & Sheet	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-171	—	C61300	≤2 [≤50]	75/37 [515/255]	Plate & Sheet	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-171	—	C61400	>2 and ≤5 >51 and ≤127]	65/26 [450/180]	Plate & Sheet	90Cu-7Al-3Fe
35	35	ASTM/ASME	B/SB-171	—	C61400	≤2 [≤51]	70/28 [485/195]	Plate & Sheet	90Cu-7Al-3Fe

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Copper and Copper Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
35	35	ASTM/ASME	B/SB-171	—	C63000	>3.5 and ≤5 [>89 and ≤127]	80/30 [550/205]		Plate & Sheet	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B/SB-171	—	C63000	>2 and ≤3.5 [>51 and ≤89]	85/33 [585/230]		Plate & Sheet	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B/SB-171	—	C63000	≤2 [≤51]	90/36 [620/250]		Plate & Sheet	81Cu-10Al-5Ni-3Fe
35	35	ASTM/ASME	B/SB-171	—	C63200	>3.5 and ≤5 [>89 and ≤127]	80/30 [550/205]		Plate & Sheet	83Cu-9Al-4Ni-4Fe
35	35	ASTM/ASME	B/SB-171	—	C63200	>2 and ≤3.5 [>51 and ≤89]	85/33 [585/230]		Plate & Sheet	83Cu-9Al-4Ni-4Fe
35	35	ASTM/ASME	B/SB-171	—	C63200	≤2 [≤51]	90/36 [620/250]		Plate & Sheet	83Cu-9Al-4Ni-4Fe
35	35	ASTM/ASME	B/SB-271	—	C95200		65/25 [450/170]		Castings	88Cu-9Al-3Fe
35	35	ASTM/ASME	B/SB-271	—	C95300		65/25 [450/170]		Castings	89Cu-10Al-1Fe
35	35	ASTM/ASME	B/SB-271	—	C95400		75/30 [515/205]		Castings	85Cu-11Al-4Fe
35	35	ASTM/ASME	B/SB-271	—	C95410		75/30 [515/205]		Castings	84Cu-10Al-4Fe-2Ni
35	35	ASTM/ASME	B/SB-271	—	C95500		90/40 [620/275]		Castings	82Cu-11Al-4Fe-3Mn
35	35	ASTM/ASME	B/SB-283	—	C64200	>1.5 [≥40]	68/23 [470/160]		Forgings	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-283	—	C64200	≤1.5 [≤40]	70/25 [485/170]		Forgings	91Cu-7Al-2Si
35	35	ASTM/ASME	B/SB-315	—	C61300		65/28 [450/195]		Seamless Pipe & Tube	90Cu-7Al-2.5Fe-Sn
35	35	ASTM/ASME	B/SB-315	—	C61400		65/28 [450/195]		Seamless Pipe & Tube	90Cu-7Al-3Fe
35	35	ASTM	B359	—	C60800		50/19 [345/130]		Seamless Tube	95Cu-5Al
35	35	ASTM/ASME	B/SB-395	—	C60800		50/19 [345/130]		Seamless Tube	95Cu-5Al
35	35	ASTM/ASME	B/SB-505	—	C95200		68/26 [470/180]		Castings	88Cu-9Al-3Fe
35	35	ASTM	B608	—	C61300		70/— [485/—]		Welded Pipe	90Cu-7Al-2.5Fe-Sn
35	35	ASTM	B608	—	C61400		70/— [485/—]		Welded Pipe	90Cu-7Al-3Fe

Table C.2
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
		Standard	Specification				Strength, ksi	[MPa]		
Nickel and Nickel Base Alloys										
41	41	ASTM/ASME	B/SB-160	—	N02200		55/15	[380/105]	Rod & Bar	99.0Ni
41	41	ASTM/ASME	B/SB-160	—	N02201		50/10	[345/69]	Rod & Bar	99.0Ni-Low C
41	41	ASTM/ASME	B/SB-161	—	N02200		55/12	[380/83]	Seamless Pipe & Tube	99.0Ni
41	41	ASTM/ASME	B/SB-161	—	N02201		50/10	[345/69]	Seamless Pipe & Tube	99.0Ni-Low C
41	41	ASTM/ASME	B/SB-162	—	N02200		55/15	[380/105]	Plate, Sheet & Strip	99.0Ni
41	41	ASTM/ASME	B/SB-162	—	N02201		50/12	[345/83]	Plate, Sheet & Strip	99.0Ni-Low C
41	41	ASTM/ASME	B/SB-163	—	N02200		55/15	[380/105]	Seamless Tube	99.0Ni
41	41	ASTM/ASME	B/SB-163	—	N02201		50/12	[345/83]	Seamless Tube	99.0Ni-Low C
41	41	ASTM/ASME	B/SB-366	—	N02200		55/15	[380/105]	Fittings	99.0Ni
41	41	ASTM/ASME	B/SB-366	—	N02201		50/10	[345/69]	Fittings	99.0Ni-Low C
41	41	ASTM/ASME	B/SB-564	—	N02200		55/15	[380/105]	Forgings	99.0Ni
41	41	ASTM	B725	—	N02200		55/12	[380/83]	Welded Pipe	99.0Ni
41	41	ASTM	B725	—	N02201		50/12	[345/80]	Welded Pipe	99.0Ni-Low C
41	41	ASTM	B730	—	N02200		55/15	[380/105]	Welded Tube	99.0Ni
41	41	ASTM	B730	—	N02201		50/12	[345/80]	Welded Tube	99.0Ni-Low C
42	42	ASTM/ASME	A/SA-494	M35-2	N04020		65/30	[450/205]	Castings	67Ni-30Cu-Fe-Si
42	42	ASTM/ASME	A/SA-494	M30C	N24130		65/32.5	[450/225]	Castings	67Ni-30Cu-2Fe-Cb
42	42	ASTM/ASME	A/SA-494	M35-1	N24135		65/25	[450/170]	Castings	67Ni-30Cu-2Fe-Cb
42	42	ASTM/ASME	B/SB-127	—	N04400		70/28	[485/195]	Plate, Sheet & Strip	67Ni-30Cu
42	42	ASTM/ASME	B/SB-163	—	N04400		70/28	[485/195]	Seamless Tube	67Ni-30Cu
42	42	ASTM/ASME	B/SB-164	—	N04400		70/25	[485/170]	Rod, Bar & Wire	67Ni-30Cu
42	42	ASTM/ASME	B/SB-164	—	N04405		70/25	[485/170]	Rod, Bar & Wire	67Ni-30Cu
42	42	ASTM/ASME	B/SB-165	—	N04400		70/25	[485/170]	Seamless Pipe & Tube	67Ni-30Cu
42	42	ASTM/ASME	B/SB-366	—	N04400		70/25	[485/170]	Fittings	67Ni-30Cu
42	42	ASTM/ASME	B/SB-564	—	N04400		70/25	[485/170]	Forgings	67Ni-30Cu
42	42	ASTM	B725	—	N04400		70/28	[485/195]	Welded Pipe	67Ni-30Cu
42	42	ASTM	B730	—	N04400		70/28	[485/195]	Welded Tube	67Ni-30Cu
43	43	ASTM/ASME	A/SA-494	CY40	N06040		70/28	[485/195]	Castings	72Ni-15Cr-8Fe-Si
43	43	ASTM/ASME	A/SA-494	CW2M	N26455		72/40	[495/275]	Castings	66Ni-16Mo-16Cr-Fe-W

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy		Thickness or Diameter Limitations, in [mm]	UNS Number	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Base Metal Specification	Standard					
Nickel and Nickel Base Alloys								
43	43	ASTM/ASME	A/SA-494	CW6MC	N26625	70/40 [485/275]	Castings	60Ni-21.5Cr-9Mo-4Cb-Fe
43	43	ASTM/ASME	B/SB-163	—	N06025	98/39 [675/270]	Seamless Tube	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-163	—	N06600	80/35 [550/240]	Seamless Tube	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B/SB-163	—	N06601	80/30 [550/205]	Seamless Tube	60Ni-23Cr-12Fe-Al
43	43	ASTM/ASME	B/SB-163	—	N06690	85/35 [585/240]	Seamless Tube	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B/SB-166	—	N06025	98/39 [675/270]	Rod, Bar & Wire	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-166	—	N06600	80/35 [550/240]	Rod, Bar & Wire	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B/SB-166	—	N06601	80/30 [550/205]	Rod, Bar & Wire	60Ni-23Cr-12Fe-Al
43	46	ASTM/ASME	B/SB-166	—	N06617	95/35 [655/240]	Rod, Bar & Wire	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B/SB-166	—	N06690	85/35 [585/240]	Rod, Bar & Wire	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B/SB-167	—	N06025	98/39 [675/270]	Seamless Pipe & Tube	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-167	—	N06600	75/25 [515/170]	Seamless Pipe & Tube	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B/SB-167	—	N06601	80/30 [550/205]	Seamless Pipe & Tube	60Ni-23Cr-12Fe-Al
43	46	ASTM/ASME	B/SB-167	—	N06617	95/35 [655/240]	Seamless Pipe & Tube	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B/SB-167	—	N06690	75/25 [515/175]	Seamless Pipe & Tube	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B/SB-168	—	N06025	98/39 [675/270]	Plate, Sheet & Strip	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-168	—	N06600	80/35 [550/240]	Plate, Sheet & Strip	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B/SB-168	—	N06601	80/30 [550/205]	Plate, Sheet & Strip	60Ni-23Cr-12Fe-Al
43	46	ASTM/ASME	B/SB-168	—	N06617	95/35 [655/240]	Plate, Sheet & Strip	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B/SB-168	—	N06690	85/35 [585/240]	Plate, Sheet & Strip	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B/SB-366	—	N06002	100/40 [690/275]	Fittings	47Ni-22Cr-9Mo-18Fe
43	44	ASTM/ASME	B/SB-366	—	N06022	100/45 [690/310]	Fittings	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B/SB-366	—	N06025	98/39 [675/270]	Fittings	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-366	—	N06035	85/35 [585/240]	Fittings	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B/SB-366	—	N06059	100/45 [690/310]	Fittings	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B/SB-366	—	N06200	100/45 [690/310]	Fittings	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B/SB-366	—	N06210	100/45 [690/310]	Fittings	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B/SB-366	—	N06230	110/45 [760/310]	Fittings	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B/SB-366	—	N06455	100/40 [690/275]	Fittings	61Ni-15Mo-16Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum		Product Form	Nominal Composition
							Tensile/Yield Strength, ksi [MPa]			
Nickel and Nickel Base Alloys										
43	43	ASTM/ASME	B/SB-366	—	N06600		80/35	[550/240]	Fittings	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B/SB-366	—	N06603		94/43	[650/295]	Fittings	62Ni-25Cr-9Fe-3Al-Cu-Ti-Zr
43	43	ASTM/ASME	B/SB-366	—	N06625		100/55	[690/380]	Fittings	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-366	—	N10276		100/41	[690/285]	Fittings	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B/SB-366	—	N10362		105/45	[725/310]	Fittings	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B/SB-435	—	N06002		95/35	[655/240]	Plate, Sheet & Strip	47Ni-22Cr-9Mo-18Fe
43	43	ASTM/ASME	B/SB-435	—	N06230		110/45	[760/310]	Plate, Sheet & Strip	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B/SB-443	1	N06625		110/55	[760/380]	Plate, Hot-Rolled Sheet	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-443	1	N06625		120/60	[825/415]	Cold Rolled Sheet Strip	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-443	2	N06625		100/40	[690/275]	Plate, Sheet & Strip	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-444	1	N06625		120/60	[825/415]	Seamless Pipe & Tube	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-444	2	N06625		100/40	[690/275]	Seamless Pipe & Tube	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-446	1	N06625	4–10 [100–250]	100/50	[690/345]	Rod & Bar	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-446	1	N06625	<4 [<100]	120/60	[825/415]	Rod & Bar	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-446	2	N06625		100/40	[690/275]	Rod & Bar	60Ni-22Cr-9Mo-3.5Cb
43	44	ASTM/ASME	B/SB-462	—	N06022		100/45	[690/310]	Forgings	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B/SB-462	—	N06035		85/35	[585/240]	Forgings	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B/SB-462	—	N06059		100/45	[690/310]	Forgings	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B/SB-462	—	N06200		100/45	[690/310]	Forgings	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B/SB-462	—	N06686		100/45	[690/310]	Forgings	58Ni-21Cr-16Mo-3.5N
43	43	ASTM/ASME	B/SB-462	—	N10276		100/41	[690/285]	Forgings	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B/SB-462	—	N10362		105/45	[725/310]	Forgings	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B/SB-516	—	N06025		98/39	[675/270]	Welded Tube	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-516	—	N06600		80/35	[550/240]	Welded Tube	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B/SB-516	—	N06603		94/43	[650/295]	Welded Tube	62Ni-25Cr-9Fe-3Al-Cu-Ti-Zr
43	43	ASTM/ASME	B/SB-517	—	N06025		98/39	[675/270]	Welded Pipe	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-517	—	N06600		80/35	[550/240]	Welded Pipe	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B/SB-517	—	N06603		94/43	[650/295]	Welded Pipe	62Ni-25Cr-9Fe-3Al-Cu-Ti-Zr
43	44	ASTM/ASME	B/SB-564	—	N06022		100/45	[690/310]	Forgings	55Ni-21Cr-13.5Mo

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Nickel and Nickel Base Alloys		
							Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
43	43	ASTM/ASME	B/SB-564	—	N06025	>4 and ≤12 [>100 and ≤300]	84/39 [580/270]	Forgings	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-564	—	N06025	≤4 [≤100]	98/39 [675/270]	Forgings	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
43	43	ASTM/ASME	B/SB-564	—	N06035		85/35 [585/240]	Forgings	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B/SB-564	—	N06059		100/45 [690/310]	Forgings	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B/SB-564	—	N06110	>4 and ≤10 [>102 and ≤254]	90/40 [620/275]	Forgings	51Ni-30Cr-10Mo-W
43	43	ASTM/ASME	B/SB-564	—	N06110	≤4 [≤102]	95/45 [655/310]	Forgings	51Ni-30Cr-10Mo-W
43	43	ASTM/ASME	B/SB-564	—	N06200		100/45 [690/310]	Forgings	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B/SB-564	—	N06210		100/45 [690/310]	Forgings	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B/SB-564	—	N06230		110/45 [760/310]	Forgings	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B/SB-564	—	N06600		80/35 [550/240]	Forgings	72Ni-15Cr-8Fe
43	43	ASTM/ASME	B/SB-564	—	N06603		94/43 [650/295]	Forgings	62Ni-25Cr-9Fe-3Al-Cu-Ti-Zr
43	46	ASTM/ASME	B/SB-564	—	N06617		95/35 [655/240]	Forgings	52Ni-22Cr-13Co-9Mo
43	43	ASTM/ASME	B/SB-564	—	N06625	>4 and ≤10 [>102 and ≤254]	110/50 [760/345]	Forgings	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-564	—	N06625	≤4 [≤102]	120/60 [825/415]	Forgings	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-564	—	N06686		100/45 [690/310]	Forgings	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B/SB-564	—	N06690		85/35 [585/240]	Forgings	58Ni-29Cr-9Fe
43	43	ASTM/ASME	B/SB-564	—	N10276		100/41 [690/285]	Forgings	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B/SB-564	—	N10362		105/45 [725/310]	Forgings	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B/SB-572	—	N06002		95/35 [655/240]	Rod	47Ni-22Cr-9Mo-18Fe
43	43	ASTM/ASME	B/SB-572	—	N06230		110/45 [760/310]	Rod	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B/SB-574	—	N06022		100/45 [690/310]	Rod	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B/SB-574	—	N06035		85/35 [585/240]	Rod	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B/SB-574	—	N06059		100/45 [690/310]	Rod	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B/SB-574	—	N06200		100/45 [690/310]	Rod	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B/SB-574	—	N06210		100/45 [690/310]	Rod	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B/SB-574	—	N06455		100/40 [690/275]	Rod	61Ni-16Mo-16Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
Nickel and Nickel Base Alloys										
43	43	ASTM/ASME	B/SB-574	—	N06686		100/45 [690/310]		Rod	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B/SB-574	—	N10276		100/41 [690/285]		Rod	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B/SB-574	—	N10362		105/45 [725/310]		Rod	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B/SB-575	—	N06022		100/45 [690/310]		Plate, Sheet & Strip	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B/SB-575	—	N06035		85/35 [585/240]		Plate, Sheet & Strip	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B/SB-575	—	N06059		100/45 [690/310]		Plate, Sheet & Strip	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B/SB-575	—	N06200		100/45 [690/310]		Plate, Sheet & Strip	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B/SB-575	—	N06210		100/45 [690/310]		Plate, Sheet & Strip	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B/SB-575	—	N06455		100/40 [690/275]		Plate, Sheet & Strip	61Ni-16Mo-16Cr
43	43	ASTM/ASME	B/SB-575	—	N06686		100/45 [690/310]		Plate, Sheet & Strip	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B/SB-575	—	N10276		100/41 [690/285]		Plate, Sheet & Strip	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B/SB-575	—	N10362		105/45 [725/310]		Plate, Sheet & Strip	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B/SB-619	—	N06002		100/40 [690/275]		Welded Pipe	47Ni-22Cr-9Mo-18Fe
43	44	ASTM/ASME	B/SB-619	—	N06022		100/45 [690/310]		Welded Pipe	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B/SB-619	—	N06035		85/35 [585/240]		Welded Pipe	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B/SB-619	—	N06059		100/45 [690/310]		Welded Pipe	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B/SB-619	—	N06200		100/45 [690/310]		Welded Pipe	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B/SB-619	—	N06210		100/45 [690/310]		Welded Pipe	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B/SB-619	—	N06230		110/45 [760/310]		Welded Pipe	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B/SB-619	—	N06455		100/40 [690/275]		Welded Pipe	61Ni-16Mo-16Cr
43	43	ASTM/ASME	B/SB-619	—	N06686		100/45 [690/310]		Welded Pipe	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B/SB-619	—	N10276		100/41 [690/285]		Welded Pipe	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B/SB-619	—	N10362		105/45 [725/310]		Welded Pipe	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B/SB-622	—	N06002		100/40 [690/275]		Seamless Pipe & Tube	47Ni-22Cr-9Mo-18Fe
43	44	ASTM/ASME	B/SB-622	—	N06022		100/45 [690/310]		Seamless Pipe & Tube	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B/SB-622	—	N06035		85/35 [585/240]		Seamless Pipe & Tube	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B/SB-622	—	N06059		100/45 [690/310]		Seamless Pipe & Tube	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B/SB-622	—	N06060		90/35 [620/240]		Seamless Pipe & Tube	57Ni-21Cr-13Mo-6Fe-Cu- (Cb+Ta)

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy			UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Base Metal Specification	Standard	Designation					
Nickel and Nickel Base Alloys									
43	43	ASTM/ASME	B/SB-622	—	N06200		100/45 [690/310]	Seamless Pipe & Tube	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B/SB-622	—	N06210		100/45 [690/310]	Seamless Pipe & Tube	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B/SB-622	—	N06230		110/45 [760/310]	Seamless Pipe & Tube	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B/SB-622	—	N06250		90/35 [620/240]	Seamless Pipe & Tube	52Ni-21Cr-13Fe-11Mo-W-Cu
43	43	ASTM/ASME	B/SB-622	—	N06255		85/32 [585/220]	Seamless Pipe & Tube	50Ni-24Cr-17Fe-7Mo-W
43	43	ASTM/ASME	B/SB-622	—	N06455		100/40 [690/275]	Seamless Pipe & Tube	61Ni-16Mo-16Cr
43	43	ASTM/ASME	B/SB-622	—	N06686		100/45 [690/310]	Seamless Pipe & Tube	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B/SB-622	—	N10276		100/41 [690/285]	Seamless Pipe & Tube	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B/SB-622	—	N10362		105/45 [725/310]	Seamless Pipe & Tube	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B/SB-626	—	N06002		100/40 [690/275]	Welded Tube	47Ni-22Cr-9Mo-18Fe
43	44	ASTM/ASME	B/SB-626	—	N06022		100/45 [690/310]	Welded Tube	55Ni-21Cr-13.5Mo
43	43	ASTM/ASME	B/SB-626	—	N06035		85/35 [585/240]	Welded Tube	58Ni-33Cr-8Mo
43	43	ASTM/ASME	B/SB-626	—	N06059		100/45 [690/310]	Welded Tube	59Ni-23Cr-16Mo
43	43	ASTM/ASME	B/SB-626	—	N06200		100/45 [690/310]	Welded Tube	59Ni-23Cr-16Mo-1.6Cu
43	43	ASTM/ASME	B/SB-626	—	N06210		100/45 [690/310]	Welded Tube	60Ni-19Cr-19Mo-1.8Ta
43	43	ASTM/ASME	B/SB-626	—	N06230		110/45 [760/310]	Welded Tube	53Ni-22Cr-14W-Co-Fe-Mo
43	43	ASTM/ASME	B/SB-626	—	N06455		100/40 [690/275]	Welded Tube	61Ni-16Mo-16Cr
43	43	ASTM/ASME	B/SB-626	—	N06686		100/45 [690/310]	Welded Tube	58Ni-21Cr-16Mo-3.5W
43	43	ASTM/ASME	B/SB-626	—	N10276		100/41 [690/285]	Welded Tube	54Ni-16Mo-15Cr
43	43	ASTM/ASME	B/SB-626	—	N10362		105/45 [725/310]	Welded Tube	62Ni-22Mo-15Cr
43	43	ASTM/ASME	B/SB-704	1	N06625		120/60 [825/415]	Welded Tube	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-704	2	N06625		100/40 [690/275]	Welded Tube	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-705	1	N06625		120/60 [825/415]	Welded Pipe	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM/ASME	B/SB-705	2	N06625		100/40 [690/275]	Welded Pipe	60Ni-22Cr-9Mo-3.5Cb
43	43	ASTM	B755	—	N06110		95/45 [655/310]	Plate, Sheet & Strip	51Ni-30Cr-10Mo-W
43	43	ASTM	B756	—	N06110	>4 and ≤10 [>102 and ≤254]	90/40 [620/275]	Rod & Bar	51Ni-30Cr-10Mo-W
43	43	ASTM	B756	—	N06110	≤4 [≤102]	95/45 [655/310]	Rod & Bar	51Ni-30Cr-10Mo-W
43	43	ASTM	B757	—	N06110		95/45 [655/310]	Welded Pipe	51Ni-30Cr-10Mo-W

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Standard	Specification						
Nickel and Nickel Base Alloys									
43	43	ASTM	B758	—	N06110		95/45 [655/310]	Welded Tube	51Ni-30Cr-10Mo-W
43	43	ASTM	B759	—	N06110		95/45 [655/310]	Seamless Pipe & Tube	51Ni-30Cr-10Mo-W
44	43	AMS	5711	—	N06635		185/120 [1275/825]	Sheet	62Ni-16Cr-15Mo-3Fe-2Co-1W-Mn-Si-Al
44	44	ASTM/ASME	A/SA-494	N7M	N30007		76/40 [525/275]	Castings	65Ni-31.5Mo-1.5Fe-Cr
44	44	ASTM/ASME	A/SA-494	CW6M	N30107		72/40 [495/275]	Castings	56Ni-19Mo-18Cr-2Fe
44	44	ASTM/ASME	B/SB-333	—	N10001	≤0.1875 and ≤2.5 [≤4.8 and ≤64]	100/45 [690/310]	Plate, Sheet & Strip	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B/SB-333	—	N10001	<0.1875 [<48]	115/50 [795/345]	Plate, Sheet & Strip	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B/SB-333	—	N10624		104/46 [715/315]	Plate, Sheet & Strip	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B/SB-333	—	N10629		110/51 [760/350]	Plate, Sheet & Strip	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B/SB-333	—	N10665		110/51 [760/350]	Plate, Sheet & Strip	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B/SB-333	—	N10675		110/51 [760/350]	Plate, Sheet & Strip	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B/SB-335	—	N10001	>1.5 and ≤3.5 [>38 and ≤89]	100/46 [690/315]	Rod	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B/SB-335	—	N10001	≤0.3125 and ≤1.5 [≤8 and ≤38]	115/46 [795/315]	Rod	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B/SB-335	—	N10624		104/46 [715/315]	Rod	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B/SB-335	—	N10629		110/51 [760/350]	Rod	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B/SB-335	—	N10665		110/51 [760/350]	Rod	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B/SB-335	—	N10675		110/51 [760/350]	Rod	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B/SB-366	—	N10001		100/45 [690/310]	Fittings	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B/SB-366	—	N10003		100/40 [690/275]	Fittings	70Ni-16Mo-7Cr-5Fe
44	44	ASTM/ASME	B/SB-366	—	N10242		105/45 [725/310]	Fittings	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B/SB-366	—	N10624		104/46 [715/315]	Fittings	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B/SB-366	—	N10629		110/51 [760/350]	Fittings	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B/SB-366	—	N10665		110/51 [760/350]	Fittings	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B/SB-366	—	N10675		110/51 [760/350]	Fittings	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B/SB-434	—	N10003		100/40 [690/275]	Plate, Sheet & Strip	70Ni-16Mo-7Cr-5Fe
44	44	ASTM/ASME	B/SB-434	—	N10242		105/45 [725/310]	Plate, Sheet & Strip	62Ni-25Mo-8Cr-2Fe

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy		UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
		Base Metal Specification	Standard			Designation	Strength, ksi [MPa]		
Nickel and Nickel Base Alloys									
44	44	ASTM/ASME	B/SB-462	—	N10629	110/51 [760/350]		Forgings	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B/SB-462	—	N10665	110/51 [760/350]		Forgings	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B/SB-462	—	N10675	110/51 [760/350]		Forgings	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B/SB-564	—	N10242	105/45 [725/310]		Forgings	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B/SB-564	—	N10624	104/46 [715/315]		Forgings	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B/SB-564	—	N10629	110/51 [760/350]		Forgings	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B/SB-564	—	N10665	110/51 [760/350]		Forgings	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B/SB-564	—	N10675	110/51 [760/350]		Forgings	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B/SB-573	—	N10003	100/40 [690/275]		Rod	70Ni-16Mo-7Cr-5Fe
44	44	ASTM/ASME	B/SB-573	—	N10242	105/45 [725/310]		Rod	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B/SB-619	—	N10001	100/45 [690/310]		Welded Pipe	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B/SB-619	—	N10242	105/45 [725/310]		Welded Pipe	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B/SB-619	—	N10624	104/46 [715/315]		Welded Pipe	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B/SB-619	—	N10629	110/51 [760/350]		Welded Pipe	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B/SB-619	—	N10665	110/51 [760/350]		Welded Pipe	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B/SB-619	—	N10675	110/51 [760/350]		Welded Pipe	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B/SB-622	—	N10001	100/45 [690/310]		Seamless Pipe & Tube	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B/SB-622	—	N10242	105/45 [725/310]		Seamless Pipe & Tube	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B/SB-622	—	N10624	104/46 [715/315]		Seamless Pipe & Tube	60Ni-23Mo-8Cr-7Fe
44	44	ASTM/ASME	B/SB-622	—	N10629	110/51 [760/350]		Seamless Pipe & Tube	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B/SB-622	—	N10665	110/51 [760/350]		Seamless Pipe & Tube	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B/SB-622	—	N10675	110/51 [760/350]		Seamless Pipe & Tube	65Ni-29.5Mo-2Fe-2Cr
44	44	ASTM/ASME	B/SB-626	—	N10001	100/45 [690/310]		Welded Tube	62Ni-28Mo-5Fe
44	44	ASTM/ASME	B/SB-626	—	N10242	105/45 [725/310]		Welded Tube	62Ni-25Mo-8Cr-2Fe
44	44	ASTM/ASME	B/SB-626	—	N10624	104/46 [715/315]		Welded Tube	60Ni-23Mo-8Cr-6.5Fe
44	44	ASTM/ASME	B/SB-626	—	N10629	110/51 [760/350]		Welded Tube	66Ni-28Mo-3Fe-1.3Cr-0.25Al
44	44	ASTM/ASME	B/SB-626	—	N10665	110/51 [760/350]		Welded Tube	65Ni-28Mo-2Fe
44	44	ASTM/ASME	B/SB-626	—	N10675	110/51 [760/350]		Welded Tube	65Ni-29.5Mo-2Fe-2Cr
45	8.2	ASTM/ASME	A/SA-182	—	N08367	95/45 [655/310]		Forgings	46Fe-24Ni-21Cr-6Mo-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Nickel and Nickel Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
45	8.2	ASTM/ASME	A/SA-182	F904L	N08904		71/31 [490/215]		Forgings	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A/SA-182	F58	S31266		109/61 [750/420]		Forgings	24Cr-22Ni-6Mo-3Mn-Cu-W-N
45	8.2	ASTM/ASME	A/SA-240	—	N08367	≤0.1875 [≤5]	95/45 [655/310]		Plate	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-240	—	N08367	<0.1875 [≤5]	100/45 [690/310]		Sheet & Strip	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-240	904L	N08904		71/31 [490/215]		Plate, Sheet & Strip	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A/SA-240	—	S31266		109/61 [750/420]		Plate, Sheet & Strip	24Cr-22Ni-6Mo-3Mn-Cu-W-N
45	8.2	ASTM/ASME	A/SA-240	S31277	S31277		112/52 [770/360]		Plate, Sheet & Strip	27Ni-22Cr-7Mo-Mn-Cu
45	8.2	ASTM/ASME	A/SA-249	—	N08367	>0.1875 [≥5]	95/45 [655/310]		Welded Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-249	—	N08367	≤0.1875 [≤5]	100/45 [690/310]		Welded Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-249	—	N08904		71/31 [490/215]		Welded Tube	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A/SA-312	N08367	N08367	>0.1875 [≥5]	95/45 [655/310]		Seamless & Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-312	N08367	N08367	≤0.1875 [≤5]	100/45 [690/310]		Seamless & Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-312	—	N08904		71/31 [490/215]		Seamless & Welded Pipe	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A/SA-351	CN3MN	J94651		80/38 [550/260]		Castings	46Fe-24Ni-21Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	A/SA-351	CN7M	N08007		62/25 [425/170]		Castings	28Ni-19Cr-Cu-Mo
45	45	ASTM/ASME	A/SA-351	CT15C	N08151		63/25 [435/170]		Castings	32Ni-45Fe-20Cr-Cb
45	45	ASTM/ASME	A/SA-351	HT30	N08603		65/28 [450/195]		Castings	35Ni-15Cr-0.5Mo
45	8.2	ASTM/ASME	A/SA-358	N08367	N08367	≤0.1875 [≤5]	95/45 [655/310]		Fusion Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-358	N08367	N08367	<0.1875 [≤5]	100/45 [690/310]		Fusion Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-358	—	S31266		109/61 [750/420]		Fusion Welded Pipe	24Cr-22Ni-6Mo-3Mn-Cu-W-N
45	8.2	ASTM	A403	—	N08367		95/45 [655/310]		Wrought Piping Fittings	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-403	—	N08904		71/31 [490/215]		Wrought Piping Fittings	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	A/SA-479	—	N08367		95/45 [655/310]		Bars & Shapes	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM	A479	904L	N08904		71/31 [490/215]		Bars & Shapes	44Fe-25Ni-21Cr-Mo
45	45	ASTM/ASME	A/SA-494	CU5MCuC	N08826		75/35 [515/240]		Castings	42Ni-21.5Cr-3Mo-2.3Cu
45	8.2	ASTM/ASME	A/SA-813	N08367	N08367	>0.1875 [≥5]	95/45 [655/310]		Welded Pipe	46Fe-24Ni-21Cr-6Mo-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Nickel and Nickel Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
45	8.2	ASTM/ASME	A/SA-813	N08367	N08367	≤0.1875 [≤5]	100/45 [690/310]		Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-814	N08367	N08367	>0.1875 [≥5]	95/45 [655/310]		Cold Worked Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	A/SA-814	N08367	N08367	≤0.1875 [≤5]	100/45 [690/310]		Cold Worked Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B/SB-163	—	N08120		90/40 [620/275]		Seamless Tube	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B/SB-163	—	N08800		75/30 [515/205]		Seamless Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-163	—	N08801		65/25 [450/170]		Seamless Tube	32Ni-45Fe-20.5Cr-Ti
45	45	ASTM/ASME	B/SB-163	—	N08810		65/25 [450/170]		Seamless Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-163	—	N08811		65/25 [450/170]		Seamless Tube	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B/SB-163	—	N08825		85/35 [585/240]		Seamless Tube	42Ni-21.5Cr-3Mo-2.3Cu
45	43	ASTM/ASME	B/SB-366	—	N06007		90/35 [620/240]		Fittings	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B/SB-366	—	N06030		85/35 [585/240]		Fittings	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B/SB-366	—	N06985		90/35 [620/240]		Fittings	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B/SB-366	—	N08020		80/35 [550/240]		Fittings	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B/SB-366	—	N08031		94/40 [650/275]		Fittings	31Ni-31Fe-27Cr-7Mo
45	45	ASTM/ASME	B/SB-366	—	N08120		90/40 [620/275]		Fittings	37Ni-33Fe-25Cr
45	8.2	ASTM/ASME	B/SB-366	—	N08367	>0.1875 [≥4.8]	95/45 [655/310]		Fittings	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-366	—	N08367	≤0.1875 [≤4.8]	100/45 [690/310]		Fittings	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B/SB-366	—	N08800		75/30 [515/205]		Fittings	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-366	—	N08810		65/25 [450/170]		Fittings	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-366	—	N08811		65/25 [450/170]		Fittings	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B/SB-366	—	N08825		85/35 [585/240]		Fittings	42Ni-21.5Cr-3Mo-2.3Cu
45	8.2	ASTM/ASME	B/SB-366	—	N08904		71/31 [490/215]		Fittings	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B/SB-366	—	N08925		87/43 [600/295]		Fittings	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-366	—	N08926		94/43 [650/295]		Fittings	25Ni-20Cr-6Mo-Cu-N
45	45	ASTM/ASME	B/SB-366	—	R20033		109/55 [750/380]		Fittings	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B/SB-366	—	R30556		100/45 [690/310]		Fittings	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	45	ASTM/ASME	B/SB-407	—	N08120		90/40 [620/275]		Seamless Pipe & Tube	37Ni-33Fe-25Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum		Product Form	Nominal Composition
							Tensile Strength, ksi	Yield Strength, MPa		
Nickel and Nickel Base Alloys										
45	45	ASTM/ASME	B/SB-407	—	N08800	75/30	[515/205]		Seamless Pipe & Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-407	—	N08801	65/25	[450/170]		Seamless Pipe & Tube	32Ni-45Fe-20.5Cr-Ti
45	45	ASTM/ASME	B/SB-407	—	N08810	65/25	[450/170]		Seamless Pipe & Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-407	—	N08811	65/25	[450/170]		Seamless Pipe & Tube	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B/SB-408	—	N08120	90/40	[620/275]		Rod & Bar	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B/SB-408	—	N08800	75/30	[515/205]		Rod & Bar	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-408	—	N08810	65/25	[450/170]		Rod & Bar	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-408	—	N08811	65/25	[450/170]		Rod & Bar	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B/SB-409	—	N08120	90/40	[620/275]		Plate, Sheet & Strip	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B/SB-409	—	N08800	75/30	[515/205]		Plate, Sheet & Strip	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-409	—	N08810	65/25	[450/170]		Plate, Sheet & Strip	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-409	—	N08811	65/25	[450/170]		Plate, Sheet & Strip	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B/SB-423	—	N08221	79/34	[545/235]		Seamless Pipe & Tube	42Ni-21Cr-6Mo-2.3Cu
45	45	ASTM/ASME	B/SB-423	—	N08825	75/25	[515/170]		Seamless Pipe & Tube	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B/SB-424	—	N08221	79/34	[545/235]		Plate, Sheet & Strip	42Ni-21Cr-6Mo-2.3Cu
45	45	ASTM/ASME	B/SB-424	—	N08825	85/35	[585/240]		Plate, Sheet & Strip	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B/SB-425	—	N08221	79/34	[545/235]		Rod & Bar	42Ni-21Cr-6Mo-2.3Cu
45	45	ASTM/ASME	B/SB-425	—	N08825	85/35	[585/240]		Rod & Bar	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B/SB-435	—	R30556	100/45	[690/310]		Plate, Sheet & Strip	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	45	ASTM/ASME	B/SB-462	—	N06030	85/35	[585/240]		Forgings	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B/SB-462	—	N08020	80/35	[550/240]		Forgings	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B/SB-462	—	N08024	80/35	[550/240]		Forgings	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B/SB-462	—	N08026	80/35	[550/240]		Forgings	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B/SB-462	—	N08031	94/40	[650/275]		Forgings	31Ni-33Fe-22Cr-6.5Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-462	—	N08367	95/45	[655/310]		Forgings	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B/SB-462	—	R20033	109/55	[750/380]		Forgings	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B/SB-463	—	N08020	80/35	[550/240]		Plate, Sheet & Strip	35Ni-35Fe-20Cr-Cb

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Nickel and Nickel Base Alloys		Product Form	Nominal Composition
							Strength, ksi [MPa]	Minimum Tensile/Yield		
45	45	ASTM/ASME	B/SB-463	—	N08024		80/35 [550/240]		Plate, Sheet & Strip	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B/SB-463	—	N08026		80/35 [550/240]		Plate, Sheet & Strip	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B/SB-464	—	N08020		80/35 [550/240]		Welded Pipe	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B/SB-464	—	N08024		80/35 [550/240]		Welded Pipe	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B/SB-464	—	N08026		80/35 [550/240]		Welded Pipe	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B/SB-468	—	N08020		80/35 [550/240]		Welded Tube	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B/SB-468	—	N08024		80/35 [550/240]		Welded Tube	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B/SB-468	—	N08026		80/35 [550/240]		Welded Tube	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B/SB-473	—	N08020		80/35 [550/240]		Bar	35Ni-35Fe-20Cr-Cb
45	45	ASTM/ASME	B/SB-473	—	N08024		80/35 [550/240]		Bar	37Ni-33Fe-23Cr-4Mo
45	45	ASTM/ASME	B/SB-473	—	N08026		80/35 [550/240]		Bar	35Ni-30Fe-24Cr-6Mo-3Cu
45	45	ASTM/ASME	B/SB-514	—	N08120		90/40 [620/275]		Welded Pipe	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B/SB-514	—	N08800		75/30 [515/205]		Welded Pipe	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-514	—	N08810		65/25 [450/170]		Welded Pipe	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-515	—	N08120		90/40 [620/275]		Welded Tube	37Ni-33Fe-25Cr
45	45	ASTM/ASME	B/SB-515	—	N08800		75/30 [515/205]		Welded Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-515	—	N08810		65/25 [450/170]		Welded Tube	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-515	—	N08811		65/25 [450/170]		Welded Tube	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B/SB-564	—	N08031		94/40 [650/275]		Forgings	31Ni-31Fe-27Cr-7Mo
45	45	ASTM/ASME	B/SB-564	—	N08120		90/40 [620/275]		Forgings	37Ni-33Fe-25Cr
45	8.2	ASTM/ASME	B/SB-564	—	N08367		95/45 [655/310]		Forgings	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B/SB-564	—	N08800		75/30 [515/205]		Forgings	33Ni-42Fe-21Cr
45	45	ASTM/ASME	B/SB-564	—	N08810		65/25 [450/170]		Forgings	33Ni-42Fe-21Cr
45	44	ASTM/ASME	B/SB-564	—	N08811		65/25 [450/170]		Forgings	33Ni-42Fe-21Cr-Al-Ti
45	45	ASTM/ASME	B/SB-564	—	N08825		85/35 [585/240]		Forgings	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B/SB-564	—	R20033		109/55 [750/380]		Forgings	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B/SB-572	—	R30556		100/45 [690/310]		Rod	21Ni-30Fe-22Cr-18Co-3Mo-3W

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Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Nickel and Nickel Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
45	43	ASTM/ASME	B/SB-581	—	N06007	>0.75 and ≤3.5 [>19 and ≤89]	85/30 [585/205]		Rod	47Ni-22Cr-19Fe-6Mo
45	43	ASTM/ASME	B/SB-581	—	N06007	≤0.3125 and ≤0.75 [≤8 and ≤19]	90/35 [620/240]		Rod	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B/SB-581	—	N06030		85/35 [585/240]		Rod	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B/SB-581	—	N06975		85/32 [585/220]		Rod	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B/SB-581	—	N06985	>0.75 and ≤3.5 [>19 and ≤89]	85/30 [585/205]		Rod	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B/SB-581	—	N06985	≤0.3125 and ≤0.75 [≤8 and ≤19]	90/35 [620/240]		Rod	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B/SB-581	—	N08031		94/40 [650/275]		Rod	31Ni-31Fe-27Cr-7Mo
45	43	ASTM/ASME	B/SB-582	—	N06007	>0.75 and ≤2.5 [>19 and ≤64]	85/30 [585/205]		Plate, Sheet & Strip	47Ni-22Cr-19Fe-6Mo
45	43	ASTM/ASME	B/SB-582	—	N06007	≤0.75 [≤19]	90/35 [620/240]		Plate, Sheet & Strip	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B/SB-582	—	N06030		85/35 [585/240]		Plate, Sheet & Strip	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B/SB-582	—	N06975		85/32 [585/220]		Plate, Sheet & Strip	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B/SB-582	—	N06985	>0.75 and ≤2.5 [>19 and ≤64]	85/30 [585/205]		Plate, Sheet & Strip	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B/SB-582	—	N06985	≤0.75 [≤19]	90/35 [620/240]		Plate, Sheet & Strip	47Ni-22Cr-20Fe-7Mo
45	8.2	ASTM/ASME	B/SB-599	—	N08700		80/35 [550/240]		Plate, Sheet & Strip	25Ni-47Fe-21Cr-5Mo
45	43	ASTM/ASME	B/SB-619	—	N06007		90/35 [620/240]		Welded Pipe	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B/SB-619	—	N06030		85/35 [585/240]		Welded Pipe	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B/SB-619	—	N06975		85/32 [585/220]		Welded Pipe	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B/SB-619	—	N06985		90/35 [620/240]		Welded Pipe	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B/SB-619	—	N08031		94/40 [650/275]		Welded Pipe	31Ni-31Fe-27Cr-7Mo
45	8.2	ASTM/ASME	B/SB-619	—	N08320		75/28 [515/195]		Welded Pipe	26Ni-22Cr-5Mo-Ti
45	45	ASTM/ASME	B/SB-619	—	R20033		109/55 [750/380]		Welded Pipe	33Cr-31Ni-32Fe-1.5Mo- 0.6Cu-N
45	45	ASTM/ASME	B/SB-619	—	R30556		100/45 [690/310]		Welded Pipe	21Ni-30Fe-22Cr-18Co-3Mo- 3W

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy			UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum		Product Form	Nominal Composition
		Base Metal Specification	Standard	Designation			Tensile/Yield Strength, ksi [MPa]	Strength, ksi [MPa]		
45	8.2	ASTM/ASME	B/SB-620	—	N08320		75/28 [515/195]		Plate, Sheet & Strip	26Ni-22Cr-5Mo-Ti
45	8.2	ASTM/ASME	B/SB-621	—	N08320		75/28 [515/195]		Rod	26Ni-22Cr-5Mo-Ti
45	43	ASTM/ASME	B/SB-622	—	N06007		90/35 [620/240]		Seamless Pipe & Tube	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B/SB-622	—	N06030		85/35 [585/240]		Seamless Pipe & Tube	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B/SB-622	—	N06975		85/32 [585/220]		Seamless Pipe & Tube	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B/SB-622	—	N06985		90/35 [620/240]		Seamless Pipe & Tube	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B/SB-622	—	N08031		94/40 [650/275]		Seamless Pipe & Tube	31Ni-31Fe-27Cr-7Mo
45	45	ASTM/ASME	B/SB-622	—	N08135		73/31 [505/215]		Seamless Pipe & Tube	36Ni-35Fe-22Cr-5Mo-W
45	8.2	ASTM/ASME	B/SB-622	—	N08320		75/28 [515/195]		Seamless Pipe & Tube	26Ni-22Cr-5Mo-Ti
45	45	ASTM/ASME	B/SB-622	—	N08535		73/31 [505/215]		Seamless Pipe & Tube	37Fe-33Ni-26Cr-3Mo-Cu
45	45	ASTM/ASME	B/SB-622	—	R20033		109/55 [750/380]		Seamless Pipe & Tube	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B/SB-622	—	R30556		100/45 [690/310]		Seamless Pipe & Tube	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	45	ASTM/ASME	B/SB-625	—	N08031		94/40 [650/275]		Plate, Sheet & Strip	31Ni-31Fe-27Cr-7Mo
45	8.2	ASTM/ASME	B/SB-625	—	N08904		71/31 [490/215]		Plate, Sheet & Strip	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B/SB-625	—	N08925		87/43 [600/295]		Plate, Sheet & Strip	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-625	—	N08926		94/43 [650/295]		Plate, Sheet & Strip	25Ni-20Cr-6Mo-Co-N
45	8.2	ASTM/ASME	B/SB-625	—	N08932		87/44 [600/305]		Plate, Sheet & Strip	41Fe-25Ni-25Cr-5Mo-Cu-N
45	45	ASTM/ASME	B/SB-625	—	R20033		109/55 [750/380]		Plate, Sheet & Strip	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	43	ASTM/ASME	B/SB-626	—	N06007		90/35 [620/240]		Welded Tube	47Ni-22Cr-19Fe-6Mo
45	45	ASTM/ASME	B/SB-626	—	N06030		85/35 [585/240]		Welded Tube	40Ni-29Cr-15Fe-5Mo
45	45	ASTM/ASME	B/SB-626	—	N06975		85/32 [585/220]		Welded Tube	49Ni-25Cr-18Fe-6Mo
45	45	ASTM/ASME	B/SB-626	—	N06985		90/35 [620/240]		Welded Tube	47Ni-22Cr-20Fe-7Mo
45	45	ASTM/ASME	B/SB-626	—	N08031		94/40 [650/275]		Welded Tube	31Ni-31Fe-27Cr-7Mo
45	8.2	ASTM/ASME	B/SB-626	—	N08320		75/28 [515/195]		Welded Tube	26Ni-22Cr-5Mo-Ti
45	45	ASTM/ASME	B/SB-626	—	R20033		109/55 [750/380]		Welded Tube	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
							Strength, ksi [MPa]	Strength, ksi [MPa]		
Nickel and Nickel Base Alloys										
45	45	ASTM/ASME	B/SB-626	—	R30556		100/45 [690/310]		Welded Tube	21Ni-30Fe-22Cr-18Co-3Mo-3W
45	45	ASTM/ASME	B/SB-649	—	N08031		94/40 [650/275]		Bar & Wire	31Ni-31Fe-27Cr-7Mo
45	8.2	ASTM/ASME	B/SB-649	—	N08904		71/31 [490/215]		Bar & Wire	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B/SB-649	—	N08925		87/43 [600/295]		Bar & Wire	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-649	—	N08926		94/43 [650/295]		Bar & Wire	25Ni-20Cr-6Mo-Cu-N
45	45	ASTM/ASME	B/SB-649	—	R20033		109/55 [750/380]		Bar & Wire	33Cr-31Ni-32Fe-1.5Mo-0.6Cu-N
45	45	ASTM/ASME	B/SB-668	—	N08028		73/31 [505/215]		Seamless Tube	31Ni-31Fe-29Cr-Mo
45	8.2	ASTM/ASME	B/SB-672	—	N08700		80/35 [550/240]		Bar & Wire	25Ni-47Fe-21Cr-5Mo
45	8.2	ASTM/ASME	B/SB-673	—	N08904		71/31 [490/215]		Welded Pipe	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B/SB-673	—	N08925		87/43 [600/295]		Welded Pipe	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-673	—	N08926		94/43 [650/295]		Welded Pipe	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-674	—	N08904		71/31 [490/215]		Welded Tube	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B/SB-674	—	N08925		87/43 [600/295]		Welded Tube	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-674	—	N08926		94/43 [650/295]		Welded Tube	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-675	—	N08367	>0.1875 [>4.8]	95/45 [655/310]		Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-675	—	N08367	≤ 0.1875 [≤ 4.8]	100/45 [690/310]		Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-676	—	N08367	>0.1875 [>4.8]	95/45 [655/310]		Welded Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-676	—	N08367	≤ 0.1875 [≤ 4.8]	100/45 [690/310]		Welded Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-677	—	N08904		71/31 [490/215]		Seamless Pipe & Tube	44Fe-25Ni-21Cr-Mo
45	8.2	ASTM/ASME	B/SB-677	—	N08925		87/43 [600/295]		Seamless Pipe & Tube	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-677	—	N08926		94/43 [650/295]		Seamless Pipe & Tube	25Ni-20Cr-6Mo-Cu-N
45	8.2	ASTM/ASME	B/SB-688	—	N08366		75/35 [515/240]		Plate, Sheet & Strip	46Fe-24Ni-21Cr-6Mo
45	8.2	ASTM/ASME	B/SB-688	—	N08367	>0.1875 [>4.8]	95/45 [655/310]		Plate, Sheet & Strip	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-688	—	N08367	≤ 0.1875 [≤ 4.8]	100/45 [690/310]		Plate, Sheet & Strip	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-690	—	N08366		75/30 [515/205]		Seamless Pipe & Tube	46Fe-24Ni-21Cr-6Mo
45	8.2	ASTM/ASME	B/SB-690	—	N08367	>0.1875 [>4.8]	95/45 [655/310]		Seamless Pipe & Tube	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-690	—	N08367	≤ 0.1875 [≤ 4.8]	100/45 [690/310]		Seamless Pipe & Tube	46Fe-24Ni-21Cr-6Mo-N

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Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
		Standard	Specification				Strength, ksi	[MPa]		
Nickel and Nickel Base Alloys										
45	8.2	ASTM/ASME	B/SB-691	—	N08366		75/30	[515/205]	Rod, Bar & Wire	46Fe-24Ni-21Cr-6Mo
45	8.2	ASTM/ASME	B/SB-691	—	N08367		95/45	[655/310]	Rod, Bar & Wire	46Fe-24Ni-21Cr-6Mo-N
45	45	ASTM/ASME	B/SB-704	—	N08825		85/35	[585/240]	Welded Tube	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B/SB-705	—	N08825		85/35	[585/240]	Welded Pipe	42Ni-21.5Cr-3Mo-2.3Cu
45	45	ASTM/ASME	B/SB-709	—	N08028		73/40	[505/275]	Plate, Sheet & Strip	31Ni-31Fe-29Cr-Mo
45	43	ASTM	B718	—	N06333		80/35	[550/240]	Plate, Sheet & Strip	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	43	ASTM	B719	—	N06333		80/35	[550/240]	Bar	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	—	ASTM	B720	—	N08310		—/—	[—/—]	Seamless Tube	Fe-Cr-Ni-Mo
45	43	ASTM	B722	—	N06333		80/35	[550/240]	Seamless Pipe & Tube	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	43	ASTM	B723	—	N06333		80/35	[550/240]	Welded Pipe	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	43	ASTM	B726	—	N06333		80/35	[550/240]	Welded Tube	46Ni-26Cr-16Fe-3Mo-3W-3Co
45	45	ASTM/ASME	B/SB-729	—	N08020		80/35	[550/240]	Seamless Pipe & Tube	35Ni-35Fe-20Cr-Cb
45	8.2	ASTM/ASME	B/SB-804	—	N08367	>0.1875 [>5]	95/45	[655/310]	Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	8.2	ASTM/ASME	B/SB-804	—	N08367	≤ 0.1875 [≤ 5]	100/45	[690/310]	Welded Pipe	46Fe-24Ni-21Cr-6Mo-N
45	43	ASTM	B814	—	N06920		95/35	[655/240]	Plate, Sheet & Strip	46Ni-22Cr-19Fe-9Mo-2W
45	43	NACE	MR 01-75	100	N06950		110/102	[760/700]	Pipe	50Ni-20Cr-18Fe-9Mo
45	43	NACE	MR 01-75	110	N06950		115/110	[795/760]	Pipe	50Ni-20Cr-18Fe-9Mo
45	43	NACE	MR 01-75	125	N06950		131/125	[900/860]	Pipe	50Ni-20Cr-18Fe-9Mo
45	43	NACE	MR 01-75	140	N06950		145/140	[1000/965]	Pipe	50Ni-20Cr-18Fe-9Mo
46	45	ASTM/ASME	B/SB-163	—	N06045		90/35	[620/240]	Seamless Tube	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B/SB-166	—	N06045		90/35	[620/240]	Rod, Bar & Wire	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B/SB-167	—	N06045		90/35	[620/240]	Seamless Pipe & Tube	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B/SB-168	—	N06045		90/35	[620/240]	Plate, Sheet & Strip	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B/SB-366	—	N06045		90/35	[620/240]	Fittings	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B/SB-366	—	N08330		70/30	[485/205]	Fittings	35Ni-19Cr-1.25Si

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy		UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Base Metal Specification	Standard					
Nickel and Nickel Base Alloys								
46	46	ASTM/ASME	B/SB-366	—	N12160	90/35 [620/240]	Fittings	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B/SB-435	—	N12160	90/35 [620/240]	Plate, Sheet & Strip	37Ni-30Co-28Cr-2.7Si
46	45	ASTM/ASME	B/SB-462	—	N06045	90/35 [620/240]	Forgings	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B/SB-511	—	N08330	70/30 [485/205]	Bars & Shapes	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B/SB-511	—	N08332	67/27 [460/185]	Bars & Shapes	35Ni-19Cr-1.25Si-C
46	45	ASTM	B512	—	N08330	70/30 [485/205]	Bars & Billets	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B/SB-516	—	N06045	90/35 [620/240]	Welded Tube	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B/SB-517	—	N06045	90/35 [620/240]	Welded Pipe	46Ni-27Cr-23Fe-2.75Si
46	45	ASTM/ASME	B/SB-535	—	N08330	70/30 [485/205]	Seamless Pipe & Tube	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B/SB-535	—	N08332	67/27 [460/185]	Seamless Pipe & Tube	35Ni-19Cr-1.25Si-C
46	45	ASTM/ASME	B/SB-536	—	N08330	70/30 [485/205]	Plate, Sheet & Strip	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B/SB-536	—	N08332	67/27 [460/185]	Plate, Sheet & Strip	35Ni-19Cr-1.25Si-C
46	45	ASTM/ASME	B/SB-564	—	N06045	90/35 [620/240]	Forgings	46Ni-27Cr-23Fe-2.75Si
46	46	ASTM/ASME	B/SB-564	—	N12160	90/35 [620/240]	Forgings	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B/SB-572	—	N12160	90/35 [620/240]	Rod	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B/SB-619	—	N12160	90/35 [620/240]	Welded Pipe	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B/SB-622	—	N12160	90/35 [620/240]	Seamless Pipe & Tube	37Ni-30Co-28Cr-2.7Si
46	46	ASTM/ASME	B/SB-626	—	N12160	90/35 [620/240]	Welded Tube	37Ni-30Co-28Cr-2.7Si
46	45	ASTM/ASME	B/SB-710	—	N08330	70/30 [485/205]	Welded Pipe	35Ni-19Cr-1.25Si
46	45	ASTM/ASME	B/SB-710	—	N08332	67/27 [460/185]	Welded Pipe	35Ni-19Cr-1.25Si-C
49	—	ASTM/ASME	B/SB-815	—	R31233	120/55 [825/380]	Rod	Co-26Cr-9Ni-5Mo-3Fe-2W
49	—	ASTM/ASME	B/SB-818	—	R31233	120/55 [825/380]	Plate, Sheet & Strip	Co-26Cr-9Ni-5Mo-3Fe-2W

Table C.2
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal			Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Standard	Specification	Alloy						
Titanium and Titanium Base Alloys										
51	51.1	ASTM/ASME	B/SB-265	1	R50250		35/20 [240/140]		Plate, Sheet & Strip	Ti
51	51.2	ASTM/ASME	B/SB-265	2	R50400		50/40 [345/275]		Plate, Sheet & Strip	Ti
51	51.2	ASTM/ASME	B/SB-265	2H	R50400		58/40 [400/275]		Plate, Sheet & Strip	Ti
51	52	ASTM/ASME	B/SB-265	11	R52250		35/20 [240/140]		Plate, Sheet & Strip	Ti-Pd
51	51.1	ASTM/ASME	B/SB-265	17	R52252		35/20 [240/140]		Plate, Sheet & Strip	Ti-Pd
51	51.1	ASTM/ASME	B/SB-265	27	R52254		35/20 [240/140]		Plate, Sheet & Strip	Ti-Ru
51	52	ASTM/ASME	B/SB-265	7	R52400		50/40 [345/275]		Plate, Sheet & Strip	Ti-Pd
51	52	ASTM/ASME	B/SB-265	7H	R52400		58/40 [400/275]		Plate, Sheet & Strip	Ti-Pd
51	51.2	ASTM/ASME	B/SB-265	16	R52402		50/40 [345/275]		Plate, Sheet & Strip	Ti-Pd
51	51.2	ASTM/ASME	B/SB-265	16H	R52402		58/40 [400/275]		Plate, Sheet & Strip	Ti-Pd
51	51.2	ASTM/ASME	B/SB-265	26	R52404		50/40 [345/275]		Plate, Sheet & Strip	Ti-Ru
51	51.2	ASTM/ASME	B/SB-265	26H	R52404		58/40 [400/275]		Plate, Sheet & Strip	Ti-Ru
51	52	ASTM/ASME	B/SB-265	13	R53413		40/25 [275/170]		Plate, Sheet & Strip	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B/SB-265	33	R53442		50/40 [345/275]		Plate, Sheet & Strip	Ti-Ni-Pd-Ru-Cr
51	52	ASTM/ASME	B/SB-265	30	R53530		50/40 [345/275]		Plate, Sheet & Strip	Ti-0.3Co-Pd
51	51	ASTM	B337	1	R50250		35/25 [240/170]		Seamless & Welded Pipe	Ti
51	51	ASTM	B337	2	R50400		50/40 [345/275]		Seamless & Welded Pipe	Ti
51	51	ASTM	B337	11	R52250		35/25 [240/170]		Seamless & Welded Pipe	Ti-Pd
51	51	ASTM	B337	7	R52400		50/40 [345/275]		Seamless & Welded Pipe	Ti-Pd
51	51.1	ASTM/ASME	B/SB-338	1	R50250		35/20 [240/140]		Seamless & Welded Tube	Ti
51	51.2	ASTM/ASME	B/SB-338	2	R50400		50/40 [345/275]		Seamless & Welded Tube	Ti
51	51.2	ASTM/ASME	B/SB-338	2H	R50400		58/40 [400/275]		Seamless & Welded Tube	Ti
51	51	ASTM/ASME	B/SB-338	11	R52250		35/20 [240/140]		Seamless & Welded Tube	Ti-Pd
51	51	ASTM/ASME	B/SB-338	17	R52252		35/20 [240/140]		Seamless & Welded Tube	Ti-Pd
51	51	ASTM/ASME	B/SB-338	27	R52254		35/20 [240/140]		Seamless & Welded Tube	Ti-Ru
51	52	ASTM/ASME	B/SB-338	7	R52400		50/40 [345/275]		Seamless & Welded Tube	Ti-Pd
51	52	ASTM/ASME	B/SB-338	7H	R52400		58/40 [400/275]		Seamless & Welded Tube	Ti-Pd
51	51.2	ASTM/ASME	B/SB-338	16	R52402		50/40 [345/275]		Seamless & Welded Tube	Ti-Pd
51	51.2	ASTM/ASME	B/SB-338	16H	R52402		58/40 [400/275]		Seamless & Welded Tube	Ti-Pd

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Titanium and Titanium Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
51	51.2	ASTM/ASME	B/SB-338	26	R52404		50/40 [345/275]		Seamless & Welded Tube	Ti-Ru
51	51.2	ASTM/ASME	B/SB-338	26H	R52404		58/40 [400/275]		Seamless & Welded Tube	Ti-Ru
51	52	ASTM/ASME	B/SB-338	13	R53413		40/25 [275/170]		Seamless & Welded Tube	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B/SB-338	33	R53442		50/40 [345/275]		Seamless & Welded Tube	Ti-Ni-Pd-Ru-Cr
51	52	ASTM/ASME	B/SB-338	30	R53530		50/40 [345/275]		Seamless & Welded Tube	Ti-0.3Co-Pd
51	51.1	ASTM/ASME	B/SB-348	1	R50250		35/20 [240/140]		Bars & Billets	Ti
51	51.2	ASTM/ASME	B/SB-348	2	R50400		50/40 [345/275]		Bars & Billets	Ti
51	51.2	ASTM/ASME	B/SB-348	2H	R50400		58/40 [400/275]		Bars & Billets	Ti
51	51	ASTM/ASME	B/SB-348	11	R52250		35/20 [240/140]		Bars & Billets	Ti-Pd
51	51	ASTM/ASME	B/SB-348	17	R52252		35/20 [240/140]		Bars & Billets	Ti-Pd
51	52	ASTM/ASME	B/SB-348	7	R52400		50/40 [345/275]		Bars & Billets	Ti-Pd
51	52	ASTM/ASME	B/SB-348	7H	R52400		58/40 [400/275]		Bars & Billets	Ti-Pd
51	51.2	ASTM/ASME	B/SB-348	16	R52402		50/40 [345/275]		Bars & Billets	Ti-Pd
51	51.2	ASTM/ASME	B/SB-348	16H	R52402		58/40 [400/275]		Bars & Billets	Ti-Pd
51	51.2	ASTM/ASME	B/SB-348	26	R52404		50/40 [345/275]		Bars & Billets	Ti-Ru
51	51.2	ASTM/ASME	B/SB-348	26H	R52404		58/40 [400/275]		Bars & Billets	Ti-Ru
51	52	ASTM/ASME	B/SB-348	13	R53413		40/25 [275/170]		Bars & Billets	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B/SB-348	33	R53442		50/40 [345/275]		Bars & Billets	Ti-Ni-Pd-Ru-Cr
51	52	ASTM/ASME	B/SB-348	30	R53530		50/40 [345/275]		Bars & Billets	Ti-0.3Co-Pd
51	51.1	ASTM/ASME	B/SB-363	WPT 1	R50250		35/25 [240/170]		Seamless & Welded Fittings	Ti
51	51.2	ASTM/ASME	B/SB-363	WPT 2	R50400		50/40 [345/275]		Seamless & Welded Fittings	Ti
51	51	ASTM/ASME	B/SB-363	WPT 11	R52250		35/25 [240/170]		Seamless & Welded Fittings	Ti-Pd
51	51	ASTM/ASME	B/SB-363	WPT 17	R52252		35/25 [240/170]		Seamless & Welded Fittings	Ti-Pd
51	52	ASTM/ASME	B/SB-363	WPT 7	R52400		50/40 [345/275]		Seamless & Welded Fittings	Ti-Pd
51	52	ASTM/ASME	B/SB-363	WPT 7H	R52400		58/40 [400/275]		Seamless & Welded Fittings	Ti-Pd
51	51.2	ASTM/ASME	B/SB-363	WPT 16	R52402		50/40 [345/275]		Seamless & Welded Fittings	Ti-Pd
51	51.2	ASTM/ASME	B/SB-363	WPT 16H	R52402		58/40 [400/275]		Seamless & Welded Fittings	Ti-Pd
51	51.2	ASTM/ASME	B/SB-363	WPT 26	R52404		50/40 [345/275]		Seamless & Welded Fittings	Ti-Ru
51	51.2	ASTM/ASME	B/SB-363	WPT 26H	R52404		58/40 [400/275]		Seamless & Welded Fittings	Ti-Ru

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield		Product Form	Nominal Composition
							Strength, ksi	[MPa]		
Titanium and Titanium Base Alloys										
51	52	ASTM/ASME	B/SB-363	WPT 13	R53413		40/25	[275/170]	Seamless & Welded Fittings	Ti-0.5Ni-Ru
51	52	ASTM/ASME	B/SB-363	WPT 30	R53530		50/40	[345/275]	Seamless & Welded Fittings	Ti-0.3Co-Pd
51	51	ASTM/ASME	B/SB-367	C-7	—		50/40	[345/275]	Castings	Ti-Pd
51	51	ASTM/ASME	B/SB-367	C-17	R52252		35/25	[240/170]	Castings	Ti-Pd
51	51	ASTM/ASME	B/SB-367	C-16	R52402		50/40	[345/275]	Castings	Ti-Pd
51	51.4	ASTM/ASME	B/SB-367	C-2	R52550		50/40	[345/275]	Castings	Ti
51	51.1	ASTM/ASME	B/SB-381	F-1	R50250		35/20	[240/140]	Forgings	Ti
51	51.2	ASTM/ASME	B/SB-381	F-2	R50400		50/40	[345/275]	Forgings	Ti
51	51.2	ASTM/ASME	B/SB-381	F-2H	R50400		58/40	[400/275]	Forgings	Ti
51	51	ASTM/ASME	B/SB-381	F-11	R52250		35/20	[240/140]	Forgings	Ti-Pd
51	51	ASTM/ASME	B/SB-381	F-17	R52252		35/20	[240/140]	Forgings	Ti-Pd
51	52	ASTM/ASME	B/SB-381	F-7	R52400		50/40	[345/275]	Forgings	Ti-Pd
51	52	ASTM/ASME	B/SB-381	F-7H	R52400		58/40	[400/275]	Forgings	Ti-Pd
51	51.2	ASTM/ASME	B/SB-381	F-16	R52402		50/40	[345/275]	Forgings	Ti-Pd
51	51.2	ASTM/ASME	B/SB-381	F-16H	R52402		58/40	[400/275]	Forgings	Ti-Pd
51	51.2	ASTM/ASME	B/SB-381	F-26	R52404		50/40	[345/275]	Forgings	Ti-Ru
51	51.2	ASTM/ASME	B/SB-381	F-26H	R52404		58/40	[400/275]	Forgings	Ti-Ru
51	52	ASTM/ASME	B/SB-381	F-13	R53413		40/25	[275/170]	Forgings	Ti-0.5Ni-Ru
51	52	ASTM/ASME	B/SB-381	F-30	R53530		50/40	[345/275]	Forgings	Ti-0.3Co-Pd
51	51.1	ASTM/ASME	B/SB-861	1	R50250		35/20	[240/140]	Seamless Pipe	Ti
51	51.2	ASTM/ASME	B/SB-861	2	R50400		50/40	[345/275]	Seamless Pipe	Ti
51	51.2	ASTM/ASME	B/SB-861	2H	R50400		58/40	[400/275]	Seamless Pipe	Ti
51	51	ASTM/ASME	B/SB-861	11	R52250		35/20	[240/140]	Seamless Pipe	Ti-Pd
51	51	ASTM/ASME	B/SB-861	17	R52252		35/20	[240/140]	Seamless Pipe	Ti-Pd
51	52	ASTM/ASME	B/SB-861	7	R52400		50/40	[345/275]	Seamless Pipe	Ti-Pd
51	52	ASTM/ASME	B/SB-861	7H	R52400		58/40	[400/275]	Seamless Pipe	Ti-Pd
51	51.2	ASTM/ASME	B/SB-861	16	R52402		50/40	[345/275]	Seamless Pipe	Ti-Pd
51	51.2	ASTM/ASME	B/SB-861	16H	R52402		58/40	[400/275]	Seamless Pipe	Ti-Pd
51	51.2	ASTM/ASME	B/SB-861	26	R52404		50/40	[345/275]	Seamless Pipe	Ti-Ru

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
		Standard	Specification							
Titanium and Titanium Base Alloys										
51	51.2	ASTM/ASME	B/SB-861	26H	R52404		58/40 [400/275]		Seamless Pipe	Ti-Ru
51	52	ASTM/ASME	B/SB-861	13	R53413		40/25 [275/170]		Seamless Pipe	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B/SB-861	33	R53442		50/40 [345/275]		Seamless Pipe	Ti-Ni-Pd-Ru-Cr
51	51.1	ASTM/ASME	B/SB-862	1	R50250		35/20 [240/140]		Welded Pipe	Ti
51	51.2	ASTM/ASME	B/SB-862	2	R50400		50/40 [345/275]		Welded Pipe	Ti
51	51.2	ASTM/ASME	B/SB-862	2H	R50400		58/40 [400/275]		Welded Pipe	Ti
51	51	ASTM/ASME	B/SB-862	11	R52250		35/20 [240/140]		Welded Pipe	Ti-Pd
51	51	ASTM/ASME	B/SB-862	17	R52252		35/20 [240/140]		Welded Pipe	Ti-Pd
51	51	ASTM/ASME	B/SB-862	27	R52254		35/20 [240/140]		Welded Pipe	Ti-Ru
51	52	ASTM/ASME	B/SB-862	7	R52400		50/40 [345/275]		Welded Pipe	Ti-Pd
51	52	ASTM/ASME	B/SB-862	7H	R52400		58/40 [400/275]		Welded Pipe	Ti-Pd
51	51.2	ASTM/ASME	B/SB-862	16	R52402		50/40 [345/275]		Welded Pipe	Ti-Pd
51	51.2	ASTM/ASME	B/SB-862	16H	R52402		58/40 [400/275]		Welded Pipe	Ti-Pd
51	51.2	ASTM/ASME	B/SB-862	26	R52404		50/40 [345/275]		Welded Pipe	Ti-Ru
51	51.2	ASTM/ASME	B/SB-862	26H	R52404		58/40 [400/275]		Welded Pipe	Ti-Ru
51	52	ASTM/ASME	B/SB-862	13	R53413		40/25 [275/170]		Welded Pipe	Ti-0.5Ni-Ru
51	54	ASTM/ASME	B/SB-862	33	R53442		50/40 [345/275]		Welded Pipe	Ti-Ni-Pd-Ru-Cr
52	51.3	ASTM/ASME	B/SB-265	3	R50550		65/55 [450/380]		Plate, Sheet & Strip	Ti
52	52	ASTM/ASME	B/SB-265	12	R53400		70/50 [485/345]		Plate, Sheet & Strip	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B/SB-265	14	R53414		60/40 [415/275]		Plate, Sheet & Strip	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-265	15	R53415		70/55 [485/380]		Plate, Sheet & Strip	Ti-0.5Ni-Ru
52	54	ASTM/ASME	B/SB-265	34	R53445		65/55 [450/380]		Plate, Sheet & Strip	Ti-Ni-Pd-Ru-Cr
52	52	ASTM/ASME	B/SB-265	31	R53532		65/55 [450/380]		Plate, Sheet & Strip	Ti-0.3Co-Pd
52	52	ASTM	B337	3	R50550		65/55 [450/380]		Seamless & Welded Pipe	Ti
52	52	ASTM	B337	12	R53400		70/50 [485/345]		Seamless & Welded Pipe	Ti-0.3Mo-0.8Ni
52	51.3	ASTM/ASME	B/SB-338	3	R50550		65/55 [450/380]		Seamless & Welded Tube	Ti
52	52	ASTM/ASME	B/SB-338	12	R53400		70/50 [485/345]		Seamless & Welded Tube	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B/SB-338	14	R53414		60/40 [415/275]		Seamless & Welded Tube	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-338	15	R53415		70/55 [485/380]		Seamless & Welded Tube	Ti-0.5Ni-Ru

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Titanium and Titanium Base Alloys		Product Form	Nominal Composition
							Minimum Tensile/Yield Strength, ksi [MPa]			
52	54	ASTM/ASME	B/SB-338	34	R53445		65/55 [450/380]		Seamless & Welded Tube	Ti-Ni-Pd-Ru-Cr
52	52	ASTM/ASME	B/SB-338	31	R53532		65/55 [450/380]		Seamless & Welded Tube	Ti-0.3Co-Pd
52	51.3	ASTM/ASME	B/SB-348	3	R50550		65/55 [450/380]		Bars & Billets	Ti
52	52	ASTM/ASME	B/SB-348	12	R53400		70/50 [485/345]		Bars & Billets	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B/SB-348	14	R53414		60/40 [415/275]		Bars & Billets	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-348	15	R53415		70/55 [485/380]		Bars & Billets	Ti-0.5Ni-Ru
52	54	ASTM/ASME	B/SB-348	34	R53445		65/55 [450/380]		Bars & Billets	Ti-Ni-Pd-Ru-Cr
52	52	ASTM/ASME	B/SB-348	31	R53532		65/55 [450/380]		Bars & Billets	Ti-0.3Co-Pd
52	51.3	ASTM/ASME	B/SB-363	WPT 3	R50550		65/55 [450/380]		Seamless & Welded Fittings	Ti
52	52	ASTM/ASME	B/SB-363	WPT 12	R53400		70/50 [485/345]		Seamless & Welded Fittings	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B/SB-363	WPT 14	R53414		60/40 [415/275]		Seamless & Welded Fittings	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-363	WPT 15	R53415		65/55 [450/380]		Seamless & Welded Fittings	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-367	C-8	—		65/55 [450/380]		Castings	Ti-Pd
52	51.4	ASTM/ASME	B/SB-367	C-3	R52550		65/55 [450/380]		Castings	Ti
52	51.3	ASTM/ASME	B/SB-381	F-3	R50550		65/55 [450/380]		Forgings	Ti
52	52	ASTM/ASME	B/SB-381	F-12	R53400		70/50 [485/345]		Forgings	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B/SB-381	F-14	R53414		60/40 [415/275]		Forgings	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-381	F-15	R53415		70/55 [485/380]		Forgings	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-381	F-31	R53532		65/55 [450/380]		Forgings	Ti-0.3Co-Pd
52	51.3	ASTM/ASME	B/SB-861	3	R50550		65/55 [450/380]		Seamless Pipe	Ti
52	52	ASTM/ASME	B/SB-861	12	R53400		70/50 [485/345]		Seamless Pipe	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B/SB-861	14	R53414		60/40 [415/275]		Seamless Pipe	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-861	15	R53415		70/55 [485/380]		Seamless Pipe	Ti-0.5Ni-Ru
52	54	ASTM/ASME	B/SB-861	34	R53445		65/55 [450/380]		Seamless Pipe	Ti-Ni-Pd-Ru-Cr
52	51.3	ASTM/ASME	B/SB-862	3	R50550		65/55 [450/380]		Welded Pipe	Ti
52	52	ASTM/ASME	B/SB-862	12	R53400		70/50 [485/345]		Welded Pipe	Ti-0.3Mo-0.8Ni
52	52	ASTM/ASME	B/SB-862	14	R53414		60/40 [415/275]		Welded Pipe	Ti-0.5Ni-Ru
52	52	ASTM/ASME	B/SB-862	15	R53415		70/55 [485/380]		Welded Pipe	Ti-0.5Ni-Ru
52	54	ASTM/ASME	B/SB-862	34	R53445		65/55 [450/380]		Welded Pipe	Ti-Ni-Pd-Ru-Cr

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum		Product Form	Nominal Composition
							Tensile/Yield Strength, ksi [MPa]			
Titanium and Titanium Base Alloys										
53	54	AMS	4914	—	R58153		98/96 [675/660]		Sheet	Ti-15V-3Al-3Cr-3Sn
53	51.4	ASTM/ASME	B/SB-265	4	R50700		80/70 [550/485]		Plate, Sheet & Strip	Ti
53	52	ASTM/ASME	B/SB-265	32	R55111		100/85 [690/585]		Plate, Sheet & Strip	Ti-5Al-1Sn-1Zr-1V-Mo
53	53	ASTM/ASME	B/SB-265	9	R56320		90/70 [620/485]		Plate, Sheet & Strip	Ti-3Al-2.5V
53	53	ASTM/ASME	B/SB-265	18	R56322		90/70 [620/485]		Plate, Sheet & Strip	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B/SB-265	28	R56323		90/70 [620/485]		Plate, Sheet & Strip	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B/SB-265	21	R58210		115/110 [795/760]		Plate, Sheet & Strip	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B/SB-265	19	R58640		115/110 [795/760]		Plate, Sheet & Strip	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B/SB-265	20	R58645		115/110 [795/760]		Plate, Sheet & Strip	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	53	ASTM	B337	9	R56320		90/70 [620/485]		Seamless & Welded Pipe	Ti-3Al-2.5V
53	53	ASTM/ASME	B/SB-338	9	R56320		90/70 [620/485]		Seamless & Welded Tube	Ti-3Al-2.5V
53	53	ASTM/ASME	B/SB-338	18	R56322		90/70 [620/485]		Seamless & Welded Tube	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B/SB-338	28	R56323		90/70 [620/485]		Seamless & Welded Tube	Ti-3Al-2.5V-0.1Ru
53	51.4	ASTM/ASME	B/SB-348	4	R50700		80/70 [550/485]		Bars & Billets	Ti
53	52	ASTM/ASME	B/SB-348	32	R55111		100/85 [690/585]		Bars & Billets	Ti-5Al-1Sn-1Zr-1V-Mo
53	53	ASTM/ASME	B/SB-348	9	R56320		90/70 [620/485]		Bars & Billets	Ti-3Al-2.5V
53	53	ASTM/ASME	B/SB-348	18	R56322		90/70 [620/485]		Bars & Billets	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B/SB-348	28	R56323		90/70 [620/485]		Bars & Billets	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B/SB-348	21	R58210		115/110 [795/760]		Bars & Billets	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B/SB-348	19	R58640		115/110 [795/760]		Bars & Billets	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B/SB-348	20	R58645		115/110 [795/760]		Bars & Billets	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	53	ASTM/ASME	B/SB-363	WPT 9	R56320		90/70 [620/485]		Seamless & Welded Fittings	Ti-3Al-2.5V
53	53	ASTM/ASME	B/SB-363	WPT 18	R56322		90/70 [620/485]		Seamless & Welded Fittings	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B/SB-363	WPT 28	R56323		90/70 [620/485]		Seamless & Welded Fittings	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B/SB-363	WPT 21	R58210		115/110 [795/760]		Seamless & Welded Fittings	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B/SB-363	WPT 19	R58640		115/110 [795/760]		Seamless & Welded Fittings	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B/SB-363	WPT 20	R58645		115/110 [795/760]		Seamless & Welded Fittings	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	51.4	ASTM/ASME	B/SB-381	F-4	R50700		80/70 [550/485]		Forgings	Ti
53	53	ASTM/ASME	B/SB-381	F-9	R56320		90/70 [620/485]		Forgings	Ti-3Al-2.5V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Titanium and Titanium Base Alloys									
53	53	ASTM/ASME	B/SB-381	F-18	R56322		90/70 [620/485]	Forgings	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B/SB-381	F-28	R56323		90/70 [620/485]	Forgings	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B/SB-381	F-21	R58210		115/110 [795/760]	Forgings	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B/SB-381	F-19	R58640		115/110 [795/760]	Forgings	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B/SB-381	F-20	R58645		115/110 [795/760]	Forgings	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	53	ASTM/ASME	B/SB-861	9	R56320		90/70 [620/485]	Seamless Pipe	Ti-3Al-2.5V
53	53	ASTM/ASME	B/SB-861	18	R56322		90/70 [620/485]	Seamless Pipe	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B/SB-861	28	R56323		90/70 [620/485]	Seamless Pipe	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B/SB-861	21	R58210		115/110 [795/760]	Seamless Pipe	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B/SB-861	19	R58640		115/110 [795/760]	Seamless Pipe	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B/SB-861	20	R58645		115/110 [795/760]	Seamless Pipe	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
53	53	ASTM/ASME	B/SB-862	9	R56320		90/70 [620/485]	Welded Pipe	Ti-3Al-2.5V
53	53	ASTM/ASME	B/SB-862	18	R56322		90/70 [620/485]	Welded Pipe	Ti-3Al-2.5V-Pd
53	53	ASTM/ASME	B/SB-862	28	R56323		90/70 [620/485]	Welded Pipe	Ti-3Al-2.5V-0.1Ru
53	54	ASTM/ASME	B/SB-862	21	R58210		115/110 [795/760]	Welded Pipe	Ti-15Mo-3Al-2.7Nb-Si
53	54	ASTM/ASME	B/SB-862	19	R58640		115/110 [795/760]	Welded Pipe	Ti-3Al-8V-6Cr-4Zr-4Mo
53	54	ASTM/ASME	B/SB-862	20	R58645		115/110 [795/760]	Welded Pipe	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
54	52	AMS	4915	—	R54810	>2.5 and ≤4 [>65 and ≤100]	120/110 [825/760]	Plate	Ti-8Al-1Mo-1V
54	52	AMS	4915	—	R54810	>1 and ≤2.5 [>25 and ≤65]	130/120 [895/825]	Plate	Ti-8Al-1Mo-1V
54	52	AMS	4915	—	R54810	>0.5 and ≤1 [>13 and ≤25]	140/130 [965/895]	Plate	Ti-8Al-1Mo-1V
54	52	AMS	4915	—	R54810	>0.187 and ≤0.5 [>5 and ≤13]	145/135 [1000/930]	Plate	Ti-8Al-1Mo-1V
54	52	AMS	4915	—	R54810	≤0.187 [≤5]	145/135 [1000/930]	Sheet & Strip	Ti-8Al-1Mo-1V
54	52	AMS	4919	—	R54620		135/125 [930/860]	Sheet	Ti-6Al-4Zr-2Mo-2Sn
54	52	AMS	4973	—	R54810	>2.5 and ≤4 [>65 and ≤100]	120/110 [825/760]	Forgings	Ti-8Al-1Mo-1V
54	52	AMS	4973	—	R54810	≤2.5 [≤65]	130/120 [895/825]	Forgings	Ti-8Al-1Mo-1V

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum		Product Form	Nominal Composition
							Tensile Strength, ksi	Yield Strength, MPa		
Titanium and Titanium Base Alloys										
54	52	AMS	4975	—	R54620		130/120	[895/825]	Bar	Ti-6Al-4Zr-2Mo-2Sn
54	52	AMS	4976	—	R54620		130/120	[895/825]	Forgings	Ti-6Al-4Zr-2Mo-2Sn
54	53	ASTM/ASME	B/SB-265	38	R54250		130/115	[895/794]	Plate, Sheet & Strip	Ti-4Al-2.5V-1.5Fe
54	52	ASTM/ASME	B/SB-265	6	R54520		120/115	[825/795]	Plate, Sheet & Strip	Ti-5Al-2.5Sn
54	53	ASTM/ASME	B/SB-265	35	R56340		130/120	[895/825]	Plate, Sheet & Strip	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B/SB-265	5	R56400		130/120	[895/825]	Plate, Sheet & Strip	Ti-6Al-4V
54	53	ASTM/ASME	B/SB-265	25	R56403		130/120	[895/825]	Plate, Sheet & Strip	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B/SB-265	29	R56404		120/110	[825/760]	Plate, Sheet & Strip	Ti-6Al-4V-Pd-ELI-Ru
54	53	ASTM/ASME	B/SB-265	24	R56405		130/120	[895/825]	Plate, Sheet & Strip	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B/SB-338	38	R54250		130/115	[895/794]	Seamless & Welded Tube	Ti-4Al-2.5V-1.5Fe
54	53	ASTM/ASME	B/SB-338	35	R56340		130/120	[895/825]	Seamless & Welded Tube	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B/SB-348	38	R54250		130/115	[895/794]	Bars & Billets	Ti-4Al-2.5V-1.5Fe
54	52	ASTM/ASME	B/SB-348	6	R54520		120/115	[825/795]	Bars & Billets	Ti-5Al-2.5Sn
54	53	ASTM/ASME	B/SB-348	35	R56340		130/120	[895/825]	Bars & Billets	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B/SB-348	5	R56400		130/120	[895/825]	Bars & Billets	Ti-6Al-4V
54	53	ASTM/ASME	B/SB-348	25	R56403		130/120	[895/825]	Bars & Billets	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B/SB-348	24	R56405		130/120	[895/825]	Bars & Billets	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B/SB-348	23	R56407		120/110	[825/760]	Bars & Billets	Ti-6Al-4V-ELI
54	53	ASTM/ASME	B/SB-363	WPT38	R54250		130/115	[895/794]	Seamless & Welded Fittings	Ti-4Al-2.5V-1.5Fe
54	53	ASTM/ASME	B/SB-363	WPT 25	R56403		130/120	[895/825]	Seamless & Welded Fittings	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B/SB-363	WPT 24	R56405		130/120	[895/825]	Seamless & Welded Fittings	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B/SB-363	WPT 23	R56407		120/110	[825/760]	Seamless & Welded Fittings	Ti-6Al-4V-ELI
54	52	ASTM/ASME	B/SB-367	C-6	R54520		115/105	[795/725]	Castings	Ti-5Al-2.5Sn
54	53	ASTM/ASME	B/SB-367	C-5	R56400		130/120	[895/825]	Castings	Ti-6Al-4V
54	53	ASTM/ASME	B/SB-381	F-38	R54250		130/115	[895/794]	Forgings	Ti-4Al-2.5V-1.5Fe
54	52	ASTM/ASME	B/SB-381	F-6	R54520		120/115	[825/795]	Forgings	Ti-5Al-2.5Sn
54	53	ASTM/ASME	B/SB-381	F-5	R56400		130/120	[895/825]	Forgings	Ti-6Al-4V
54	53	ASTM/ASME	B/SB-381	F-25	R56403		130/120	[895/825]	Forgings	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B/SB-381	F-24	R56405		130/120	[895/825]	Forgings	Ti-6Al-4V-Pd

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Base Metal		Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]		Product Form	Nominal Composition
		Standard	Specification				Strength, ksi	Strength, MPa		
Titanium and Titanium Base Alloys										
54	53	ASTM/ASME	B/SB-381	F-23	R56407		120/110	[825/760]	Forgings	Ti-6Al-4V-ELI
54	53	ASTM/ASME	B/SB-861	38	R54250		130/115	[895/794]	Seamless Pipe	Ti-4Al-2.5V-1.5Fe
54	53	ASTM/ASME	B/SB-861	35	R56340		130/120	[895/825]	Seamless Pipe	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B/SB-861	5	R56400		130/120	[895/825]	Seamless Pipe	Ti-6Al-4V
54	53	ASTM/ASME	B/SB-861	25	R56403		130/120	[895/825]	Seamless Pipe	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B/SB-861	29	R56404		120/110	[825/760]	Seamless Pipe	Ti-6Al-4V-Pd-ELI-Ru
54	53	ASTM/ASME	B/SB-861	24	R56405		130/120	[895/825]	Seamless Pipe	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B/SB-861	23	R56407		120/110	[825/760]	Seamless Pipe	Ti-6Al-4V-ELI
54	53	ASTM/ASME	B/SB-862	38	R54250		130/115	[895/794]	Welded Pipe	Ti-4Al-2.5V-1.5Fe
54	53	ASTM/ASME	B/SB-862	35	R56340		130/120	[895/825]	Welded Pipe	Ti-4.5Al-2Mo-1.6V
54	53	ASTM/ASME	B/SB-862	5	R56400		130/120	[895/825]	Welded Pipe	Ti-6Al-4V
54	53	ASTM/ASME	B/SB-862	25	R56403		130/120	[895/825]	Welded Pipe	Ti-6Al-4V-Ni-Pd
54	53	ASTM/ASME	B/SB-862	29	R56404		120/110	[825/760]	Welded Pipe	Ti-6Al-4V-Pd-ELI-Ru
54	53	ASTM/ASME	B/SB-862	24	R56405		130/120	[895/825]	Welded Pipe	Ti-6Al-4V-Pd
54	53	ASTM/ASME	B/SB-862	23	R56407		120/110	[825/760]	Welded Pipe	Ti-6Al-4V-ELI

Table C.2
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Type, Grade, or Alloy		UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
		Base Metal Specification	Designation					
Zirconium and Zirconium Base Alloys								
61	61	ASTM	B351	R60001		42/20 [290/140]	Bar, Rod & Wire	99.9Zr
61	61	ASTM	B351	R60802		60/35 [415/240]	Bar, Rod & Wire	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
61	61	ASTM	B351	R60804		60/35 [415/240]	Bar, Rod & Wire	98.2Zr-1.5Sn-0.32(Fe+Cr)
61	61	ASTM	B353	R60001		42/20 [290/140]	Plate, Sheet & Strip	99.9Zr
61	61	ASTM	B352	R60802		58/35 [400/240]	Plate, Sheet & Strip	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
61	61	ASTM	B352	R60804		56/35 [385/240]	Sheet & Strip	98.2Zr-1.5Sn-0.32(Fe+Cr)
61	61	ASTM	B352	R60804		58/35 [400/240]	Plate	98.2Zr-1.5Sn-0.32(Fe+Cr)
61	61	ASTM	B353	R60001		42/20 [290/140]	Seamless & Welded Tube	99.9Zr
61	61	ASTM	B353	R60802		60/35 [415/240]	Seamless & Welded Tube	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
61	61	ASTM	B353	R60804		60/35 [415/240]	Seamless & Welded Tube	98.2Zr-1.5Sn-0.32(Fe+Cr)
61	61	ASTM/ASME	B/SB-493	R60702		55/30 [380/205]	Forgings	99.2Zr
61	61	ASTM/ASME	B/SB-523	R60702		55/30 [380/205]	Seamless & Welded Tube	99.2Zr
61	61	ASTM/ASME	B/SB-550	R60702		55/30 [380/205]	Bar & Wire	99.2Zr
61	61	ASTM/ASME	B/SB-551	R60702		55/30 [380/205]	Plate, Sheet & Strip	99.2Zr
61	61	ASTM/ASME	B/SB-653	R60702		55/30 [380/205]	Seamless & Welded Fittings	99.2Zr
61	61	ASTM/ASME	B/SB-658	R60702		55/30 [380/205]	Seamless & Welded Pipe	99.2Zr
62	62	ASTM	B351	R60901		65/45 [450/310]	Bar, Rod & Wire	97.3Zr-2.6Cb
62	62	ASTM	B352	R60901		65/45 [450/310]	Plate, Sheet & Strip	97.3Zr-2.6Cb
62	62	ASTM	B353	R60901		65/45 [450/310]	Seamless & Welded Tube	97.3Zr-2.6Cb
62	62	ASTM	B353	R60904		65/45 [450/310]	Seamless & Welded Tube	97.35Zr-2.65Cb
62	62	ASTM/ASME	B/SB-493	R60704		60/35 [415/240]	Forgings	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B/SB-493	R60705		70/55 [485/380]	Forgings	95.5Zr+2.5Cb
62	62	ASTM/ASME	B/SB-523	R60704		60/35 [415/240]	Seamless & Welded Tube	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B/SB-523	R60705		80/55 [550/380]	Seamless & Welded Tube	95.5Zr+2.5Cb
62	62	ASTM/ASME	B/SB-550	R60704		60/35 [415/240]	Bar & Wire	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B/SB-550	R60705		80/55 [550/380]	Bar & Wire	95.5Zr+2.5Cb
62	62	ASTM/ASME	B/SB-551	R60704		60/35 [415/240]	Plate, Sheet & Strip	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B/SB-551	R60705		80/55 [550/380]	Plate, Sheet & Strip	95.5Zr+2.5Cb

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Zirconium and Zirconium Base Alloys									
62	62	ASTM/ASME	B/SB-551	R60706	R60706		74/50 [510/345]	Plate, Sheet & Strip	95.5Zr+2.5Cb
62	62	ASTM/ASME	B/SB-658	R60704	R60704		60/35 [415/240]	Seamless & Welded Pipe	97.5Zr-1.5Sn-0.3(Fe+Cr)
62	62	ASTM/ASME	B/SB-658	R60705	R60705		80/55 [550/380]	Seamless & Welded Pipe	95.5Zr+2.5Cb

Table C.2
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Magnesium and Magnesium Base Alloys									
81	—	ASTM	B90	AZ31B	M11311		32/– [220/–]	Plate & Sheet	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B90	AZ31C	M11312	≤0.016 and ≤0.06 [≤0.4 and ≤1.5]	32/18 [220/125]	Sheet	95.5Mg-3Al-Zn
81	—	ASTM	B90	AZ31C	M11312	≤0.06 and ≤3 [≤1.5 and ≤80]	32/15 [220/105]	Plate & Sheet	95.5Mg-3Al-Zn
81	—	ASTM	B90	HK31A	M13310	>1 and ≤3 [>25 and ≤80]	29/14 [200/97]	Plate	95.5Mg-3Al-Zn
81	—	ASTM	B90	HK31A	M13310	≤0.016 and ≤0.5 [≤0.4 and ≤13]	30/16 [205/110]	Plate & Sheet	95.5Mg-3Al-Zn
81	—	ASTM	B90	HK31A	M13310	>0.5 and ≤1 [>13 and ≤25]	30/15 [205/105]	Plate	95.5Mg-3Al-Zn
81	—	ASTM	B90	ZE10A	M16100	≤0.25 and ≤0.5 [≤6 and ≤13]	29/12 [200/83]	Plate	98Mg-1.25Zn-0.17Re
81	—	ASTM	B90	ZE10A	M16100	>0.06 and ≤0.25 [>1.5 and ≤6]	30/15 [205/105]	Sheet	98Mg-1.25Zn-0.17Re
81	—	ASTM	B90	ZE10A	M16100	≤0.016 and ≤0.06 [≤0.4 and ≤1.5]	30/18 [205/125]	Sheet	98Mg-1.25Zn-0.17Re
81	—	ASTM	B91	AZ31B	M11311		32/15 [220/105]	Forgings	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B91	AZ61A	M11610		35/19 [240/130]	Forgings	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ31B	M11311		29/13 [200/90]	Hollow Profiles	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	≤0.028 and ≤0.25 [≤1 and ≤6]	29/17 [200/115]	Tube	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	≤2.5 and <5 [≤60 and <130]	29/17 [200/115]	Bar, Rods, Profiles & Wire	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	>0.25 and ≤0.75 [>6 and ≤20]	29/13 [200/90]	Tube	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	≤1.5 and <2.5 [≤40 and <60]	31/19 [215/130]	Bar, Rods, Profiles & Wire	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	≤0.25 and <1.5 [≤6 and <40]	32/19 [220/130]	Bar, Rods, Profiles & Wire	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31B	M11311	<0.25 [≤6]	32/18 [220/125]	Bar, Rods, Profiles & Wire	95.5Mg-3Al-Zn-Mn
81	—	ASTM	B107	AZ31C	M11312		29/13 [200/90]	Hollow Profiles	95.5Mg-3Al-Zn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Magnesium and Magnesium Base Alloys									
81	—	ASTM	B107	AZ31C	M11312	≤0.028 and ≤0.25 [≤1 and ≤6]	29/17 [200/115]	Tube	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	≤2.5 and <5 [≤60 and <130]	29/17 [200/115]	Bar, Rods, Profiles & Wire	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	>0.25 and ≤0.75 [>6 and ≤20]	29/13 [200/90]	Tube	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	≤1.5 and <2.5 [≤40 and <60]	31/19 [215/130]	Bar, Rods, Profiles & Wire	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	≤0.25 and <1.5 [≤6 and <40]	32/19 [220/130]	Bar, Rods, Profiles & Wire	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ31C	M11312	<0.25 [<6]	32/18 [220/125]	Bar, Rods, Profiles & Wire	95.5Mg-3Al-Zn
81	—	ASTM	B107	AZ61A	M11610		33/13 [230/90]	Hollow Profiles	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ61A	M11610	≤0.028 and ≤0.75 [≤1 and ≤20]	33/13 [230/90]	Tube	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ61A	M11610	<0.25 [<6]	35/18 [240/125]	Bar, Rods, Profiles & Wire	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ61A	M11610	≤2.5 and <5 [≤60 and <130]	37/19 [255/130]	Bar, Rods, Profiles & Wire	92.5Mg-6Al-Zn
81	—	ASTM	B107	AZ61A	M11610	≤0.25 and <2.5 [≤6 and <60]	37/21 [255/145]	Bar, Rods, Profiles & Wire	92.5Mg-6Al-Zn
81	—	ASTM	B107	M1A	M15100		33/13 [230/90]	Hollow Profiles	98Mg-Mn
81	—	ASTM	B107	M1A	M15100	≤0.028 and ≤0.75 [≤1 and ≤20]	33/13 [230/90]	Tube	98Mg-Mn
81	—	ASTM	B107	M1A	M15100	<0.25 [<6]	35/18 [240/125]	Bar, Rods, Profiles & Wire	98Mg-Mn
81	—	ASTM	B107	M1A	M15100	≤0.25 and <2.5 [≤6 and <60]	37/21 [255/145]	Bar, Rods, Profiles & Wire	98Mg-Mn
81	—	ASTM	B107	M1A	M15100	≤2.5 and <5 [≤60 and <130]	37/19 [255/130]	Bar, Rods, Profiles & Wire	98Mg-Mn
83	—	ASTM	B80	AZ91C, F	M11914		21/10 [145/69]	Castings	90.5Mg-9Al-Zn-Mn
83	—	ASTM	B80	AZ92A, F	M11920		21/10 [145/69]	Castings	88.5Mg-9Al-2Zn-Mn
83	—	ASTM	B80	K1A	M18010		22/5 [150/34]	Castings	99.6Mg-Zr
83	—	ASTM	B199	AM100A	M10100		18/9 [125/62]	Castings	89.5Mg-10Al-Mn

(Continued)

Table C.2 (Continued)
M-Number Listing of Base Metals—Nonferrous Alloys (see C.1, I2.2.1, and I3)

Material Number	ISO 15608 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Thickness or Diameter Limitations, in [mm]	Minimum Tensile/Yield Strength, ksi [MPa]	Product Form	Nominal Composition
Magnesium and Magnesium Base Alloys									
83	—	ASTM	B199	AZ91C, F	M11914		21/10 [145/69]	Castings	90.5Mg-9Al-Zn-Mn
83	—	ASTM	B199	AZ92A, F	M11920		21/10 [145/69]	Castings	88.5Mg-9Al-2Zn-Mn
83	—	ASTM	B403	AM100A, F	M10100		18/9 [125/62]	Castings	89.5Mg-10Al-Mn
83	—	ASTM	B403	AZ91C, F	M11914		16/9 [110/62]	Castings	90.5Mg-9Al-Zn-Mn
83	—	ASTM	B403	AZ92A, F	M11920		18/9 [125/62]	Castings	88.5Mg-9Al-2Zn-Mn
83	—	ASTM	B403	K1A	M18010		22/5 [150/34]	Castings	99.6Mg-Zr

Note: For unlisted base materials, mechanical test requirements are per material specification.

Table C.3
Listing of Base Metal Specifications—Iron Castings

AWS D11.2 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Minimum As-Welded Tensile/Yield Strength, ksi [MPa]	Type of Base Metal	Nominal Composition
Iron Castings^{a, b}							
A	ASTM	A48	Class 20	F11401	20/– [138/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 25	F11701	25/– [172/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 30	F12101	30/– [207/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 35	F12401	35/– [241/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 40	F12801	40/– [276/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 45	F13101	45/– [310/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 50	F13501	50/– [345/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 55	F13801	55/– [379/–]	Gray Cast Iron	Not Specified
A	ASTM	A48	Class 60	F14101	60/– [414/–]	Gray Cast Iron	Not Specified
A	ASTM	A74	Class A	—	21/– [145/–]	Gray Cast Iron	0.75 Max.P, 0.15 Max.S
A	ASTM	A126	Class A	F11501	21/– [145/–]	Gray Cast Iron	0.75 Max.P, 0.15 Max.S
A	ASTM	A126	Class B	F12102	31/– [214/–]	Gray Cast Iron	0.75 Max.P, 0.15 Max.S
A	ASTM	A126	Class C	F12103	41/– [283/–]	Gray Cast Iron	0.75 Max.P, 0.15 Max.S
A	ASTM	A159	Grade 1800	F10004	18/– [124/–]	Gray Cast Iron	0.55Si-0.65Mn; 4.35CE
A	ASTM	A159	Grade 2500	F10005	25/– [172/–]	Gray Cast Iron	2.2 Si-0.75Mn; 4.12CE
A	ASTM	A159	Grade 2500a	F10009	25/– [172/–]	Gray Cast Iron	1.85Si-0.75Mn; 4.12 CE
A	ASTM	A159	Grade 3000	F10006	30/– [207/–]	Gray Cast Iron	2.1Si-0.75Mn; 4.02CE
A	ASTM	A159	Grade 3500	F10007	35/– [241/–]	Gray Cast Iron	2.0Si-0.75Mn; 3.8CE
A	ASTM	A159	Grade 3500b	F10010	35/– [241/–]	Gray Cast Iron	1.55Si-0.75Mn; 3.8CE
A	ASTM	A159	Grade 3500c	F10011	35/– [241/–]	Gray Cast Iron	1.55Si-0.75Mn; 3.8CE
A	ASTM	A159	Grade 4000	F10008	40/– [276/–]	Gray Cast Iron	1.95Si-0.85Mn; 3.8CE
A	ASTM	A159	Grade 4000d	F10012	40/– [276/–]	Gray Cast Iron	1.95Si-0.85Mn; 3.8CE
A	ASTM	A319	Class I	F10001	25/– [172/–]	Gray Cast Iron	Not Specified
A	ASTM	A319	Class II	F10002	30/– [207/–]	Gray Cast Iron	Not Specified
A	ASTM	A319	Class III	F10003	40/– [276/–]	Gray Cast Iron	Not Specified
A	SAE	J431	G1800	F10004	18/– [124/–]	Gray Cast Iron	2.3Si-0.65Mn; 4.35CE
A	SAE	J431	G2500	F10005	25 [172]	Gray Cast Iron	2.3Si-0.75Mn; 4.12CE
A	SAE	J431	G3000	F10006	30 [207]	Gray Cast Iron	2.1Si-0.65Mn; 4.02CE
A	SAE	J431	G3500	F10007	35 [241]	Gray Cast Iron	2.0Si-0.75Mn; 3.8CE
A	SAE	J431	G4000	F10008	40 [276]	Gray Cast Iron	1.95Si-0.95Mn; 3.8CE
B	ASTM	A536	100-70-03	F34800	100/70 [689/483]	Ductile	Not Specified
B	ASTM	A536	120-90-02	F36200	120/90 [827/621]	Ductile	Not Specified
B	ASTM	A536	60-40-18	F32800	60/40 [414/276]	Ductile	Not Specified
B	ASTM	A536	65-45-12	F33100	65/42 [448/290]	Ductile	Not Specified
B	ASTM	A536	80-55-06	F33800	80/55 [552/379]	Ductile	Not Specified
B	ASTM	A716	60-42-10	F32900	60/– [414/–]	Ductile	Not Specified
B	ASTM	A746	60-42-10	—	60/– [414/–]	Ductile	Not Specified
B	ASTM	A874	—	—	45/30 [310/207]	Ductile	3.35C-1.75Si
B	ASTM	A897	125-80-10	—	125/80 [862/552]	Ductile	1.0Ni-0.5Cu-0.35Mn-0.015Mo

(Continued)

Table C.3 (Continued)
Listing of Base Metal Specifications—Iron Castings

AWS D11.2 Group	Standard	Base Metal Specification	Type, Grade, or Alloy Designation	UNS Number	Minimum As-Welded Tensile/Yield Strength, ksi [MPa]	Type of Base Metal	Nominal Composition
Iron Castings^{a, b}							
B	SAE	J434	D4018	F32800	60/– [414/–]	Ductile	Not Specified
B	SAE	J434	D4512	F33100	65/– [448/–]	Ductile	Not Specified
B	SAE	J434	D5506	F33800	80/– [552/–]	Ductile	Not Specified
B	SAE	J434	D7003	F34800	100/– [689/–]	Ductile	Not Specified
C	ASTM	A47	32510	F22200	50/– [345/–]	Malleable	Not Specified
C	ASTM	A47	35018	F22400	53/– [365/–]	Malleable	Not Specified
C	ASTM	A197	—	F22200	40/– [276/–]	Malleable	Not Specified
C	ASTM	A220	40010	F22830	60/– [414/–]	Malleable	Not Specified
C	ASTM	A220	45006	F23131	65/– [448/–]	Malleable	Not Specified
C	ASTM	A220	45008	F23130	65/– [448/–]	Malleable	Not Specified
C	ASTM	A220	50005	F23530	70/– [483/–]	Malleable	Not Specified
C	ASTM	A220	60004	F24130	80/– [552/–]	Malleable	Not Specified
C	ASTM	A220	70003	F24830	85/– [586/–]	Malleable	Not Specified
C	ASTM	A220	80002	F25530	95/– [655/–]	Malleable	Not Specified
C	ASTM	A220	90001	F26230	105/– [724/–]	Malleable	Not Specified
C	ASTM	A602	M3210	F20000	50/– [345/–]	Malleable	Not Specified
C	ASTM	A602	M4504	F20000	65/– [448/–]	Malleable	Not Specified
C	ASTM	A602	M5003	F20000	75/– [517/–]	Malleable	Not Specified
C	SAE	J158a	M3210	F20000	50/– [345/–]	Malleable	Not Specified
C	SAE	J158a	M4504	F20001	65/– [448/–]	Malleable	Not Specified

^a In the absence of an M number to group the alloys, a separate procedure qualification is required for each group of the above materials.

^b The groups are based on AWS D11.2.

Table C.4
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	AMS	AMS-QQ-S-763	S-8	304	S30400	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	304L	S30403	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	316	S31600	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	309	S30900	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	310	S31000	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	316L	S31603	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	321	S32100	Bars, Wire, Shapes & Forgings
TP248	AMS	AMS-QQ-S-763	S-8	347	S34700	Bars, Wire, Shapes & Forgings
TP248	ASTM	A27	S-1	Grade 60-30	J03000	Castings
TP248	ASTM	A27	S-1	Grade 65-35	J03001	Castings
TP248	ASTM	A27	S-1	Grade 70-36	J03501	Castings
TP248	ASTM	A36	S-1	—	—	Plate, Bars & Shapes
TP248	ASTM	A53	S-1	Grade A, Type E	K02504	Resistance Welded Pipe
TP248	ASTM	A53	S-1	Grade A, Type F	K03005	Furnace Welded Pipe
TP248	ASTM	A53	S-1	Grade A, Type S	K03005	Seamless Pipe
TP248	ASTM	A53	S-1	Grade B, Type E	K02504	Resistance Welded Pipe
TP248	ASTM	A53	S-1	Grade B, Type S	K03005	Seamless Pipe
TP248	ASTM	A105	S-1	A105	K03504	Flanges, Fittings & Valves
TP248	ASTM	A106	S-1	Grade A	K02501	Seamless Pipe
TP248	ASTM	A106	S-1	Grade B	K03006	Seamless Pipe
TP248	ASTM	A131	S-1	Grade A	—	Plate, Bars & Shapes
TP248	ASTM	A131	S-1	Grade B	—	Plate, Bars & Shapes
TP248	ASTM	A131	S-1	Grade D	—	Plate, Bars & Shapes
TP248	ASTM	A131	S-1	Grade AH-36	—	Plate, Bars & Shapes
TP248	ASTM	A131	S-1	Grade DH-36	—	Plate, Bars & Shapes
TP248	ASTM	A134	S-1	A283 Grade A	K01400	Welded Pipe
TP248	ASTM	A134	S-1	A283 Grade B	K01702	Welded Pipe
TP248	ASTM	A134	S-1	A283 Grade C	K02401	Welded Pipe

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	ASTM	A134	S-1	A283 Grade D	K02702	Welded Pipe
TP248	ASTM	A134	S-1	A285 Grade A	K01700	Welded Pipe
TP248	ASTM	A134	S-1	A285 Grade B	K02200	Welded Pipe
TP248	ASTM	A134	S-1	A285 Grade C	K02801	Welded Pipe
TP 248	ASTM	A178	S-1	Grade A	K01200	Electric Resistance Welded Tube
TP 248	ASTM	A178	S-1	Grade C	K03503	Electric Resistance Welded Tube
TP 248	ASTM	A178	S-1	Grade D	K03010	Electric Resistance Welded Tube
TP 248	ASTM	A179	S-1	—	K01200	Seamless Tube
TP 248	ASTM	A182	S-8	F304	S30400	Flanges, Fittings & Valves
TP 248	ASTM	A182	S-8	F304L	S30403	Flanges, Fittings & Valves
TP 248	ASTM	A182	S-8	F316	S31600	Flanges, Fittings & Valves
TP 248	ASTM	A182	S-8	F316L	S31603	Flanges, Fittings & Valves
TP 248	ASTM	A192	S-1	—	K01201	Seamless Tube
TP 248	ASTM	A210	S-1	Grade A-1	K03501	Seamless Tube
TP 248	ASTM	A213	S-8	TP 304	K02707	Seamless Tube
TP 248	ASTM	A213	S-8	TP 304L	S30403	Seamless Tube
TP 248	ASTM	A214	S-1	—	K01807	Electric Resistance Welded Tube
TP248	ASTM	A216	S-1	Grade WCA	J02502	Castings
TP248	ASTM	A216	S-1	Grade WCB	J03002	Castings
TP248	ASTM	A216	S-1	Grade WCC	J02503	Castings
TP248	ASTM	A234	S-1	WPB	K03006	Piping Fittings
TP248	ASTM	A234	S-1	WPC	K03501	Piping Fittings
TP248	ASTM	A240	S-8	Type 304	S30400	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 304L	S30403	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 309S	S30908	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 310S	S31008	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 316	S31600	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 316L	S31603	Plate, Sheet & Strip

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	ASTM	A240	S-8	Type 321	S32100	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 347	S34700	Plate, Sheet & Strip
TP248	ASTM	A240	S-8	Type 348	S34800	Plate, Sheet & Strip
TP 248	ASTM	A269	S-8	TP 304	S30400	Seamless Pipe
TP 248	ASTM	A269	S-8	TP 304L	S30403	Seamless Pipe
TP 248	ASTM	A269	S-8	TP 316	S31600	Seamless Pipe
TP 248	ASTM	A269	S-8	TP 316L	S31603	Seamless Pipe
TP 248	ASTM	A276	S-8	TP 304	S30400	Bar
TP 248	ASTM	A276	S-8	TP 304L	S30403	Bar
TP 248	ASTM	A276	S-8	TP 316	S31600	Bar
TP 248	ASTM	A276	S-8	TP 316L	S31603	Bar
TP 248	ASTM	A283	S-1	Grade A	K01400	Plate
TP 248	ASTM	A283	S-1	Grade B	K01702	Plate
TP 248	ASTM	A283	S-1	Grade C	K02401	Plate
TP 248	ASTM	A283	S-1	Grade D	K02702	Plate
TP 248	ASTM	A285	S-1	Grade A	K01700	Plate
TP 248	ASTM	A285	S-1	Grade B	K02200	Plate
TP 248	ASTM	A285	S-1	Grade C	K02801	Plate
TP 248	ASTM	A296	S-8	CF-8	J92600	Castings
TP248	ASTM	A312	S-8	Type 304	S30400	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 304L	S30403	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 316	S31600	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 316L	S31603	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 321	S32100	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 347	S34700	Seamless or Welded Pipe
TP248	ASTM	A312	S-8	Type 348	S34800	Seamless or Welded Pipe
TP 248	ASTM	A333	S-1	Grade 1	K03008	Seamless or Welded Pipe
TP 248	ASTM	A333	S-1	Grade 6	K03006	Seamless or Welded Pipe

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A334	S-1	Grade 1	K03008	Welded Tube
TP 248	ASTM	A334	S-1	Grade 6	K03006	Welded Tube
TP 248	ASTM	A350	S-1	Grade LF1	K03009	Forgings
TP 248	ASTM	A351	S-8	CF-3	J92500	Castings
TP 248	ASTM	A351	S-8	CF-3M	J92800	Castings
TP 248	ASTM	A351	S-8	CF-8	J92600	Castings
TP 248	ASTM	A351	S-8	CF-8M	J92900	Castings
TP 248	ASTM	A352	S-1	Grade LCA	J02504	Castings
TP 248	ASTM	A352	S-1	Grade LCB	J03003	Castings
TP 248	ASTM	A369	S-1	Grade FPA	K02501	Forged Pipe
TP 248	ASTM	A369	S-1	Grade FPB	K03006	Forged Pipe
TP 248	ASTM	A372	S-1	Grade A/Type I	K03002	Forging
TP 248	ASTM	A403	S-8	WP304	S30400	Wrought Fittings
TP 248	ASTM	A403	S-8	WP304L	S30403	Wrought Fittings
TP 248	ASTM	A403	S-8	WP316	S31600	Wrought Fittings
TP 248	ASTM	A403	S-8	WP316L	S31603	Wrought Fittings
TP 248	ASTM	A414	S-1	Grade A	K01501	Sheet
TP 248	ASTM	A414	S-1	Grade B	K02201	Sheet
TP 248	ASTM	A414	S-1	Grade C	K02503	Sheet
TP 248	ASTM	A414	S-1	Grade D	K02505	Sheet
TP 248	ASTM	A414	S-1	Grade E	K02704	Sheet
TP 248	ASTM	A414	S-1	Grade F	K-3102	Sheet
TP 248	ASTM	A414	S-1	Grade G	K03103	Sheet
TP 248	ASTM	A420	S-1	Grade WPL6	K03006	Piping Fittings
TP 248	ASTM	A473	S-8	316	S31600	Forging
TP 248	ASTM	A479	S-8	304	S30400	Bars & Shapes
TP 248	ASTM	A479	S-8	304L	S30403	Bars & Shapes
TP 248	ASTM	A479	S-8	316	S31600	Bars & Shapes

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A479	S-8	316L	S31603	Bars & Shapes
TP 248	ASTM	A479	S-8	321	S32100	Bars & Shapes
TP 248	ASTM	A479	S-8	347	S34700	Bars & Shapes
TP 248	ASTM	A479	S-8	348	S34800	Bars & Shapes
TP 248	ASTM	A500	S-1	Grade A	K03000	Welded or Seamless Tubing
TP 248	ASTM	A500	S-1	Grade B	K03000	Welded or Seamless Tubing
TP 248	ASTM	A500	S-1	Grade C	K02705	Welded or Seamless Tubing
TP 248	ASTM	A500	S-1	Grade D	K03000	Welded or Seamless Tubing
TP 248	ASTM	A501	S-1	Grade A	K03000	Welded or Seamless Tubing
TP 248	ASTM	A501	S-1	Grade B	K03000	Welded or Seamless Tubing
TP 248	ASTM	A511	S-8	304	S30400	Seamless Tubing
TP 248	ASTM	A511	S-8	304L	S30403	Seamless Tubing
TP 248	ASTM	A511	S-8	316	S31600	Seamless Tubing
TP 248	ASTM	A511	S-8	316L	S31603	Seamless Tubing
TP 248	ASTM	A512	S-1	Grade 1008	G10080	Tube
TP 248	ASTM	A512	S-1	Grade 1010	G10100	Tube
TP 248	ASTM	A512	S-1	Grade 1012	G10120	Tube
TP 248	ASTM	A512	S-1	Grade 1015	G10150	Tube
TP 248	ASTM	A512	S-1	Grade 1016	G10160	Tube
TP 248	ASTM	A512	S-1	Grade 1018	G10180	Tube
TP 248	ASTM	A512	S-1	Grade 1019	G10190	Tube
TP 248	ASTM	A512	S-1	Grade 1020	G10200	Tube
TP 248	ASTM	A512	S-1	Grade 1021	G10210	Tube
TP 248	ASTM	A512	S-1	Grade 1025	G10250	Tube
TP 248	ASTM	A513	S-1	Grade 1008	G10080	Tube
TP 248	ASTM	A513	S-1	Grade 1010	G10100	Tube
TP 248	ASTM	A513	S-1	Grade 1012	G10120	Tube
TP 248	ASTM	A513	S-1	Grade 1015	G10150	Tube

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A513	S-1	Grade 1016	G10160	Tube
TP 248	ASTM	A513	S-1	Grade 1018	G10180	Tube
TP 248	ASTM	A513	S-1	Grade 1019	G10190	Tube
TP 248	ASTM	A513	S-1	Grade 1020	G10200	Tube
TP 248	ASTM	A513	S-1	Grade 1021	G10210	Tube
TP 248	ASTM	A513	S-1	Grade 1025	G10250	Tube
TP248	ASTM	A515	S-1	Grade 55	K02001	Plate
TP248	ASTM	A515	S-1	Grade 60	K02401	Plate
TP248	ASTM	A515	S-1	Grade 65	K02800	Plate
TP248	ASTM	A515	S-1	Grade 70	K03101	Plate
TP248	ASTM	A516	S-1	Grade 55	K01800	Plate
TP248	ASTM	A516	S-1	Grade 60	K02100	Plate
TP248	ASTM	A516	S-1	Grade 65	K02403	Plate
TP248	ASTM	A516	S-1	Grade 70	K02700	Plate
TP 248	ASTM	A519	S-1	Grade 1008	G10080	Tube
TP 248	ASTM	A519	S-1	Grade 1010	G10100	Tube
TP 248	ASTM	A519	S-1	Grade 1012	G10120	Tube
TP 248	ASTM	A519	S-1	Grade 1015	G10150	Tube
TP 248	ASTM	A519	S-1	Grade 1016	G10160	Tube
TP 248	ASTM	A519	S-1	Grade 1018	G10180	Tube
TP 248	ASTM	A519	S-1	Grade 1019	G10190	Tube
TP 248	ASTM	A519	S-1	Grade 1020	G10200	Tube
TP 248	ASTM	A519	S-1	Grade 1021	G10210	Tube
TP 248	ASTM	A519	S-1	Grade 1025	G10250	Tube
TP 248	ASTM	A524	S-1	Grade I	K02104	Seamless Pipe
TP 248	ASTM	A524	S-1	Grade II	K02104	Seamless Pipe
TP 248	ASTM	A537	S-1	Class 1	K12437	Plate
TP 248	ASTM	A554	S-8	MT-304	S30400	Welded Tubing

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A554	S-8	MT-304L	S30403	Welded Tubing
TP 248	ASTM	A554	S-8	MT-316	S31600	Welded Tubing
TP 248	ASTM	A554	S-8	MT-316L	S31603	Welded Tubing
TP 248	ASTM	A554	S-8	MT-321	S32100	Welded Tubing
TP 248	ASTM	A554	S-8	MT-347	S34700	Welded Tubing
TP 248	ASTM	A556	S-1	Grade A2	K01807	Tube
TP 248	ASTM	A556	S-1	Grade B2	K02707	Tube
TP 248	ASTM	A557	S-1	Grade A2	K01807	Electric Resistance Welded Tube
TP 248	ASTM	A557	S-1	Grade B2	K03007	Electric Resistance Welded Tube
TP 248	ASTM	A562	S-1	—	K11224	Plate
TP 248	ASTM	A569	S-1	Grade A	K02502	Sheet & Strip
TP 248	ASTM	A569	S-1	Grade B	K02502	Sheet & Strip
TP 248	ASTM	A569	S-1	Grade C	K02502	Sheet & Strip
TP 248	ASTM	A570	S-1	Grade 36 Type 1	K02502	Sheet & Strip
TP 248	ASTM	A572	S-1	Grade 42	—	Plate, Bars & Shapes
TP 248	ASTM	A572	S-1	Grade 50	—	Plate, Bars & Shapes
TP 248	ASTM	A575	S-1	M1008	—	Bar
TP 248	ASTM	A575	S-1	M1010	—	Bar
TP 248	ASTM	A575	S-1	M1012	—	Bar
TP 248	ASTM	A575	S-1	M1015	—	Bar
TP 248	ASTM	A575	S-1	M1017	—	Bar
TP 248	ASTM	A575	S-1	M1020	—	Bar
TP 248	ASTM	A575	S-1	M1023	—	Bar
TP 248	ASTM	A575	S-1	M1025	—	Bar
TP 248	ASTM	A576	S-1	1008	G10080	Bar
TP 248	ASTM	A576	S-1	1010	G10100	Bar
TP 248	ASTM	A576	S-1	1012	G10120	Bar
TP 248	ASTM	A576	S-1	1015	G10150	Bar

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A576	S-1	1016	G10160	Bar
TP 248	ASTM	A576	S-1	1017	G10170	Bar
TP 248	ASTM	A576	S-1	1018	G10180	Bar
TP 248	ASTM	A576	S-1	1019	G10190	Bar
TP 248	ASTM	A576	S-1	1020	G10200	Bar
TP 248	ASTM	A576	S-1	1021	G10210	Bar
TP 248	ASTM	A576	S-1	1022	G10220	Bar
TP 248	ASTM	A576	S-1	1023	G10230	Bar
TP 248	ASTM	A576	S-1	1025	G10250	Bar
TP 248	ASTM	A587	S-1	—	K11500	Electric Resistance Welded Pipe
TP 248	ASTM	A606	S-1	Type 2, CR, AR	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 2, HR, A	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 2, HR, AR	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 2, HR, N	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 4, CR, AR	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 4, HR, A	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 4, HR, AR	—	Sheet & Strip
TP 248	ASTM	A606	S-1	Type 4, HR, N	—	Sheet & Strip
TP 248	ASTM	A659	S-1	1015	G10150	Sheet & Strip
TP 248	ASTM	A659	S-1	1016	G10160	Sheet & Strip
TP 248	ASTM	A659	S-1	1017	G10170	Sheet & Strip
TP 248	ASTM	A659	S-1	1018	G10180	Sheet & Strip
TP 248	ASTM	A659	S-1	1020	G10200	Sheet & Strip
TP 248	ASTM	A659	S-1	1021	G10210	Sheet & Strip
TP 248	ASTM	A659	S-1	1023	G10230	Sheet & Strip
TP 248	ASTM	A660	S-1	WCA	J02504	Pipe
TP 248	ASTM	A662	S-1	Grade A	K01701	Plate
TP 248	ASTM	A662	S-1	Grade B	K02203	Plate

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A666	S-8	TP 304	S30400	Sheet, Strip, Plate & Flat Bar
TP 248	ASTM	A666	S-8	TP 304L	S30403	Sheet, Strip, Plate & Flat Bar
TP 248	ASTM	A666	S-8	TP 316	S31600	Sheet, Strip, Plate & Flat Bar
TP 248	ASTM	A666	S-8	TP 316L	S31603	Sheet, Strip, Plate & Flat Bar
TP 248	ASTM	A671	S-1	Grade CA55	K02801	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CB60	K02401	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CB65	K02800	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CC60	K02100	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CC65	K02403	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CE55	K02202	Fusion Welded Pipe
TP 248	ASTM	A671	S-1	Grade CE60	K02402	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade A45	K01700	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade A50	K02200	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade A55	K02801	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade B55	K02001	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade B60	K02401	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade B65	K02800	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade C55	K01800	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade C60	K02100	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade C65	K02403	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade E55	K02202	Fusion Welded Pipe
TP 248	ASTM	A672	S-1	Grade E60	K02402	Fusion Welded Pipe
TP 248	ASTM	A709	S-1	Grade 50W	—	Plate, Bars & Shapes
TP 248	ASTM	A727	S-1	—	K02506	Forging
TP 248	ASTM	A743	S-8	CF3	J92500	Castings
TP 248	ASTM	A743	S-8	CF8	J92600	Castings
TP 248	ASTM	A743	S-8	CF8M	J92900	Castings
TP 248	ASTM	A743	S-8	CN7M	N08007	Castings

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A743	S-8	CN7MS	J94650	Castings
TP 248	ASTM	A744	S-8	CN7M	N08007	Castings
TP 248	ASTM	A744	S-8	CN7MS	J94650	Castings
TP 248	ASTM	A765	S-1	Grade I	K03046	Forging
TP 248	ASTM	A793	S-8	TP 304	S30400	Floor Plate
TP 248	ASTM	A793	S-8	TP 304L	S30403	Floor Plate
TP 248	ASTM	A793	S-8	TP 316	S31600	Floor Plate
TP 248	ASTM	A793	S-8	TP 316L	S31603	Floor Plate
TP 248	ASTM	A794	S-1	1015	G10150	Sheet
TP 248	ASTM	A794	S-1	1016	G10160	Sheet
TP 248	ASTM	A794	S-1	1017	G10170	Sheet
TP 248	ASTM	A794	S-1	1018	G10180	Sheet
TP 248	ASTM	A794	S-1	1020	G10200	Sheet
TP 248	ASTM	A794	S-1	1021	G10210	Sheet
TP 248	ASTM	A794	S-1	1023	G10230	Sheet
TP 248	ASTM	A813	S-8	TP304	S30400	Welded Pipe
TP 248	ASTM	A830	S-1	1006	G10060	Plate
TP 248	ASTM	A830	S-1	1008	G10080	Plate
TP 248	ASTM	A830	S-1	1009	G10090	Plate
TP 248	ASTM	A830	S-1	1010	G10100	Plate
TP 248	ASTM	A830	S-1	1012	G10120	Plate
TP 248	ASTM	A830	S-1	1015	G10150	Plate
TP 248	ASTM	A830	S-1	1016	G10160	Plate
TP 248	ASTM	A830	S-1	1017	G10170	Plate
TP 248	ASTM	A830	S-1	1018	G10180	Plate
TP 248	ASTM	A830	S-1	1019	G10190	Plate
TP 248	ASTM	A830	S-1	1020	G10200	Plate
TP 248	ASTM	A830	S-1	1021	G10210	Plate

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP 248	ASTM	A830	S-1	1022	G10220	Plate
TP 248	ASTM	A830	S-1	1023	G10230	Plate
TP 248	ASTM	A830	S-1	1025	G10250	Plate
TP 248	ASTM	A1008	S-1	Grade CS Type A	—	Sheet
TP 248	ASTM	A1008	S-1	Grade CS Type B	—	Sheet
TP 248	ASTM	A1011	S-1	Grade 36 Type 1	—	Sheet & Strip
TP 248	ASTM	A1011	S-1	Grade 36 Type 2	—	Sheet & Strip
TP 248	ASTM	A1011	S-1	Grade CS Type B	—	Sheet & Strip
TP248	Federal Specification	QQ-S-763	S-8	304	S30400	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	304L	S30403	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	316	S31600	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	309	S30900	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	310	S31000	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	316L	S31603	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	321	S32100	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-763	S-8	347	S34700	Bars, Wire, Shapes & Forgings
TP248	Federal Specification	QQ-S-766	S-8	304	S30400	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	304L	S30403	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	309S	S30908	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	310S	S31008	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	316	S31600	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	316L	S31603	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	321	S32100	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	347	S34700	Plate, Sheet & Strip
TP248	Federal Specification	QQ-S-766	S-8	348	S34800	Plate, Sheet & Strip
TP248	Military Specification	MIL-C-24707/3	S-8	ASTM A744 Grade CF-8	J92600	Castings
TP248	Military Specification	MIL-C-24707/3	S-8	ASTM A744 Grade CF-8C	J92710	Castings
TP248	Military Specification	MIL-C-24707/3	S-8	ASTM A744 Grade CF-8M	J92200	Castings

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	Military Specification	MIL-DTL-23194/MIL-S-23194	S-1	Composition C Type 1	K13502	Forging
TP248	Military Specification	MIL-DTL-23194/MIL-S-23194	S-1	Composition C Type 2	K13502	Forging
TP248	Military Specification	MIL-DTL-23195/MIL-S-23195	S-8	304	S30400	Bars & Forgings
TP248	Military Specification	MIL-DTL-23195/MIL-S-23195	S-8	304L	S30403	Bars & Forgings
TP248	Military Specification	MIL-DTL-23195/MIL-S-23195	S-8	347	S34700	Bars & Forgings
TP248	Military Specification	MIL-DTL-23195/MIL-S-23195	S-8	348	S34800	Bars & Forgings
TP248	Military Specification	MIL-DTL-23196/MIL-S-23196	S-8	304	S30400	Plate, Sheet & Strip
TP248	Military Specification	MIL-DTL-23196/MIL-S-23196	S-8	304L	S30403	Plate, Sheet & Strip
TP248	Military Specification	MIL-DTL-23196/MIL-S-23196	S-8	347	S34700	Plate, Sheet & Strip
TP248	Military Specification	MIL-DTL-23196/MIL-S-23196	S-8	348	S34800	Plate, Sheet & Strip
TP248	Military Specification	MIL-DTL-23226/MIL-T-23226	S-8	304	S30400	Seamless Tube & Pipe
TP248	Military Specification	MIL-DTL-23226/MIL-T-23226	S-8	304L	S30403	Seamless Tube & Pipe
TP248	Military Specification	MIL-DTL-23226/MIL-T-23226	S-8	347	S34700	Seamless Tube & Pipe
TP248	Military Specification	MIL-DTL-23226/MIL-T-23226	S-8	348	S34800	Seamless Tube & Pipe
TP248	Military Specification	MIL-DTL-23467/MIL-F-23467	S-8	304	S30400	Seamless Fitting & Flanges
TP248	Military Specification	MIL-DTL-23467/MIL-F-23467	S-8	304L	S30403	Seamless Fitting & Flanges
TP248	Military Specification	MIL-DTL-23467/MIL-F-23467	S-8	347	S34700	Seamless Fitting & Flanges
TP248	Military Specification	MIL-DTL-23467/MIL-F-23467	S-8	348	S34800	Seamless Fitting & Flanges
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A216 Grade WCA	J02502	Castings
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A216 Grade WCB	J03002	Castings
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A216 Grade WCC	J02503	Castings
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A757 Grade AIQ	—	Castings
TP248	Military Specification	MIL-DTL-24707/1	S-1	ASTM A757 Grade A2Q	—	Castings
TP248	Military Specification	MIL-F-20236	S-1	Type I Class 1	—	Tube & Pipe Butt-Welding Fittings
TP248	Military Specification	MIL-F-20236	S-1	Type I Class 2	—	Tube & Pipe Butt-Welding Fittings
TP248	Military Specification	MIL-F-20236	S-1	Type II Class 1	—	Tube & Pipe Butt-Welding Fittings
TP248	Military Specification	MIL-F-20236	S-1	Type II Class 2	—	Tube & Pipe Butt-Welding Fittings
TP248	Military Specification	MIL-F-20670	S-1	Type A	—	Pipe Flanges

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	Military Specification	MIL-F-20670	S-1	Type B	—	Pipe Flanges
TP248	Military Specification	MIL-F-20670	S-1	Type C	—	Pipe Flanges
TP248	Military Specification	MIL-F-20670	S-1	Type D	—	Pipe Flanges
TP248	Military Specification	MIL-P-24691/1	S-1	Grade A	K02501	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/1	S-1	Grade B	K03006	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	304	S30400	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	304L	S30403	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	316	S31600	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	316L	S31603	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	321	S32100	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-P-24691/3	S-8	347	S34700	Seamless or Welded Pipe & Tube
TP248	Military Specification	MIL-S-867	S-8	Class I	—	Castings
TP248	Military Specification	MIL-S-867	S-8	Class II	—	Castings
TP248	Military Specification	MIL-S-867	S-8	Class III	—	Castings
TP248	Military Specification	MIL-S-15083	S-1	Grade 65-35	—	Castings
TP248	Military Specification	MIL-S-15083	S-1	Grade 70-36	—	Castings
TP248	Military Specification	MIL-S-15083	S-1	Grade B	—	Castings
TP248	Military Specification	MIL-S-15083	S-1	Grade CW	—	Castings
TP248	Military Specification	MIL-S-17509	S-8	Class I	—	Castings
TP248	Military Specification	MIL-S-17509	S-8	Class II	—	Castings
TP248	Military Specification	MIL-S-17509	S-8	Class III	—	Castings
TP248	Military Specification	MIL-S-22698	S-1	ABS Grade A	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	ABS Grade B	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	ABS Grade D	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	ABS Grade E	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	AH-36, 36Z, 36T, 36TZ	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	DH-36	—	Plate, Bars & Shapes
TP248	Military Specification	MIL-S-22698	S-1	EH-36, 36Z, 36T, 36TZ	—	Plate, Bars & Shapes

(Continued)

Table C.4 (Continued)
Listing of Base Metal Specifications for Standard Welding Procedure
Specifications for Naval Applications—Ferrous Alloys

Source	Standard	Base Metal Specification	Material Number	Type, Grade, or Alloy Designation	UNS Number	Product Form
TP248	Military Specification	MIL-S-23193	S-8	Composition A (304). Formerly Class I	S30400	Castings
TP248	Military Specification	MIL-S-23193	S-8	Composition B (348). Formerly Class II	S34800	Castings
TP248	Military Specification	MIL-S-23193	S-8	Composition C (316). Formerly Class III	S31600	Castings
TP248	Military Specification	MIL-S-23284	S-1	Class 3	—	Forging
TP248	Military Specification	MIL-S-23284	S-1	Class 4	—	Forging
TP248	Military Specification	MIL-S-24093	S-1	Class H, Type V	—	Forging
TP248	Military Specification	MIL-S-24238	S-1	Composition C	—	Plate
TP248	Military Specification	MIL-S-24412	S-1	Grade HT	—	Shape
TP248	Military Specification	MIL-T-16286	S-1	Class a	—	Seamless Tube
TP248	Military Specification	MIL-T-16286	S-8	Class c	—	Seamless Tube
TP248	Military Specification	MIL-T-16286	S-1	Class g	—	Seamless Tube
TP248	Military Specification	MIL-T-20157	S-1	Type E	—	Seamless Tube & Pipe
TP248	Military Specification	MIL-T-8504	S-8	304	S30400	Seamless & Welded Tubing
TP248	WW-P-404	WW-P-404	S-1	Type E Grade A Class A53A ERW	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade A Class A53A ERW XS	—	Electric-Resistance Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade A Class A53A ERW XXS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade B Class A53B ERW	—	Electric-Resistance Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade B Class A53B ERW XS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type E Grade B Class A53B ERW XXS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type F Class A53 BW	—	Furnace Butt Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type F Class A53 BW XS	—	Furnace Butt Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type F Class A53 BW XXS	—	Furnace Butt Welded Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade A Class A53A S	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade A Class A53A S XS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade A Class A53A S XXS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade B Class A53B S	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade B Class A53B S XS	—	Seamless Pipe
TP248	WW-P-404	WW-P-404	S-1	Type S Grade B Class A53B S XXS	—	Seamless Pipe

Annex H (Informative)

Requesting an Official Interpretation on an AWS Standard

This annex is not part of this standard but is included for informational purposes only.

H1. Introduction

The following procedures are here to assist standard users in submitting successful requests for official interpretations to AWS standards. Requests from the general public submitted to AWS staff or committee members that do not follow these rules may be returned to the sender unanswered. AWS reserves the right to decline answering specific requests; if AWS declines a request, AWS will provide the reason to the individual why the request was declined.

H2. Limitations

The activities of AWS technical committees regarding interpretations are limited strictly to the interpretation of provisions of standards prepared by the committees. Neither AWS staff nor the committees are in a position to offer interpretive or consulting services on (1) specific engineering problems, (2) requirements of standards applied to fabrications outside the scope of the document, or (3) points not specifically covered by the standard. In such cases, the inquirer should seek assistance from a competent engineer experienced in the particular field of interest.

H3. General Procedure for all Requests

H3.1 Submission. All requests shall be sent to the Managing Director, AWS Standards Development. For efficient handling, it is preferred that all requests should be submitted electronically through standards@aws.org. Alternatively, requests may be mailed to:

Managing Director
Standards Development
American Welding Society
8669 NW 36 St, # 130
Miami, FL 33166

H3.2 Contact Information. All inquiries shall contain the name, address, email, phone number, and employer of the inquirer.

H3.3 Scope. Each inquiry shall address one single provision of the standard unless the issue in question involves two or more interrelated provisions. The provision(s) shall be identified in the scope of the request along with the edition of the standard (e.g., D1.1:2006) that contains the provision(s) the inquirer is addressing.

H3.4 Question(s). All requests shall be stated in the form of a question that can be answered “yes” or “no”. The request shall be concise, yet complete enough to enable the committee to understand the point of the issue in question. When the point is not clearly defined, the request will be returned for clarification. Sketches should be used whenever appropriate, and all paragraphs, figures, and tables (or annexes) that bear on the issue in question shall be cited.

H3.5 Proposed Answer(s). The inquirer shall provide proposed answer(s) to their own question(s).

H3.6 Background. Additional information on the topic may be provided but is not necessary. The question(s) and proposed answer(s) above shall stand on their own without the need for additional background information.

H4. AWS Policy on Interpretations

The American Welding Society (AWS) Board of Directors has adopted a policy whereby all official interpretations of AWS standards are handled in a formal manner. Under this policy, all official interpretations are approved by the technical committee that is responsible for the standard. Communication concerning an official interpretation is directed through the AWS staff member who works with that technical committee. The policy requires that all requests for an official interpretation be submitted in writing. Such requests will be handled as expeditiously as possible, but due to the procedures that must be followed, some requests for an official interpretation may take considerable time to complete.

H5. AWS Response to Requests

Upon approval by the committee, the interpretation is an official interpretation of the Society, and AWS shall transmit the response to the inquirer, publish it in the *Welding Journal*, and post it on the AWS website.

H6. Telephone Inquiries

Telephone inquiries to AWS Headquarters concerning AWS standards should be limited to questions of a general nature or to matters directly related to the use of the standard. The *AWS Board Policy Manual* requires that all AWS staff members respond to a telephone request for an official interpretation of any AWS standard with the information that such an interpretation can be obtained only through a written request. Headquarters staff cannot provide consulting services. However, the staff can refer a caller to any of those consultants whose names are on file at AWS Headquarters.

Annex I (Informative)

Guidelines for Requesting Adoption of New Materials Under the AWS B2.1 Standard

This annex is not part of this standard but is included for informational purposes only.

I1. Introduction

AWS policy requires all requests to adopt materials for inclusion to be handled in a formal manner. Official communication concerning requests for material adoption is through the AWS staff member who works with that committee. The policy requires that all requests be submitted in writing. Requests will be handled as expeditiously as possible, but due to the complexity of the work and the procedures that must be followed, some requests may require considerable time.

It is the policy of the AWS B2 Committee to adopt for inclusion in the standard only such specifications as have been adopted by recognized national or international organizations. The committee will consider requests to adopt new materials only from other codes and standards, or fabricators and other end users. In addition, such requests should be for materials for which there is a reasonable expectation of use in AWS standards.

I2. Procedure

All requests for the adoption of materials or for extended coverage of existing materials must be directed to:

Managing Director
Technical Services Division
American Welding Society
8669 NW 36 St, # 130
Miami, FL 33166

All requests must contain the name, address, and affiliation of the inquirer, and they must provide the necessary information for the committee to consider the request.

I2.1 Scope. The inquiry shall identify the material or materials for which consideration is being requested and the AWS codes and standards for which the material is considered applicable. The inquirer shall identify the general usage of the material and the temperature range of the application. The inquirer shall also identify all product forms, size ranges, and specifications for which incorporation is desired.

I2.2 Content of the Inquiry. The inquiry should be concise, yet complete, addressing mechanical properties, weldability, and other pertinent information.

I2.2.1 Mechanical Properties. Together with the specification for the material, the inquirer shall furnish the committee with adequate data for inclusion in the applicable tables. The data shall include values of ultimate tensile strength, yield strength, reduction of area, and elongation. Any heat treatment that is required to produce the mechanical properties should be fully described.

The inquirer shall submit a proposed entry for Table C.2 of the standard. Note that the minimum tensile and yield strength values specified in Table C.2 are minimum welded values.

Fracture toughness data shall be provided for materials for which fracture toughness rules would be expected to apply. The data shall include test results for the intended lowest service metal temperature and for the range of material thicknesses desired. The fracture toughness data shall include the results of fracture toughness tests of weld HAZ in the material.

12.2.2 Weldability. The inquirer shall furnish complete data on the weldability of the proposed material, including data on procedure qualification tests made in accordance with the requirements of recognized national or international organizations. Welding tests shall cover the full range of thickness in which the material is to be used. Data may be provided from documented references, standards, or codes.

12.2.3 Pertinent Information. The inquirer should provide any information that may affect the classification and use of the materials such as required heat treatments, susceptibility to air hardening, effect of welding procedure and HAZ and weld metal fracture toughness, and the amount of experience with welding the material. Information describing service experience will be useful to the committee.

I3. Material Inquiry Checklist

To assist inquirers desiring the adoption of new materials of the extended coverage of existing materials, the committee provides the following summary of items that must be addressed for each inquiry. The committee reserves the right to request additional information.

- (1) Identification of the inquirer is required.
- (2) The material must be covered by a specification issued by a recognized national or international organization and an English language version must be provided.
- (3) The code or standard where the material is expected to be used shall be identified.
- (4) The material shall be defined as ferrous or nonferrous and the application must be identified (product forms, size range, and specification).
- (5) Mechanical property data must be submitted (ultimate tensile strength, yield strength, reduction of area, and elongation).
- (6) A proposed entry for Table C.2 of the standard shall be submitted. Note that the minimum tensile and yield strength values specified in Table C.2 are minimum welded values.
- (7) If applicable, appropriate fracture toughness data shall be submitted.
- (8) Procedure qualification test data or other supporting documentation shall be submitted.

I4. Publication of Adopted Material

Materials that are officially adopted for inclusion in the standard will appear online at <http://www.aws.org/w/a/technical>.

I5. Telephone Inquiries

Telephone inquiries to AWS Headquarters concerning the adoption or extended coverage of existing materials should be limited to questions of a general nature or directly related to the submission of all of the information required for the official inquiry. The Board of Directors' policy requires that all AWS staff members respond to a telephone request for an official interpretation of any AWS standard with the information that such an interpretation can be obtained only through a written request. The headquarters staff cannot provide consulting services. The staff can, however, refer a caller to any of these consultants whose names are on file at AWS Headquarters.

I6. The AWS Technical Committee

The activities of AWS technical committees in regard to interpretations are limited strictly to the interpretation of provisions of standards prepared by committee or to consideration of revision to existing provisions on the basis of new data or technology. Neither the committee nor the staff is in a position to offer interpretive or consulting services on (1) specific engineering problems, or (2) requirements of standards applied to fabrications outside the scope of the document or points not specifically covered by the standard. In such cases, the inquirer should seek assistance from a competent engineer experienced in the particular field of interest.

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List of AWS Documents on Procedure and Performance Qualification

Designation	Title
B2.1/B2.1M	<i>Specification for Welding Procedure and Performance Qualification</i>
B2.1/B2.1M-BMG	<i>Base Metal Grouping for Welding Procedure and Performance Qualification</i>
B2.1-1-001	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 3/16 inch [5 mm] through 3/4 inch [19 mm] Thick, E7016 and E7018, in the As-Welded Condition, Primarily Plate and Structural Applications</i>
B2.1-1-002	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 3/16 inch [5 mm] through 7/8 inch [22 mm] Thick, in the As-Welded Condition, Primarily Plate and Structural Applications</i>
B2.1-1-003	<i>Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Galvanized Steel (M-1), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-1-004	<i>Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Carbon Steel (M-1, Group 1), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-8-005	<i>Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Austenitic Stainless Steel (M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-1/8-006	<i>Standard Welding Procedure Specification (SWPS) for Gas Metal Arc Welding (Short Circuiting Transfer Mode) of Carbon Steel to Austenitic Stainless Steel (M-1 to M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-1-007	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Galvanized Steel (M-1), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-1-008	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel (M-1, P-1, or S-1), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-8-009	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-1/8-010	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1, P-1, or S-1 to M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-1-011	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Galvanized Steel (M-1), 10 through 18 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-1-012	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1, P-1, or S-1 to M-1, P-1, or S-1), 10 through 18 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-8-013	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 10 through 18 Gauge, in the As-Welded Condition, with or without Backing</i>
B2.1-1/8-014	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1 to M-8/P-8/S-8, Group 1), 10 through 18 Gauge, in the As-Welded Condition, with or without Backing</i>

List of AWS Documents on Procedure and Performance Qualification (Continued)

Designation	Title
B2.1-22-015	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Aluminum (M/P-22 to M/P-22), 18 through 10 Gauge, ER4043 or R4043, in the As-Welded Condition, with or without Backing</i>
B2.1-1-016	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E7018, As-Welded or PWHT Condition</i>
B2.1-1-017	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010, As-Welded or PWHT Condition</i>
B2.1-1-018	<i>Standard Welding Procedure Specification (SWPS) for Self-Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E71T-8, As-Welded Condition</i>
B2.1-1-019	<i>Standard Welding Procedure Specification (SWPS) for CO₂ Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E70T-1 and E71T-1, As-Welded Condition</i>
B2.1-1-020	<i>Standard Welding Procedure Specification (SWPS) for 75% Ar/25% CO₂ Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E70T-1 and E71T-1, As-Welded or PWHT Condition</i>
B2.1-1-021	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1 1/2 inch Thick, ER70S-2 and E7018, As-Welded or PWHT Condition</i>
B2.1-1-022	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Uphill) Followed by E7018, As-Welded or PWHT Condition</i>
B2.1-8-023	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, As-Welded Condition</i>
B2.1-8-024	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/16 through 1-1/2 inch Thick, ER3XX, As-Welded Condition, Primarily Plate and Structural Applications</i>
B2.1-8-025	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, ER3XX and E3XX-XX, As-Welded Condition, Primarily Plate and Structural Applications</i>
B2.1-1-026	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Downhill) Followed by E7018, As-Welded or PWHT Condition</i>
B2.1-1-027	<i>Standard Welding Procedure Specification (SWPS) for Self-Shielded Flux Cored Arc Welding of Carbon Steel (M-1 or P-1, Groups 1 and 2), 1/8 inch [3 mm] through 1/2 inch [13 mm] Thick, E71T-11, As-Welded Condition, Primarily Plate and Structural Applications</i>
B2.1-1-201	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 3/4 inch Thick, E6010 (Vertical Uphill) Followed by E7018 (Vertical Uphill), As-Welded Condition, Primarily Pipe Applications</i>

List of AWS Documents on Procedure and Performance Qualification (Continued)

Designation	Title
B2.1-1-202	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 3/4 inch Thick, E6010 (Vertical Downhill) Followed by E7018 (Vertical Uphill), As-Welded Condition, Primarily Pipe Applications</i>
B2.1-1-203	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 3/4 inch Thick, E6010 (Vertical Uphill), As-Welded Condition, Primarily Pipe Applications</i>
B2.1-1-204	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 3/4 inch Thick, E6010 (Vertical Downhill Root with the Balance Vertical Uphill), As-Welded Condition, Primarily Pipe Applications</i>
B2.1-1-205	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Uphill) Followed by E7018 (Vertical Uphill), As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-206	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E6010 (Vertical Downhill) Followed by E7018 (Vertical Uphill), As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-207	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, ER70S-2, As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-208	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, E7018, As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-209	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1 1/2 inch Thick, ER70S-2 and E7018, As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-210	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, INMs-1 and ER70S-2, As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-211	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Group 1 or 2), 1/8 through 1-1/2 inch Thick, INMs-1, ER70S-2, and E7018, As-Welded Condition, Primarily Pipe Applications</i>
B2.1-8-212	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/16 through 1-1/2 inch Thick, ER3XX, As-Welded Condition, Primarily Pipe Applications</i>
B2.1-8-213	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, E3XX-XX, As-Welded Condition, Primarily Pipe Applications</i>
B2.1-8-214	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, ER3XX and E3XX-XX, As-Welded Condition, Primarily Pipe Applications</i>
B2.1-8-215	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1 1/2 inch Thick, IN3XX and ER3XX, As-Welded Condition, Primarily Pipe Applications</i>

List of AWS Documents on Procedure and Performance Qualification (Continued)

Designation	Title
B2.1-8-216	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, IN3XX, ER3XX, and E3XX-XX, As-Welded Condition, Primarily Pipe Applications</i>
B2.1-4-217	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), ER80S-B2, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 3/4 inch Thick, PWHT Condition, Primarily Pipe Applications</i>
B2.1-4-218	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), E8018-B2, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, Primarily Pipe Applications</i>
B2.1-4-219	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, ER80S-B2 and E8018-B2, Primarily Pipe Applications</i>
B2.1-4-220	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding (Consumable Insert Root) of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), E8018-B2, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 3/4 inch Thick, PWHT Condition, IN515 and ER80S-B2, Primarily Pipe Applications</i>
B2.1-4-221	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding (Consumable Insert Root) followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-4/P-4, Group 1 or 2), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, IN515, ER80S-B2, and E8018-B2, Primarily Pipe Applications</i>
B2.1-5A-222	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Chromium-Molybdenum Steel (M-5A/P-5A), ER90S-B3, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 3/4 inch Thick, PWHT Condition, Primarily Pipe Applications</i>
B2.1-5A-223	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A/P-5A), E9018-B3, 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, Primarily Pipe Applications</i>
B2.1-5A-224	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A/P-5A), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, ER90S-B3 and E9018-B3, Primarily Pipe Applications</i>
B2.1-5A-225	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding (Consumable Insert Root) of Chromium-Molybdenum Steel (M-5A/P-5A), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 3/4 inch Thick, PWHT Condition, IN521 and ER90S-B3, Primarily Pipe Applications</i>
B2.1-5A-226	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding (Consumable Insert Root) followed by Shielded Metal Arc Welding of Chromium-Molybdenum Steel (M-5A/P-5A), 1/8 through 1/2 inch Thick, As-Welded Condition; 1/8 through 1-1/2 inch Thick, PWHT Condition, IN521, ER90S-B3, and E9018-B3 Primarily Pipe Applications</i>
B2.1-1/8-227	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel (M-1/P-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8, Group 1), 1/16 through 1-1/2 inch Thick, ER309 (L), As-Welded Condition, Primarily Pipe Applications</i>

List of AWS Documents on Procedure and Performance Qualification (Continued)

Designation	Title
B2.1-1/8-228	<i>Standard Welding Procedure Specification (SWPS) for Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, E309(L)-15, -16, or -17, As-Welded Condition, Primarily Pipe Applications</i>
B2.1-1/8-229	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8, Group 1), 1/8 through 1-1/2 inch Thick, ER309(L) and E309(L)-15, -16, or -17, As-Welded Condition, Primarily Pipe Applications</i>
B2.1-1/8-230	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root of Carbon Steel (M-1/P-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8, Group 1), 1/16 through 1-1/2 inch Thick, IN309 and ER309(L), As-Welded Condition, Primarily Pipe Applications</i>
B2.1-1/8-231	<i>Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, IN309, ER309(L), and E309(L)-XX, As-Welded Condition, Primarily Pipe Applications</i>
B2.1-1-232	<i>Standard Welding Procedure Specification (SWPS) for 75% Argon Plus 25% Carbon Dioxide Shielded Gas Metal Arc Welding (Short Circuiting Transfer Mode) followed by 75% Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 inch [38 mm] through 1-1/2 inch [38 mm] Thick, ER70S-3 and E7XT-X, in the As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-233	<i>Standard Welding Procedure Specification (SWPS) for 75% Argon Plus 25% Carbon Dioxide Shielded Gas Metal Arc Welding (Short Circuiting Transfer Mode) followed by 98% Argon Plus 2% Oxygen Shielded Gas Metal Arc Welding (Spray Transfer Mode) of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, ER70S-3, in the As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-234	<i>Standard Welding Procedure Specification (SWPS) for 75% Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, E7XT-X, in the As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-235	<i>Standard Welding Procedure Specification (SWPS) for 98% Argon Plus 2% Oxygen Shielded Gas Metal Arc Welding (Spray Transfer Mode) of Carbon Steel (M-1/P-1, Group 1 or 2), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, ER70S-3, in the As-Welded or PWHT Condition, Primarily Pipe Applications</i>
B2.1-1-301	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-2, in the As-Welded or PWHT Condition, Primarily Plate and Structural Naval Applications</i>
B2.1-1-302	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-7018-M, in the As-Welded or PWHT Condition, Primarily Plate and Structural Naval Applications</i>
B2.1-1-303	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-2 and MIL-7018-M, in the As-Welded or PWHT Condition, Primarily Plate and Structural Naval Applications</i>

List of AWS Documents on Procedure and Performance Qualification (Continued)

Designation	Title
B2.1-1-304	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70T-1 and MIL-71T-1, in the As-Welded Condition, Primarily Plate and Structural Naval Applications</i>
B2.1-1-305	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for 75% Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70T-1 and MIL-71T-1, in the As-Welded or PWHT Condition, Primarily Plate and Structural Naval Applications</i>
B2.1-8-308	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX, in the As-Welded Condition, Primarily Plate and Structural Naval Applications</i>
B2.1-8-309	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX-XX, in the As-Welded Condition, Primarily Plate and Structural Naval Applications</i>
B2.1-8-310	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX and MIL-3XX-XX, in the As-Welded Condition, Primarily Plate and Structural Naval Applications</i>
B2.1-1-311	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-2, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications</i>
B2.1-1-312	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-7018-M, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications</i>
B2.1-1-313	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-2 and MIL-7018-M, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications</i>
B2.1-1-314	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding with Consumable Insert Root of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-MS-1 and MIL-70S-2, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications</i>
B2.1-1-315	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-MS-1 MIL-70S-2, and MIL-7018-M in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications</i>
B2.1-1-316	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Argon Plus 2% Oxygen Shielded Gas Metal Arc Welding (Spray Transfer Mode) of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70S-3, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications</i>
B2.1-1-317	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for 75% Argon Plus 25% Carbon Dioxide Shielded Flux Cored Arc Welding of Carbon Steel (S-1), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-70T-1 and MIL-71T-1, in the As-Welded or PWHT Condition, Primarily Pipe for Naval Applications</i>

List of AWS Documents on Procedure and Performance Qualification (Continued)

Designation	Title
B2.1-8-318	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX, in the As-Welded Condition, Primarily Pipe for Naval Applications</i>
B2.1-8-319	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications</i>
B2.1-8-320	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX and MIL-3XX-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications</i>
B2.1-8-321	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding with Consumable Insert Root of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX, in the As-Welded Condition, Primarily Pipe for Naval Applications</i>
B2.1-8-322	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding with Consumable Insert Root Followed by Shielded Metal Arc Welding of Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-3XX and MIL-3XX-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications</i>
B2.1-1/8-323	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding of Carbon Steel (S-1) to Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-309, ER309L, in the As-Welded Condition, Primarily Pipe for Naval Applications</i>
B2.1-1/8-324	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Shielded Metal Arc Welding of Carbon Steel (S-1) to Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-309XX, MIL-309L-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications</i>
B2.1-1/8-325	<i>Standard Welding Procedure Specification for Naval Applications (SWPS-N) for Gas Tungsten Arc Welding Followed by Shielded Metal Arc Welding of Carbon Steel (S-1) to Austenitic Stainless Steel (S-8), 1/8 inch [3 mm] through 1-1/2 inch [38 mm] Thick, MIL-309/ER309L and MIL-309-XX/MIL-309L-XX, in the As-Welded Condition, Primarily Pipe for Naval Applications</i>
B2.2/B2.2M	<i>Specification for Brazing Procedure and Performance Qualification</i>
B2.3/B2.3M	<i>Specification for Soldering Procedure and Performance Qualification</i>
B2.4	<i>Specification for Welding Procedure and Performance Qualification for Thermoplastic</i>
B2.5/B2.5M	<i>Specification for Measurement of Welding Power Source Output for Calculation of Welding Procedure Heat Input</i>

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