



**AWS D1.5M/D1.5 Official Interpretation**

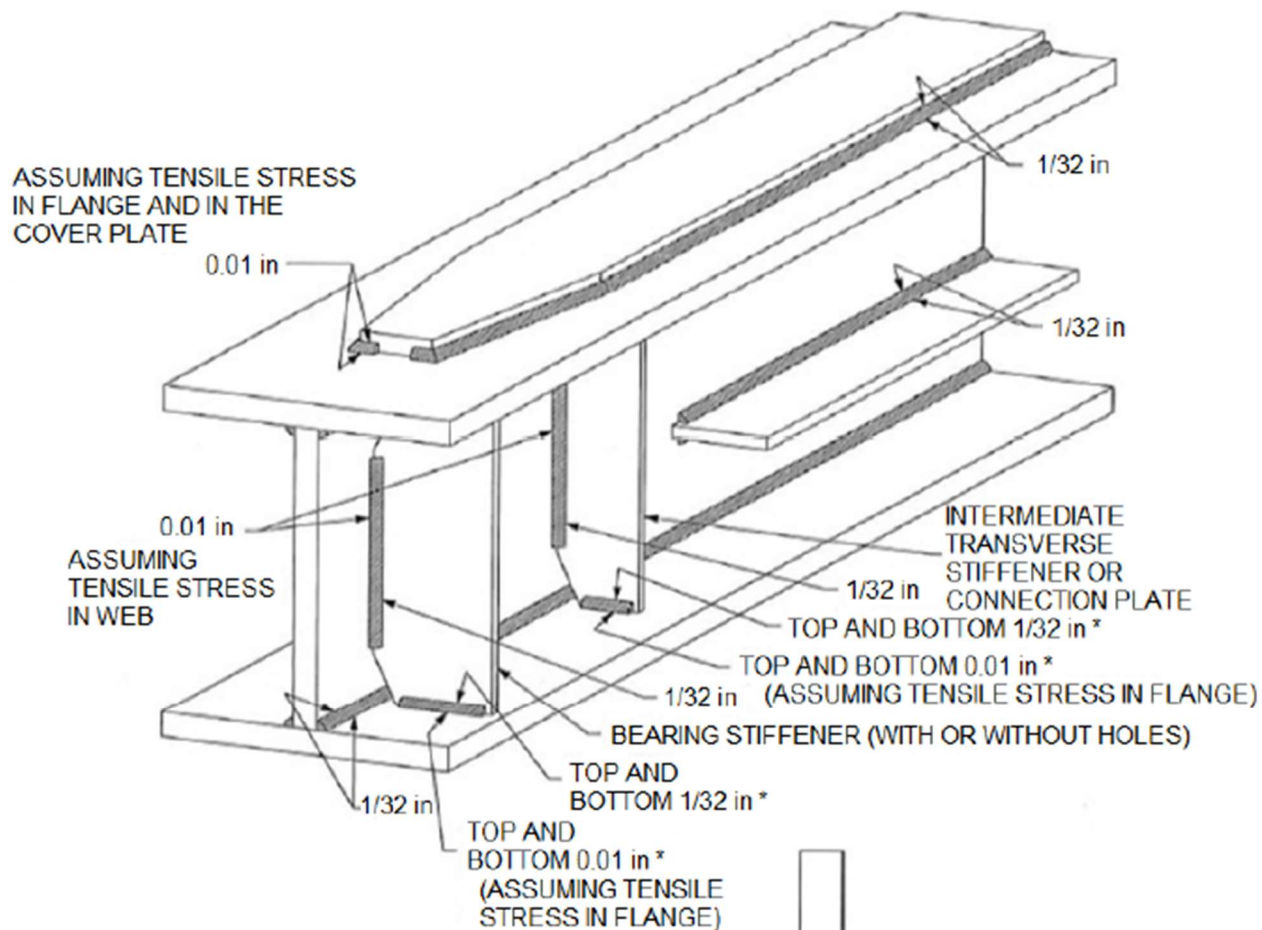
**Date:** September 30<sup>th</sup>, 2024  
**Subject:** Undercut Allowance  
**Code Edition:** D1.5M/D1.5:2015-AMD1  
**Code Provision:** Subclause 6.26.1.5  
**AWS Log:** D1.5-15-I10

**Inquiry:** AWS D1.5M/D1.5:2015-AMD1, subclause 6.26.1.5 addresses allowable undercut as being no more than 0.25 mm [0.01 in] when the weld is transverse to the tensile stress under any design loading condition and no more than 1 mm [1/32 in] for all other cases:

Does the attached sketch correctly represent the intent of AWS D1.5M/D1.5:2015-AMD1, subclause 6.26.1.5?

**Response:** The schematic below illustrates the provisions of AWS D1.5M/D1.5:2015-AMD1, subclause 6.26.1.5, except the top toe of the fillet weld at the end of the cover plate is 1/32 inch, and both toes of the fillet weld on the tapered part of the cover plate are 1/32 inch.

# UNDERCUT TOLERANCES



**UNDERCUT TOLERANCES:**

0.01 in MAXIMUM DEPTH WHEN THE WELD IS TRANSVERSE TO TENSILE STRESS

1/32 in MAXIMUM DEPTH IS IN ALL OTHER CASES.

Ref. AWS D1.5M/D1.5:2015, 6.26.1.5

\* TOP AND BOTTOM REFERS TO STIFFENER WELD TO TOP AND BOTTOM FLANGE

AWS standards are prepared by AWS technical committees. Because many AWS standards are written in the form of codes or specification, they cannot present background material or discuss the committee's intent.

The nature of inquiries directed to the American Welding Society and their technical committees have indicated that there are some requirements in AWS standards that are either difficult to understand or not sufficiently specific.

It should be recognized that the fundamental premise of AWS standards is to provide general stipulations applicable to any situation and to leave sufficient latitude for the exercise of engineering judgment. Another point to be recognized is that AWS standards represent the collective experience of AWS technical committees; and, while some provisions may seem overly conservative, they have been based on sound engineering practice.