



Noise

INTRODUCTION

In welding, cutting, and allied operations, noise can result from the process, the power source, or other equipment. Excessive noise is a known health hazard.

DEFINITION

Noise is an unwanted or unpleasant sound. Sound waves are produced when the air is mechanically disturbed. Sound is measured by its frequency (pitch-high or low) and intensity (loudness). Noise can get in the way of the sounds we would rather hear and often need to hear for safety reasons.

EFFECTS OF OVEREXPOSURE TO NOISE

- Loss of hearing can be either full or partial and either temporary or permanent.
- Temporary hearing loss can be recovered if removed from the noise source.
- Permanent hearing loss depends on individual susceptibility, noise intensity, noise frequency and exposure duration.
- There is evidence that excessive noise can affect other bodily functions and behavior as well.

HOW TO PROTECT AGAINST NOISE

- Reduce the intensity of the source.
- Shield the source where practical.
- Use engineering control methods, such as room acoustics, to control noise.
- If engineering methods fail to reduce noise to acceptable levels, wear approved personal protective devices such as earmuffs or ear plugs, or both, as appropriate for the situation.
- Follow OSHA regulations which require a Hearing Conservation Program.
- If the noise level is questionable, have a safety specialist or industrial hygienist take measurements and make recommendations.
- Select tools and equipment to limit noise generation.
- Consider hearing protection with integrated communication to promote compliance and consistent use.

INFORMATION SOURCES

ACGIH, *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*, American Conference of Governmental Industrial Hygienists, <www.acgih.org>.

MSHA Title 30, Parts 1-199, *Mineral Resources*, Mine Safety and Health Administration, *Code of Federal Regulations*, <www.msha.gov>.

OSHA Title 29, 1910, *Occupational Safety and Health Standards*, Occupational Safety and Health Administration, Code of Federal Regulations, <www.osha.gov>.

OSHA Title 29, 1926, *Safety and Health Regulations for Construction*, Occupational Safety and Health Administration, Code of Federal Regulations, <www.osha.gov>.

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