



## 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](http://www.acgih.org)>.

MSHA Title 30, Parts 1-199, *Mineral Resources*, Mine Safety and Health Administration, *Code of Federal Regulations*, <[www.msha.gov](http://www.msha.gov)>.

OSHA Title 29, 1910, *Occupational Safety and Health Standards*, Occupational Safety and Health Administration, *Code of Federal Regulations*, <[www.osha.gov](http://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](http://www.osha.gov)>.

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