ANSI/ASSE A10.46 – 2013
Hearing Loss Prevention for
Construction and Demolition Workers

American National Standard
for Construction and
Demolition Operations
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**Foreword**

(This Foreword is not a part of American National Standard A10.46 – 2013.)

This standard is one of a series of safety standards that have been formulated by the Accredited Standards Committee on Safety in Construction and Demolition Operations, A10. It is expected that the standards in the A10 series will find a major application in industry, serving as a guide to contractors, labor and equipment manufacturers. For the convenience of users, a list of existing and proposed standards in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

A10.1 Pre-Project & Pre-Task Safety & Health Planning
A10.2 Safety, Health and Environmental Training (under development)
A10.3 Powder-Actuated Fastening Systems
A10.4 Personnel Hoists and Employee Elevators
A10.5 Material Hoists
A10.6 Demolition Operations
A10.7 Transportation, Storage, Handling and Use of Commercial Explosives and Blasting Agents
A10.8 Scaffolding
A10.9 Concrete and Masonry Construction
A10.10 Temporary and Portable Space Heating Devices
A10.11 Personnel and Debris Nets
A10.12 Excavation
A10.13 Steel Erection
A10.15 Dredging
A10.16 Tunnels, Shafts and Caissons
A10.17 Safe Operating Practices for Hot Mix Asphalt (HMA) Construction
A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways and Other Unprotected Edges
A10.19 Pile Installation and Extraction Operations
A10.20 Ceramic Tile, Terrazzo, and Marble Work
A10.21 Safe Construction and Demolition of Wind Generation/Turbine Facilities (under development)
A10.22 Rope-Guided and Non-Guided Workers’ Hoists
A10.23 Safety Requirements for the Installation of Drilled Shafts (under development)
A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
A10.25 Sanitation in Construction
A10.26 Emergency Procedures for Construction Sites
A10.27 Hot Mix Asphalt Facilities
A10.28 Work Platforms Suspended from Cranes or Derricks
A10.29 Aerial Platforms in Construction (under development)
A10.30 Digger-Derricks
A10.31 Personal Fall Protection Used in Construction and Demolition Operations
A10.32 Safety and Health Program Requirements for Multi-Employer Projects
A10.33 Public Protection
A10.34 Debris Nets
A10.35 Basic Elements of a Program to Provide a Safe and Healthful Work Environment
A10.36 Construction Safety and Health Audit Program
A10.37 Reduction of Musculoskeletal Problems in Construction
A10.38 Equipment Operator and Supervisor Qualifications and Responsibilities (under development)
A10.39 Rigging Qualifications and Responsibilities in the Construction Industry
A10.40 Confined Spaces in Construction (under development)
A10.41 Lockout/Tagout in Construction
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1. GENERAL

1.1 Scope. This standard applies to all construction and demolition workers with potential noise exposures (continuous, intermittent and impulse) of 85 dBA and above.

1.2 Purpose. This standard is intended to help employers prevent occupational hearing loss among construction and demolition workers.

2. DEFINITIONS

2.1 Administrative Controls. Methods of managing noise-exposed workers' activities that have the effect of limiting each worker's exposure to hazardous noise. Appendix 1 has examples of administrative noise controls.

2.2 Attenuation. The amount of sound in decibels by which an engineering control measure or a hearing protection device can reduce an individual's noise exposure level.

2.3 Audiogram. A chart, graph or table resulting from an audiometric test showing an individual's hearing threshold levels as a function of frequency.

2.4 Baseline Audiogram. The audiogram against which future audiograms are compared.

2.5 Continuous Noise. Noise that remains at a steady level and has a variation in level that involves maxima at intervals of one second or less.

2.6 Decibel (dB). Unit of measurement of sound pressure level.

2.7 Decibel, A-Weighted (dBA). Unit representing the sound level measured with the A-weighting network on a sound-level meter. The A-scale discriminates against very low frequencies (as does the human ear) and is therefore more appropriate for determining worker exposure to noise.

2.8 Derating. An adjustment that is made to the Noise Reduction Rating (NRR) that is intended to estimate how hearing protectors perform in the field for populations of users as compared with laboratory measurements.

2.9 Double Hearing Protection. Simultaneous use of earmuffs and earplugs.

2.10 Engineering Controls. Methods of reducing noise levels that involve changes at the noise source or along the noise transmission path. Appendix 1 has examples of engineering controls.

2.11 Exchange Rate. The increase or decrease in average noise level in decibels, which warrants a doubling or halving of the noise dose. For example, an increase in noise level from 85 to 88 dBA warrants a decrease in allowable exposure time from eight to four hours, according to the 3 dB exchange rate used in this standard.

2.12 Hearing Protection Devices (HPD). Devices, also called hearing protectors, worn to reduce the sound level in the ear canal.

2.13 Hertz (Hz). Unit of measurement of frequency, numerically equal to cycles per second.

2.14 Impulse Noise. A transient noise having less than one second duration, which may repeat after a delay of more than one second. For example, pile driving or single loaded powder-actuated tools.