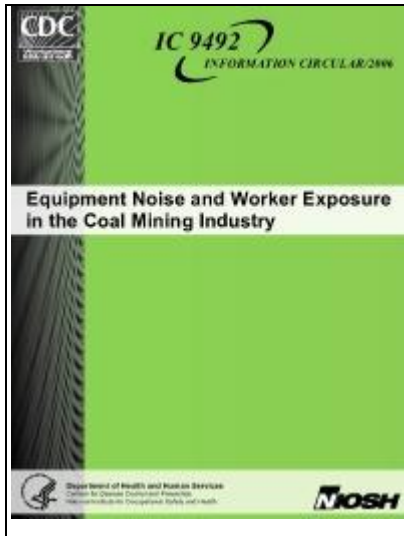


Equipment Noise and Worker Exposure in the Coal Mining Industry



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Prolonged exposure to loud noise can cause permanent damage to the auditory nerve and/or its sensory components. Despite regulations and efforts by government and industry to reduce noise-induced hearing loss (NIHL), it is still a problem in the U.S. coal mining industry. The Mine Safety and Health Administration noise standard (30 CFR 3 62), which was enacted in September 2000, is aimed at reducing NIHL in the mining industry. To address NIHL in various aspects of coal mining and provide the necessary information to effectively implement control technologies, the National Institute for Occupational Safety and Health conducted a cross-sectional survey of noise sources and worker noise exposures. Noise surveys consisting of full-shift worker noise exposure (dose) determination, time-motion studies (task observations), and equipment and/or area noise profiling were completed in 8 underground coal mines, 10 surface coal mines, and 8 coal preparation plants. The studies revealed that more than 40% of all workers monitored were subject to noise exposures above 90 dBA TWA8. A summary of these studies is presented, their application to administrative and engineering controls is discussed, and exposure reduction methods are reviewed.

Author(s): Bauer-ER, Babich-DR, Viperman-JS

Reference: Pittsburgh, PA: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2007-105, IC 9492, 2006 Dec; :1-77

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