



Noise control of large mining machines

Abstract

Underground mining relies heavily on the use of large machines for the extraction and transportation of ore. Many of these machines generate high levels of noise and lead to noise overexposure for the machine operators and other nearby miners. To address this health risk, researchers at the National Institute for Occupational Safety and Health (NIOSH) have developed noise controls for many of these large machines. This presentation discusses the successes in developing these noise controls for large mining machines as an illustration of the development of controls for the general category of large machines. The development and performance of controls for continuous mining machines, haul trucks, and longwall shearers are described with illustrations of the controls and their effectiveness. It is shown that identifying the primary noise sources is a critical part of effective noise controls for large machines. Reductions of up to 8 dB are demonstrated with basic modifications that take into account miner allowable exposure times from two hours to the entire shift.

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