The Safety Scene: Two Must-Haves for Mine Safety

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Chem.Info's *monthly The Safety Scene feature focuses on how to improve safety during various industrial processes. In this edition, we take a look at mine safety.*

The U.S. Mine Safety and Health Administration's (MSHA) 2012 Fatality Analysis [1] states that "The leading cause of fatalities in the U.S. mining industry during 2012 was powered haulage, which claimed the lives of 10 miners," and "other leading causes included machinery accidents, which killed six; slip or fall of person accidents, which also claimed six lives; and rib falls, which killed three miners."

Based on the 2012 fatality analysis, it is clear that some problems are more common than others. According to the report, the following two solutions can be the keys to mine safety:

1. *Proximity Detection Systems.* Between 1984 and 2012, 73 deaths occurred from pinning, crushing and striking accidents in underground coal mines. 33 of these accidents were associated with continuous mining machines — and proximity detection systems, which "can be installed on mining machinery to detect the presence of personnel or machinery within a certain distance of a machine," could have prevented these accidents.
According to MSHA, many prominent companies are starting to take note of the technology's importance: "Alliance Resource Partners is installing proximity detection equipment on continuous mining machines," and "Consol Energy and Peabody Energy are working on the application of proximity detection protections to section mining equipment." MSHA hopes that other companies follow suit.

2. *Proper Training.* The analysis shows that training played a big role in 2012's mine fatalities. Eight of the deaths "involved miners with one year or less experience at the mine and 13 of the deaths involved miners with one year or less at the job or task." In metal and nonmetal mines, three of the miners killed had less than one year of experience at the mine, and five had less than one year of experience at the job they were performing. The same trend is found in coal mines: Five miners had one year or less of experience at the mine, and eight had one year or less of experience at the job they were performing. Supervisors are not spared from this trend — they "accounted for nine fatalities out of a total of 36, or 25 percent of the total." This points to the importance of proper training procedures early on, and across the board. "Miners need effective and appropriate task training before they perform a new task," the analysis warns. "In September, MSHA issued an alert on the importance of supervisor training, noting the alarming number of fatalities in coal and metal in which mine owners or supervisors were killed while performing tasks for which they were not appropriately trained."

While 2012 had the second-lowest number of mining fatalities on record, second only to 2011, this recent trend toward safety can be sustained — and possibly heightened — by implementing proper safety measures.

For more information, please visit www.msha.gov *[2]. To see data on mining fatalities by state in 2012 and as far back as 2001, visit* www.msha.gov/stats/charts/Allstates.pdf *[3].*

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