

# Beyond Capacity

The manufacturer knows best, in terms of how products should be used

BY PHIL KIMBLE



**Mining, whether it's for** coal, copper, gold or anything else, is a hazardous occupation. Collapsing ceilings, explosions and methane gas are just a few of the hazards miners face every day. Even the equipment necessary to work a mine is dangerous to use or be around. The Mine Safety and Health Administration (MSHA) establishes standards for procedures and practices to ensure the safety of the men and women working in mines. Mine owners are required to conform to these regulations and when an accident happens, an MSHA visit is sure to follow.

An MSHA inspector was touring a mine after a recent accident. This mine, as well as the company that owned the mine, had a stellar safety record. In fact, the MSHA inspector could not find any previous significant safety violations for this mine or any of the other mines operated by this company. Because the accident resulted in a fatality from a

disconnected airline, the inspector was determined to get to the root cause.

Poring over his notes, equipment specifications, product brochures and catalogs from various manufacturers that supply products used in the mining industry, the inspector set about writing his report. His report cited the owners of the mine to be in violation of regulation CFR 57.14205, which states, "Machinery, equipment and tools shall not be used beyond the design capacity intended by the manufacturer where such use may create a hazard to persons." His contention, based upon warnings and statements in the coupling manufacturer's product literature, was the use of combination nipples for compressed air (in this case 4 inches)—which exceeded the manufacturer's design capacity for this product.

The mine owner did not take this news, or the substantial fine that accompanied it, very well. Not only did

the mine owner decide to fight the citation, it sued MSHA and the state's Department of Business and Industry. Their suit, based upon their longevity of "safe" use of combination nipples in all of their mines and their impressive safety record in general, cited the use of combination nipples for compressed air as an industry standard.

After all of the testimony was heard from both sides, the citation was upheld and the suit was dismissed. In essence, the ruling decreed that the manufacturer is responsible for making recommendations on the performance specifications of its own products. The mine's assertion that it had a safe history of using combination nipples in compressed gas applications was not relevant.

When designing any system, always use the STAMPED acronym (Size, Temperature, Application, Pressure, Ends, Dixon). Just because something has been used a certain way for a long time without any problems doesn't mean it's a safe practice. There may be factors at work or parameters that one is unaware of that would deem a product unsafe in certain situations. Always consult the manufacturer for recommendations. It's the manufacturer's product and the manufacturer has the final say as to how its products are to be used. ■