

SA faces unique technical problems due to depths of its mines, writes Alistair Anderson

High mine fatalities not necessarily due to lack of will

FOLLOWING three deaths at AngloGold Ashanti's mines last week, the total number of reported fatalities from accidents on SA's gold, coal, diamond and other mines has risen to about 30 — and it's only April.

Science-based products group DuPont says mining casualties at 24 since the beginning of the year indicate too many people are still dying underground in SA.

This does not compare well with mining industries internationally. For example, in the US an average 65 workers die in mining operations every year.

SA's record may be due more to the country's particular geographical, historical and technical environment, though, rather than a lack of attention to safety.

Paul Mardon, head of occupational health and safety for trade union Solidarity, says difficulties using advanced technology due to

the structure of South African mines are an obstacle to safety. "SA has the world's deepest mines. Tau-Tona mine, where one of the three unfortunate deaths occurred on Thursday, is, at 3,9km, the deepest on the planet.

"World-class equipment is used to measure seismicity underground but, even though it can monitor movements in rocks to a thousandth of a millimetre, it isn't accurate enough."

Seismicity is the frequency or magnitude of earthquake activity in a given area.

"Companies cannot say for certain when or where rock falls will happen, so they spend a lot of money on creating alarm systems that alert workers to areas which have unstable rock. These can be hundreds of metres wide, which makes it difficult to evacuate workers," Mardon says.

Still, says Sietse van der Woude,

safety and sustainable development adviser for the Chamber of Mines, SA's industry has spent "around R150m in the past 10 years" trying to understand seismicity.

Technology such as Anglo-Australian mining company Rio Tinto's robotic machinery is not advanced enough to be functional on SA's "narrow, well-excavated mines", Mardon says.

According to a 2008 mine health and safety audit conducted by the Department of Minerals and Energy, the fatality rate per 1 000 people at work was 0,45 — or 220 people. Comparatively, in 2007, in Australia, the rate was 0,005, or five workers per 100 000.

Nevertheless, SA's mine deaths have fallen, albeit at a decreasing rate. "For 2005, the industry reduced deaths by 16%. Between 2007 and 2008, deaths fell by about a third, from 221 to 168, but between 2008 and last year that 168 changed

only to 165," Mardon says.

Leigh McMaster, a safety, health and environment practitioner at Solidarity, is optimistic.

"One death is too many but fewer than thirty deaths, one third into the year, indicates deaths are on a downward trend," he says.

Mining accidents could happen anywhere despite world-class safety measures. Twenty-nine people were killed in a US coal mine early this month.

Mardon says SA's mining industry has undertaken advanced programmes to bring itself in line with international best practice.

In 2003, the industry developed a 13-milestone plan to cut mine accidents and to consider health concerns, specifically the percentage of miners infected with silicosis, a lung disease caused by breathing in silica dust, as well as those who suffered hearing loss while working at a mine or after they had retired.

The plan was supposed to make the industry comparable with best practice by 2013, but Mardon says the industry decided in 2008 that the plan had failed.

That year, the Chamber of Mines established the mining occupational safety and health task team as "an accelerated relief measure", McMaster says.

Despite the industry's supposed good intentions, unions have argued that mining companies conducted inquiries into accidents more to determine who was responsible for the accidents than to improve safety itself.

"As long as we take punitive measures and dismiss workers when things go wrong, we will never fix anything. Too often ... the Mine Health and Safety Act is not invoked," says Franz Stehring, an official with the United Association of SA trade union.

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