



Safety, health, and the environment through the eyes of MineSafe



It is an honour for the President of the Institute to write the President's Corner note for the *Journal*, especially so when it is the first one after inauguration as President. It was indeed a great pleasure to present the story of research and development in the mining industry in South Africa in my Presidential Address at the AGM, and to be able to describe the journey so far that the Mandela Mining Precinct has travelled. The work of the Precinct has focused on the research and development of mining systems, of which health, safety and environmental topics are an essential component. What has become very clear, and flowing out of the Mining Phakisa in 2015, is the need for a collaborative approach in this research work.

No area of research is more demanding of collaboration and involvement of all stakeholders than that of safety, health, and environmental protection in mining, and the annual MineSafe conference and Industry Awards is an event that epitomizes the coming together of industry, labour, and the State.

MineSafe is one of the flagship events on the SAIMM Calendar, and this year's event, held from 29 to 31 August, built further on the success of previous conferences.

MineSafe is jointly organized between the SAIMM, and the Mines Professional Associations, in particular the Association of Mine Managers of South Africa, the South African Colliery Managers Association, and the Mine Metallurgical Managers Association. Of particular importance at this event is the level of participation by mine management, employees, and organized labour representatives from mine operational level to executive office-bearers, not only at the awards ceremony, but also at the technical presentations.

This year, the level of professionalism in the technical presentations was extremely high and the technical content, which addressed issues in safety, health, and environment, was exemplary.

In particular, papers focused on solutions to problems associated with geotechnical hazards facing miners, using techniques such as three-dimensional ground-penetrating radar, real-time monitoring of ground movement, and effective post-splitting of open pit highwalls. These advances in technology illustrate the importance of embracing the innovations in digitalization and data availability that allow not only improved operational control, but also predictive maintenance that can be applied not only to equipment, but also to the ground and its condition.

A focus on occupational health and safety addressed the need to deal with occupational health risks at source, to reach the aspiration of zero harm in health as well as in safety, instead of merely aiming for legal compliance.

In the area of environmental protection, advances in the treatment of polluted minewater were illustrated through the removal of heavy metals down to nanometre levels of treatment and filtration.

All of these areas were further backed up by well-considered and presented poster presentations, admirably showcased by their authors.

A critical theme of the event was the realization that none of these technologies or systems will realize their full value without the full engagement and support of the employees, their representative labour organizations, and the communities around the mines. This was emphasized throughout the conference, and in a powerful and at times emotionally charged keynote address on the awards day, backed up by a heart-rending industrial theatre presentation.

Safety, health, and the environment through the eyes of MineSafe (continued)

The awards celebrated the significant advances that have been made in mine health and safety since 1993, with some outstanding achievements that truly reflect that the aspiration of zero harm is reachable. However, statistics in 2017 and 2018 to date indicate that for the industry as a whole to reach these targets and the milestone targets, much work remains to be done. Not only is there more work to be done, but it is clear that this will only be achieved if the effort is truly collaborative and that engagement with all stakeholders is honest and transparent. Never more so has the clarion call of 'nothing about us without us' been so compelling.

So what does this mean for the future?

First, it means that research work that is aimed at improving health and safety must be coordinated and structured so as to achieve the goal of zero harm, by identifying solutions that will address current challenges, in a collaborative way. This involves coordination of effort between research institutions, universities, industry, the DMR, the Mine Health and Safety Council, OEMs, and organized labour. In terms of health, this coordination needs to extend beyond the mine fence by addressing the impact of the changing socio-economic circumstances of employees and communities. Meaningful engagement and dialogue are essential.

Secondly, in terms of MineSafe, it will be vital going forward that stakeholder involvement extends beyond attendance only, and that it involve engagement and participation in committees and presentations; best of all, in collaboration with other stakeholders.

Thirdly, the SAIMM should take a more active role, in providing platforms where constructive debates can be held to find collective solutions to reach our target of zero harm. This can be done through establishing innovative events such as 'Hackathons', debates, and breakfast events, as well as more traditional conferences, schools, and seminars.

As President, I commit to ensuring that the SAIMM will assist the Professional Associations to achieve this in a proactive way. These matters will become a part of the Technical Programme Committee agendas, and will help to forge closer relationships between the SAIMM, the Mines Professional Associations, industry, the Department of Mineral Resources, and organized labour.

Finally, congratulations to all the winners of the many prestigious awards for health, safety, and environmental performance at MineSafe 2018. In particular, the winners of the JT Ryan Awards, which went to AngloGold Ashanti Vaal River and West Wits Chemical Laboratories for surface operations, and Lonmin K3 Shaft UG2 Section for underground operations.

The Most Improved Mining Company award went to Lonmin.

The Institute recognizes these achievements as well as all the other worthy winners.

A.S. Macfarlane
President, SAIMM