

TECHNICAL SKILLS – A threat to the mining industry

Dealing with skills shortages in the mining industry requires smart and innovative efforts from all role players.

Retaining skilled mining staff has become critical, and mining houses need to come up with innovative ways to deal with the shortage of technical skills in South Africa, experts in the recruitment and labour research industries say.

“The growing labour shortage has become a significant strategic threat to the industry,” warns an Ernst & Young report on the state of the international labour market. It adds that skills shortages remain an acute problem in South Africa’s mining industry and that this is now affecting both productivity and the ability of the industry to expand worldwide.

A third of South Africa’s engineers have left the country over the past 40 years, and this, combined with insufficient new graduates, an ageing workforce and HIV/Aids, has made the problem critical in South Africa, imparts Ernst & Young mining and metals sector leader, Adrian Macartney.



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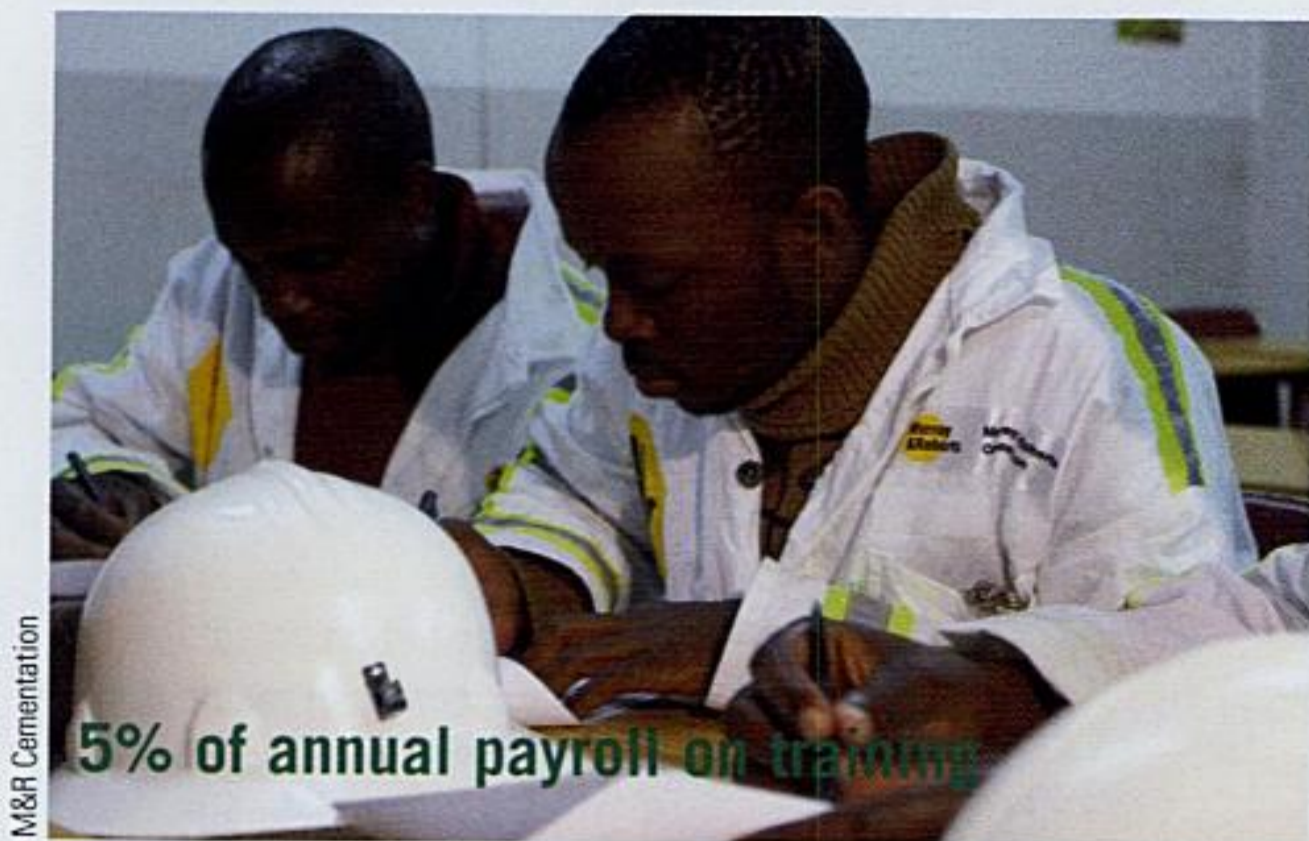


Cobus Kotze

Top: A shortage of skills is becoming a threat to the industry, and mining companies have to come up with innovative ways of dealing with the problem.

Above: The mining industry is often associated with a perception of physical danger and isolated locations.

Training and development



The dire shortage of technical skills, such as engineers and artisans, is being acknowledged by new initiatives by stakeholders in the industry, and solutions are being implemented to curb the problem.

INNOVATIVE APPROACHES

According to the Ernst & Young report, artisanship in South Africa has also been neglected in the recent past, with artisanship programmes that used to be run by parastatals, such as Eskom and Iscor, playing a significant role in supplying skills.

"The demand for technical talent, such as engineers, metallurgists and geoscientists, is greater than ever, yet the pool of adept graduates emerging from universities is insufficient," the Ernst & Young report says.

Sandra Burmeister, CEO of Landelahni, believes the industry had "shirked its responsibility for training and developing competent artisans and technicians. Companies have tended to step aside, believing that – by contributing a skills development levy to the Sector Education and Training Authorities (Setas) – they were doing enough. Unfortunately, the disappointing performance of the Setas has left them high and dry."

However, Burmeister says South Africa's dire shortage of artisans and skilled workers is also being incrementally acknowledged by new initiatives on the part of government and its agencies.

Mining companies must, therefore, be "smarter" and innovative in recruiting and retaining staff, says Macartney, and human resources departments in the mining industry need to be more proactive in recognising trends and profiling their workforce. "Different generations

are going to want different things (in the workplace)," says Macartney. Predictive modelling of the labour market is an innovative approach which the mining industry should be using, he says.

It takes 12 or 15 years to develop a mine shaft in deep level mining in South Africa. "This means you are effectively looking at attracting employees who are now in grade one – those are the time frames you have to talk about," adds Macartney. When analysing project risks, the question should be asked whether the project will be able to schedule labour out for two or three years. "This is the kind of question that should hit the chief operating officer's desk," Macartney divulges.

The mining industry is developing some innovative solutions to its labour problems. These include offering new recruits sign-on bonuses as a way of restraining the cost of increased compensation, as well as creating appropriate relationships with local communities where they can recruit from, while others are coming up with their own internal training programmes. According to the Ernst & Young report, in South Africa, underground workers are being offered sign-up bonuses up to five times their base salaries.

Burmeister says in acknowledging the problem, government has implemented the Joint Initiative on Priority Skills Acquisition (Jipsa) strategy and the Department

of Labour is planning to reinvigorate the Institute for National Development of Learnerships, Employment & Labour Assessment (Indlela) at Olifantsfontein to play a major role in the assessment, moderation and training of artisans.

"Companies need to take joint responsibility with government for developing well-qualified, competent and experienced artisans," says Burmeister, adding that while there are some outstanding private sector training initiatives, they are not nearly enough.

TWP Consulting came up with an initiative to train young draughting professionals when it became clear that the demand for draughting skills could not be met from the available skills pool, according to TWP training and development administrator, Deidre Devitt.

She says from the first intake of four students in September 2007, the initiative has developed into a comprehensive 12-module training course requiring full-time attendance for five months.

Murray & Roberts Cementation is spending about 5% of its annual payroll on training and development, and recently, 40 of its employees graduated from a project management training programme at Wits Business School.

Mining equipment manufacturer, Atlas Copco has announced that it will spend about R80-million on training in the next five years in response to skills shortages in the mining industry.



A lack of technical capacity can result in feasibility studies that are not of the required standard, leading to an underestimation of capital expenditure requirements.

"We have HIV/Aids, we have the brain drain and we have a legacy of poor education for 90% of the population. Overlaying this, you have massive demand in the resources sector," says Macartney.

According to Landelahni Recruitment Group, an executive search company, while 2007 was a year of expansion for the global mining industry, spurred on by the international commodities boom, companies – internationally and locally – faced increasing pressure as a result of the skills shortage.

While mines are experiencing a boom and new projects are coming on stream, the South African government is embarking on expansions of the rail network, airports, roads, ports and stadiums; and these are drawing skills away from the mining industry, creating competition for engineers and other skilled staff.

Macartney says due to these factors, staff turnover in the industry is on the rise, and he comments that this is a problem that could lead to decreased productivity in mining, as well as a possible compromise on safety standards, especially if an inexperienced staff complement is left to fill the gaps.

According to Roger Dixon, SRK Consulting director, South Africa's poor safety record is a reflection of the level of technical skills on mines. He adds that the safety situation is going to continue getting worse until skills levels improve. On the other hand, according to the experts, the safety situation has, in a way, resulted in the mining industry's problem to attract and retain skilled workers, as the industry is often associated with a perception of physical danger and isolated locations.

According to NOSA, a company that offers safety, health, environment and quality (SHEQ) solutions at mines, safety is directly affected by the problem of skills scarcity in South Africa.

Dixon says when the mining industry was in its heyday, there were people with 15 to 20 years of engineering experience at the workface, watching and monitoring equipment and practice daily, but with the cutbacks on mines in the past decade or so, this is no longer the case.

In an earlier interview with *Mining Mirror*, Wesizwe CEO, Michael Solomon also agreed that the shortage of skills is a big issue in the industry. The company has, as a result, contracted Murray & Roberts

Cementation a year ahead of the commencement of its Frischgewaagd-Ledig platinum project in the North West Province. "We didn't want to finish our bankable feasibility study and not have anyone to build the mine," he explains.

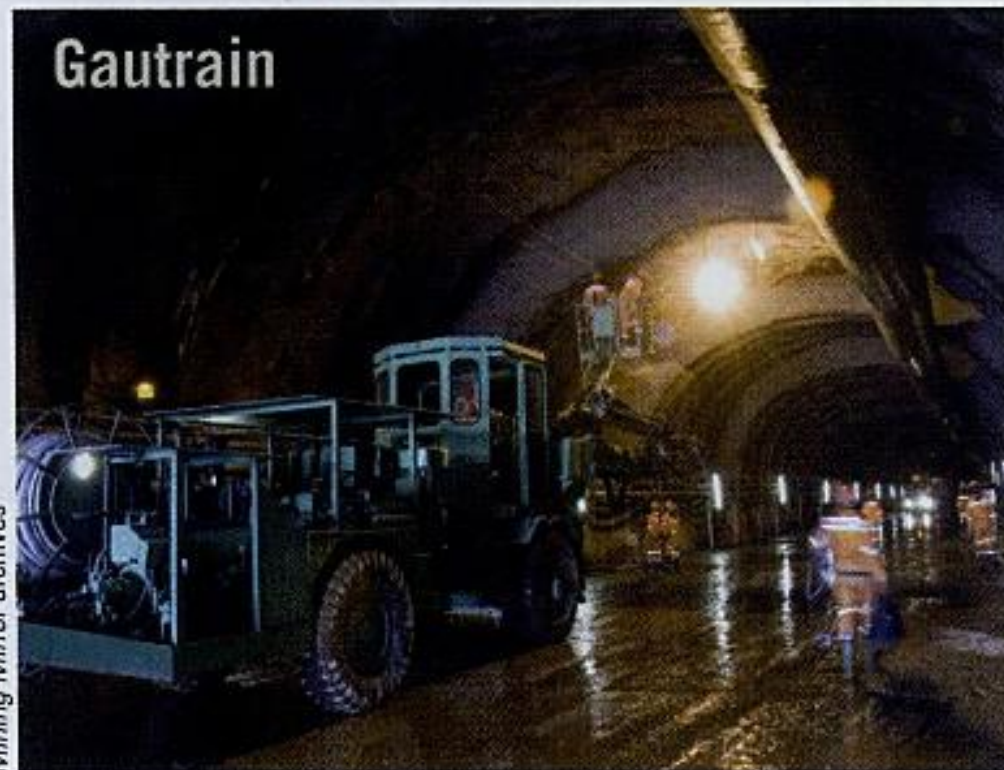
Dixon also warns that price escalations, cost over-runs and insufficient technical capacity are also threatening to douse the attractiveness of new mining project, adding that a lack of technical capacity is a key factor in project over-runs. "The feasibility studies may not be to the required standard, leading to an underestimation of capital expenditure requirements," he says.

"And then, when you come to implementation, the technical capacity often isn't there to ensure the plan is rolled out well and in good time. Engineers in all the different disciplines are in an extremely difficult position in the business environment we now operate in, and the shortage of skills just exacerbates this situation," tells Dixon.

He says high levels of uncertainty make it difficult for project backers and raise questions about the way that feasibility studies are being conducted.



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The mining industry is competing with other sectors such as the booming construction industry and the Gautrain project for technical skills.

RETAINING PEOPLE

The Ernst & Young report also suggests other options, including looking outside the industry and attracting people with general rather than specific skill sets, and "opening up the sector to a broader demographic".

"Although skills are in short supply, there is an available pool of artisans – boilermakers, fitters, turners toolmakers and mechanics – who are fully qualified academically," Burmeister says. "But, many have no experience and many of our clients say they have no time to train new recruits. This is particularly true in the case of the mines," says Burmeister, adding that most of the company's clients insist on at least two years of underground experience. "This is understandable in the face of increasingly tougher safety regulations. But, it seems to be a case of looking for experience instead of competence," she says.

"How can newly qualified artisans gain the skills if companies are unwilling to train them? It's a two-way process that demands a shift in mindset. It's the responsibility of the company to train in a skills shortage and to develop entry-level skills," she adds.

According to Burmeister, one possible solution is to couple experienced people with less experienced recruits so as to create a pipeline for future development. "Another alternative is job sharing, with more highly skilled artisans handling the more complex tasks," she says.

Employers can assist further by providing workplace opportunities to at least a proportion of young graduates on completion of their training. For the candidate, temporary assignments are a good way of developing skills and frequently provide a bridge to more permanent employment, she comments.

"We need to think smarter," says Burmeister. "Companies should get together and pool funding for training in similar fields. As industry leaders, large corporations have in the past seen it as their responsibility to grow industry resources. The time is ripe for them to do so again."

The Mining Qualifications Authority has also acknowledged that, like all sectors in the economy, the mining industry is also "greatly affected" by a lack of sufficient skills and that a strategy is necessary to halt this problem. 🌐