

In this special series of articles, we asked some of our AusIMM professional societies and networks for their industry insights. The following is a collection of thoughts from our professionals on how practices have developed over the past 125 years.

# Developments in health and safety

**AusIMM Health and Safety Society**

## **Is there a single event that defined the beginning of this technical discipline in Australasia?**

Mining has always been seen as a hazardous undertaking. Safety legislation was developed as a result of mining accidents and poor protection for miners. Mining safety legislation and regulation in Australia evolved directly from the UK legislation. The earliest approach to safety in mines in Australia was thus prescriptive and reactionary.

Since the commencement of mining in Australia in 1798, the approach to safety has evolved drastically – especially since the 1980s. As a discipline, we have evolved from someone being appointed as a safety officer to the modern idea of safety managers and safety departments.

Discovery of minerals at Broken Hill in the 19th century led to the emergence of large mining companies. Many technological breakthroughs in mineral processing, mining methods and geological approaches followed. Health and safety (H&S) in mining operations was poor, with many deaths and fatal occupational illnesses. This led to a union-driven campaign for improved H&S for miners. Management began to focus on the H&S of operators. This was a long time coming and still is evolving today. Modern companies focus on safety leadership, systems and symbols in order to use safety as a prerequisite to drive the work culture.

The AusIMM's Health and Safety Taskforce was formed in 1998. The taskforce recommended several safety initiatives, the most significant being the development of the 'Safety Beliefs and Principles' and the creation of a Health and Safety Award, ranking alongside all other AusIMM Awards. The taskforce evolved into a permanent committee in 2001, and became the Health and Safety Society in 2015.

## **What industry issues or problems has this discipline helped to address?**

The increased focus on safety in Australian mining companies has led to a reduction in safety incidents, with the result that there has been a reduction in harm to the



mining workforce. Thus, the Australian mining industry is among the safest in the world. The idea that safety is the sole responsibility of the safety officer is long outdated thinking; the improvement in safety is a result of efforts by top management, safety professionals and line workers – in fact all employees. The understanding that safety is in our own hands, no matter what safety system a company has in place, has taken a long time to become widespread.

While there have been great advances in improving safety in mines, the return of black lung and possibly silicosis has demonstrated that we must concentrate on the health of mine workers. We also have to focus on the mental health of miners as fly in, fly out operations and longer shift times have been introduced.

During the 1970-80s the Australian iron ore industry in the Pilbara was suffering with poor performance in terms of productivity, H&S and high costs created by the influence of the trade unions and poor management. Through the endeavours of pioneering senior executives, the influence of the unions became neutered by improving safety leadership and systems. Productivity improved some 20 per cent in this period.

#### **How has this discipline changed and how might it look in the future?**

Deaths in mining used to be considered normal and unavoidable; now the need is to prevent them at any cost. The community expects that people should not be harmed at work. Companies with poor safety records are at risk of losing their social licence to operate and their reputation being destroyed.

As mentioned, the forerunner to H&S management in the industry was simply regulations. For the last 30 years it has been increasingly recognised that human factors, leadership and company culture all play important roles in preventing harm. Hence, there is a need to lift professional standards among AusIMM members who play an important role in leadership, management and design in our industry.

#### **What are the big challenges or opportunities facing this discipline?**

Directors are increasingly liable for H&S performance. Miners' health is the emerging issue we will face over the next five years. The AusIMM H&S Society has a role in educating members on this issue. Health is one of the considerations in the development of remote operations/automation, as it removes workers from dangerous workplaces and tasks.

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Artificial intelligence and machine learning provide a chance to optimise and prevent downtime.

Digital platforms will collect data requiring quantum computers, and cloud-based servers will enable a more holistic view of mines and improve communications and remove silos. These data will allow better management of H&S risks.

The H&S Society must be a thought leader so that future leaders in the AusIMM clearly understand that H&S is not optional in the day-to-day activities they will undertake in the future. This view should be reinforced by the AusIMM and will require additional emphasis in the future.

#### **What has AusIMM's role been in advancing professional practice in this discipline?**

The AusIMM H&S Society's role is to increase the interest and level of safety knowledge among members and industry. This is done in a number of ways. Committee members have participated in safety conferences, produced newsletters and sourced eminent professionals to deliver webinars for our members. These initiatives will continue. The H&S Society committee members have a genuine desire and willingness to advance H&S values, principles, standards and thinking.

The challenge is to how best to achieve these goals. The journey is a continuous one with much effort. The committee believes it is vital to have more members enrolled as H&S Society members. Our task will never be complete until we, as professionals, have done everything we can to prevent accidents in the workplace. AusIMM members, as professionals and leaders, have a particularly heavy responsibility to lead by example and care for the safety of the people we work with. 📌