

Inexperienced Mine Worker Program – Developing Safe Behaviours in the Mining Industry

Myne Start Pty Ltd (wholly owned subsidiary of Mastermyne Pty Ltd)

The Problem or Initiative

Mastermyne Pty Ltd, founded in 1996 as a service provider to the QLD and NSW coal mining industries, currently employs in excess of 1100 experienced employees. Until recently, like most mining organisations Mastermyne utilised traditional onboarding methods to meet the demand of engaging personnel for their underground operations.

Similar to other mining companies, Mastermyne has experienced difficulties in engaging suitable skilled personnel to maintain and meet the growing labour demand of their businesses due largely to a diminished pool of suitable labour. Not only has this restricted their ability to fully access the potential of present and future coal mining opportunities, it has also exposed their business to potential unacceptable risks in personnel health and safety due to the unique nature of the work environment and the higher dependence on a suitable skilled workforce.

The initiative as describe in this submission aims to lessen some of the impact of the skills shortages experienced through the development and operation of purpose built training facilities. These facilities incorporate the use of a simulated underground coal mining environment, focusing primarily on the training required to consistently introduce inexperienced personnel into the underground coal mining industry, thereby maintaining and potentially reducing some a number of the potential health and safety risks.



Trainees completing a Task 5 prior to commencing tasks



Roadway in Myne Start training complex

The Solution

To address the problem Mastermyne set up a subsidiary to their business, Myne Start Pty Ltd, for the sole purpose of establishing and operating unique purpose built underground training facility in Mackay and more recently in Brisbane; unique due to their physical structure and the diverse range and depth of training that they provide. Presently these are the only facilities in Queensland offering this type/depth of simulation/training outside of an operating mine site.

Myne Start's objectives are to provide the mining industry with controlled, consistent pathways by which inexperienced personnel can gain a more indepth level of understanding of the underground mining environment, its unique hazards and associated control processes, whilst accelerating them into more productive work in a far reduced timeframe when compared to traditional training methods.

To achieve these objectives the Myne Start facilities needed to:-

- Have a strong resemblance to the underground mining environment, providing the trainees with hands on access to current mining plant/equipment and operating system/practice.
- Focus on introducing inexperienced personnel into the underground coal mining industry, with the training programs/curriculum offered concentrating on this purpose. It is also recognised that the facility, though most beneficial for the training of inexperienced personnel, can as well be utilised for refresher training and assessment activities for existing experienced employees. This applies to both underground and surface mining operations.
- Maintain a strong alignment with current underground coal mining practice and mine site skilling needs. Linking where possible the programs delivered within the facility with mine site activities, onsite training plans and monitoring processes designed to monitor the effective implementation of the initial off site training.
- Maintain and where possible reduce potential operational risk levels in regards to health and safety of the inexperience personnel and their future fellow employees.
- Demonstrate a higher level of training quality and consistency than is current, involving the use of innovative/interactive/engaging training and assessment methodologies which will move industry training benchmarks forward.
- Recognise the requirements for continual improvement of training to suit economic and industry demands in conjunction/partnership with Government and industry bodies.
- Be credible and recognised by the relevant industry sectors in Queensland, nationally, and potentially internationally.
- Partner with a Registered Training Organization (RTO), able to issue national qualifications for the training delivered.

Myne Start operates under a Safety & Health Management System, adopting procedures and controls similar to that of a typical underground coal mine site (where relevant). This system was developed to show alignment with the Workplace Health and Safety legislation due to the nature and location of the complex, as well the Coal Mining Health & Safety legislation due to the training outcomes required. Examples of the implementation of this system include the requirement for participants to;

- Wear appropriate PPE at all times.
- Participate in random drug and alcohol testing.
- Tag in and out when entering the underground facilities.
- Restrict taking contraband items into the underground facilities.
- Follow recognised fatigue management guidelines.
- Conduct SLAM/SAM/Take 5 observations prior to undertaking a task.
- Isolate, tag and lock out plant/equipment similar to a working mine site.
- To conduct pass/toolbox meetings the start of each training day.

The nature of the Myne Start underground facilities allows the delivery of the training program to be highly interactive, focusing primarily on work based/on the job training activities to demonstrate and reinforce learning. A diverse range of topics are delivered within the inexperienced employee program, as well as the presentation of a range of induction/standard operating procedures (SOP) topics relevant to all mine sites and enhancing the delivery of the hands on training program through the use of various simulation tools.

Throughout the training program the effectiveness of the training and in turn the trainees' introduction into the underground mining environment is measured by;

- Feedback/signoff from site trainers - once the trainees have completed training at Myne Start they are required to continue their training onsite in line with detailed training plans, generally for a period of 2 to 3 months.
- Feedback from the trainees - with a formal program feedback of the training scheduled at the completion of each program.
- Program debriefs - the program is formally reviewed by the Myne Start management representatives, trainers and site management team members.
- Interviews via site Project Managers - at the completion of their onsite training plan requirements each trainee is interviewed by the Site Project Manager to ensure that they hold the relevant knowledge/skills necessary to work under general supervision.
- Employment probationary period - standard employment measures are applied and monitor the trainees throughout their probationary period of 3 months.

To date the mine site hosts have recognised the effectiveness of the training within Myne Start, reducing the required cleanskin training period on site by the training time within the facility and/or reducing the ratio of experienced to inexperienced personnel working underground, with large mining companies including BMA and Anglo American working with Myne Start to deliver the program to their own newly employed permanent inexperienced workforce. General feedback from mine sites has been extremely positive, clearly indicating that the employees who have completed the program are far more advanced in not only their safety awareness but in the industry knowledge and skills required to effectively commence operation in the underground environment, when compared other inexperienced employees that have gone direct to site.



Working belt and roadway in Myne Start training complex



Trainee roof bolting in Myne Start training complex

Benefits / Effects / Outcomes

The main benefit recognised from the introduction of the Myne Start complex is the formation of clearly identifiable pathways for introducing inexperienced personnel into the underground coal mining industry. When compared to the traditional introduction methods the pathways are:-

- Accelerated, allowing inexperienced personnel to enter into a productive mode within a quicker timeframe.
- Less disruptive, with a larger percentage of the training conducted off site, reducing the potential training impact/disruption on site.
- Better aligned to the trainee's needs, both in learning methods/styles (i.e. practical hands on) and experience level, with training programs being purpose built and focused on the training of inexperienced personnel only.
- Focused, providing the trainees with a more indepth level of understanding of the underground environment and the unique hazards and control processes involved.
- Reduced risk to all workers when the inexperience workers commences on site.

Transferability

Since the implementation of the first inexperience employee program, Myne Start has also been utilised and/or modified to suit the following training programs and workshops;

- One day Supervisors Safety Workshop for the refreshing of key principles from a supervisory role, utilising on the job activities with the inexperience trainees.
- 1st year engineering apprentices in specific underground coal mining applications.
- International miners in specific Australian underground coal applications.
- Experience metalliferous miners in specific underground coal applications.
- “Open Days” for Mastermyne/Myne Start employees and family members.
- “Women in Hard Hats” program facilitated by the CQ University in Mackay.
- “Toolkit for Girls” event for female students in Years 10-12.

Myne Start's future focus is to be credible and recognised by the relevant industry sectors in Queensland, nationally, and potentially internationally as well as targeting other pressing industry training needs including;

- Underground Mine Deputies/ERZ Controller programs.
- Mobile Operator Training (Man Transporter, Loader).
- Underground Mine Fitter Trades programs (additional to already existing Electrical Trades programs).



Eimco used by trainees throughout the course



Longwall chocks and shearer arm in Myne Start training complex

Innovation

Prior to commencing with the development of the Myne Start facility representatives of Mastermyne attended a range of meetings and made presentations aimed at:-

- Raising awareness of the proposed facility.
- Verifying an assurance of need for a facility of this nature.
- Ensuring that the facility was not duplicating other facilities in place or proposed.

These meetings were with representatives from:-

- Government; Local, State and Federal.
- Industry Groups; Queensland Resources Council, Mining Industry Skills Centre.
- Mining Organisations;
- Higher Education Sectors.

All presentations were well received with clear indications of support obtained for the development of the proposed facilities.

Myne Start is clearly an improvement on existing processes of recruitment and training of inexperienced workers. This innovation is sustainable and will continue to grow and diversify to meet the ever changing needs of a growing industry.