

# EFFECTIVE BLASTING TRAINING AND EDUCATION

Quarry managers and operators frequently seek assistance in providing practical approaches to risk management and improvement.

As one Maxam customer stated, his site required an understanding of not only the product they worked with, but a means to ensure all stakeholders involved in the blast understood the importance of clear communication and how critical safety and risk management is for successful results.

In the rapidly changing environment of the extractive and mining industries it is being recognised that business must encourage customers and employees to obtain or improve their technical knowledge. This has a number of benefits to the businesses, such as improved safety, remaining productive and competitive in local and global markets, encouraging superior performance, improved quality of product and services, increased customer satisfaction and the development of committed and result-focused employees.

All these factors allow businesses to improve their focus on the current process as well as allowing an increased ability to deal with change as required.

Explosives and blasting services are no exception and, in fact, it is a fundamental requirement of explosive consumption that consumers understand the boundaries of use due to the high inherent risk of the product.

Users of explosives as well as legislators recognise this fact and require strict usage guidelines of these products to be in place and, more importantly, they need to be clearly communicated to their personnel. This is the nature of the supply of explosives and services and the correct risk management of these goods and services is the cornerstone of how the major explosive companies operate.

Maxam is no exception to this and has developed procedures and work methods to meet these expectations.

Maxam however, has also recognised that it needed to do more for its customers and consumers of its products and services, both internal and external, to enable them to fully manage the risk and to get the maximum benefits from its products.

Improved training in the use of explosives was identified as one major area where Maxam could assist the industry.

A number of potential training programs were investigated to meet the identified requirements.

It was identified that there was a significant gap in the market for knowledge transfer in the specific area of identification of risk in the drill and blast process - current courses being either too sales based or too technical theory orientated.

The courses available were also based on traditional practices that had not been modified for identification of risk in today's security sensitive working environment.

Maxam felt that a more practical risk based technical training was required in addition to explosive awareness for users and personnel potentially exposed to explosives.

The first part of this new training to be developed was the Effective Blasting course.

This course aims to provide attendees with a working knowledge of explosives, their application and the risks faced while working within drill and blast processes within the quarry and mining industry.

It aims at developing the attendee's knowledge of explosive types and properties, their applications and an understanding of the influences of the rock on explosive performance. This is at all times carried out with reference to current legislation and an underlining theme of risk management in all aspects of the drill and blast process, not just placement and on bench use.

Attendees are able to explore common risks and it enables them to use simple guidelines to optimise the drill and blast process.

The course is technically based and aimed at both external customers and internal Maxam personnel.

Maxam understands that not only its customers but its own personnel require a fundamental grounding in effective blasting and that there is no differential to external customers in this regard.

To expand the knowledge level of Maxam employees it was decided that all employees who directly use or apply explosives attend the training courses.

The program is conducted over two days and covers 11 main sections, including:

- Risk and safety in drill and blast
- Explosives – Types and properties and their applications
- Design – Applications and risks to

consider in all designs

- Initiation – Various systems and their application and risks
- Environmental – Vibration, airblast and other effects on the wider community
- Legislation – What effect is the current security and safety environment having on use and control
- Control and optimisation – What are the types of risks and challenges to be controlled and optimised to ensure safe and effective blasting.

The training course uses examples from industry to build knowledge of their risk and suitability to their operation as well as explore the extent to which these designs can be modified in a safe and effective manner. It utilises video and photography heavily to ensure attendees can directly relate the information presented to real life situations.

It is essential to the development of the industry that Maxam passes on this information in these clear, practical examples of what has happened which is, unfortunately, not always correct procedure.

The industry must learn from the past and recognise the less efficient and safe practices that have been used so that we all move forward in a safe and efficient manner.

Maxam has developed this course by utilising its world network of personnel and resources as well as key independent Australian consultants. This has resulted in the development of a course that is not a Maxam sales course but a balanced blasting course highlighting explosive product groups and practical information of benefit to all explosives users in the industry.

Maxam has realised that it cannot rest on its laurels and say it has done its best with the success of this course. It must continue to develop and improve the content of the course as well ensuring that the personnel who have attended the course use the information once they are back in their own work environment.

Maxam views this course as either the start of or part of the continued knowledge transfer vital for the improved safety and efficiency of the quarry and mining industries. •

Source: Maxam