

# SHOTFIRING SERVICE

# **Blasting Solutions**

**TAP Technical Applications Services** 

Shotfiring service is provided to MAXAM customers to make their blasting work easier providing expert support in mines, quarries and civil works. Permitting safety assessment and execution are the responsibility of the MAXAM crews and shotfirers. Knowledge of products and customer requirements are on behalf of perfect results.

#### **APPLICATIONS**

×	Open pit mining
X	Civil works, OP and tunnelling
X	Underground mining
X	Quarrying
×	Underwater works

#### **BENEFITS**

The shotfiring service is based on the professionalism of MAXAM personnel in charge of the execution of the work. Some rules covered include:

### Safety

The main activity in blasting practice, Safety is covered during shotfiring service.

- X Risk assessment analysis prior to blasting.
- Comply with MAXAM standards in the planning and execution of blasts.
- × Clearance area calculation.
- × Post blast analysis.

# **Permits**

Previously to the execution, needed permits have to be obtained.

- × Certified shotfirers and blasters.
- × Official permits to do the blast.
- ★ Blast report and certificates in official and or customer format.

#### Execution

Professionalism is the golden rule for MAXAM crew during shotfiring service.

- Knowledge of MAXAM products and blasting technique.
- × Professionalism and expertise.
- >< Follow up of blast plan and preparing of blast report.
- × Avoidance and remedial of cut-offs.

#### **Environment**

Most of the time, environmental issues have to be considered during shotfiring service.

- Noise reduction by controlling free face and stemming
- Vibration control, based in MIC (maximum instantaneous charge) and timing, according to the blast plan.
- Fumes avoidance, performing the loading according to right procedure mainly in the presence of water.
- Leaching avoidance, by elimination of explosives spillage.

# **EQUIPMENT**

Equipment used during shotfiring service is divided between; loading equipment (in Bulk operations, MMUs and cassettes) and firing equipment (blasting machines, stand alone or remote ones).

Other auxiliary equipment is used during loading (measuring tape, stemming control pole, etc) and stemming (buckets or stemming machines).

# **METHODOLOGY**

Shotfiring service is performed in different steps, covering the needs of the customer.

- Definition of blast plan according to blast design
- Risk Assessment execution with the customer representative and corrections of dangerous items
- Priming, loading –according to blast plan, indicating changes–, stemming –controlling length–, and tie up –according to timing plan.
- Clearance area execution according to calculations.
- Check the blast in order to detect cut-offs and, eventually, remediation of them.
- × Evaluation of blast results.
- X Blast report preparation and sign off.

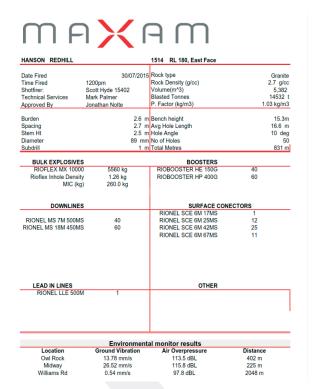
The documentation generated during shotfiring service is the proof of the work done, measuring the results of the blast in several ways:

- Explosive and initiation systems used, type and quantity
- Issues and special remarks during the execution of the blast
- >< Results obtained in terms of fragmentation, vibrations, heave, fumes, etc.

The blast report is a complete summary of shotfiring work.







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version 1.0 January 2016