

THE AUSTIN ADVANTAGE

OPTIMIZATION WITH COMBINED MEASURES E*STAR AND FRAGMENTATION ANALYSIS



GENERAL INFORMATION

Location: Upper Austria

Project Type: Granite, Surface Quarry

Products Used:

- E*STAR
- Hydromite 70 AL
- Emulex 2+ 65/700
- Paradigm

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THE HISTORY

A drill and blast contractor requested Austin technical support to vie with his competitor using different products for a Rock on Ground Operation in a granite quarry in Upper Austria.

Previously, all blasts were carried out using packaged emulsion and nonelectric detonators. The customer tried to change the drill diameter and the diameter of the packaged emulsion with little success and mixed blasting results.

Furthermore, the quarry was not pleased with the fragmentation they were getting with either one of their contractors.

THE GOALS

1. Demonstrate successful blasts using Austin products and services
2. Achieve a more uniform muckpile fragmentation with less oversize material
3. Expand drill pattern for a more profitable overall blasting concept
4. Present E*STAR and demonstrate the benefits of the system



THE CHALLENGES

The customer was concerned that optimization efforts would be time-consuming and produce unsuitable material on short notice. In addition, the most cost-efficient solution was needed to support the customer's technological approach.

THE AUSTIN SOLUTION

Austin Powder demonstrated that the E*STAR system could produce the fragmentation needed within the range of the applied drill pattern. The results eased the quarry's concerns regarding rapid changes producing questionable results.

With enough data from the E*STAR blasts, Paradigm simulations could be used to identify possible optimization scenarios and further narrow down the most suitable blasting procedure through several test blasts. Switching from packaged emulsion to bulk emulsion reduced the required workforce at each blast. Also, it permitted a complete fill of the hole.



THE RESULTS

1. Increased efficiency of the volume-drill ratio by 10.8%
2. 11.1% savings in labor
3. Significant improvement of oversize material observed

