DDT Technical Review

Hans Baasden
1 Dec 2004

Stope jigs - observed benefits

- increased face advance per blast
- consistent and parallel drilling
- straight face shape (improves cleaning cycle)
- new burden control brackets developed for Marula makes face hole marking unnecessary
- team complement – face length per panel employee stays the same 2.5m per man
- reduced physical effort by operators
- less skill required to accurately drill holes
- implementation at Marula proceeding well
DDT

DDT stope rig
DDT stope rig

• ASG JIG observed benefits
  • improved safety - operator removed from face area
  • increased face advance per blast
  • better profiling of the ASG which gives a safer working environment and also minimises dilution
  • consistent and parallel drilling
  • can be used for raises and winzes
  • reduced physical effort by operators
  • less skill required to drill holes
  • mini-bolter also designed to utilise same boom
**ASG Jig**

- Mini-bolters
  - easy installation of roof bolts on the face due to newly designed roof-bolting machine
  - improved safety operator removed from face area (remote drilling)
  - no temporary support installation – work being done under permanent support (roof-bolts)
  - newly designed hydrabolt an easier support method than the fully grouted roof bolt
  - less 200mm poles being transported and installed (60% less poles per centare to be installed)
  - less damage of timber support due to the increased distance between timber support and blasted face

---

**Roofbolters**

- Mini-bolters
  - easy installation of roof bolts on the face due to newly designed roof-bolting machine
  - improved safety operator removed from face area (remote drilling)
  - no temporary support installation – work being done under permanent support (roof-bolts)
  - newly designed hydrabolt an easier support method than the fully grouted roof bolt
  - less 200mm poles being transported and installed (60% less poles per centare to be installed)
  - less damage of timber support due to the increased distance between timber support and blasted face
Roofbolters

- Tripod rig
  - newly developed for cost effective vertical drilling in ASGs, raises/winzes, or any large excavation that requires safe, remote, roofbolt holes
  - uses a standard DDT stope boom mounted on a simple tripod base
Tripod Roofbolter

Roofbolters

- Drill steel for in-stope roof bolting:
  - drill-steels have been developed to enable sub 1.0 metre roof bolting in Merensky and sub 0.8 metre roof bolting for UG2 panels
New technology - roofbolters drill steel

Mini-bolters drill steel