

Deepening shaft during hoisting, Prosper-Haniel No. 10 Shaft



Scope of Work

- Install a safety platform for deepening work on days without extraction
- Deepening of a shaft

Client

Deutsche Steinkohle (DSK)

Location

Bottrop-Kirchhellen,
Germany

Duration

04.2002 - 12.2008

Technical Data

- Deepen shaft with a final diameter of 8 m by a further 272 m
- A 2-sided inset constructed using the rockbolt-shotcrete lining, each side 10 m with final diameter averaging 12.5 m and 1-sided shaft station with 4.5 m final diameter
- Excavated volumes (without shaft pipes) 4,400m³
- Inset secured with 5m long mortar rockbolts and 60cm steel fiber shotcrete with reinforcement made of three-bar lattice grids /lattice grids
- Wet shotcrete using a shotcrete manipulator
- The fresh concrete was tipped from surface down a 65/8"-API line
- 3 shaft bottom frames mounted, 6 guiding beam lines assembled for a main and an auxiliary hoisting system and 7 pipelines built with inner diameters of 50 – 400 mm
- Connected old and new shaft parts on days without use of coal hoisting operation

Special Features

- The joint venture Tieferteufen Prosper Schacht 10 received awards for excellent safety work both in October 2007 and October 2008 by the Statutory Accident Insurance of the Quarrying and Mining Industry