

Rehabilitation of inclined shafts in Portugal



Scope of Work

- Enlargement of a ventilation shaft
- Rehabilitation of 5 ventilation shafts
- Furnishing 2 shafts with pipes transport system and ladderway

Client

SOMINCOR (Sociedade Mineira de Neves-Corvo, S.A.)

Project Location

Castro Verde, Portugal

Geology

Primarily greenstone with deposits of arenaceous shale and sandstone

Duration

March 2009 - September 2014

JV with Drillcon, Iberia

Technical Data

- Diameter of the shafts 3.10 m each
- Depth between 230 m and 350 m
- Deviation of shafts from the vertical between 7° and 18°
- Lining with mesh, resin bolts, shotcrete and Wiborex bolts
- Drainage with spiral-formed water troughs and resin injections
- Installation of a ladderway with resting platforms
- Installation of hosting system for the transport of steel structure and pipes
- Installation of pipe strings

Special Features

- Inclined shafts with small diameter
- Shafts with different inclinations (variable hoisting facilities)
- Cross slopes of the shafts from construction period
- Heavy water inflow at times
- Reconstruction of a shaft after a rock outburst of 350 m³
- Installation of up to 15 pipe strings inside a Ø 2.95 m shaft