

PROJECT DETAILS

Customer:

NSW Coal Mine

Location:

Hunter Valley, Australia

Project Duration:

October 2019

Products Offered:

- FB200
- Sprayplast
- Flexistop
- Services

Industry Sector:

Mining - Coal

Applications:

Gas and ventilation control
Services



CONVERGENCE SEALS NSW, AUSTRALIA.

A NSW coal mine located in the Hunter Valley. This deep mine has a proud history of providing high quality coking coal.

Minova designed and installed a 140 kPa rated FB200 ventilation plug seal in the longwall panel where significant roof to floor convergence was expected.

CHALLENGE

This deep coal mine has operated at depths of over 500 m below the surface. The longwall where Minova's seal was required was at a depth of over 450 m.

Ventilation seals installed at this mine typically experience convergence. Minova's FB200 plug seal design was required to accept a minimum 8% convergence without failure of the seal occurring.





SOLUTION

Minova designed and constructed a plug seal using our FB200 grout specifically to meet the convergence requirements at the mine. The seal was designed to withstand a minimum 140 kPa overpressure.

A rigorous quality control regime was undertaken to ensure that the correct compressive strength of the FB200 grout was achieved. Nine samples were taken during the seal construction and all exceeded the minimum design strength.

Additionally, a nitrogen chamber was required to be constructed between the seal and the goaf. The solution was to install a Flexistop behind the seal, Minova's live tested flexible ventilation stopping.

RESULT

Rated at 140 kPa explosion overpressure, Minova's FB200 plug seal installed at this mine experienced convergence of over 15%. Multiple inspections by the Undermanager showed that the seal remained gas tight, even after experiencing greater convergence than it was designed for.

ACHIEVEMENTS

- Cost effective FB200 plug seal design
- Ventilation seal constructed within time frame
- Seal convergence measured to be over 15% against a required 8%

**SECURING
PERFORMANCE
TOGETHER.**