CASE STUDY
COAL MINING

FB200 Convergence Seal
Hunter Valley - Australia

OVERVIEW >>>>

A NSW coal mine was located in the Hunter Valley. This deep mine had 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. The mine had operated at depths of over 500 m below the surface, and the longwall where Minova's seal was required was at a depth of over 450 m.

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

Customer: NSW Coal Mine

Project Duration: October 2019

Products Offered:
FB200
Sprayplast
Flexistop

Applications: Gas & Ventilation

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.

Rated at 140 kPa explosion over pressure, 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.

CONTACT OUR TEAM