



SIKA AT WORK

EXXARO GROOTGELUK MINE

WATERPROOFING WITH SIKA POLUREA SYSTEMS

BUILDING TRUST



EXXARO GROOTGELUK MINE



PROJECT DESCRIPTION

It was cause for concern when areas of poor quality concrete were discovered at two of the thickeners and one clarifier at Exxaro's Grootgeluk Coal Mine in Ellisras, Limpopo. Consulting engineering company ARUP, had no hesitation in specifying Sika products including one of its top-quality, polyurea membranes to solve the problem.

Projects Name: Exxaro Grootgeluk Mine

Location: Ellisras, Limpopo, South Africa

Construction Year: 2013

Size in m²: 1500 m²

PROJECT REQUIREMENTS

Exxaro is the second-largest coal producer in South Africa. The company's main priority, the Grootgeluk Medupi Expansion Project (GMEP), was initiated to construct two new processing plants and to expand existing pits at Grootgeluk mine, which has since begun supplying coal to Eskom's Medupi Power Station.

SIKA SOLUTION

Moisture barrier: Sikagard®-720 EpoCem, Primer: Sikafloor®- 156 ZA, Coatings: Sikalastic®-841 ST, Sikalastic®-844 XT. As a moisture barrier, SikaGard®-720 EpoCem ZA was applied (min 2mm thick) to the concrete walls. Requiring minimal waiting time, SikaGard®-720 EpoCem ZA was coated with Sikalastic®-EP Primer II, a two-part, low viscosity, epoxy-

polyamine resin. This multi-purpose product is easy to apply, provides high bond strength, good penetration, and short waiting times. As a waterproofing and protective coating on the concrete walls, Sikalastic®-844 XT Plus, a two-part, flexible, modified polyurea membrane, was the product of choice. It is specifically designed for use in applications on concrete or steel where exposure to high acidic or alkaline chemical concentrations, are present. It also provides high resistance to microbial waste, so is suitable for use in wastewater and treatment plants. The Sikalastic®-800 range of products provides such versatility, with hundreds of different uses, it was specifically the high performance of Sikalastic®-844 XT Plus, in this application, that allowed engineers and architects to recognise that it is not merely a solution to waterproofing, but actually a specialist product. Contractors were faced with severely high surface temperatures as the project took place during the hottest months. They also had to exercise extreme caution not to cause damage to the surrounding environment due to the site being situated in a sensitive ecological area. Despite these challenges, the concrete refurbishment at Exxaro's Grootgeluk Mine was another highly successful Sika project.

PROJECT PARTICIPANTS

Consultants: Arup Consulting Engineers

Main Contractor: Aveng Grinaker LTA

Sub-Contractor: BKV Holdings

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