Case Study

HMA WEAR SOLUTIONS

COBRE PANAMA PROJECT

Location Panama
Industry Coal Processing

HMA Wear Solutions has collaborated with design engineering company Lycopodium on the ceramic piping specification for the Cobre Panama project by First Quantum Minerals Ltd. of Canada. This $6.3 billion copper project is anticipated to be one of the few new 'red metal' mines to enter production by the end of the decade. Lycopodium is responsible for the design of the mineral-processing plant at Cobre.

HMA Wear Solutions is part of the HMA Group, specialising in the design and manufacture of abrasion-resistant lined equipment. It provides a range of products and materials such as rubber, polyurethane, white iron and ceramics to reduce costs and increase performance through improved design, optimal material selection, and a unique manufacturing process.

The $7.38 million contract awarded to HMA Wear Solutions saw 1115 pipes supplied over a two-year period, with a size range from DN200 to DN1200 and a design pressure ranging from 1400 kPa to 10 020 kPa. According to HMA Wear Solutions International Sales Manager Mark Langbridge, a particular achievement of the project was zero damage during shipping, "with our milestone targets achieved every month."

HMA provides total product support, installation, and maintenance. "Our aim is to achieve the longest possible operating life with the most cost-effective material. HMA Wear Solutions has reduced plant operating costs through improved design and optimal material selection, in combination with our unique manufacturing equipment and processes," Langbridge highlights.

Cobre is a large open-pit copper development in Panama. The concession is 120 km west of Panama City, and 20 km from the Caribbean Sea coast, in the district of Donoso, Colon province. The concession consists of four zones totalling 13600 ha.

In May 2018, First Quantum revealed that the orebody was 3.695 mt @ 0.37% Cu (M&I resources), and 3.182 mt @ 0.38% Cu (P&P reserves). The strip ratio is 1:1, with competent rock and a 40-year-plus mine life. At that stage the project was already about 70% complete, clocking up 72 million-man hours and a Lost Time Injury (LTI) rate of 0.10. A milestone of ten million-man hours without a single LTI was achieved on 19 April 2018.

Operations include an international port, a 300 MW power plant, a large electric mine fleet, and in-pit crushing and conveying. The goals for 2019 are to commence ore feed from the mine to the process plant, the ramp-up of the process plant to an annualised 74 Mtpa mill feed, and a targeted 150 000 tonnes copper in concentrate production.

By 2020, the process plant will be ramped up to an annualised 85 Mtpa mill feed, and a targeted 270 000 to 300 000 tonnes copper in concentrate production. This will reach 350 000 tonnes in 2021, and an additional investment by First Quantum post-2022 to achieve the revised 100 Mtpa mill feed.

In February this year, First Quantum announced that ore had passed through the primary crushing circuit at an initial feed rate of 4000 t/h to 5000 t/h, before being placed into the first completed milling circuit. This was followed by hot commissioning to move the ore throughout the plant until the first copper concentrates are produced. An efficient phased ramp-up is planned for Cobre Panama throughout 2019.

Case Study

HMA WEAR SOLUTIONS

COBRE PANAMA PROJECT

HMA Wear Solutions secured the Cobre Panama contract in March 2017. As Australia's largest engineering designer, manufacturer, and supplier of ceramic lined piping systems, the project joins its growing list of prestigious mining projects, including Exxaro Leeuwpan (cyclone contract), FQML Kansanshi (cyclone feed pipes), PT KDA Ombilin (PF piping) BMA Caval Ridge (tailing thickener underflow pipework upgrade), Sedgman Peak Downs CHPP Upgrade (reflux classifier), Newcrest Telfer (cyclone feed bends upgrade), Coal & Allied Mt Thorley (supply and installation of cyclones), the MainTek Moranbah North Plant Upgrade, cyclone feed and discharge lines for Newcrest Cadia, and a co-disposal line project for Rio Tinto Kestrel, to name but a few.

Key brands represented by HMA Wear Solutions worldwide are Uretech, GTech Cyclones, and Eriez. Its service offering encompasses design, manufacturing, scheduling, procurement, execution, commissioning, and condition monitoring. Some key focus products are slurry and pneumatic pipelines, dense medium and classification cyclones, distributors and chute work, all complemented by the engineered product support, condition monitoring, site services such as industrial tiling, and pipework installation.

"Our 40 years' experience and innovation has enabled us to overcome many design and manufacturing problems associated with ceramic-lined pipe and equipment, ensuring a 'guaranteed fit' every time. HMA Wear Solutions' piping systems have become the industry benchmark due to our superior products and manufacturing processes, the result of which reduces plant operating costs," Langbridge stresses.

"The success of our piping supply for Cobre has proven the capability of HMA Wear Solutions to compete on the world stage, and we look forward to similar projects to add to our growing international portfolio," Langbridge.

ABOUT HMA GROUP

Established in 1966, Halley & Mellowes represents an impressive list of internationally respected companies and manufactures under licence to a number of these companies. We also manufacture a range of products and equipment developed and designed by our own engineers. The HMA Group manufactures, services, and sells a range of capital plant equipment to a diverse range of industries. This includes the mining sector, minerals processing, materials handling, power generation, petrochemicals and oil & gas.

WEA-CS-0035 JUN 2019