



## Case study

### Pump solution helps site expansion to increase plant throughput by 75%

Metso Outotec provided an efficient pump solution to Jellinbah coal mine during challenging pandemic times. Jellinbah mine is located in the Bowen Basin in central Queensland, Australia. Owned by the Jellinbah Group, the mine has been in operation since 1989, and produces a low-volatile PCI coal with high specific energy and low ash. A favourable strip ratio and generous seam thickness means that Jellinbah mine is a highly productive mine, operating in excess of 5 Mtpa.

#### Challenges

- Upgrading CHPP to increase capacity
- COVID-19 pandemic

#### Solution

- Supply of nine different pump applications across CHPP
- Progressive delivery of pumps during the pandemic

#### Benefits

- Minimal site downtime
- Maximum throughput achieved



Pump assembly at Metso Outotec's Tomago facility

In 2020, the company set out on a project to increase the mine's processing capacity by 75%: from 285t/h to 500t/h. The upgrade to the coal handling and preparation plant (CHPP) was awarded to Sedgman, a leading provider of minerals processing and associated infrastructure solutions to the global resources industry, which in turn selected Metso Outotec to supply necessary pump equipment for the upgrade.

The pumps supplied for the project were to be used across the process from flotation to thickening and dewatering. They included extra heavy-duty pumps (Thomas XG series), heavy-duty pumps (Orion HM series), mining-duty slurry pumps (Orion MM series), and vertical sump pumps (Sala VS series) for a range of applications.

#### Working in partnership through the COVID-19 pandemic

Metso Outotec worked in partnership with Sedgman to help Jellinbah get the project completed. One particularly useful tool in the process was Metso Outotec's PumpDim™ program — an online slurry pump selection tool — that allowed the team to efficiently select the right pumps to meet the project's design objectives. PumpDim helps quickly select the correct Metso Outotec pumps for the project requirement, to ensure that the pumps offer maximum efficiency and optimised wear life.

Metso Outotec, with its broad range of pump technology and a legacy of over 150 years' experience in minerals processing technology, was also able to assemble and fully test the pumps locally at its facilities in Tomago, New South Wales, and Mackay, Queensland, shortening the lead time and mitigating the supply chain challenges introduced by the COVID-19 pandemic. Metso Outotec was also in regular contact with domestic and global suppliers to expedite the process, while being very aware of the site's challenges.

As a result, the last of nine pumps arrived on site in May 2021, and the Metso Outotec commissioning site support concluded in September 2021.



The Metso Outotec service team undertaking pre commissioning inspections



Thickener underflow temperature checks

#### Efficient deployment with minimal downtime

With Sedgman's excellent planning and execution, and timely delivery of equipment from Metso Outotec, a large portion of the upgrade was carried out without interruption to the wash plant. This allowed for the upgrade to be completed within a short downtime window and deliver Jellinbah's increased capacity.

"This was a great opportunity to showcase to the customer what value we can deliver from both the service and equipment sides of our business," remarked Jeremy Umbers, Service Sales Manager at Metso Outotec.



Dense medium cyclone feed pump XG350



Deslime cyclone feed pump MM350

#### Local support

The Metso Outotec commissioning team from the local Mackay Service Centre and Brisbane office were on site for preinstallation, as well as during the installation, and wet and dry commissioning of the pumps. The team worked closely with Sedgman to overcome a few challenges that came up. This resulted in an effective turnaround time to deliver the equipment, without delay to the project. The customer received the pumps progressively and even received the first ones before the deadline, despite the challenges of the pandemic.

#### Maximum throughput achieved

Jellinbah, Sedgman and Metso Outotec were able to achieve their collective goal of upgrading the existing CHPP capacity by 75% through the supply of equipment, progressive delivery and ongoing support during challenging times. The pumps are working to nameplate following a successful commissioning.

Sedgman General Manager, Projects, Jordan Tomasel, said "It has been a privilege working with the Metso Outotec team who overcame several challenges to deliver our pumps safely and on time. The pumps are currently operating effectively on site enabling our client to continue to deliver and achieve production targets."