

Innomotics partners in world's first digital mine

Innomotics, a Siemens Business, has partnered with Anglo American, one of the world's leading mining companies, to develop a digital mining solution for Quellaveco copper mine, in Peru, providing a suite of Siemens technologies to help Anglo American engineer, monitor, manage and run the mining operations from the earliest stages of design through to commissioning and into production.

Commissioned in 2022, the Quellaveco copper mine is the largest greenfield copper mine developed by Anglo American. By deploying new technologies such as autonomous trucks, automated drilling and remote operation, Anglo American put its FutureSmart Mining™ approach into action.

Anglo American's Quellaveco digital mine is based on Siemens plant cycle management platforms and guarantees the optimal collaboration, continuity, and consistency of all the disciplines involved in plant engineering and operation. The system accomplishes this by consolidating data from a variety of sources. Automation data can be read out of the process control system and imported to COMOS to be graphically displayed, consolidated, and made available for further engineering and vice versa. COMOS uses this data to support the creation of the plant's digital representation, a fast and reliable migration, and updates to the PCS7 process control system – all through a single solution.

The seamless pit to port solution allows Anglo American to observe and measure the whole operation in real time from the mine

pit through mineral processing, logistics and to the port where copper concentrate is stockpiled, loaded, and shipped. Working from a remote integrated operations centre, operators can quickly spot problems or inefficiencies and coordinate to take remedial action immediately.

Using the plant cycle management platform, Innomotics has integrated engineering data to create a unique data source for schematics from piping and instrumentation diagrams and data sheets to 3D models. Using concepts such as smart data and smart documentation, data from different engineering phases are combined, linked, contextualised and made available for the operation phase.

"We take pride in being one of Anglo American's key partners in the development of their first digital mine. The creation of a digital representation of the entire mining operation has allowed us to virtually explore different scenarios and anticipate potential issues before they happen in the real world," says Oliver Beck, Senior Vice-President of Solutions at Innomotics.

Michael Reichle, Chief Executive Officer of Innomotics adds: "We are delighted to

take part in this ground-breaking project with Anglo American to help shape the future of mining operations. The merging of the real and the digital world is key to enhance productivity and efficiency. In doing so, Anglo American and Innomotics will greatly contribute to sustainability efforts in the mining business. Furthermore, this project once again underlines our position as a pioneer and leader in the field of technology and digital solutions and our ambition to redefine reliable motion for a better tomorrow." In addition to its leading solutions in digitalization and automation, Innomotics also supplied gearless drives for Quellaveco's four grinding mills and the overland conveyor system and 22 medium and low-voltage motors for the floatation plant to become the main supplier for all electrical, automation and digitalization products, systems, solutions, and services.

Built at a cost of around US\$5.5-billion, Quellaveco is expected to produce an average of 300 000 t of copper a year during its first ten year of operations. The mine is a joint venture between Anglo American and Mitsubishi Corporation.

www.innomotics.com



Innomotics has partnered with Anglo American to develop the world's first digital mining solution for Quellaveco copper mine in Peru.