

Thermal Cameras Monitor Dig Sites 24/7, Providing Safety in Mines

The Accuracii XR cameras have afforded us the ability to quickly scan the entire mine area in record time, day or night and in bad weather, something that was very difficult to do before in person via ground transportation.

Carlos Lopez, Geologist for Codelco at Chuquicamata

Chuquicamata Mine, Chile

Mining is incredibly important to the Chilean economy, accounting for over 30% of its annual exports.

Chuquicamata, one of the largest open pit copper mines and the second deepest open-pit mine in the world, has been in operation since 1910. "Chuqui", as it is popularly known, is located in northern Chile, 1,650 km north of the country's capital, Santiago. It is owned and operated by Codelco, and forms part of the company's Codelco Norte Division, producing some 855,000 tons of copper annually.

SCENARIO

Mining companies face many challenging conditions at their work sites, from landslides to security concerns, making real-time accurate surveillance and recording an extremely important element of operations. As such they need to be able to monitor what is happening on the ground from a safe distance, and also to pinpoint problems as they develop so that they can optimize safe working conditions and respond quickly to potential and developing problems.

Codelco needed a dynamic camera system solution that could provide long range surveillance (20 km) for security and safety, operate 24/7, report back distances of targets, be viewed from a control room, integrate easily, and that was cost effective, while providing all of these benefits. After enquiring with competing companies and being told there was no existing camera that could meet their needs in terms of either features or price, they came to Opgal.



Carlos Lopez
Geologist for Codelco at Chuquicamata

With the Accuracii XR cameras, engineers can now make operational decisions faster, saving time and money



Opgal has a long history of working closely with customers to find workable customized solutions to difficult surveillance problems. Once we understood the needs of the customer, our development team went to work, combining existing technologies into one integrated, cost effective package that seamlessly delivered every single one of the customer's surveillance requirements.

SOLUTION

To answer this request, Opgal has leveraged the Accuracii modular design to combine three separate sensors: a cooled thermal night camera for long range night surveillance, a CCD day camera for daytime surveillance, and a laser range finder (LRF) for accurately measuring distances, a need specific to certain industries and integral to mining companies like Codelco in particular. The resulting camera system was a modified version of the Accuracii XR, a unique and sophisticated surveillance solution unlike any previously in existence.

After the camera systems were shipped to the customer, Vumii® ensured a successful installation and implementation of the solution on site. This ensured that our customers were able to use the systems as they needed, proving that when you choose Opgal you get not only a solution to your surveillance needs, but also world class customer care from start to finish.

SUCCESS

The high quality thermal imaging modified Accuracii XR camera systems have been installed at two locations so far at the Chuquicamata mining site, and continue to perform well. They have provided better monitoring of the geological conditions in the mine, 24/7 surveillance, and comprehensive security coverage, not just meeting but surpassing customer expectations. The security team is able to survey the mine site from a central command center, receiving real-time alerts of potential security, landslide, and other safety threats. Opgal modular Accuracii XR systems continue to provide effective coverage of Codelco's biggest mining site, and are an excellent surveillance solution for this application.

Accuracii XR HD Key Features



Cooled Thermal Core

For maximum sensitivity and accurate threat assessment.



Long-Range Thermal Optics

Cooled thermal camera capable of Johnson's Criteria detection beyond 20km.



Analytics & Alerts

Unique image processing and enhanced contrast for video analytics systems.



Complete Customizability

Configurable with a choice of mid, long, or extreme long-range day color cameras.



Seamless Integration

Supports both ONVIF Profile S and Pelco D.



Ruggedized

Designed and certified to IP66, hot, cold, dusty, and other harsh environments.

