Measurement & Analytics

Vale Canada has successfully installed ABB's LM80 laser level gauges in its Totten nickel mine in Sudbury, Ontario

By installing ABB's LM80 laser level gauges the Totten underground mine has stopped worrying about jamming or overloading the crusher system. As the system is automated, the crusher no longer requires an operator to be present at the controls, all monitored from the operator room including ABB 800xA control system with Extended Operator Workplace (EOW).

Vale Nickel – Operations in Sudbury

Sudbury, Ontario, the mining capital of the world, has been producing ore for more than 100 years and Vale's operations here are among their largest on the planet.

Totten Mine is Vale's first new mine in the Sudbury Basin in over 40 years. It is the mine of our future – utilizing some of the best technology, automation and environmental management in the mining industry. Totten Mine was developed with industry leading environmental design features including three water treatment plants, enclosed material handling facilities and progressive closure planning.

As the mine ramps up to full production in 2016, it will employ approximately 200 people and produce 2,200 tons per day of copper, nickel and precious metals, for 20 years.

Benefits

We asked Mr Paul Horlings, Automation Specialist, Vale Totten mine and Mr Ron Legault, Operator Room Supervisor, Vale Totten mine: What are the main benefits of ABB's LM80 laser gauges installed in the crusher and the ABB control system 800xA?

"Vale Totten mine is an ABB mine and the 800xA Control System is keeping all ABB products together. We process 300 tons of ore per hour in Totten mine and ABB LM80 laser level gauges, installed on crusher jaws, is optimizing the performance in the crusher."

"The opening where the ore is falling down is approximately 3x3 feet and if we don't have ABB laser level gauges the ore will get stuck and jam up. The level gauge maintains an even level from feeder to crusher and the crusher does not get overloaded with ore."

"Previously we had a case where it took 9 hours to unclog the ore that was stuck in the crusher. Now, after installation of ABB LM80 laser level gauge and update of automation software, we don't have any more clogging problems. It frees up an operator for other activities."

Operator room with ABB 800xA control system with EOW and LM80 laser level gauges installed in Vale Totten underground mine, Sudbury, Ontario, Canada.

"With ABB LM80 laser level gauges we can do other things than just watching the crusher jaws on the EOW screen."

Mr Paul Horlings, Automation Specialist and Mr Ron Legault, Operator Room Supervisor, Vale Totten mine.

"Since 3 years back we have ABB's 800xA control system with Extended Operator Workplace installed and we are very happy and satisfied with the performance. With ABB LM80 laser level gauges we can do other things than just watching the crusher jaws on the EOW screen. In the operator room we have a very good overview of the mining process. We get lots of statistics, trends, etc and that is very good!"

ABB's supply to Vale Totten underground mine in Sudbury, Ontario, Canada

- ABB LM80 laser level gauges
- ABB 800xA control system with Extended Operator Workplace (EOW) solution
- Mine hoist – Double drum skip-cage hoist
- Mine hoist – Single drum auxiliary cage hoist

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