

Increasing Availability for Leading Nickel Producer Maintenance partnership celebrates over 10 years of continuous improvement

ABB Full Service® improves plant and financial performance.

"In 2011 ABB won the new Full Service agreement in tight competition. The entire Norilsk Nickel Harjavalta organization was unanimous in the decision to choose ABB Full Service yet again. We want to face our future production challenges together with a reliable partner."

- Tommi Heikkilä, maintenance manager at Norilsk Nickel Harjavalta

Strong partnership commitment with a jointly created strategy has enabled the systematic improvement of plant reliability and availability – the core elements of ABB's Full Service solution.

ABB has been responsible for maintenance operations at Harjavalta Industrial Park since 1999, when Outokumpu Harjavalta Metals Oy signed the first Full Service agreement with ABB. This was followed eight years later by a new partnership between Norilsk Nickel Harjavalta Oy and ABB, when Norilsk Nickel took over nickel production from OMG Harjavalta Nickel Oy.

Today, ABB has renewed the Full Service agreement with Norilsk Nickel Harjavalta Oy for another 3-year term beginning in 2012. ABB employs a full-time staff of 65 service professionals to maintain Norilsk Nickel's Harjavalta plants. In the current partnership, ABB has full responsibility for the site's maintenance operations and works closely with the client to develop future maintenance solutions. When the agreement was first signed, the focus was on cost effectiveness. Now emphasis is on reliability improvement and Life Cycle Management.

Norilsk Nickel (MMC Norilsk Nickel), together with its subsidiaries, is the world's largest producer of nickel and palladium, and is one of the leading platinum and copper



Tommi Heikkilä, maintenance manager at Norilsk Nickel Harjavalta Oy

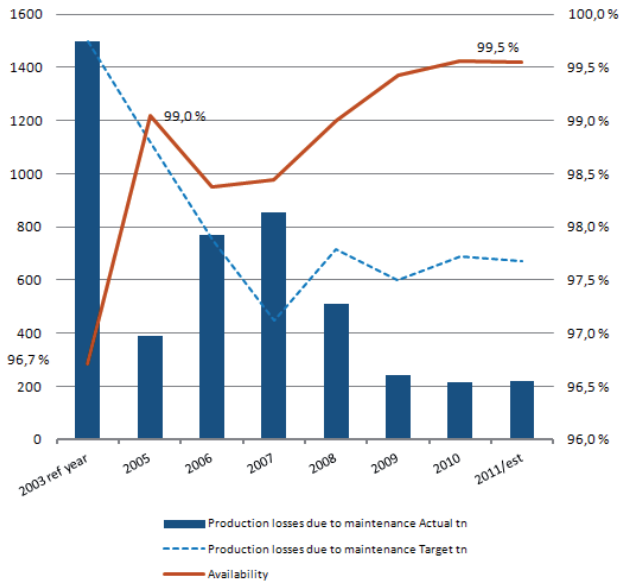
producers in the world. Norilsk Nickel Harjavalta Oy (NNH), located in Finland, is a member of the Norilsk Nickel Group and develops competitive products and production technology. NNH employs 230 people and produces roughly 60,000 metric tons of nickel chemicals and nickel metals annually.

Tommi Heikkilä, maintenance manager at Norilsk Nickel Harjavalta, explains why NNH wanted to continue the Full Service agreement: "We wanted to make sure the development of maintenance continues as it had before, and we saw that ABB has the capability to continue this development. We have had, and will have, many process changes that ABB have adapted, and will adapt to, together with our joint strategy. This requires the maintenance functions to be very flexible and the communication in this partnership plays a key role. Our common target is to optimize OEE and secure the most efficient utilization of our assets," says Tommi Heikkilä.

The current maintenance plan also pays special attention to predictability and the improvement of maintenance disciplines. According to NNH's Senior Manager, Plant Services Kimmo Tuomi, unnecessary production breaks are avoided by executing a service program every four weeks. This includes continuous onsite condition monitoring.

Increased emphasis on OEE (Overall Equipment Effectiveness) has also improved technical availability, which has risen from 96.7% to 99.6% between 2003 and 2010. This represents a decrease of 86% in production losses.

See graph for impact of maintenance on technical availability and production losses.



Production losses and availability

Norilsk Nickel Harjavalta has bought the entire output of cobalt and nickel from the new Talvivaara mine. As a result, the Harjavalta plant has increased onsite production capacity significantly. ABB's expertise and support played a crucial role in the commissioning and startup of new machinery. This, in turn, has enabled a smooth ramp-up of production capacity.

Kimmo Tuomi, senior manager at Norilsk Nickel Harjavalta, points out: "ABB's maintenance knows ABB devices." This is a good base to build the partnership on, now and in the future.

Benefits

- Maintenance has managed to improve effectiveness even when the production process has changed significantly
- Lost production volume due to maintenance downtime has decreased by 86% between 2003 and 2010
- Technical availability of production reached 99% in 2008 (96.7% in 2003) with availability levels at steady 99.4% – 99.6% (2008-2010)

Features

- Management and execution of all maintenance operations, including warehousing of spare parts and Norilsk Nickel Harjavalta Oy's production supplies
- Maintenance development, including
 - Root cause analysis
 - Signal analysis from the customer's production automation system
 - Optimizing warehouse functions
 - Development of equipment life cycle management model together with the customer
- Producing replacement investment proposals concerning customer's assets
 - Maintenance services for operational assets, including emergency maintenance, planned corrective maintenance, preventative maintenance and predictive maintenance
- Third-party management services

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