

MAINTENANCE TECHNOLOGY®

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MAINTENANCE LOG



Polishing A Contracted Maintenance Strategy

Maintenance was never a core competency for this Swedish manufacturer. Now working with an outside service provider, the company truly understands the meaning of "win-win."

Stainless steel is the fastest growing metal market in the world, not only for its popularity in kitchen appliances but industrial applications as well. The Outokumpu Stainless Hot Rolled Plate (HRP) factory in Degerfors, Sweden serves the latter.

Mladen Perkovic
Outokumpu Stainless
Hot Rolled Plate Plant

We can be experts at producing plates, while our contracted service provider can focus on keeping our machines running.

Outokumpu Stainless is one of the world's four largest producers of hot rolled plate with one of the widest range of products and steel grades within the stainless steel industry. Our Degerfors factory alone produces 120 thousand tons per year. The plates are extremely resistant to corrosion and wear, making them popular in challenging applications and environments including pulp & paper, oil & gas, chemicals and power generation.

Because our customers depend on us to keep our production lines running, we looked outside the company for maintenance assistance. Gradually, we increased our reliance on contracted maintenance services ("outsourcing") and raised the bar to higher standards. The strategy has led to our current full-service, performance-oriented, maintenance-management agreement.

Outsourcing evolution

When the plant opened in 1996, we had extensive knowledge of stainless steel production, but little in terms of equipment maintenance. To alleviate the burden, some maintenance tasks were managed internally and others were contracted out on an hourly basis to various service providers. At its peak, about 100 individuals were involved in plant maintenance activities.

For three years, our operational effectiveness (OE) and production availability were high, yet our maintenance costs were prohibitive. The break/fix approach was expensive, and tensions ran high between maintenance and production personnel.

By 1999, maintenance was still not a core competency for us. Thus, we resolved to forgo all maintenance responsibility and consolidate it under a single, more conducive contract. We chose to contract 100% of our corrective and preventive maintenance activities in Degerfors under a jointly developed, hourly-based ABB Full Service maintenance agreement.

The agreement established performance objectives that subjected the service provider to bonuses or penalties depending on its performance. This approach allowed the contractor to share the risks and rewards of plant maintenance, and provided the incentive to continuously improve performance. Soon, we had approximately 65 ABB Service employees working at the plant.

In 2001, the arrangement was transitioned from hourly rates to a fixed price so that we could have more predictable budgets. Performance incentives still provided rewards or penalties depending on the results achieved.





By 2006, an enhanced four-year contract was negotiated. Plant management, production and maintenance personnel were all involved in developing the new agreement, setting target performance levels and specifying when and how long the machines would be stopped should corrective maintenance be required. More services were added to the agreement and caps were established on certain service costs.

We began conducting weekly management meetings with the provider to assess equipment status, production schedules and maintenance priorities. In our plant, production is moving all the time and production priorities change every week. When corrective action is required, maintenance personnel are reassigned to the highest priority tasks based on equipment criticality and bottleneck location. Our priority classifications are as follows:

- **Level One – Accident risk:** Equipment problems that pose a potential danger for the operator are of first concern. All other maintenance is stopped.
- **Level Two – Outage in the hot part of production:** Equipment trouble in the hot rolling mill can destroy a lot of materials and suffer the greatest costs.
- **Level Three – Process transition:** Bottlenecks in moving

from one machine to another affect production throughput and must be minimized.

Operational benefits

One of the greatest advantages of our maintenance outsourcing agreement is having another company at the table. It provides a new way of thinking about maintenance and a new perspective on problems. We can be experts at producing plates, while our contracted service provider can focus on keeping our machines running. Moreover, we can put much greater pressure on an outside party than we would on our own employees.

When the Maximo system was brought in, we saw a tremendous improvement. Our previous maintenance management system was wholly inadequate, and work instructions were often written on paper. Now, all of ABB's maintenance practices and records are tracked in the new system. Outokumpu also uses the system to manage spare parts.

Our costs have decreased as a result of streamlined operations and better maintenance planning, giving us the ability to do more with less. Maintenance costs now are on par with other departments, while OE and production availability remain high.

The four-year agreement duration also has given our service provider greater incentive to invest more in its maintenance processes, since it now can be assured of seeing the return on its investments before the contract expires.

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Convincing results

Among other things, since 2001, our full service maintenance agreement has helped us:

- Decrease our total maintenance cost by 24%
- Reduce our maintenance cost per produced ton by 58%
- Achieve our current customer satisfaction score of 91.2%

What's most impressive is that, in the same timeframe, we've raised our production volume by 80%—to 120 thousand tons. In 2006, as part of our agreement, we added overall equipment effectiveness (OEE) as an additional metric. Much more preventive work is being done now, and the work is being completed more quickly and efficiently.

Ongoing improvement

The performance incentives in the full-service agreement benefit Outokumpu through ongoing operational improvements and the service provider through financial rewards. As such, we are always trying to do things better. Utilizing the industry's best maintenance practices and systems will facilitate our mutual desire for continuous improvement.

Our greatest test was convincing the corporate office of our strategy's value. Because Outokumpu's vision is to be number one in stainless, with success based on operational effectiveness, management questioned whether maintenance outsourcing fit with our corporate goals. Once we explained the arrangement, including the benchmarking, the best practices and the bottom-line benefits, management supported our approach. By entrusting an outside service provider with all our maintenance requirements under the full-service, performance-driven agreement, Outokumpu corporate and the Degerfors plant can look forward to further cost reductions and operational improvements. ❖

Mladen Perkovic is production manager for the Outokumpu Stainless Hot Rolled Plate (HRP) Plant.

About ABB Full Service

After years of downsizing and emphasizing core competencies, manufacturers can no longer rely solely on internal staff to meet the demands of designing, implementing, maintaining and optimizing their manufacturing infrastructure. Innovative partnerships that emphasize shared risk, common objectives, and business benefits tied to operating results are emerging to redefine supplier/client relationships.

An ABB Full Service® partnership is a long-term, performance-based agreement in which ABB commits to maintain and improve the production equipment. With a Full Service agreement, ABB takes over responsibility for the engineering, planning, execution and management of an entire plant's maintenance activities.

Bringing together world-class maintenance and reliability methodologies, parts and logistics management, online tools, and domain expertise, ABB Full Service increases asset effectiveness while keeping tight control of costs.

Each contract is measured against Key Performance Indicators (KPIs) developed with the client. To demonstrate its commitment to the client's success, ABB includes risk/reward sharing in its Full Service contracts, linking ABB's financial outcome directly to the client's performance.

Benefits:

- Improve plant performance
- Increase reliability and life cycle of production equipment
- Manage maintenance as a business
- Manage change and create a service culture
- Access to resources and knowledge of ABB's global network

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