

Improve Plant Performance Concentrate on the core business to gain better availability with lower maintenance costs

ABB Full Service® improves plant and financial performance.

“I can’t even think about taking care of all the activities that ABB Full Service® is now in charge of. They take care of maintenance and we concentrate on our core business. The leadership and commitment of the Service management has been driving the change in maintenance. This coupled with the implementation of a customer/supplier interface has changed the service attitude. Also the maintenance personnel have worked to become better, and we can see they are proud of what they do. For us, it is important that when we call for help, Full Service has the resources. The maintenance has improved a lot, but additionally we get more concrete input from the service team on how to improve the production process. We feel that improved maintenance has also contributed to the quality of the end product,” Peter Åsmo, Production Manager at ABB Power Products, Transformers & Components, Ludvika, Sweden.



ABB Power Products and Power Systems manufacturing sites in Ludvika, Sweden.

The ABB Ludvika history goes back more than 100 years. Today, it is one of the ABB Power Products' major production sites for manufacturing capacitors, circuit breakers, components, instrument transformers, surge arresters, and power transformers. During the last three years, the production has grown significantly and is expected to grow even more in the future. The two biggest production lines are for the Large Power Transformers. The plant has around 7000 different production machines and equipment that need to be maintained (i.e. winding machines, lifting equipment, plate shop, process equipment, painting, etc).

Until the end of 2005, the maintenance activities were managed by an internal support organization also responsible for machine workshops, parts manufacturing, plate shop and technical department. The management was continuously coping with the high pressure of manufacturing while dealing with the underperformance of the machinery shop. Under these conditions and with continuous cost pressure, there was no possibility to develop and manage the preventative maintenance in a proper way. The decision to outsource all activities was made in the end of 2005, with the execution of the first ABB Full Service® agreement beginning January 1, 2006. The agreement was renewed in April 2009.

The Full Service agreement in Ludvika covers all reactive and preventative mechanical, electrical and automation activities, including spare parts management, CMMS and maintenance Key Performance Indicator's (KPI's). As a part of the Full Service agreement, forklift maintenance, site internal logistics, production waste management and some projects in process engineering are part of available services additional to the plant maintenance services.

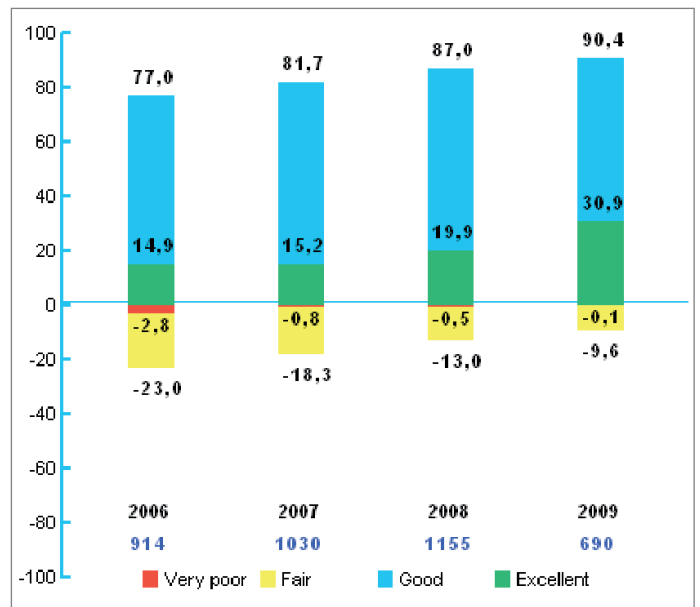
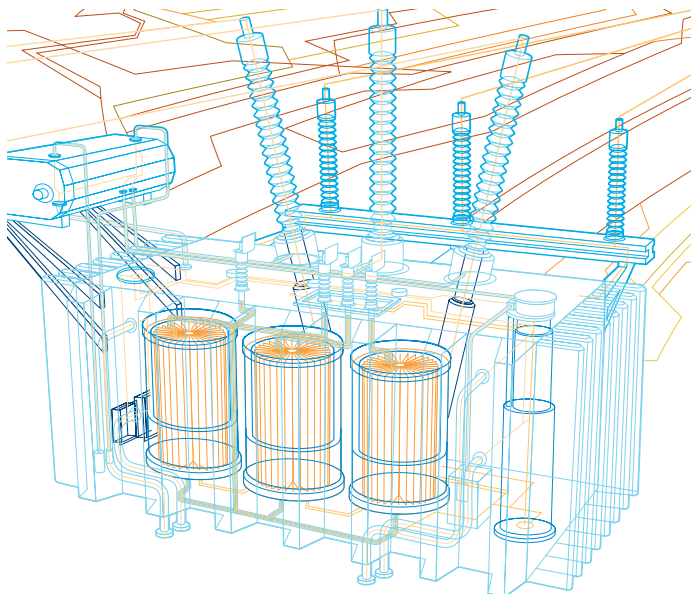
The implementation of Full Service has resulted in significant benefits for ABB Power Products. Most noticeable is the change in the maintenance mindset, which now has a high focus on preventive maintenance and availability improvement. The maintenance crew is well-trained and motivated, with continuously increasing safety awareness. The implementation of the latest MAXIMO CMMS system and OEE measurements in spring 2009 will further enhance the plant performance.

Investments in new machinery have increased the need for spare parts and the understanding of how the right spare parts can save a lot of time in an emergency breakdown. At the beginning of the agreement, the spare parts inventory was analyzed and the capital bound in spares was reduced. Today the decision on what spare parts should be in the warehouse is based on careful analysis of the parts needed and the control of capital invested in spare parts. The introduction of the warehouse lifts modules to storage spare parts led to various benefits, such as space savings, easy location of spare parts, cataloging, and longer storage time.

Logistics and waste management services are creating considerable value on top of the traditional maintenance service benefits. The internal logistics costs and forklift availability improved significantly when the new transportation methodologies were applied. The forklift repair shop has been developed, which has resulted in faster and more accurate logistic support with less costs.

Environmental and energy efficiency requirements, which originally drove waste management, are now accompanied by concrete profit-contributing measurements. All scrap metal, environmental waste, plastics, wood, paper and recyclable or scrap material are now properly managed, sorted and sold. The operation has become a solid profit-maker. The team that developed the waste management audit and execution concept is carrying out similar projects for other Full Service customers.

Like in similar manufacturing sites, there is a small process engineering projects team integrated in the Full Service agreement that offers tailored project services based on specific customer requests in process engineering, machine layout changes and modifications, and production support.



1. All questions altogether: Customer satisfaction has been improving constantly.

Benefits

- Reorganized maintenance to successfully respond to the increased production needs.
- Increased employee satisfaction to 77%, leading to more commitment
- Reduced relational maintenance cost by almost 10%
- Improved preventive maintenance from 13.5% (2006) to 35.5% (July 09)
- Transformed waste management from cost center to profit generator
- Doubled number of near misses, showing an improved safety consciousness
- Increased Customer Satisfaction Index from 77% to 90.4% in three years

Features

- Full Service, fixed price agreement including maintenance management (planned, preventive, corrective maintenance and modifications; contractors management; spare parts logistics), and engineering, labor and select materials.
- Key KPI's are maintenance-related availability, planned maintenance and customer satisfaction.
- Site material logistics and transportation
- Waste material management
- Facilities support services, factory layout changes

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