

## Improve plant performance Decreased maintenance costs and down time with increased productivity & availability

ABB Full Service® improves plant and financial performance.

“Our core competence is the product, and not the maintenance. ABB Performance Services stands for integrated teamwork on the highest level. Together we are strong.” –Urs Völlmin, Line Manager of ABB Turbocharging.



ABB Turbo Systems AG, Turbocharging.

ABB Turbo Systems AG is the world market leader in charging gasoline and diesel engines in the performance range above 500 KW via exhaust-driven turbochargers. Over 180,000 ABB turbochargers are actively utilized globally in ships, train engines, power stations, and heavy construction and mining vehicles in order to improve the performance of diesel engines. The organization has over 100 international agencies and service stations worldwide, and its headquarters are located in Baden, Switzerland.

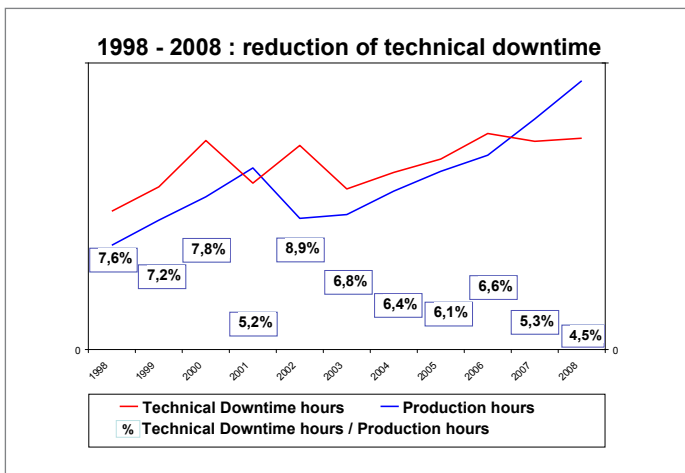
### Focus on reliability

The co-operation between ABB Turbo Systems AG Baden & Deitingen and ABB Process Automation Service started in January 2000, and led to signing the ABB Full Service® agreement a year after. Since that, ABB maintenance employees have successfully delivered value to the customer by executing the ABB Full Service® concept.

The main KPI measured at ABB Turbo Systems AG sites in Baden and Deitingen is the technical downtime, which signifies the number of technical breakdowns. The graph shows clearly that during the partnership, the technical downtime has reduced significantly. It has reduced by 3.3 per cent units from 7.8% to 4.5% within eight years. At the same time the production work load has increased by 30%.

### Creating service culture

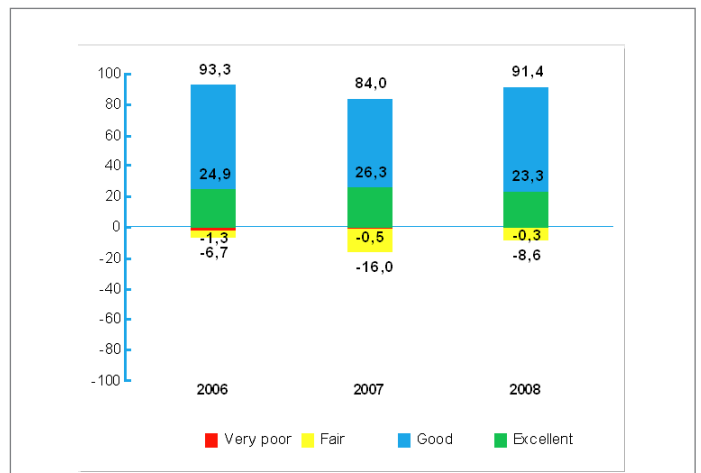
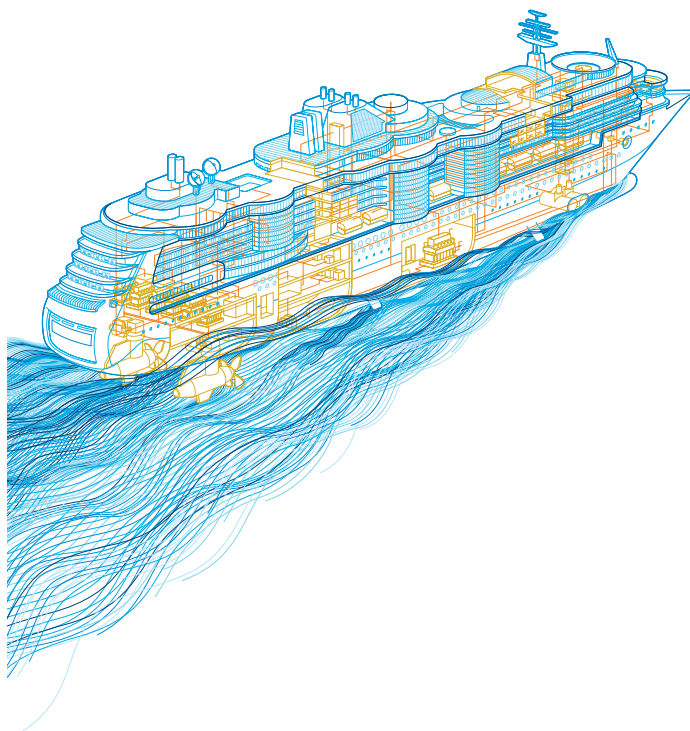
A lot of emphasis has also been put on ABB maintenance personnel training and education in order to deliver better



Reduction of technical downtime 1998-2008

services and more value to the customer. Also a program to improve the Health & Safety has been executed. The hard work has paid off, and the customer satisfaction survey results also verify the existence of a successful partnership. The customer says that ABB personnel are professional people, with service attitude. The helpfulness and responsiveness of the ABB maintenance professionals is continuously creating value for the customer, and for this, ABB Turbocharging would be very likely to recommend ABB Full Service® to others, as well.

The close co-operation between ABB Turbo Systems AG and ABB Process Automation Service has contributed to a good understanding and collaboration between both parties at the site. ABB's methods and approach in maintenance have been highly valued, and due to the good maintenance techniques and exposure to the best maintenance practices, good results and improvements have been gained at ABB Turbo Systems AG, Baden and Deitingen.



Customer satisfaction of ABB Turbocharging

#### During the nine years

- Increasing availability over 3% with full utilization of tools and transparency: Root Cause Analysis, resource utilization and impact of maintenance, focus in preventive and predictive maintenance, Total Productive Maintenance introduction and day-to-day realization, Failure Modes, Effects and Criticality Analysis for selected key and bottleneck equipment
- Systematic planning and execution: Full utilization of CMMS (Computerized Maintenance Management System)
- Production performance improvement: Engineering and executing process improvements
- Reduced downtime from 7.8% to 4.5%
- Increased production by 30%
- **Common success**
- Annual increase of production hours with the same, existing equipment/machinery, with the same size of maintenance team
- High level quality of final products: Precision of the production equipment (among other things: continuous laser measuring)

#### Delivering high quality service

- Total maintenance responsibility
- Introduction, project management and enforcement of Total Productive Maintenance (TPM)
- Process improvements and Upgrades.

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