

## Case Study

### Siemens AG, Industrial Solutions and Services

### MTU Aero Engines GmbH & Co. KG

Internationale Fachmesse für industrielle Instandhaltung

**M,O,C, München**  
**18.-20. Oktober 2005**

International Trade Fair for Industrial Maintenance

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## Optimizing maintenance at MTU using a maintenance strategy and an organization oriented to the company's business objectives

### Sector

1. Maintenance services / Maintenance management for plants/machinery
2. Service / Tribology
3. Repair / Technology

### Industry

Aerospace industry

### Brief description

- Concept development, organization and planning of mechanical and electrical maintenance for machine tools, production and processing systems and related technical equipment
- Control all maintenance sub-procedures
- Perform preventative maintenance and repair work
- Perform inspections in compliance with BGV/A3 and coordinate secondary procedures such as coolant and lubricant services

### Tasks

Take over maintenance operations for more than 6,000 machine tools, production and processing systems at the Munich-based turbine plant of MTU Aero Engines GmbH.

### Preparation

The first step was for both partners to develop a concept for and to implement a "maintenance control center" to centrally coordinate all tasks and control all maintenance procedures. They then collaborated to develop and implement a concept for gradually optimizing the company's maintenance operation that was tailored to MTU's business objectives and processes.

### Customer-specific optimization concept for maintenance

*The joint venture between MTU Aero Engines GmbH & Co. KG, Germany's leading manufacturer of civilian and military engine components and turbines, and Siemens AG, Industrial Solutions and Services, was established in mid-2001. The partnership's recipe for success is the consistent implementation of a customer-specific optimization concept for maintenance at MTU.*

When MTU awarded the contract to Siemens, Siemens AG/Industrial Solutions and Services assumed responsibility for MTU's entire mechanical and electrical maintenance operation for more than 6,000 machine tools, production and processing systems, for performing inspections in compliance with BGV/A3 and for coordinating all coolant and lubrication services. Siemens is responsible for scheduled maintenance such as regular inspections and service work as well as correcting machine malfunctions and making repairs. All maintenance procedures are coordinated by a central maintenance control center that accepts malfunction reports, manages scheduled maintenance work/timetables and compiles schedules for materials and personnel. It uses the SAP/R3 PM maintenance module, which ensures optimum interaction between the scheduled maintenance measures and MTU's operational requirements. It also gives MTU an overview of all maintenance measures and all services rendered by Siemens at all times.

A project team consisting of electrical-engineering and mechanical maintenance specialists at Siemens – including engineers, technicians, foremen and skilled workers – as well as third-party service providers and the system manufacturers' service personnel whenever necessary, keeps machines and systems running

smoothly. According to Mr. Keller, Head of Rotor/Stator Production Services at MTU, "Siemens has several years of experience with maintenance projects, some of which are very complex, and a team of competent maintenance specialists. So we are certain that the necessary level of maintenance quality is being reached."

### Benefits

- Increased plant availability as well as improved productivity and efficiency in the entire maintenance operation.
- Improved process and cost transparency
- Reduced coordination effort
- Makes maintenance costs easier to plan

### Customer

**MTU Aero Engines GmbH. & Co. KG**, a subsidiary of MTU Aero Engines holding AG in Munich, is Germany's leading enterprise in the development, manufacture and maintenance of civilian and military engines and their subsystems. Together with its subsidiaries in North America, South American and Asia, MTU is also the world's leading provider of maintenance services for civilian engines. The company generated just less than 2 billion euros in sales during fiscal year 2004.

Internet: <http://www.mtu.de>

### Contractor

**Siemens AG Industrial Solutions and Services (I&S)** provides innovative solutions, products and services for increasing the productivity and competitive capability of companies in the processing, manufacturing and infrastructure industries. Its portfolio covers the entire lifecycle of industrial and infrastructure systems, from planning and construction to operation and the integration of MES solutions to maintenance and modernization. I&S offers a comprehensive range of services in the maintenance sector: "SIMAIN<sup>®</sup> Maintenance Services are technical support services that predominantly focus on restoring operations and plant availability. "SIMAIN<sup>®</sup> Business-based Maintenance" consists of services for optimizing maintenance processes, from consulting and implementation to optimization programs and the complete or partial takeover of maintenance processes that have been tailored to the strategies and operational requirements of the company in question.

Internet: <http://www.www.siemens.de/siemensindustrialservices>

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### Maintain 2005

Munich International Trade Fairs celebrated the premiere of MAINTAIN, the International Trade Fair for Industrial Maintenance at the M,O,C, Event Center, from October 18 – 20, 2005. MAINTAIN is the only exhibition in Germany that provides experts and decision-makers in the processing and manufacturing industries with non-sector-specific information about modern solutions for the inspection, repair and maintenance of industrial plants and machinery. Thanks to practice-oriented reference projects, optimum market proximity is guaranteed. The fair examines the topic of industrial maintenance as a core competency and a factor of production. The exhibition is rounded out by forums and an up-to-date Internet platform.

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