

ARCHIBUS Success Story



China's 3rd Largest Steel Maker Assures Operational Continuity with ARCHIBUS

Capital Steel is one of China's largest producers of steel and was also one of the largest sources of air pollution from its five mills surrounding Beijing. Pressure from government to improve air quality prior to the Olympics, however, compelled the manufacturer to move some of its steel manufacturing operations to the coastal city of Tangshan, where it completed a four-year project building a new and vastly more efficient plant.

Now Capital Steel's new Caofeidain Mill is operating at peak efficiency thanks, in part, to its Equipment Monitoring System (EMS) incorporating ARCHIBUS Preventive Maintenance (PM) for monitoring more than 100,000 inspection points.

Integrating ERP Systems

Founded in 1919, state-owned Capital Steel, a division of the Shougang Corporation, may be an old company but it was one ready to adopt new ideas and technology in order to become both globally competitive and environmentally more sustainable. Before its move to the new facility, in fact, the company was the biggest source of air pollution in Beijing and responsible for 23% of inhalable particulates and 8% of water consumption in that city.

Following a series of mergers with, and acquisitions of, other steel manufacturers, Capital Steel consolidated its plant capacity at the new Caofeidain Mill, where it can take advantage of Tangshan's port location for more convenient product shipment. The company's new facility also gives it proximity to nearby coal deposits that power its processes for making hot rolled, cold rolled, and specialty steels.

A model of advanced manufacturing practices, Capital Steel has implemented and integrated leading-edge software platforms to run all aspects of its business. It has, for example, integrated its SAP/3 ERP administrative and financial system with manufacturing and automation systems from a wide range of suppliers including GE, Honeywell, Siemens and many others to ensure optimal business efficiency.

A key piece of that infrastructure is ARCHIBUS Preventive Maintenance, central to the company's equipment spot checking protocol for minimizing production interruptions.



Vital Statistics

Organization:

Capital Steel

Location:

Caofeidain, Tangshan City, China

Facilities Facts:

More than 100,000 equipment inspection points for preventive maintenance procedure

ARCHIBUS Applications:

Preventive Maintenance, Space Inventory & Performance, Overlay with Design Management for AutoCAD & Revit, and Web Central

3rd Party Applications:

SAP/3 and other automation/manufacturing ERP systems

Reason for Implementation:

Equip new steel manufacturing facility with state-of-the-art FM applications, including equipment spot checking system incorporating PDAs

Benefits Gained:

Lower rates of unanticipated equipment failure, improved operational efficiency, superior space and drawing management

Plans for Future Use:

Roll-out to other Capital Steel plants

Business Partner:

ARCHIBUS Solution Center - Beijing

Web Site:

<http://www.shougang.com.cn>

ARCHIBUS PM: Over 100,000 Spot Checks

“Preventive Maintenance automatically generates spot check plans and schedules so that inspectors don’t miss check points or make mistakes in recording results,” said Steven Zhang, Research and Development Manager of the ARCHIBUS Solution Center-Beijing. “It provides the comprehensive technical support for equipment condition analysis, while providing detailed information for equipment maintenance.”

Also implemented at Capital Steel are ARCHIBUS Space Inventory & Performance, Overlay with Design Management for AutoCAD & Revit, and Web Central.

The ARCHIBUS-based spot checking sub-system links to PDAs carried by inspectors as they conduct their inspection routines. The company’s team of 210 inspectors (70 inspectors are assigned to each of the plant’s three 8-hour shifts) surveys more than 100,000 inspection points looking for abnormal noise, heat, emissions or other tell-tale signs that machinery isn’t operating properly.

“The Web-enabled PM application and PDAs provide a flexible framework that’s easy to customize and integrate with other systems,” says Zhang, who notes that in addition to intelligent navigation and schedule management, the PM system provides data communications capabilities, as well as query, statistics and data analysis functionalities. The EMS system, of which PM is a key component, interfaces with the SAP R/3 implementation that manages plant production, sales distribution, materials management, and quality management to provide a comprehensive facilities management solution.

“We had visitors from Capital Steel’s other plants to review this implementation recently,” says Zhang. “The expectation is that we will roll out the PM solution to those facilities, and to other steel manufacturers in China as well.”

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for Real Estate, Infrastructure,
and Facilities Management
in the World

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