

Shijiazhuang Iron & Steel steals a march on the competition with IBM and SAP.

Overview

■ Business Challenge

Shijiazhuang Iron & Steel found that there was literally not enough space at its manufacturing location to increase production volumes. Faced with growing competition from high-volume manufacturers able to capitalize on better economies of scale, the company needed to make a radical change in direction in order to maintain profitability. Choosing to reinvent itself as a producer of specialist steels, Shijiazhuang determined that its existing IT systems could not support the stringent quality standards required by customers.

■ Solution

Shijiazhuang implemented mySAP ERP software on the IBM System i5™ platform, replacing disjointed, largely manual systems with a highly integrated solution that connects every business function in the production cycle and shares information automatically. The SAP and IBM technologies are driving a radical transformation in the organization, enabling a view of quality that spans multiple functional areas, rather than being restricted to the final stage in manufacturing.



■ Key Benefits

- Improved control of manufacturing processes
- Ability to meet demand for high-quality steels in a new market sector
- Capability to exploit high-margin marketplace

Shijiazhuang Iron & Steel Company in Hebei, China, is a steel manufacturer with 4,300 employees. Shijiazhuang's main marketplace is China—the world's largest producer of steel—with expanding operations in Japan, Korea, Vietnam and Europe.

The company's factory, located in Shijiazhuang City, is restricted to a maximum site size of 1.2 square kilometers, which effectively limits its output to two million tons of steel per year.

“The business needed a solution which would be highly reliable and available, secure, and resistant to malicious attacks, and the IBM System i5 platform stands out as a class-leader.”

– Tian Guo Qing, vice general manager, IT Department, Shijiazhuang Iron & Steel Co.

Business Benefits

- Ability to deliver the high quality its new customers demand
- Better supply chain management and an integrated view of operations increase efficiency and ensure high margins.
- Combined production efficiency with stringent quality controls enables Shijiazhuang to move into a new, high-margin marketplace that its commoditized competitors cannot enter.

In an industry where scale brings cost advantages, it was clear that to be able to grow sales and break into international markets meant either moving to a new location or finding a new way to extract greater value from the existing capacity. As relocation was not an option, Shijiazhuang decided to refocus its business on manufacturing specialist high-quality steels for the automotive industry.

Moving to a higher-margin business model meant that Shijiazhuang needed to emphasize precision and quality control in its manufacturing processes. The existing systems for controlling business processes and delivering management information were largely manual, and could not support the end-to-end view of quality control that Shijiazhuang required to transform its business.

Automated data management

To satisfy its intended customers in the automotive industry, Shijiazhuang needed to be able to deliver high-quality specialist steels at relatively short notice. Working with IBM, Shijiazhuang selected mySAP ERP as an integrated suite of applications that would reduce its reliance on manual input, deliver real-time management information across multiple functional areas, and enable a cross-functional view of quality control.

IBM supported every aspect of the transformation of Shijiazhuang's business model, from helping design new working practices to implementing the information systems. Shijiazhuang made radical changes to both its organizational structure and its working practices, flattening the existing hierarchy of management and bringing together functional areas to enable a single view of the end-to-end production cycle.

"The project was an excellent collaboration with IBM," says Tian Guo Qing, vice general manager of the IT Department. "The experience and expertise of the consultants made Shijiazhuang confident that this major change to our business model could be accomplished successfully."

He adds, "Previously, we saw sales, production and finance as separate parts of the business, and our information systems did not allow a clear view across them. Implementing the SAP solutions has enabled us to integrate the business, and to drive quality control throughout the full production cycle. Quality control is no longer limited to checking our output; rather, it pervades every process from procurement through manufacturing to delivery."

"SAP offers us a mature ERP application customized to our business needs. The combination of the IBM System i5 platform and IBM DB2 with world-class support from IBM Global Business Services provides a secure, reliable architecture at very low total costs of operation."

– Tian Guo Qing

Class-leading stability

As the platform for the new SAP applications, Shijiazhuang chose IBM System i5 servers and IBM DB2® software. The power and scalability of the new i5 servers enabled the company to reduce the total number of systems, cutting administrative costs, while preserving the ability to handle increased workload as the company grew beyond its Chinese borders.

The choice of IBM System i5 platform was based on its class-leading stability and low costs. “Most of our competitors need two servers to run their systems: only IBM could offer a single server solution capable of meeting all our business needs,” says Tian Guo Qing. “This reduced the cost of implementation, and has ongoing advantages in terms of maintenance, enabling Shijiazhuang to keep a low IT department headcount.

“As IT professionals in a manufacturing company, my colleagues and I need to concentrate on applying IT to business problems, not on IT for its own sake. The business needed a solution which would be highly reliable and available, secure, and resistant to malicious attacks, and the IBM System i5 platform stands out as a class-leader.”

Simplifying business processes

By using mySAP ERP as a single, integrated management system with data only entered once, Shijiazhuang has improved internal efficiency as well as supporting the move to new working practices. The mySAP software includes applications for materials management, production planning and quality management that use the same data as project management, financials, and sales and distribution. With shared data provided automatically, the company has been able to remove administrative posts and reassign employees to more productive, customer-facing tasks.

“Before, a report would have to be approved by a departmental manager, the finance controller, the vice general manager, general manager and so on,” says Tian Guo Qing. “It was a time-consuming process, and reduced our ability to react quickly to changing market conditions. Now, when we get new stock, warehouse staff members simply enter it on the system and an accounting report is generated automatically in the finance department. We always know exactly what we have in stock, exactly what our sales are, and can track orders through the manufacturing process, so the business runs much more efficiently. The ability to control production more precisely supports our transformation into a specialist steel producer, by helping us to deliver to our automotive customers within demanding time frames.”

Key Components

Software

- IBM DB2 for IBM i5/OS®
- SAP software

Hardware

- IBM System i5 570
- IBM eServer™ iSeries™ 820 and 825

Services

- IBM Global Business Services
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Why it matters

Shijiazhuang Iron & Steel implemented an advanced SAP solution and IBM technologies to ensure that its steel products would satisfy the demands of its intended customers in the automotive sector. With more rigorous production control information now available, and a view of quality that encompasses the entire chain of production processes, Shijiazhuang is successfully transforming its business and gaining new customers in a new market sector.

Prior to the introduction of the SAP solutions, there were no standards for reporting or data management, so each department's reports would differ widely. The company had to manually compile multiple reports into a single view at the end of each month, which was time-consuming and inefficient. The SAP software solutions enable Shijiazhuang to generate consistent management reports automatically, without human intervention, saving time and increasing general business productivity.

"It was an important factor in our decision that SAP produces a version of its software specifically for the metallurgy industry," adds Tian Guo Qing. "We knew that the solution would be able to deal with the challenges we face in this industry, and would help us stay ahead of our rivals—we were the first Chinese metallurgy company to implement SAP software."

A new position in the value chain

With the SAP software running on the IBM infrastructure, Shijiazhuang has turned its limitations in total production capacity and location to its advantage. The detailed control and rapid, automated delivery of information provided by SAP applications and IBM System i5 technology is enabling Shijiazhuang to meet customer demands for high-quality steels in a new sector of the market. Shijiazhuang is now focused on the high-margin automotive market, which will enable it to increase profitability without needing to increase trade volumes.

"With the help of SAP, Shijiazhuang can combine efficient production techniques with the stringent quality controls of precision engineering, enabling us to exploit new, high-margin markets that our competitors cannot enter," says Tian Guo Qing. "IBM helped us to see that the inability to physically expand our site—which had seemed a grave disadvantage—could be viewed as an opportunity to move to a more profitable line of business in a less crowded marketplace."

He concludes: "SAP offers us a mature ERP application customized to our business needs. The combination of the IBM System i5 platform and IBM DB2 with world-class support from IBM Global Business Services provides a secure, reliable architecture at very low total costs of operation."

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