

Midrex seizes international iron markets with the collaborative power of SMARTEAM



"SMARTEAM gives us a competitive advantage in a global market, so we can sustain our leadership position." – Dan Sanford, Vice President of Operations, Midrex Technologies Inc.

Highlights

- *Midrex needed to collaborate on-line with suppliers, partners and customers, minimising operational expenses while maintaining tight quality control*
- *SMARTEAM's Web access, real-time data replication and workflow management enable concurrent engineering and a complete product data audit trail*
- *SMARTEAM helped streamline projects and reduce costs, achieving payback within a single project cycle*

Leadership from innovation

At the core of two-thirds of the world's direct reduction industry is a relatively small, remarkably agile group of innovators. Since 1969, Midrex Technologies Inc. has built 53 plants in 19 countries, and become a global technology leader in high-purity direct reduced iron used in steelmaking.

Its patented technology, using natural gas, is both energy-efficient and environmentally friendly. Midrex also develops other process technologies for the iron and steel, environmental, energy and non-ferrous metals markets.

Such technology is the brainchild of a 60-person firm based in Charlotte, North Carolina. Operating as a process technology, engineering and procurement company, Midrex has reached its leadership status by leveraging relationships around the world.

Typical projects range from \$100 to \$200 million. Midrex handles design and engineering services and equipment supply, while partners and suppliers handle the actual construction.

Conquering time and distance

Through its use of offshore engineering partners, Midrex has acquired a relatively low-cost pool of talent. It has also conquered the boundaries of time and distance, thanks to SMARTEAM PLM solutions from IBM. The result is a tightly integrated supply chain, complete quotation and bidding management, ISO 9000 compliance and collaborative project execution. Midrex had been relying on a document management system that was neither Web-enabled nor capable of controlling workflow.

"The need to collaborate with our offshore engineering partner was the main driver for change," said Dan Sanford, Vice President of Operations at Midrex. "We needed real-time replication of data files and Web access to our project database for our distant suppliers, partners and customers."

Upon project bid, Midrex loads up a project site template with knowledge from its database, then begins modifying. Plants are largely



standardised, so a large percentage of any project's content is re-used. Once the contract is signed, Midrex uses SMARTEAM to source, update, modify and collaborate upon flowsheets, technical specifications and all the requisite project knowledge in various files and formats needed for the specific project at hand.

Control and ISO compliance

Documents and correspondence are posted and version managed in SMARTEAM. Every email is catalogued, every revision tracked. The system is integrated with the company's AutoCAD, office and email applications, and plans exist for future integration with an ERP system now under review.

"As we implemented, we realised SMARTEAM could be the backbone for our ISO 9001 compliance," says Mr. Sanford. "ISO requires you to have a set of processes and controls

to ensure integrity of the product to the design, and an audit trail of who touches what. All of that is kept electronically in SMARTEAM; when ISO auditors come in, we can demonstrate our quality management system and simply print out the required reports."

After-market advantage

Unlike some engineering companies, Midrex carries on a thriving after-market parts business, representing as much as 30 percent of revenues. The cataloguing and parts numbering capability in SMARTEAM will provide a distinct advantage.

"We don't just build it, throw it over the fence and disappear," explains Mr. Sanford. "We maintain documents 'forever' which is why PLM is so much more appealing than document management."

The Results

Every penny Midrex spends must be worthwhile, and the Return On Investment on SMARTEAM was compelling.

"Without SMARTEAM, we would have to hire local engineering staff at higher fees, or assign people to supervise offshore work. Either option would be expensive," says Mr. Sanford. In these cost savings alone, he estimates SMARTEAM pays for itself within a single project cycle.

For more information

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