

Industrial machinery and heavy equipment

Avcon Controls

Teamcenter provides a platform for integrated design development

Products

Teamcenter, NX

Business challenges

Increasing competition from domestic and foreign players

Developing high-quality products at competitive prices

Managing data for design variants

Re-use of design data

Optimizing resources and collaboration across locations

Documenting designs for certification of regulatory compliance

Keys to success

Implementation of Teamcenter for PDM

Integration of Teamcenter with NX design tools

Optimizing resources, information and technology

Results

Reduced design manpower requirement by 50 percent

Improved security of intellectual property

Easier access, management and re-use of data



Teamcenter and NX help Avcon Controls streamline processes and optimize use of resources

Innovation, quality and value drive Avcon

Avcon Controls Pvt. Ltd. (Avcon) is known throughout India as a manufacturer of high-quality products: solenoid valves, ball and butterfly valves with pneumatic and electric actuators, and gas control valves and regulation products. The company manufactures more than 1,000 products with many variants.

With manufacturing facilities in Mumbai and Pune and a tool design manufacturing

shop at a different location in Mumbai, Avcon serves customers in several process control industries including pharmaceuticals, biotechnology, food, textiles and cement. The company has gained ISO 9001:2008 certification for its quality processes, and is committed to deliver products that meet international quality standards. Through advanced research and development, a highly motivated technical and managerial team, and a robust infrastructure of sophisticated in-house design and manufacturing, Avcon is an innovative and forward-thinking company committed to product quality and value.

Results continued

Optimized use of software licenses

Fully digitized 2D and hard-copy data

“Teamcenter helped us a lot in terms of searching existing data and projects executed in the past and finding adequate details.”

Design Manager
Avcon Controls

Maintaining quality and reducing costs

Avcon serves a saturated market with intense competition from both foreign and domestic companies. While quality is crucial, price sensitivity makes it essential to offer products at competitive rates. To achieve this goal, the company aims to continuously improve processes and use advanced product development technologies.

In 2012, Avcon adopted NX™ software from product lifecycle management (PLM) specialist Siemens PLM Software as its product development system. The company purchased multiple licenses of NX that are shared by various designers and

engineers at its three locations. Avcon personnel in the tool manufacturing shop in Mumbai and in the design and manufacturing plant in Pune were frequently competing for access to the software while licenses at the headquarters location were idle. Avcon sought to improve license usage to balance the demand for NX design, engineering and manufacturing functions.

Inefficient data management slows design, increases costs

With such a broad and varied product line, the company also wanted to improve design data management. In many cases when data from previous designs was not





readily accessible, Avcon often designed products from scratch, resulting in repetitive design work that was expensive and time-consuming.

Most of the company's 2D design data was archived in hardcopy format, so managing drawings was also an issue. Maintaining old data in 2D and hardcopy format was tedious and time-consuming, and re-use was difficult or impossible. Data loss due to wear and tear was likely, and drawings were frequently misplaced and sometimes taken outside of secure offices, and there was no backup. Lacking a central data repository with streamlined access and security, Avcon was challenged with data loss and extra time and costs for redesign.

The data management problem was also compounded by the certification requirements of government and private agencies. Certification of valves is critical for Avcon's business, and valves must undergo both physical and simulation testing, with complete design documentation delivered to the certifying agency. Without strong centralized data management, the company was challenged to deliver the required data quickly and efficiently.

Finding a solution in Teamcenter

In 2012, Avcon communicated its objectives and requirements to DesignTech Systems, a Siemens PLM Software channel partner and major distributor in India who had assisted with the NX implementation. DesignTech recommended Teamcenter® software for product data management (PDM) and NX Embedded Client. The proposed solution would enable Avcon to establish a centralized data management

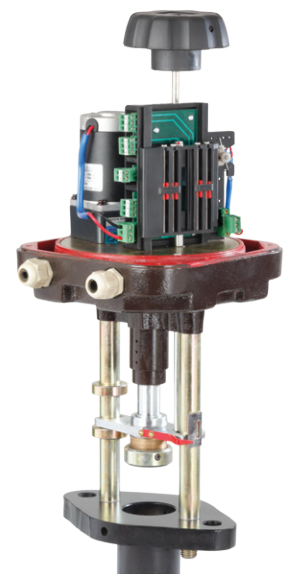
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Design Manager
Avcon Controls

system to serve its operations at all three company locations, and would seamlessly integrate the design, engineering and manufacturing functions of NX with Teamcenter capabilities for vaulting, check-in/check-out, revision management, attribute synchronization and searching.

To implement the solution, Avcon established an independent server, and connected its three locations to the server via the Internet. All of the data formerly housed separately in the company's offices was entered into the Teamcenter database for universal access and central management.

To better utilize the company's 2D data, all of the hardcopy drawings were digitized and entered into the Teamcenter data management system. To enable more effective sharing of the NX licenses, each was augmented with the embedded client, and the licenses were allocated from the central server rather than at separate offices.



“Teamcenter enables us to have more control over data, projects, resources, security and protecting our intellectual property.”

Rajan Kawale
Managing Director
Avcon Controls

Better control, visibility and security with Teamcenter

The implementation of Teamcenter at Avcon brought immediate benefit to the company. Designers and engineers at all three locations now have clear visibility and streamlined access to all product data, which is organized and stored securely in a single location with regular backup to protect Avcon’s intellectual property.

“Teamcenter enables us to have more control over data, projects, resources, security and protecting our intellectual property,” says Rajan Kawale, managing director at Avcon.

Data re-use is easier with the centralized data bank. Designers can readily search for and access data for the entire product line, and re-use it as needed in new designs instead of starting from scratch. The same data is immediately accessible from any of the company’s offices, and directly from the NX user interface, so that it can be easily incorporated in current designs. Employees no longer waste time looking through cabinets and heavy files – they can execute comprehensive searches by attributes very quickly and easily. The design manager at Avcon Controls says,

“Teamcenter helped us a lot in terms of searching existing data and projects executed in the past and finding adequate details.” Streamlined processes make it faster and more convenient to locate, manage and update product data. With clearer visibility, the company can also exercise more control over project schedules and timelines. Avcon’s design manager notes, “Teamcenter helped us eliminate manual processes and reduce our design manpower requirement by 50 percent.”

Kawale agrees, “Teamcenter helps us track projects, thus giving us more overall operational control and the ability to expedite projects. We can get to market on time, which is crucial in our business.”

Use of Teamcenter and NX have also significantly reduced the time and costs associated with providing product and process data required for certification. Avcon can now readily locate, assemble and deliver technical documentation to agencies for rapid certification of its products.

In addition, the solution has helped to optimize the use of NX licenses. With the work distributed across locations, designers and engineers can balance the use of NX as needed, avoiding bottlenecks and eliminating idle licenses. Multiple team members can now work efficiently and concurrently on projects, using up-to-date data that’s readily available.



Solutions/Services

Teamcenter
www.siemens.com/teamcenter
NX
www.siemens.com/nx

Customer's primary business

Avcon manufactures high-quality solenoid valves, ball and butterfly valves with pneumatic and electric actuators, and gas control and regulation products.
www.avconindia.com

Customer location

Mumbai
India

Partner

DesignTech Systems Ltd.
www.designtechsys.com

Future plans

The development cycle for Avcon valves typically takes about four months, from design, prototyping and assembly through testing and certification. To further reduce cycle time, the company is evaluating Teamcenter project management tools to improve process scheduling and management, which are currently performed using Excel® spreadsheet software. Avcon also plans to use Teamcenter tools for bill of materials (BOM) and variant management.



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Rajan Kawale
Managing Director
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