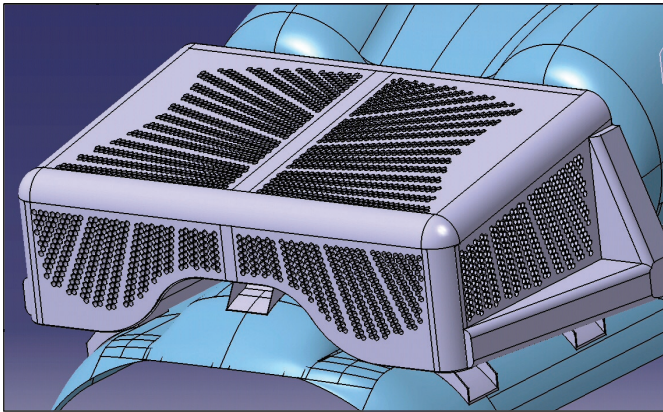**IBM**

Pall Corporation
CATIA V5 simplifies design process and speeds development at Pall

"We want to be cutting-edge with our design capability, so our intention is to expand CATIA V5's use further into the Pall Corporation."
David Huggett, Engineering Director, Pall Machinery and Equipment, Portsmouth

Highlights

- *Pall needed a computer aided design (CAD) environment upgrade that would provide cutting-edge design capability, while simplifying system management and enhancing collaboration with customers*
- *Pall's Portsmouth, UK design centre migrated 40 seats of CATIA V4 to CATIA V5, running on a Microsoft™ Windows™ platform*
- *CATIA V5 has helped Pall to simplify its design processes, improve collaboration with customers, and ease transfer of designs to production.*

Specialised products require close design collaboration

Pall Corporation designs and manufactures specialised filtration, separation and purification equipment for a broad range of industries. Its Portsmouth, UK site designs products for removing contaminants down to one micron in size for use in industrial, defence, aerospace and automotive applications. Designing custom filtration products requires close collaboration with Pall's customers and with its own manufacturing sites across the globe.

The Portsmouth site needed to upgrade its existing CATIA V4 system, but sought a solution that would save on hardware costs by functioning in a Windows environment and ease system management. In January 2002, the site migrated to CATIA V5.

"A major factor in our decision to upgrade to CATIA Version 5 was the ability to run on a Windows platform," said David Huggett, Engineering Director, Pall Machinery and Equipment, Portsmouth. "For us, the move from UNIX® provided cost effective hardware and a much simplified system management."

CATIA V5 fits the bill for Pall

With many of Pall's customers also using CATIA, it was important for the company to be able to work in both Version 4 and Version 5, allowing them to share data seamlessly.

"Collaboration along the supply chain is crucial to arriving at a timely, cost effective and technically competent solution," said Huggett. "The plan is to work exclusively in Version 5 using the older version only for very minor changes to existing products."

Pall employs a variety of CATIA modules, including Generative Shape Design for hybrid modelling and Generative Shape Drafting. In addition, it relies on Sheet Metal Design 2, Structural Analysis 2, Electrical Systems Functional Definition 2, Systems Routing 2 and the STEP interface.

SMARTEAM

CATIA

IBM's BCS (Business Consulting Services) group has assisted with the migration, providing training and support to introduce best practices and new methodologies to help Pall get maximum return on its Version 5 investment.

CATIA V5 simplifies design processes

"For part design, we can reproduce information from similar components very easily using the copy and paste operations," said Stephen Fry, Senior Design Engineer, Pall Machinery and Equipment. "With the feature-based design in Version 5, standard shapes, like pockets and grooves in shafts, can be very quickly incorporated, which is much more productive than using standard Boolean techniques.

"Our assembly modelling has also come on in leaps and bounds," he said. "For our oil purification systems, we use many bought-in components. The catalogue feature in Version 5 is very powerful for this application, allowing us to build up a parametised list of parts. To use them, we simply pick the component, enter the required sizes and drop the part into our model."

Fry finds the flexibility of Structural Analysis 2 module, used for design validation to check for high-stress areas, especially important for the high-pressure filtration systems the Portsmouth centre designs. "As in most design environments, the process is iterative," he said. "The history tree in CATIA allows us to find individual sketches very quickly. We can easily change solids and surfaces before generating the complete model."

Once a design is finalised, Pall's manufacturing groups can access the design on the Pall Wide Area Network (WAN) for machining and assembly.

Expanding the use of CATIA V5

"Most of our groups are already using Version 5 or plan to go live with it shortly," he said. "We want to be cutting-edge with our design capability. Our intention is to expand its use further in the Pall Corporation."

Pall Portsmouth is now working on a pilot PLM project using SMARTEAM as part of its collaboration with other sites within the company.

For more information

Contact your IBM Marketing Representative, IBM Business Partner or visit the IBM PLM Web site at: **ibm.com**/solutions/plm

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