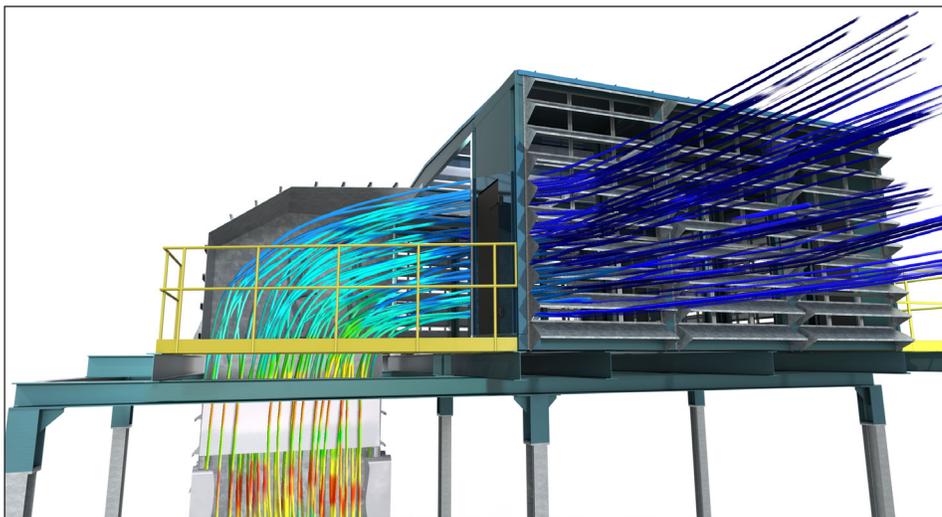


OPTAR TECHNOLOGIES LTD

Implementing product data management with SOLIDWORKS



Optar Technologies Limited is a small but innovative UK engineering solutions provider. Founded in 2005 to supply and install gas turbine air intake filters for international energy companies, a successful investment in SOLIDWORKS design, simulation and Enterprise PDM software is now enabling diversification into new markets.

The company specialises in air intake filter houses and systems for rotating machinery, compressors and turbines. Although its traditional strengths lie in large power station projects, air intakes are now designed for other smaller applications. Optar provides a complete engineering design, validation, project management and manufacturing service.

According to managing director Andrew Thomson, the company's first significant investment in computer aided design came in 2008 when it installed SOLIDWORKS 3D design software. This initially allowed subcontracted design projects to be thoroughly checked.

Introducing simulation to verify designs

Thanks to this growing CAD experience, the company quickly brought its design work in-house but was still dependent on third party technical validation. To avoid the associated costs and delays, Optar then introduced SOLIDWORKS Simulation and SOLIDWORKS Flow Simulation in 2012.

"It was a natural thing for us to go from using SOLIDWORKS design to using the SOLIDWORKS simulation packages," says Thomson.

Simulation has proved invaluable when convincing customers that proposed designs are fit for purpose. In a 720MW power station project, simulation proved that an Optar design increased 0.1 micron particulate filtering efficiency for unburnt hydrocarbons from 15% to 90%. Another air intake project at a combined heat and power plant relied heavily on finite element analysis (FEA) and computational fluid dynamics (CFD).

New enterprise product data management system required

International standards such as ISO 9001 provide a recognised quality management accreditation that Optar's customers rely upon. Key aspects range from strict filename conventions, version control and workflows to handling change requests. Keeping track of such activities without an IT framework depends on individuals doing the right thing.

Using SOLIDWORKS design, simulation and enterprise product data management software, Optar tackles a wide range of specialist engineering projects from power stations to high-speed trains.

Challenge:

Meet the needs of a small innovative engineering solution provider

Solution:

SOLIDWORKS Premium, SOLIDWORKS Simulation, SOLIDWORKS Flow Simulation and SOLIDWORKS Enterprise Product Data Management

Results:

- Eliminated need for third party 3D design services
- Ability to handle CFD, FEA and other computational studies in-house
- Achieved ISO 9001 renewal with the help of SOLIDWORKS Enterprise PDM
- Established a sound engineering foundation for business diversification

"We didn't have an automated system to manage documents because we were just manually saving things within Microsoft Windows Explorer," says Thomson.

In order to renew its ISO 9001 accreditation, Optar decided to rewrite all its procedures. Finding an easy-to-use software solution to support quality management - an enterprise product data management system - became essential.

"It also had to integrate with Microsoft Office. That was absolutely critical for us. If it was only a design data management system, it would not have been worth it."

Convinced by a product demonstration that it was the right solution, Optar decided to implement SOLIDWORKS Enterprise Product Data Management. As a small but expanding business, it wanted an effective system in place before growing any further.

Powerful and flexible tool for ISO 9001

The new software was implemented in 2013. Five days of custom training were provided including practical advice for quickly configuring the company's rewritten ISO 9001 compliant workflows. Previous SOLIDWORKS projects had also relied on professional implementation, training and support services for a successful outcome.

"The training opened my mind as to what SOLIDWORKS Enterprise PDM could do. I took it as far as I possibly could," says Thomson. "The capability of the system allowed us to exceed all our expectations. Not only did it completely control the SOLIDWORKS documents but it completely controlled Microsoft Office documents too."

SOLIDWORKS Enterprise PDM proved a powerful and flexible tool by managing everything from design documents to holiday request forms. It has also helped cut down on administration time to release staff for manufacturing or customer-facing duties.

The hard work to renew the ISO 9001 accreditation soon paid off with the official assessment organisation saying: "Of particular note is the development and utilisation of the SOLIDWORKS software package for the document control and approval processes. The system demonstrated a solid foundation to move forward on as shown to manage the company documentation efficiently."

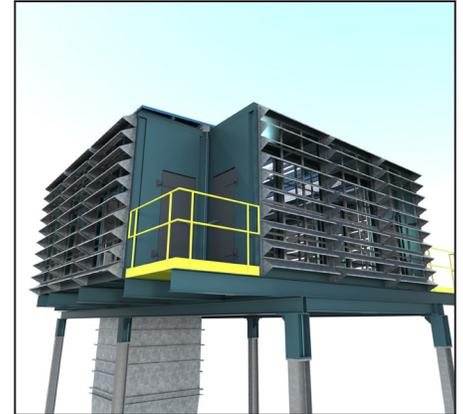
Optar continues to make excellent progress, recently adding a procurement procedure. This supports materials purchases, tracks goods received and notifies accounts. It also links materials certificates and test reports accompanying purchases to specific projects. SOLIDWORKS Enterprise PDM looks after all the relevant British and international standards.

"SOLIDWORKS is absolutely fantastic. Not only are we controlling the design of the products but we are also controlling the manufacture," says Thomson.

The next goal is to document welding codes in SOLIDWORKS Enterprise PDM, supporting a newly-opened manufacturing workshop. The company is currently involved with projects for power plants, high-speed railway locomotives, aero engine manufacture and the nuclear industry. With the help of SOLIDWORKS solutions, Optar Technologies Ltd is ready for new engineering challenges.

"SOLIDWORKS HAS ALLOWED US TO TAKE OUR EXPERIENCES FROM LARGE PROJECTS AND WORK IN DIFFERENT ENVIRONMENTS TO PROVIDE CUSTOMERS WITH A WHOLE NEW LEVEL OF QUALITY."

Andrew Thomson
Managing Director
Optar Technologies Ltd



Optar relies on SOLIDWORKS technology for a design, simulation and document control solution that provides customers with total confidence in the design, validation, manufacturing and installation processes.



Engineering solutions for the power industry

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