Trafo Proiect

Enhancing power transformer designs with CATIA PLM Express

Overview

Challenge

With a core activity focused on performing design work for transformer manufacturers, Trafo Proiect needs to quickly deliver reliable designs to boost the productivity, performance and quality of their products.

Solution

Trafo Proiect Bucharest chose CATIA PLM Express from Dassault Systèmes for its design work from initial sketch to final production drawings.

Benefits

Automatic change propagation and interference checking in CATIA PLM Express have increased the precision of Trafo Proiect's designs, saving the company time and costs, and winning it new business.

"Performing interference checking on a 3D virtual model rather on a design that has been released to manufacturing saves time, costs, and increases the confidence of our customers in our designs and in Trafo Proiect. It has consequently helped us win new business."

Octavian Stancu
Head of design department
Trafo Proiect Bucharest.

Trafo Proiect

Founded in 2003 in Bucharest as a design company, Romania's Trafo Proiect provides assistance and consulting services for transformer manufacturers, especially in the area of winding and magnetic core design. Nowadays Trafo Proiect is able to take on the complete design of large power transformers of any rating and voltage level up to 400 kV and 440 MVA.

Trafo Proiect constantly needs to design state-of-the-art transformers in an industry where competition from the Far East has become fierce. Products therefore must be technologically advanced yet affordable.

Solution provider for transformer manufacturers

In the early years of its existence, Trafo Proiect mostly repaired existing transformers. Today, the company focuses on the design of new transformers on demand and has established itself as a leading privately owned design and engineering company of large power transformers.

The company works as a design office for customers that have no design departments of their own, such as the new Romanian transformer manufacturer RETRASIB Sibiu and offers design services for other customers such as Electroputere Craiova and small repair firms that restore smaller transformers. "Our customers are the factories that build the transformers or workshops that do the repair work," said Octavian Stancu, head of the design department at Trafo Proiect.

"We take into consideration customers' specifications such as transformer output, level of losses, voltage testing values, temperatures and the type of accessories that should be installed and design the transformer that best fits the requirements and provide the manufacturer with the assembly drawings needed to build it," explained Stancu.

A solution that breeds confidence

For the entirety of its design work, Trafo Proiect chose CATIA PLM Express from Dassault Systèmes for its flexibility and

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reliability. It also chose the solution because many young engineers graduating from POLITEHNICA University of Bucharest are trained in CATIA and are therefore already skilled when they are hired. Using CATIA permits Trafo Proiect to stand out as a design office and gain an advantage over its competition, as well as to gain the trust of its customers. “CATIA’s reputation among our customers is well established,” said Stancu. “It shows them that we have a reliable tool that can produce designs in which they can have confidence. As a small company, this is a strong statement.”

Cutting costs and time helps win new business

Designing in context with CATIA PLM Express helps Trafo Proiect engineers check sub-assemblies that are dependent on other sub-assemblies especially when changes are made. “CATIA takes care of all the boring work such as having to cross check all the sub-assemblies after having made a change somewhere. Since the system automatically propagates changes throughout the entire assembly, we no longer have to do this tedious work manually as was the case with our previous 2D system. It’s an efficient way to make sure that a change that affects other subassemblies will not be missed,” explained Stancu.

Trafo Proiect also takes into account manufacturing constraints during the design phase. “During production certain tasks, such as welding different parts, must be performed in a certain order,” said Stancu. “With CATIA, we can incorporate this information into our designs from the start.”

CATIA also locates interferences between parts in an assembly. “Performing these tasks on a 3D virtual model and not after a design has been released to manufacturing saves time, costs and increases the confidence of our customers in our designs and in Trafo Proiect,” mentioned Stancu. “It has consequently helped us win new business.”

Project management and streamlined communication

Trafo Proiect is now planning to address the way it manages projects with its transformer manufacturing partners. It is looking into using ENOVIA SmarTeam to incorporate triggers that flag when validations are needed during the design process ensuring that the right person is informed at the right time. “We also would like to collect maintenance feedback from the field that we can incorporate into ENOVIA SmarTeam for use in subsequent designs,” explained Stancu. “This would further increase the quality of our work.”

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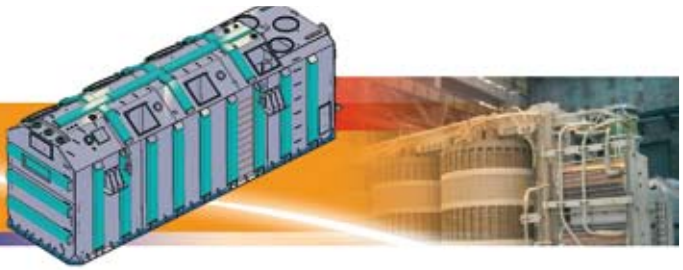

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