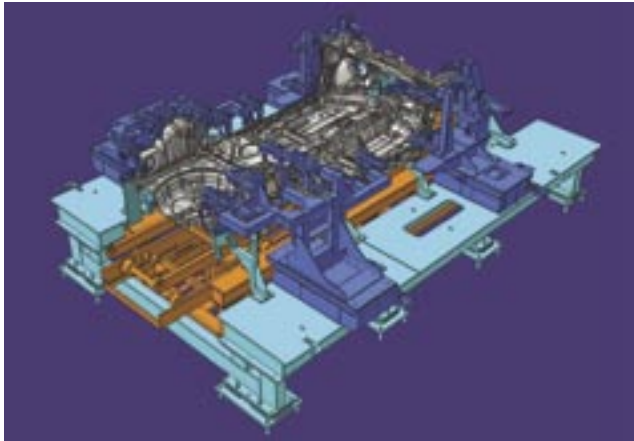


Serra gains the edge through CATIA V5 for Jigs and Fixtures



"We looked at our customer base and realised that almost all of the major OEMs would migrate to CATIA V5 sooner or later. Being an early adopter means we are now winning contracts because of our experience with CATIA V5."

– Blai Felip, Engineering Director, Serra Welding and Assembly Systems

But competition has intensified until Serra now finds itself bidding against the likes of Lear, Faurecia, Benteler and Johnson Controls, as well as the tooling divisions of its major customers. Among such competitors even the most successful mid-size companies need an edge.

In 1998, although Serra had a number of 3D design systems, it continued to work primarily in a 2D environment with cumbersome manual processes that slowed response times and drove up costs. To compete, Serra's management decided the company needed an entirely new 3D design system – CATIA V5.

Working in native data

"We looked at our customer base and realised that almost all of the major OEMs would migrate to CATIA V5 sooner or later," said Blai Felip, Engineering Director for Serra. "We became the first user in Spain. Being an early adopter means we are now winning contracts because of our experience in CATIA V5."

Highlights

- *Serra Welding and Assembly is under increasing competitive pressure as a supplier to major automotive OEMs worldwide. In the past, Serra had several disparate 3D computer aided design (CAD) systems and was not able to efficiently reuse validated designs.*
- *CATIA Version 5 allows Serra to work in the same design environment as its OEM customers. Combined with DELMIA 3D manufacturing solutions, Serra welding systems are designed right the first time.*
- *Cycle times for a new assembly line have been cut from 18 months to eight months. Serra now uses libraries of standard parts and reuses validated designs on new projects.*

Tougher competition requires better tools

Since 1934, the Serra family has grown its small welding systems workshop in Barcelona, Spain, into a global company with 800 employees and a client roster that includes the leading names in the automotive industry – Volkswagen AG, General Motors, DaimlerChrysler AG, Renault SA and PSA.

Today, Serra Welding and Assembly Systems is a leader in its sector, designing and producing turnkey welding installations with various degrees of automation.

Serra benefits from the fact that CATIA V5 is available on the same platform as other applications in use at the company. "Running CATIA V5 on Windows NT™ means that we can integrate our office applications and have one source for all information," Felip said. "The change brought with it a new philosophy of using libraries of standard parts, parametric design and reusing our validated designs for new projects. It is a powerful solution with enormous potential."



Serra has achieved significant reductions in design and total cycle times. "Our experience shows that we gain typically a 20 percent time saving in the design phase with CATIA V5," Felip said. "We save more time on some projects than others. The typical time to design a new jig is now 180 hours compared with 300 hours before. However, the major savings are during assembly and feasibility. Four years ago it took us 18 months to put a new assembly line into an OEM. Now we can do it in eight months. This would be impossible without a system that enables you to do it right the first time. Today we do not get, nor do we need, a second chance."

DELMIA brings more benefits

The combination of CATIA V5 with DELMIA, a comprehensive suite of digital 3D manufacturing solutions, has proven particularly powerful. The DELMIA IGRIP product enables users to optimise robot locations, motions and cycle times while the DELMIA DPM Assembly Product optimises the assembly process, planning and verification.

Both the CATIA V5 and DELMIA operators can access the same base data from one server for ease of integration between applications. "DELMIA has opened up a new world for us that we did not believe," Felip said. "We can now use old 'dummy' data to show a potential client exactly what we will do for him. Previously this was very difficult to understand, particularly for non-technical people. Now we can show them a high-quality visualisation. The result is impressive, unambiguous and wins us business."

Working with its long-term engineering partner CADTECH, an IBM Business Partner, Serra has developed customised training for its project groups working in CATIA V5. "In the past it would take up to five years to train an expert," Felip said. "With our new approach we expected to train good professionals in 12-14 months."

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