

Fontenax - SAMRO

Truck trailers / Motor vehicle parts and accessories

France



www.designspace.com



Activity

FONTENAX, a subsidiary of **SAMRO**, designs new chassis and trailers as well as enhancing existing products. Pierre Reus, General Manager of FONTENAX, was responsible for the recent design of a revolutionary trailer chassis, with a bolted chassis in lieu of a common welded one, he's seen as a expert and visionary in the area of trailer makers.



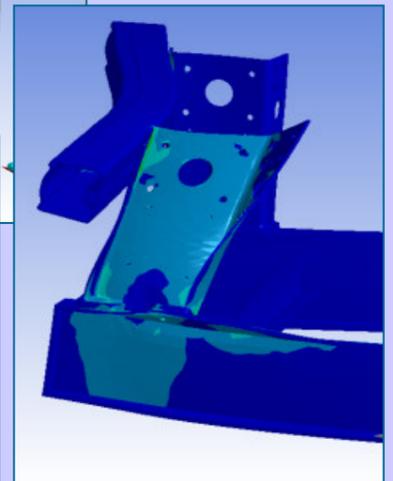
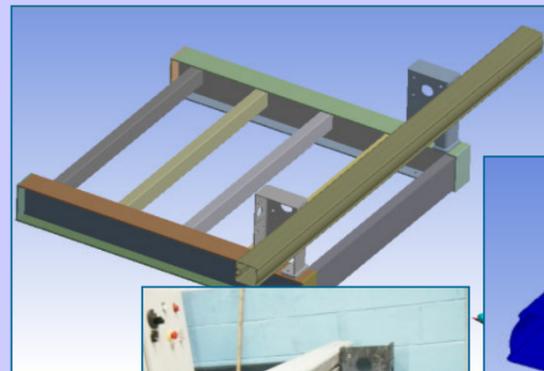
Testimonial

"The future is in combining a 3-D CAD approach to an up-front design analysis, and we have proven that on every project the advantages and benefits are substantial:

- Suppression of the structural prototypes, they are substituted by interactive virtual prototypes*
- Suppression of all laboratory measures on the first prototypes, DesignSpace results are now used and analysed.*

Adding it all up, it's a viable Return-On-Investment; the production is about 8000 supports per year, so with one single project and in less than one month SAMRO has written off DesignSpace cost."

Pierre REUS
General Manager, FONTENAX



Challenge

Fontenax had to design and develop new truck bumper supports which would drastically reduce costs. To save weight, all bumper supports were initially designed in aluminium but the manufacturing costs were very high. The supports are made to receive SAMRO bumpers as well as truck manufacturers bumpers such as Volvo, Mercedes, and Renault VI.

Solution

Tests and analysis have been performed to pass the homologation test of bumper supports. A specific chassis is designed in Solid Edge and built for the test and the simulation. The chassis is fixed on its lower side, then a static load, representing an impact on the trailer is applied to the bumper, the magnitude is normalised in order to bring to the structure the same strain energy as the impact brings.

Benefits

Using DesignSpace fully integrated in their 3-D CAD product they have been able to design a new support in structural steel with an equivalent structural behaviour as the aluminium one and with a similar weight. The manufacturing costs, including the material costs, are **two times cheaper than the original solution!**