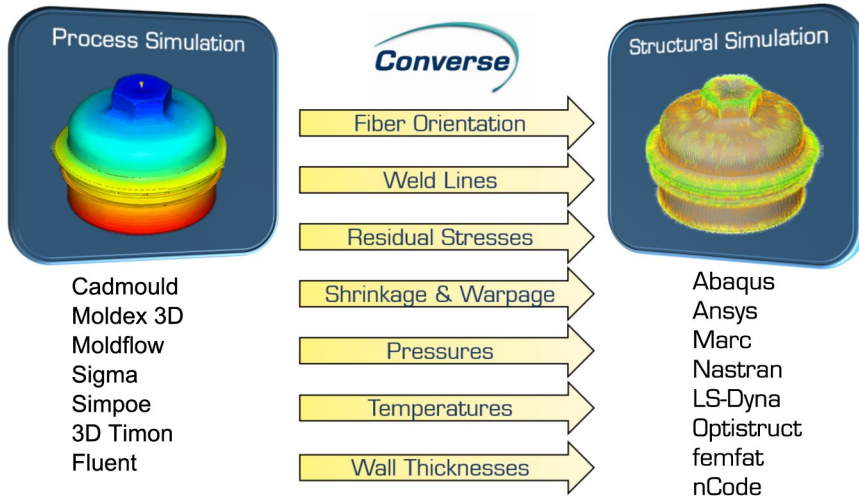


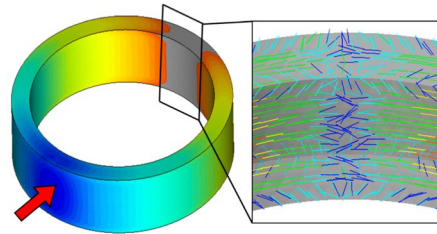
Features

- Automatic Calculation of temp. dependent anisotropic non-linear material properties
- Material database of major short-fiber-reinforced plastic grades
- Mapping between different mesh topologies
- Graphical evaluation of mapping quality
- Automated generation of all ready-to-use FE input decks



Benefits

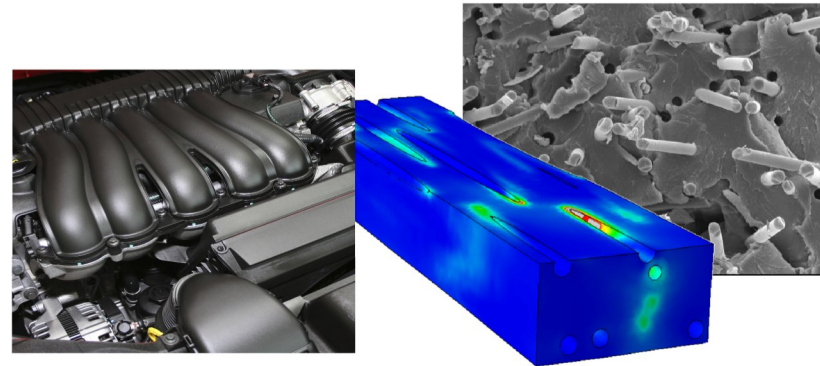
- More accurate simulation of part stiffness and strength
- Consideration of the influence of gate positions
- Consideration of the influence of residual stresses
- Improved mold and part design for parts with pressure- and temperature-sensitive inserts or molds with easy deformable cores
- Taking into account the real part shape (shrinkage/warpage)
- Easy-to-use also for occasional users
- See-through and open data handling
- No user-subroutine required
- Fast and stable simulation
- High scalability (multi processor)



Add More Value to Your Simulation Results



CONVERSE is an easy-to-use software that provides a coupling between FEM solvers for injection molding simulation and solvers for mechanical simulation. A mapping of anisotropic part properties like fiber orientation, weld lines and residual stresses as well as a mapping of pressure, temperature, wall thicknesses, shrinkage and warpage is possible.



What Users say About CONVERSE:

"With Converse it is possible to use the anisotropic material behavior resulted from fiber orientation. Identifying of manufacturing process induced weak points becomes possible and a more realistic behavior of the part can be predicted".

Tamás Schmidt
Engine Development Department
Audi Hungaria Motor Ltd. Győr, Hungary

"For the simulation of short-fiber-reinforced plastic parts we use CONVERSE consequently. Due to that we are able to improve the quality of our simulations significantly. This helps us to design our parts considerably better."

Dr. Matthias Teschner
Director Engineering
MANN+HUMMEL GmbH, Ludwigsburg, Germany



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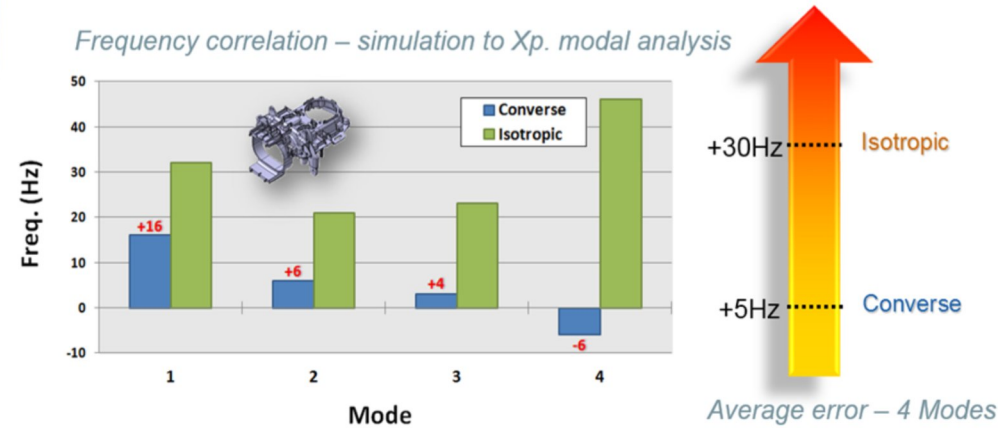


Success Stories

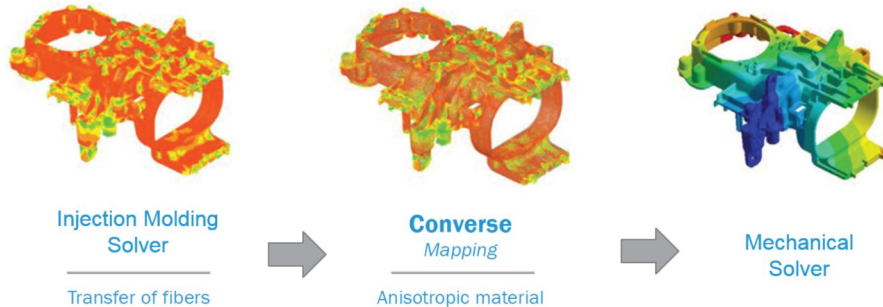
CONVERSE is one of the leading software tools to provide data from process simulation for mechanical simulation software and is used in all kind of industries in 22 countries through-out the world. This is a small selection of satisfied users from our world wide customer base.

Improved Frequency Prediction of Fiber Reinforced Components at Valeo

When a new part is designed, CONVERSE helps Valeo to consider anisotropic characteristics of the material, generated during the manufacturing process.



Following this process, which the engineers validated by experimental modal analysis, Valeo is able to receive much more accurate results than with a former process without the mapping step.



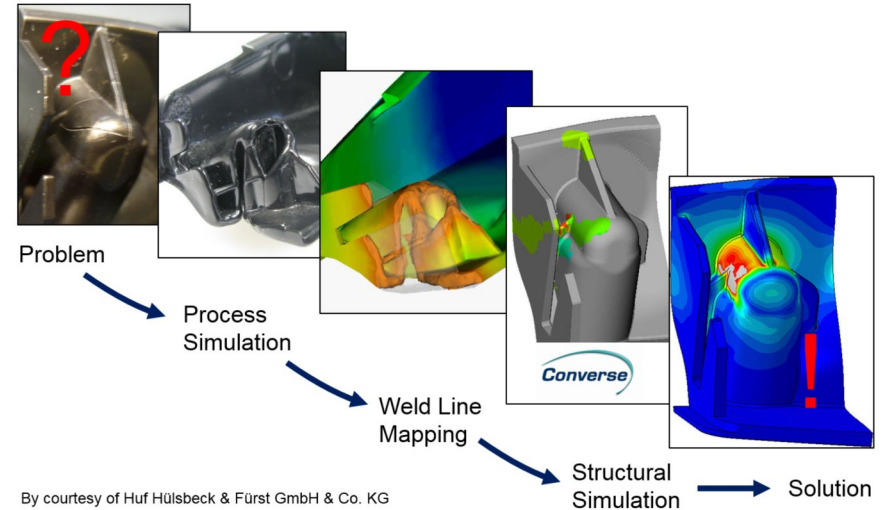
"When we were looking for software that would help us to prepare our models for the simulation of glass fiber reinforced plastic parts, we saw that the Altair Partner Alliance offers CONVERSE, which is meeting our needs perfectly."

Nicolas Pluy
Simulation Expert Mechanical Simulation
Valeo Lighting Systems, Wuhan, China

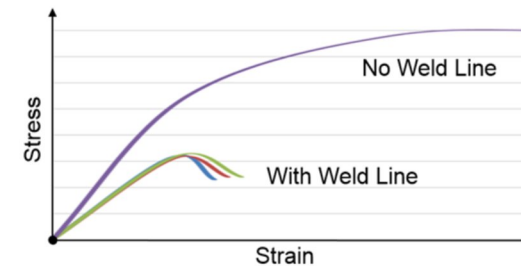


Consideration of Weld Lines in Plastic Applications at Huf

Every time complex plastic parts are produced using an injection molding procedure the creation of weld lines in most cases is unavoidable. By increasing cost pressures and the desire for weight reduction, products have to be designed closer to the strength limit and safety factors have to be reduced.



Especially but not only in fiber-reinforced plastic components detailed knowledge of material properties is essential. In addition to the fiber orientation and the mechanical properties the position of the weld lines must be very well known. The mapping of weld line information from the filling simulation into the structural analysis therefore needs to be done to achieve more reliable results in terms of component strength.



"The coupling of fill studies and FE analysis makes the predicted results more reliable. A detailed knowledge of the plastic material properties is important to design the products closer to the limits."

Dipl.-Ing. Christian Bresser
Senior Manager Processes Mechanics – Mechanical Simulation
Huf Hülbeck & Fürst GmbH & Co. KG, Velbert, Germany

