SIMUTENCE is your reliable partner for virtual design of composite parts and the according manufacturing processes based on our virtual process chain. This includes the part design, process and structural simulation as well as the optimization along the virtual process chain. We offer an independent service and support in terms of engineering services and supply software add-ons for Abaqus and Moldflow for reliable virtual analyses.

**SIMUTENCE - Virtual Process Chain**

**Design**
- Material and process specific design for composites and hybrids
- Topology optimization to create new concepts
- Layup optimization for ply design under predefined constraints

**Forming**
- Forming simulation of thermoplastic tapes, woven fabrics and non-crimp fabrics
- Manufacturability optimization
- Determination of tailored blanks for near-net shape forming

**Molding**
- Mold filling simulation for injection molding, compression molding and resin transfer molding
- Manufacturability optimization

**Structure**
- Consideration of manufacturing effects predicted by process simulation for accurate structural analyses
- Stiffness and strength analyses
- Warpge and residual stress analyses

**Engineering services**
- Efficient, reliable and holistic design of composites and hybrids
- Virtual product development
- Virtual process design

**Software add-on supply**
- Development of tailored simulation methods for Abaqus and Moldflow
- Support and training for SIMUTENCE software add-ons

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