S3.1.4 APPLICATION ORIENTED SIMULATION TECHNIQUES FOR WOVEN WIRE MESHES

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Virtual engineering has become a major part in the development process of products and processes. Due to the fact that computer systems are getting cheaper and cheaper whereas their computational power rises exponentially, the simulation of physical processes is not reserved for university research anymore but has also found its way into industry.

This presentation intents to give an overview of the vast variety of models that have been developed for the simulation of woven wire meshes over the last decade. It starts at the virtual replica of the sole mesh, including simple geometric considerations like pore sizes, shows the ability of simple flow calculations, going to complex flow regimes including turbulence and non-newtonian flows and ends up in the simulation of complete machinery where the simulation of multi-scale domains is required. The presentation will not only feature completed projects but will also take a glimpse at future developments which are already in the making.