

## **CAE PROCESSES AT MAHLE THERMAL MANAGEMENT**

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### **ABSTRACT**

Diverting solutions for the future mobility offer many opportunities for global suppliers like MAHLE. Beside that the progressive introduction of digitization has an impact on the development process of new products. An efficient CAE process contributes to achieve the customer goals with respect to function, quality and time.

This paper shows the CAE process at MAHLE Thermal Management. The process starts with the CAD import and preprocessing in ANSA and ends with reporting assisted by META. One major aspect is how the link between different CAE disciplines like FEA and CFD is realized. Another important task during the development process is to validate the design in different stages efficiently. This is achieved by tailored user friendly tools based on the scripting interfaces. As the development teams are globally organized an efficient collaboration can be accomplished by the remote desktop sharing tools. To present the simulation results in an easy accessible way VR technologies are introduced beside the typically used reports with pictures and animations.

The single steps of the standardized CAE process are illustrated by the example of a radiator, where some of the implemented tools are shown in detail and also the interaction of CFD and FEA analysis.