

AUTOMATION TOOL FOR UNDERHOOD AND UNDERBODY THERMAL SIMULATION

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ABSTRACT –

Effective Thermal management is an important consideration in the product development of passenger vehicles. Simulation of Thermal management is key to achieve not only passenger comfort but also to manage the heat generated from the tightly packaged engine compartment.

The UHUB process facilitates co-simulation of thermal and fluid flow to identify underhood hot spots and also to help improve the performance of the engine fan and vents. Model building and checking for this simulation are usually laborious and error prone. UHUB process is an end-to-end integrated process in ANSA which interacts with META Post and TAITherm. The scope of automation spans from water-tight geometry preparation to report generation and yields significant quality and productivity benefits.