

ABSTRACT

Shortening of development times in the automotive industry with simultaneous rise of complexity, efficiency and product variety require more effective, faster and "robust" simulation methods. In this research we focus on computation of cooling packages for vehicles in the concept phase. We extended conventional methods, which proceed from purely deterministic results, by a stochastic computation and CFD calculation, in order to be able to consider the effects of uncertain estimates of boundary conditions and/or the fluctuations, occurring in measurements. The goal is a robust simulation method assisting the cooling package design engineers in the very early concept and development phase, respectively.