

DISCOVERING THE ANATOMY OF A SHOCK ABSORBER WITH THE AID OF COMPUTED TOMOGRAPHY AND BEYOND

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ABSTRACT

Real objects need to be introduced into the CAE world for quality control, design evaluation, FE simulations and other. Computed Tomography (CT) provides a powerful method for achieving this in a nondestructive way even for complex assemblies. In this work, a CT scan of a shock absorber is virtually disassembled with the aid of RETOMO in order to see its anatomy. Innovative machine learning algorithms introduced in RETOMO greatly reduce required user time while improving segmentation quality. The complete process from CT data to CAE model is demonstrated through a realistic reverse engineering scenario. Eventually the seamless interaction of the BETA suite is exemplified through the creation of a CAE model for a durability load case.