

Lightweight construction of exterior body surfaces using sheet metal sandwich structures

Project management: Prof. Dr.-Ing. Martin Müller

Summary: The objective of this research project is to achieve maximum weight savings in terms of exterior bodywork, using sheet metal/sandwich structures. For this purpose, the thickness of the body panels is to be reduced, without diminishing the technical requirements. The resulting loss of stiffness is to be compensated through the application of sandwich structures on the reverse side of the sheet. In order to be able to reproduce the physical connections, an overall study of the structural-mechanical behaviour of the system is to be undertaken on a parameter test bed. At the same time, FEM models are to be developed that replicate the behaviour of the system.

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Organisational unit: Faculty of Automotive Engineering

Research area: Vehicle Construction, Polymers and Materials Science

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