



IACMI 3.7 – Reduction of CO2 Emissions Through Lightweight Body Panels

Development of a full SMC Class A capable Liftgate



Goal / Motivation

- Weight reduction of > 30%
- Complexity reduction (part consolidation)
- Successful demonstration e-coat + Class-A surface finish
- Demonstration of tool investment reduction
- Establishing and qualifying of regional supplier base

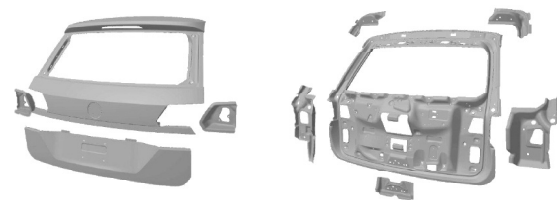
Solution

- Full-SMC Design (for manufacturing-informed performance)
- Structural SMC compound for inner part
- Class-A SMC Compound for outer part

	Steel	→	Composite	
Part Count	10	→	3	-7
Weight	21.1 kg	→	13.6 kg	- 36%

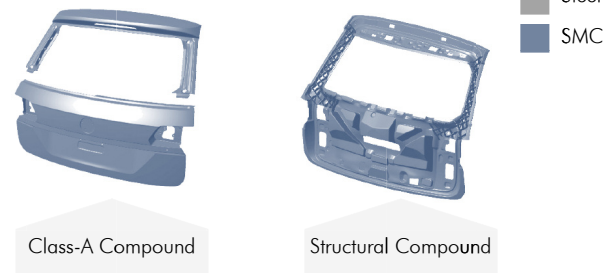
Status

- Material development finished and material cards created for manufacturing-informed performance design
- Part design and simulation completed
- Tool design, tool build and successful tool tryout finished
- Production process evaluated and prototype parts molded
- Business case created and evaluated
- LCA started



Current Steel Design

Full-SMC Design



Next Steps

- July 2019 Completion of the assemblies (trimming, bonding, priming)
- August 2019 Paint trials and Class-A surface evaluation at Volkswagen Plant Chattanooga
- September 2019 Performance testing at Volkswagen R&D headquarters in Wolfsburg Germany and at development center Puebla, Mexico
- October 2019 Start weathering test at proving ground in Arizona

