



Process/Assembly/Enabling Technologies

Torsional Welding of PDC Sensors to Thin Wall Fascia

OEM/Vehicle

Volkswagon AG
2018 Skoda Octavia

System Supplier

Magna Exteriors

Material Processor

Magna Bohemia Liberec

Material Supplier

SABIC

Resin

Sabic 8650 TPO

Tooling/Equipment Supplier

Changzhou Huawei Mold Co., Ltd.



This is the first application of torsional welding (spin & ultrasonic welding combined) on automotive fascias. It allows welding of PDC brackets without localized thickening of wall stock on 2.5 mm, thin wall, molded fascias. An adjustable TPO material with high melt flow, high stiffness/impact allowed for less material to be used resulting in a 10% reduction in mass for a 7% weight savings with \$122,000 direct cost savings in three years. Cycle times were improved and there was no weld read through resulting in a quality appearance. Future applications of this process include fascia support brackets, fog brackets and more.