

Special Feature

Tata AutoComp: A Company Known for Breakthroughs and Innovations

Grounding firm on its mission – ‘Differentiation through Safety, Quality and Constant Innovation’, the teams at Tata AutoComp Systems Ltd. (Tata AutoComp) recently succeeded in two cutting-edge innovations. These new innovations will help auto OEMs to curb emissions and enhance haptics.

Lightweight composite parts to curb auto emission

The Composite Division at Tata AutoComp Systems Ltd. is involved in the business of providing lightweight material solutions to its customers since its inception. Tata AutoComp has been supplying the front panel to Tata Motors for its ACE platform which is made out of Glass Fibre reinforced Composite material. This panel is much lighter than traditional sheet metal panel used by some other OEMs. The team of Composite Division took up a challenge of making its existing front panel (with specific gravity of 1.85) even lighter (Sp. gravity below 1.45) and at the same time retaining its strength and crash bearing properties. For this, they teamed up with Tata Chemicals and Tata Motors; both Tata Group companies, to develop a composite panel that is 15 to 20 wt. % lighter than its original offering. With pertinent efforts, the team involved in this project came up with the patented formula through a successful marriage of nano-technology and composite technology. Apart from weight criteria, the new panel has enhanced impact strength as well.

Enhanced haptics in automotive without painting

Cost effectiveness is one of the key attributes that need to be considered while designing injection moulded plastic auto components besides good aesthetics,

enhanced haptics and superior finishes. The team at Tata AutoComp’s Interior and Plastics Division has been supplying injection moulded components and aggregates to many OEMs in India. The parts included exterior and interior, functional and aesthetic parts. The challenge in this particular project was reducing the cost of some functional



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plastic parts by replacing the painted part with unpainted part, without compromising the look and feel. The team decided to experiment with the material and process technology. On the process technology front, the team iterated various simulations to optimise the mould flow and the moulding process by fine tuning the post forming treatment time. After multiple attempts, the team succeeded in getting a better end-result. Within the constraints, it found a solution for replacing moulded and painted parts with moulded parts while retaining similar aesthetics and haptics. This resulted in a saving of direct material cost in terms of paint, process cost and time.

About the company:

Tata AutoComp Systems Limited (Tata AutoComp), promoted by the Tata Group, provides products and services to the Indian and Global automotive OEMs as well as Tier 1 suppliers. Tata AutoComp has own capabilities in Automotive Interior & Exterior Plastics, Composites, Sheet Metal Stampings as well as Engineering and Supply Chain. Tata AutoComp has 7 joint ventures in partnership with leading companies from the Global Auto Component Industry through which it manufactures and markets automotive components and systems like engine cooling solutions, automotive batteries, rear view mirrors, command systems, HVAC, exhaust and emission control systems, seating systems and electronic solutions for passenger and commercial vehicles as well as suspensions for heavy commercial vehicles. Tata AutoComp has 34 manufacturing facilities spread across India and 8 facilities spread across North America, Latin America, Europe and China.