

## Jaya Hind Industries forays into new category

By Niranjan Mudholkar, Added 06 August 2019

To manufacture large Aluminum Structural Components



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Jaya Hind Industries now enters into manufacture of structural components for automobiles. Jaya Hind Industries has a technical agreement with a leading European company for producing complex aluminum structural parts. It has just concluded the development and manufacture of its first structural part for an auto OEMs forthcoming model using the high pressure die casting route.

The use of aluminum for various engine components like engine blocks, cylinder heads, clutch housing and transmission components, has been proven and adopted for a long time. However, adoption of aluminum for structural parts has not been on most OEMs' agenda in the Indian environment, primarily due to non-availability of component makers who had capability to do concurrent engineering with OEMs and develop such complex structural parts.

In its drive for improved fuel efficiency, lower emissions, the vehicle manufacturers are looking for ways to reduce weight of the vehicle. Light-weight cast components made from aluminum are becoming increasingly popular as they meet the weight reduction objectives without compromising on strength, reliability and durability. In this particular case the component identified for replacement with aluminum was a critical part, the chassis cross member assembly that supports and takes the load of the transmission.

Moving to the aluminum cross member helped the OEM achieve a weight reduction of 4kg (35%) without compromising on bending or torsional strength. In fact, the simulation tests

indicate improvement of bending rigidity and torsional strength by over 60% as well as better NVH performance and consistency.

The other advantages for the OEM were that this is a single stage manufacturing, with higher dimensional accuracy, without any additional processes like machining, primer application or top coat paint application. This part goes straight to the final assembly line.

Prasan Firodia, Managing Director Jaya Hind Industries said, “Though automobile manufacturers abroad are regularly using aluminum structural parts, in India this is being done for the first time. I am sure it will open up for Jaya Hind Industries, a whole new avenue of opportunities given the severe pressure on OEMs to light weight the vehicles”.

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