
Use of advanced high strength steels helps decrease vehicle weight

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In a study released today by the Automotive Applications Council of AISI's Steel Market Development Institute researchers with Ducker Worldwide estimated that the use of advanced high-strength steels in 2009 model year light vehicles increased by more than four percent of total body weight from 2007, while the average weight per vehicle decreased by 163 pounds.

Mr David Anderson director of the Automotive Applications Council said that "Advanced high-strength steels provide numerous benefits to automakers, including the ability to reduce vehicle weight and improve fuel economy. This study supports the continued use of AHSS in light vehicles, as the material offers affordable solutions to lightweighting, while maintaining passenger safety, vehicle durability and performance requirements."

While more than half of the vehicles produced worldwide contain some amount of AHSS, the new BMW X6 leads the way with 32 percent of its body structure and closures manufactured from AHSS. Other new models with above-average AHSS body content include the new Chevrolet Traverse, Ford F-150 and Chrysler Town and Country.

Mr Anderson added that "As fuel economy standards continue to rise, more automakers will look for ways to incorporate new steel material and process technologies into future automobile designs."

The study predicts a 10% growth rate per year in the use of AHSS through 2020 as automakers strive to meet the 35 miles per gallon fuel economy standard. Ducker researchers estimate that approximately 650 pounds of mild steel, high-strength steel and iron will have to be replaced with 350 pounds of dual-phase, martensitic, boron and other AHSS, as well as minimal amounts of aluminium, magnesium, polymers and composites to meet the new goal.

According to the study, weight reduction will account for at least 25 percent of the necessary improvement in fuel economy, with advances in powertrain and other technologies such as drag reduction, low-roll resistance tires and a 42 volt electrical system making up the difference.

The Automotive Applications Council is a part of AISI's Steel Market Development Institute. The council focuses on advancing the use of steel in the highly competitive automotive market.

(Sourced from aisi.com)

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