

Emerging trends in Automotive Sector – Role of steel plants.

Abstract: Despite lot of technical up gradation, total consumption of Micro alloy (MA) or High Strength Low Alloy (HSLA) steels constitute an important category of steels estimated to be around 12% of total world steel production.

Micro alloying with V, Nb, & Ti improves the properties of the forging quality steels & simplifies the thermo mechanical treatment to achieve the desired properties by controlled cooling, without separate quenching & tempering treatments. Micro alloy has become standard material for automotive, line pipe, offshore, construction usage, suspension components, tubular components etc. This paper shows that replacing cheaper Carbon Steels with micro alloyed steels allowed Auto makers to reduce the weight of an auto body at the lower cost. Metallurgical expertise with respect to control of grain growth during high temperature forging & cooling; precipitation hardening by forming Carbonitriding by V, Nb, Ti has become the main focus with metallurgical as well as economical benefits to producers & users too.