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ASTM A992

ASTM A992 steel is a structural steel alloy often used in the US for steel wide-flange and I beams. Like other carbon steels, the density of ASTM A992 steel is approximately 7850 kg/m^3 (0.2836 lb/in^3). ASTM A992 steel has the following minimum mechanical properties, according to ASTM specification A992/A992M. Tensile yield strength, 345 MPa (50 ksi); tensile ultimate strength, 450 MPa (65 ksi); strain to rupture (sometimes called *elongation*) in a 200-mm-long test specimen, 18%; strain to rupture in a 50-mm-long test specimen, 21%.

ASTM A992 is currently the most available steel type for structural wide-flange beams. The industry's technical institute describes the standard thus: "ASTM A992 (Fy = 50 ksi, Fu = 65 ksi) is the preferred material specification for wide-flange shapes, having replaced ASTM A36 and A572 grade 50. There are a couple of noteworthy enhancements with ASTM A992. Material ductility is well defined since a maximum yield-to-tensile strength ratio of 0.85 is specified. Additionally, weldability is improved since a maximum carbon equivalent value of 0.45 (0.47 for Group 4 and 5 shapes) is required. ASTM A992 is written to cover all hot-rolled shapes."[1]

See also

- Structural steel

Further information

- Do you 992? - AISC Steel Solutions Center (https://www.aisc.org/globalassets/modern-steel/steelwise/2003_01_steelwise.pdf)

References

1. "What is ASTM A992?" (https://web.archive.org/web/20141006111934/https://www.aisc.org/DynamicTaxonomyFAQs.aspx?id=1508). *Engineering FAQs*. American Institute of Steel Construction. 1 January 2006. Archived from the original (https://www.aisc.org/DynamicTaxonomyFAQs.aspx?id=1508) on 6 October 2014. Retrieved 1 October 2014.

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