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20-08-2018

Test Certificate

This is to certify that the samples supplied M/s. ARS Steels and Alloy International Pvt Ltd: Fe 500D and Fe 550D of diameters 8, 10, 12, 16, 20 and 25 mm were subjected to uniaxial tensile test (Project no CNP 6568 41). The samples meet the following criteria of Indian Standard IS 1786 (2008), amendment 1; Elastic Modulus (Young's Modulus), Yield Stress, Elongation, Total Elongation, Tensile Strength/Yield Strength (TS/YS). The samples supplied meet the elongation criteria for the 'D' grade steel of Fe 500 and 550 thereby suitable for use in earthquake design.

It is also worth mentioning that a maximum savings of about 4.5 % (theoretical) in area of steel can be achieved when Fe 550D is used in place of Fe 500D in flexure (singly reinforced) and when Indian Standard IS 456 (2000) is used as the design basis (comparison made at limiting moment of Fe 550D). This savings can be practically as high as 6% when the combination of different bar diameters is adopted. The saving will be further enhanced (up to 18% depending on the area required and combination of available bar diameter) if Fe 550D is used in place of Fe 415.

V. Srinivasan
Sr. Scientist

S. Sundar Kumar
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To,
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