MILD STEEL AND MEDIUM TENSILE STEEL BARS AND HARD-DRAWN STEEL WIRE FOR CONCRETE REINFORCEMENT - MILD STEEL AND MEDIUM TENSILE STEEL BARS - IS 432 (PART 1): 1982

Concrete, although strong in compression, is weak in tension. For this reason, it needs help in resisting tensile stresses caused by bending forces from applied loads which would result in cracking and ultimately failure.

Steel and concrete are having almost same Thermal Expansion Coefficient and good bonding strength hence **steel reinforcement** is addresses the issue. Steel Reinforcements are made of **Steel Bars** of varying diameters and they are placed like mesh within the formwork and then concrete is poured into the formwork.

IS 432 part 1 covers the requirement of Mild Steel and Medium Tensile Steel bars. Mild Steel and Medium Tensile Steel bars as per IS 432 (Pt 1) are categorized as given below:

- **Mild Steel Bars** (i) Grades - Grade I and II (ii) Nominal Size (mm) - 5, 6, 8, 10, 12, 16, 20, 22, 25, 28.32, 36, 40,45 and 50

- **Medium Tensile Steel Bars** (i) Nominal Size (mm) - 5, 6, 8, 10, 12, 16, 20, 22, 25, 28.32, 36, 40,45 and 50

Properties of bars which are ensured as per IS 432 Part 1 are Ultimate tensile stress, Proof stress, Elongation over a gauge length through Tensile test, Reverse Bend Test and dimension measurement and Chemical Tests. All finished bars are well and cleanly rolled to the dimensions and weights specified.

Ministry of Steel has issued Quality Control Order for Mild Steel and Medium Tensile Steel bars made mandatory to ensure the requisite property for making **safe concrete structure** for safety and once who are buying the product must check the ISI mark on this product.