



## **MILD STEEL AND MEDIUM TENSILE STEEL BARS AND HARD-DRAWN STEEL WIRE FOR CONCRETE REINFORCEMENT PART II - HARD-DRAWN STEEL WIRE IS 432 (PART 2)**

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 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. **Mild steel wire** is being used in products like **Precast concrete / RCC/ Hume pies**, wire mesh for **concrete wall** etc.

IS 432 part 2 covers the requirement of Hard drawn steel wire of mild steel and medium tensile steel. **Hard drawn steel Wires** of different diameters are manufactured by drawing of bigger diameter into to desired diameter.

Properties of wires which are ensured as per IS 432 Part 2 are Ultimate tensile stress, Proof stress, Total Elongation %, Cutting Tolerances on Length, Diameter, ductility through Tensile test, **Reverse Bend Test**, dimension measurement and Chemical Tests. IS 432 part 2 also talks about delivery inspection and sampling method and marking clause.

Ministry of Steel has issued Quality Control Order for Mild Steel and Medium Tensile Steel wires 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.