IS 1786:2008 High-strength Deformed Steel Bars and Wires for Concrete Reinforcement- Specification

High-strength Deformed Steel Bars and Wires for Concrete Reinforcement, are a type of steel reinforcement used in concrete construction. They are characterized by their ribbed surface, which provides better mechanical grip with concrete, enhancing the bond strength. They exhibit high tensile strength, yield strength, and good ductility, allowing them to effectively resist loads and stresses in construction applications.

These bars and wires are primarily used in beams, slabs, columns, and walls to enhance structural integrity and load-bearing capacity, commonly used in bridges, high-rise buildings, roads etc.

IS 1786:2008 specifies various grades (e.g. Fe 415, Fe 500, Fe 550, Fe 600), each indicating different chemical composition and yield strengths to suit specific structural needs. The standard also specifies the tests and requirements for tensile strength, yield strength, and elongation, ensuring the bars and wires can withstand loads and stresses in concrete structures. The tests for rib area and bond strength ensures improved grip with concrete while bend tests helps determine how much the bar can bend without cracking or breaking.