



IS 1785 (Part 2):1983 'Specification for hard drawn steel wire for prestressed concrete Part 2 As-drawn wire'

This standard, **IS 1785 (Part 2): 1983**, specifies the requirements for **plain hard-drawn steel wire**, particularly as-drawn wire, intended for use in **prestressed concrete** applications. This wire is commonly used in infrastructure that demands high tensile strength and durability, such as prestressed concrete pipes and other structural components.

The steel wire should exhibit **high tensile strength, durability, and resistance to deformation** under stress. Key quality parameters include mechanical properties like **tensile strength, elongation, and ductility**. Additionally, the standard ensures consistency in wire dimensions and chemical composition to meet the rigorous demands of construction applications, providing confidence in the safety and longevity of the structures that use this material.

The standard ensures the above by setting clear guidelines on **manufacturing, testing, and quality control**. It defines specific requirements for the wire's mechanical and chemical properties, ensuring that it withstands the stresses of prestressed concrete applications. Regular testing protocols are established to verify compliance with the required tensile and elongation properties, providing assurance of the wire's performance and reliability. This helps mitigate risks associated with **structural failure**, enhancing consumer trust in infrastructure safety.