



Indian Standard IS 10794 : 1984 Mild Steel wire for cotter pins specification

IS 10794: 1984 specifies the requirements for mild steel wires used in the manufacturing of cotter pins. Cotter pins are mechanical fasteners commonly used in machinery and equipment to secure other components, such as shafts, bolts, or nuts. The mild steel wire serves as the raw material for forming cotter pins, ensuring they meet the necessary strength and dimensional requirements for reliable fastening.

Consumers expect the following quality parameters in the product:

1. **Strength and Ductility:** Sufficient tensile strength to withstand mechanical stresses while maintaining ductility for easy bending or forming.
2. **Dimensional Accuracy:** Uniform diameter across the wire length to ensure consistent cotter pin manufacturing.
3. **Surface Quality:** Smooth, defect-free surface free from cracks, seams, or rust, ensuring proper functionality and longevity of cotter pins.
4. **Corrosion Resistance:** Ability to resist corrosion in environments where cotter pins may be exposed to moisture or chemicals.
5. **Reliability in Performance:** Material properties that ensure cotter pins retain their shape and strength during assembly and use.

IS 10794: 1984 ensures consumer expectations are met through:

1. **Material Composition:** Specifies the chemical composition of mild steel, limiting impurities such as sulfur and phosphorus to enhance strength and ductility.
2. **Mechanical Properties:** Defines minimum tensile strength and elongation requirements to ensure the wire's ability to withstand stresses without failure.
3. **Dimensional Tolerances:** Standardizes wire diameters and permissible deviations to guarantee uniformity during cotter pin production.
4. **Surface Finish:** Requires wires to have smooth, defect-free surfaces, minimizing the risk of failures caused by flaws or corrosion.
5. **Testing Protocols:** Includes tensile testing, bend testing, and visual inspection to verify compliance with mechanical and dimensional standards.
6. **Marking and Packaging:** Specifies proper labeling and protective packaging to ensure traceability and protection during transportation and storage.

By addressing these parameters, IS 10794 ensures that Mild steel wire used for Cotter Pins deliver reliable performance and meet diverse consumer requirements.