



## **IS 10891: Steel Wire Ropes for Aerial Ropeways — Specification**

**Aerial Ropeways** are transportation systems that use cable cars, gondolas, or other vehicles suspended from a set of cables (often referred to as ropes) to transport passengers or goods over long distances, usually across difficult or mountainous terrain.

**Haulage ropes** are the ropes that provide the primary mechanical force to move the cable cars or other vehicles along an aerial ropeway system. They are a critical component of aerial ropeway systems, as they bear the entire load of the system, including the vehicles, passengers, and freight. These ropes are subject to substantial loads, dynamic forces, and environmental stresses such as wind, temperature fluctuations, moisture, and UV radiation.

The quality, strength, and durability of the ropes are directly related to the safety and operational efficiency of the system. Hence their construction, material properties, and performance need to meet strict safety and operational standards.

**Indian Standard IS 10891: Part 1** outlines the requirements for steel wire ropes used as haulage ropes in aerial ropeways. It covers the construction, material, minimum breaking force, testing, and performance criteria for these ropes. The standard specifies the mass and minimum breaking force for seven types of haulage rope constructions, which can have either a fibre core or steel core.

It also defines the material requirements for the wires and core, along with the size range for each rope construction type. Additionally, the standard details the testing requirements for the ropes and provides guidelines for marking to ensure traceability and quality control.

In summary **IS 10891: Part 1** helps ensure that these ropes can handle heavy loads and dynamic stresses while maintaining safety and performance over time.