

IS 1855: 2022 – Stranded Steel Wire Ropes for Winding and Man - riding Haulages in Mines - Specification

Wire ropes used in the Mining Industry are required to withstand the toughest mining conditions. And hence these ropes are to be designed to **withstand heavy loads, external wear, bending and vibrational stress** to which these ropes are subjected. In designing the wire ropes, **safety of the workers in the mining Industry** is to be ensured. An optimum quality of wire rope designed for the specific use increases the service life of the rope, reduces maintenance costs, ensures the safety of the workers and increases operational efficiency.

The wire ropes manufactured as per the Indian standard, **IS 1855:2022** ensures the above requirements of Mining Industry. The standard specifies the rope constructions, types, rope grades, cores and their size ranges. The standard also specifies the requirements of the materials such as **steel wire, Fibre core, Lubricants used** in the manufacture of these wire ropes.

The standard also specifies the requirements for different **types of Lay of ropes**, the requirements of the galvanizing of the wires used in the wire rope and the requirements of **lubrication** of the wire ropes and their fibre cores.

The standard also specifies the requirements for the Test parameters such as **Tensile strength**, % Elongation of the steel wires, breaking strength of the Wire ropes, which are critical and essential **to ensure the safety of the manpower** involved. Moreover, the standard also specifies the **requirements of the fibres** used in the fibre cores and the **requirements of the fibre cores**. Finally, it is to mention that the standard also specifies the packing and marking requirements of the wire ropes.

Overall the Indian standard **IS 1855 for Stranded Steel Wire Ropes for Winding and Man - riding Haulages in Mines** is a comprehensive standard and is a useful guide for the designers of the wire ropes used in the mining Industry.