IS/ISO 3183:2019 Steel Pipe for Pipeline Transportation Systems

Steel pipes for **petroleum** and **natural gas pipeline** transportation are critical components used to safely and efficiently carry **oil** and gas across extensive networks. These pipes must be **robust** and **reliable**, ensuring that they can withstand **extreme conditions**, **high pressures**, and **corrosive environments** typically encountered in pipeline systems.

These steel pipes are expected to be of superior quality parameters, including consistent **strength**, **durability**, **corrosion resistance**, precise dimensions, and high **safety** features. These pipes are rigorously tested to ensure minimal risk of leaks or failures, which is crucial for protecting both the environment and human safety.

IS/ISO 3183:2019 addresses these expectations by setting stringent requirements for **manufacturing**, **testing**, and **marking** of steel pipes. It specifies two levels of product specifications, **PSL 1** and **PSL 2**, tailored for different performance needs. The standard covers aspects such as **chemical** and **mechanical property** limits, **non-destructive testing** protocols such as **ultrasonic testing** and **radiographic inspection**, to detect defects in the pipe material or welds. These tests are crucial for ensuring that the pipes are free from imperfections that could compromise their integrity.

The standard provides detailed instructions for **marking pipes** with information such as the manufacturer's name, pipe size, grade, and specification level. This marking ensures each pipe can be traced back to its production batch and quality records, providing transparency and accountability.

This standard supplements the **API Spec 5L**, **46th edition**, with additional requirements for European and other global markets. This alignment ensures that pipes meet both regional and international standards, making them suitable for worldwide use.