IS 7181 : 1986- Horizontally cast iron double flanged pipes for water, gas and sewage

IS 7181:1986 specifies the requirements for **horizontally cast iron double-flanged pipes** used for the conveyance of water, gas, and sewage. These pipes are primarily employed in water supply systems, gas distribution networks, and sewage systems where strength, durability, and leak-proof connections are crucial. The double-flanged design facilitates secure jointing, making these pipes particularly suitable for fixed installations requiring reliability under varying pressure conditions.

Consumers of horizontally cast iron double-flanged pipes expect several key quality parameters. One critical requirement is **mechanical strength**, as the pipes must withstand internal pressures and external loads without cracking or deforming. **Leak-proof performance** is another essential aspect, ensuring that the flanged joints provide a secure and tight seal during operation. **Corrosion resistance** is also vital, particularly for sewage and water applications, where the pipes are exposed to corrosive substances and varying environmental conditions. Dimensional accuracy and uniform wall thickness are expected to ensure ease of installation and consistent performance.

IS 7181:1986 comprehensively addresses these quality expectations. It specifies the grade of cast iron to be used, ensuring adequate **mechanical strength** and **resistance to wear** and corrosion. The standard outlines the dimensional requirements, including flange dimensions, thickness, and alignment tolerances, to ensure compatibility and **leak-proof connections**. **Hydrostatic pressure tests** are mandated to verify the pipe's ability to withstand operating pressures without leakage or failure. Additionally, the standard requires the pipes to undergo visual and dimensional inspections to ensure they meet specified design and material quality criteria.

By adhering to IS 7181:1986, manufacturers can produce cast iron double-flanged pipes that meet consumer demands for strength, durability, and reliability, ensuring safe and efficient transportation of water, gas, and sewage in various infrastructure projects.