



IS 458: 2021 PRECAST CONCRETE PIPES (WITH AND WITHOUT REINFORCEMENT)

Precast concrete pipes are widely used for water mains, **sewers, culverts** and in irrigation. **Precast concrete pipes** are also known as Reinforced Cement Concrete (**RCC Pipes**) / **Hume Pipes** are very much preferred for such usage because they are leak proof, are easily repairable and are non-reactive to sewerage toxins.

IS 458 covers Precast Concrete Pipes which are categorized as under: a) Reinforced/Unreinforced b) Manufacturing process - **Spun/Vibrated cast** c) Pressure rating class - **NP1, NP2, NP3, NP4, P1, P2 and P3** d) Sizes - 80 mm to 2600 mm (based on class of pipes) e) Joints - Flush jointed/Spigot and Socket ended/collar jointed

This standard lay down the requirements of quality and dimensions for concrete pipes cast by spinning process or vertical **vibration casting** process. IS 458 covers the raw material quality, Reinforcement weight of mild steel wire/ Bars, curing time requirements, sampling and inspection, Workmanship and finish, and Marking requirements.

Properties of pipes which can be ensured as per IS 458 are Strength of Concrete through Cube Testing, Determination of leakage under internal hydrostatic pressure through Hydrostatic pressure Test, Load bearing strength through three edge bearing load capacity test, Permeability test for compactness of concrete, Various dimensions like Internal diameter, Barrel wall thickness, Overall length, straightness etc.

Many Govt departments like **National Highway Authority (NHA)**, Municipal Corporations are procuring the pipes with ISI mark as per IS 458 for their project works. Products having ISI mark are manufactured under process control and tested as per defined method. which ensures the designed performance of pipe.

