

This standard, IS 8110:2019, focuses on water well screens and slotted pipes. These are critical for tube wells, acting as filters that prevent sediments from entering while allowing water to flow freely. The primary types include slotted pipes, bridge slots, mesh-wrapped screens, cage-type wire-wound screens, and pre-packed gravel screens, each suited to different well conditions and groundwater quality. Materials used range from corrosion-resistant metals, like stainless steel and brass, to durable options like PVC and fiber-reinforced plastic (FRP), ensuring longevity and safe water quality.

Consumers expect high standards for water well screens, focusing on durability, corrosion resistance, and efficiency in filtering out sediments. Screens must provide adequate collapse strength to withstand hydrostatic pressure, and their tensile strength should support the weight of the tube well assembly. For optimal performance, the slot sizes and distribution are precisely designed to balance water flow with sediment filtration, minimizing clogging risks and ensuring long operational life. Additionally, smooth edges and non-corrosive materials are preferred to reduce friction and prevent mineral buildup.

The standard addresses these expectations by setting stringent parameters for materials, structural strength, slot design, and inspection methods. It specifies acceptable tolerance levels, inspection protocols, and testing requirements, including collapse and tensile strength tests, to ensure that each screen meets performance and durability standards. These guidelines assure consumers of product quality, meeting safety needs for potable water and operational reliability for agricultural or industrial purposes.