

Summary of IS 1285:2023

IS 1285:2023 is an Indian Standard for wrought aluminum and aluminum alloy extruded round tubes and hollow sections for general engineering purposes. This document serves as an essential reference for manufacturers, engineers, and quality control professionals working with aluminum extrusions in India. This is the fourth revision of the standard, originally published in 1956. Previous revisions were made in 1968, 1975, and 2002.

The standard covers the following types of wrought aluminum and aluminum alloy extruded round tubes and hollow sections:

- Extruded Round Tube: Circular hollow extrusion with uniform wall thickness
- Extruded Structural Tube: Made using bridge type die or port hole die
- Extruded Seamless Tubes: Made from hollow billet without longitudinal seam welds
- Hollow Section: Non-round extruded shape enclosing voids

The standard specifies that the extruded round tubes and hollow sections shall be sound and visually free from harmful defects but can show minor discoloration, polishing marks, or spiral marks due to production processes. They must be made from alloys specified in IS 733 and tested for chemical composition for aluminum, copper, manganese, silicon, iron, magnesium, zinc, chromium, titanium, and other grain-refining elements using methods outlined in IS 504. Also, they must meet tensile test requirements as per IS 733. The standard details the selection of test samples for aluminum, non-heat-treatable aluminum alloy, and heat-treatable aluminum alloy.

It specifies that the purchaser must specify the alloy designation, temper condition, quantity, dimensions, packing mode, and detailed drawings of the product while placing an order. The standard provides the criteria for rejection and retesting of materials, as per IS 10259, and packaging according to the guidelines in IS 10259.

The standard aims to ensure consistency and quality in aluminum extrusions used in engineering applications, providing comprehensive guidelines for manufacturers and purchasers. It covers everything from material specifications to testing requirements and proper marking procedures.