



Indian Standards 737: 2008, Wrought Aluminium and Aluminium Alloy Sheets and Strips

Definition of the Product :

Wrought aluminium and aluminium alloy sheet and strip are flat-rolled products made from aluminium or its alloys, specifically processed for use in general engineering applications. These products are manufactured through mechanical processing, such as rolling, which enhances their strength and durability without altering the metal's natural lightweight and corrosion-resistant properties.

This product is widely used in chemical brewing and processing equipments, aircraft application, irrigation tubing, heat exchangers, utensil and pressure cooker etc.

Good Quality Parameter:

Consumers expect high-quality parameters for **Wrought Aluminium and Aluminium Alloy Sheets and Strips** intended for general engineering purposes to ensure the material's performance, durability, and suitability for various applications. Key quality parameters as follow:

- i) Surface Quality and Workmanship
- ii) Mechanical Strength
- iii) Consistency in Chemical Composition
- iv) Dimensional Accuracy
- v) Corrosion Resistance
- vi) Marking and Traceability

The **Indian Standard IS 737:2008** addresses the above quality parameters in the following ways:

- i) IS 737 includes requirements for **surface quality** and **workmanship**, specifying that sheets and strips should be free from visible defects such as cracks, splits, rough edges, and other surface imperfections
- ii) IS 737 specifies minimum mechanical property requirements, including **tensile strength**, **yield strength (0.2 proof strength)**, and **elongation**. These properties vary based on the alloy grade of the sheet or strip.
- iii) IS 737 defines specific **chemical composition limits** for each alloy grade, specifying the range of elements like copper, Magnesium, silicon, iron, manganese, Zinc, Titanium and Chromium that provide **corrosion resistance** in the material,
- iv) The standard prescribes strict **tolerances for thickness, width, and length** to ensure dimensional consistency across products. These tolerances are detailed based on the nominal thickness and width of the sheets or strips.
- v) IS 737 mandates that each sheet or strip must be **marked** with information such as the **alloy grade**, **condition of the material**, and **manufacturer's identification**. This marking helps in traceability and ensures that users can verify compliance with the standards.

By defining above parameters, IS 737:2008 ensures that wrought aluminium and aluminium alloy sheets and strips meet quality standards necessary for safe, durable, and reliable use in various engineering applications.