



What is Extrusions?

Extrusion is defined as a process in which a metal block is reduced in cross section by forcing it to flow through a die, in order to give it a desired shape.

Extrusions are performed both hot and cold. However, most commercial extrusions are performed hot. Extrusion processes may be direct or indirect. In Direct extrusion, which is the conventional process, the billet moves relative to the container wall, while in indirect extrusions the die moves.

The Extrusion process is the most economical and versatile method of producing aluminium sections of almost any desired shape and form.

Alupuram Extrusions Plant Facilities

India's first Extrusion plant was started at Alupuram , Kerala in the year 1955.

Presses

The Alupuram plant has two extrusion presses – 3300 ton with a 9" & 12" container and 1250 ton with a 6" container.

Die Shop

Dimensional accuracy is achieved through dies manufactured in-house from the well-equipped Die Shop having highly skilled & experienced manpower. The die shop facilities include :

- 1 Cad Cam station for die designing & programming
- 1 1 CNC EDM
- 1 2 orbital EDM
- 1 CNC lathes & other conventional tooling equipments

Solution Heat Treatment Furnace

Solution Heat Treatment: A process in which an Aluminium alloy is heated to a suitable temperature, is held at that temperature long enough to allow a certain constituent to enter into solid solution, and is then cooled rapidly to hold that constituent in solution

All 2xxx & larger CCD profiles of 6xxx & 7xxx need offline solutionising. Consistent mechanical properties like UTS & hardness are a feature of Hindalco profiles in above alloys as they are properly solutionised.

Reeling Machine

Round rods and tubes needing close tolerance are processed through special machines which ensure straight and tight dimensional tolerance.

Testing

Hindalco has the most comprehensive testing facilities in the extrusions industry in India. The facilities include :

- 1 Quantometer (optical emission) for chemical composition
- 1 Universal testing machine for tensile strength & elongation
- 1 Rockwell & Brinell Hardness testers
- 1 Digital micro ohm meter for electrical conductivity
- 1 Ultrasonic testing

Packing

Fully automatic packing line at Hindalco takes care of varied requirements of customers for road, rail & sea transportation.

Range of Alloys *

1050, 1060, 1070, 1200, 1100, 6063, 6061, 6101, 6351, 6082, 6066, AA6061, 2014, 2024, 3003, 5052, 5086, 7018.

* Individual press facility may vary

Standard Tempers

O, F, T4, T5, T6

Dimensional Range

Hindalco offers extrusions of :

- 1 Minimum area of 40 mm²
- 1 Maximum Circumscribing Circle Diameter 330 mm for Solids
- 1 Maximum Circumscribing Circle Diameter 225 mm for Hollows.

This Catalogue deals with a complete range of sections for which dies are available at Alupuram. Apart from those covered here, new dies are being continuously developed and added regularly. The company is well equipped in developing new sections as required and also co develop special sections working hand in hand with the customer.

The information available in this catalogue is indicative. For e.g. Nominal weight may vary depending upon condition of die during extrusion. For precise confirmation of section related data, Hindalco sales officials may be contacted.