

Jindal Aluminium Limited

Bangalore, India



Associate Companies/Institutions

- **Jindal Aluminium Limited (Extrusion & Rolling Division)**
- **Power Projects (Green Energy)**
 - Wind Mills
 - Solar
- **Healthcare Institutions**
 - Jindal Naturecure Institute
 - Manav Charitable Hospital
 - Jindal Charitable Hospital
- **Education Institutions**
 - Jindal Public School
 - Jindal Pre-University College
 - Jindal Degree College for Women
- **Sitaram Jindal Foundation**



Jindal | A Preview

- Established in 1968, almost five decades old Aluminium Extruder in India.
- Largest Aluminium Extruder with installed production capacity of **120,000 TPA**, with **11** extrusion presses.
- In house manufacturing of high precision and intricate Dies, with capacity to manufacture above 200 dies per month.
- Rolling division commenced operations in 2012, producing above 50,000 TPA, of rolled products.
- First Indian company in entire Aluminium Extrusion fraternity to win ISO 9001, American Bureau of Shipping (ABS) and Hartford Steam Boiler (HSB) Certifications.
- **Credit rating:** We possess a credit rating of A1+ by CRISIL (the highest safety level).
- Contribution in development of Nation by various CSR activities.
- Remarkable global presence in 40 countries.
- One of the first corporates to adopt clean energy. Installed first wind power project in the state of Karnataka and remains fully committed to clean energy by being a net energy exporter from our wind and solar power plants.



Our Presence

- HO – Bangalore, Karnataka, India
- Two Manufacturing units (Extrusion and Rolled products) – both in Bangalore, Karnataka, India
- Branch Offices in India –
 - Delhi
 - Mumbai
 - Chennai
 - Cochin
 - Pune
 - Ahmadabad
 - Coimbatore
- Overseas Office – Dubai, UAE
- Dealers – 100+ dealers PAN India



Benefits of Aluminium

100% Recyclable

Corrosion Resistant and Durable

Benefits

Extremely Light Weight

Attractive and aesthetic



Customers





Aluminium Extrusion Division



Extrusion Division..

Production–Capacities & Capabilities

- Installed capacity of 120,000 TPA including Largest German make extrusion press of 4000 UST which has a capacity to extrude profiles up to 390 mm CCD.
- Can extrude flats of 430 mm wide, round tubes of 300 mm dia, round bars of 290 mm dia and square bars of 200mm
- Capable of producing extrusions in 1xxx, 2xxx, 6xxx, and 7xxx series of alloys in various tempers such as T4, T5, T6, T66, T6511 etc...
- Separate solution treatment plant for harder alloys.
- Ageing furnace with capacity to accommodate profiles up-to 11.8 meter length.
- Achieved Highest ever production of 83,425 MT during Financial Year 2016-17.



Extrusion Division – Billet Casting

- Fully integrated plant with in-house Billet casting units having capacity of 190,000 MT/annum.
- First in country to install Hot top casting facility from Loma, USA.
- 6 melting furnaces with capacity of producing 520 MT logs per day.
- Computerized Spectro-Vac for analyzing liquid metal sample, instantaneously.
- Eco friendly Nitrogen degassing system is being used instead of conventional harmful Chlorine gas.
- Continuous TIBAL grain refining and ceramic foam filtration system.
- Continuous online homogenizing process.
- **Ultrasonic testing** for logs to detect cracks and porosity.
- **Ultramodern** filtering process for the molten metal to avoid inclusions during casting.



A View of Melting Furnace



Extrusion Division - Production Press Details

- Equipped with 11 Extrusion Presses with PLC controls from renowned manufacturers.



Press	Tonnage	Make	CCD	Billet Dia
P1	750	Jindal (indigenous)	110	121 mm
P2	1500	Lowey, USA	155	161 mm
P3	2100	SMS, Germany	205	214 mm
P4	1650	Tecalex, Spain	165	173 mm
P5	2200	SMS, Germany	145	178 mm
P6	4000	SMS, Germany 12"	390	304 mm
P7	1650	UBE, Japan	155	161 mm
P8	1160	Mingshing, China	105	127 mm
P9	1160	Mingshing, China	105	127 mm
P10	1800	SMS, Germany	150	178 mm
P11	2100	UBE, Japan	200	211 mm

Tool Shop (Die making)

- Quality of dies plays a vital role in the quality of extrusions.
- A sophisticated Tool Shop with CNCs, VMCs, EDM Wirecuts, etc. of the most reputed make in the international market.
- Equipped with the latest software for extrusion simulation, which helps to further optimize the die design, to achieve the best metal flow which in turn helps in achieving a very good surface finish.
- JAL has an expert team of die designers with vast and rich experience in die design.





Quality Assurance

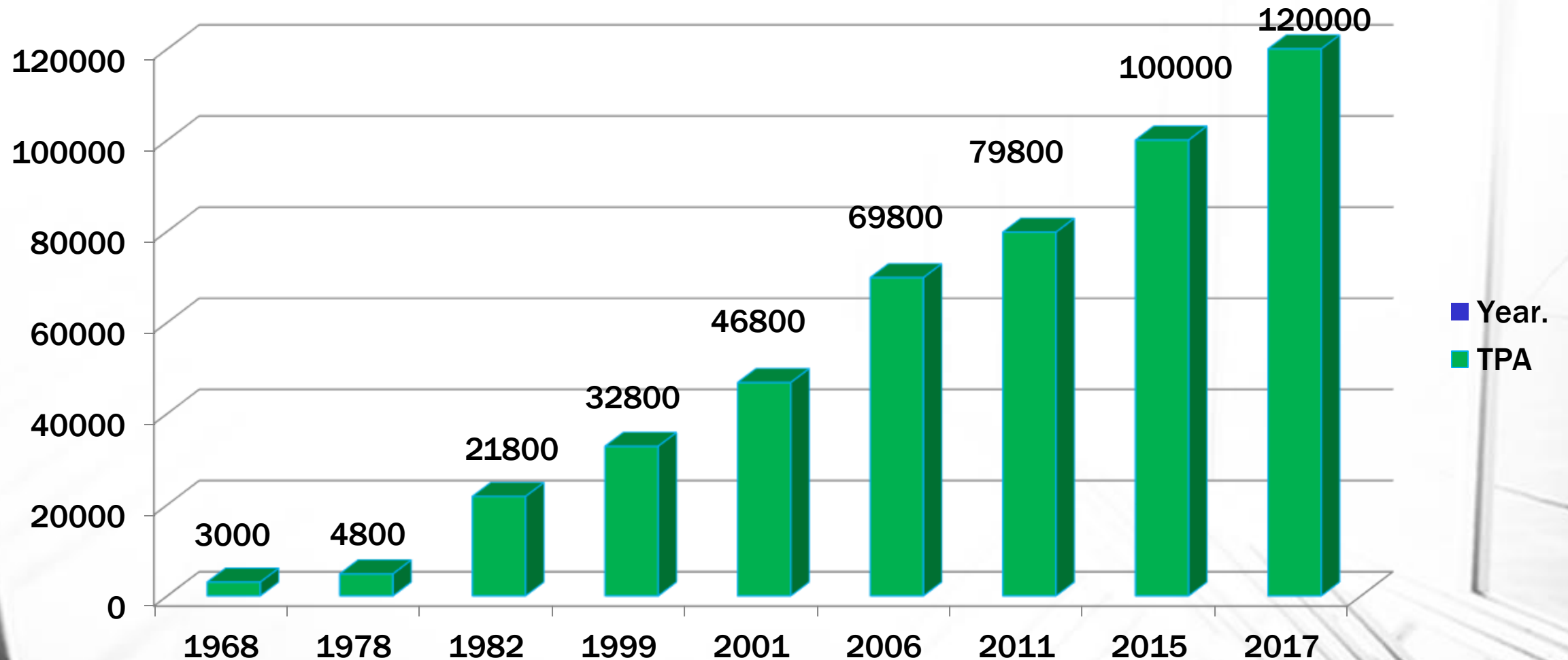
- Conductivity meter to check the electrical conductivity for electrical grade material.
- Romidot automatic profile scanning machine for accurate dimensional measurement of profiles.
- Ultrasonic testing machines for flaw detection in billets and in heavy industrial profiles, rods and bars.
- Metallurgical microscope for metallography.
- Spectro analyser for checking the chemical composition of molten metal in foundry.
- Computerised Universal testing machine for tensile testing.
- Brinell Hardness tester and portable hardness testers like Barcole, Webster, Dynamic (Leeb)
- Surface roughness tester.
- Dedicated team of qualified engineers, metallurgists and technicians to monitor the process and ensure the quality of the extrusion at every stage





Extrusion Division..

Growth in Production Capacity (in MT)





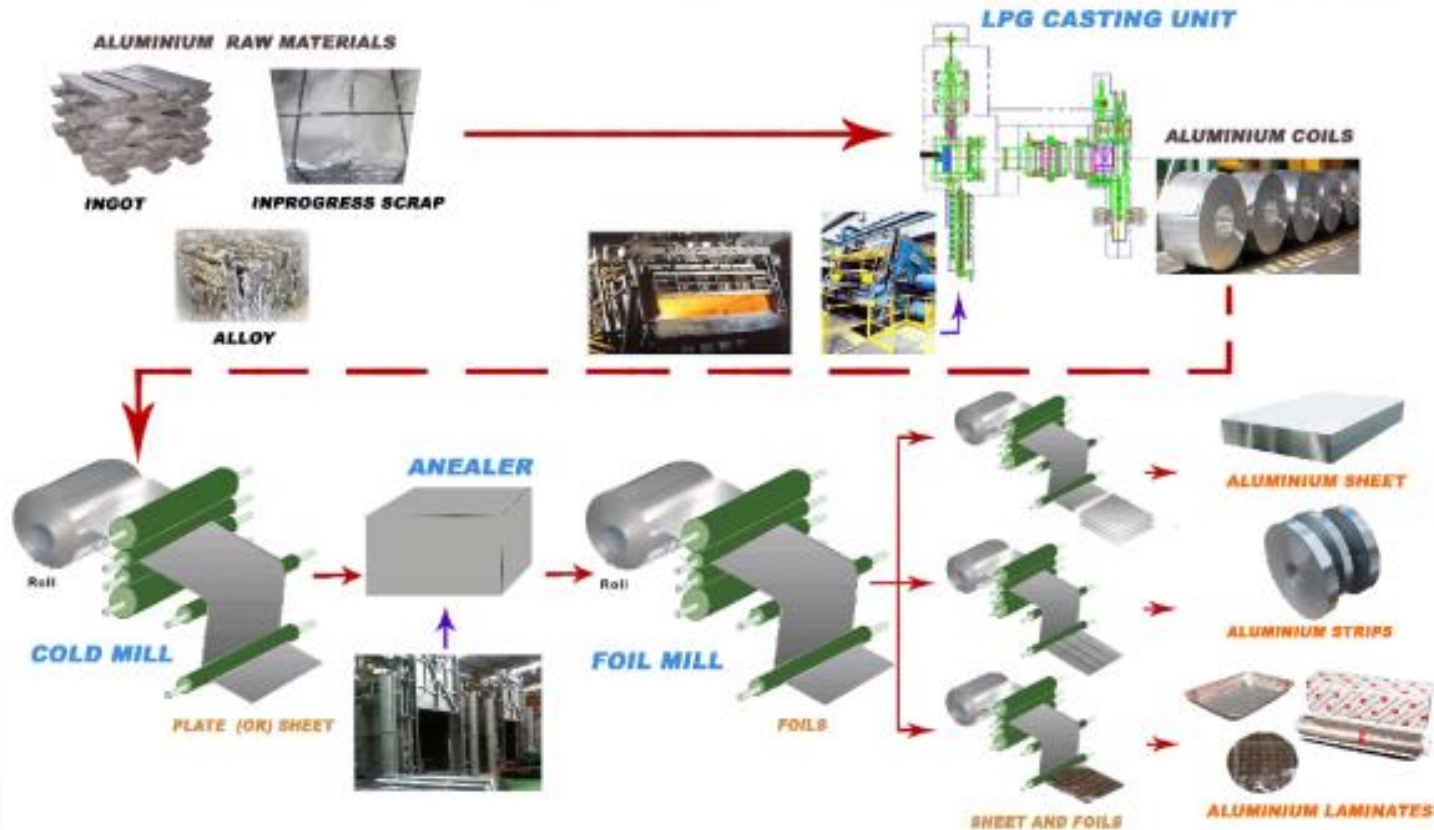
Flat Rolled Products

Rolling Division



Rolling Division.. Production Process

JINDAL ALUMINIUM ROLLING LIMITED SHEET AND FOIL PROCESS





Rolling Division.. Foundry and Casting Facility

- State of the art inclined continuous caster capable of casting 50,000 MT per annum.
- 4 set of Melting furnaces and Continuous casters for producing quality coils in desired alloys.
- German make computerized Spectro Vac for analyzing liquid metal sample, instantaneously.
- Ultra modern inline degassing & filtration process for the molten metal to avoid inclusions and entrapped gases during casting.
- Infusion of Titanium Boron rod for better grain refining.





Rolling Division.. Alloys Manufactured

Alloy Series

- 8xxx – 8011 and 8006
- 1xxx – 1235, 1100, 1200, 1050 and 1060.
- 3xxx – 3003, 3103, 3004, 3005 and 3105
- 5xxx – 5005 and 5052



Rolling Division.. Cold Rolling Mill

- Fully automatic state of the art equipment.
- Capable of producing 50,000 MT per annum.
- First in the country to have an auto flatness & gauge control (Optirol 2) CRM supplied by Achenbach, Germany.
- Widest deckle up to 1650 mm.
- Capable of rolling coils from 7 mm down to 0.10 mm thickness.



View of Cold Rolling Mill



Rolling Division.. Other Facilities

- Most Modern “Cut to length” with flying shear & flatness controller.
- Stamco, US make heavy gauge slitter with narrow slitting ability.
- Kampf, German make fully automatic separator and slitter for slitting thin gauge foils.
- Swedish Tension Leveller for table top flatness.
- Multi Slitting Machine for providing narrow width coils , even as narrow as 20 mm width.



Rolling Division.. Products Manufactured

- Aluminium Coils/ Sheets
- Aluminium Chequered Sheets
- Aluminium Foils
- Aluminium Slugs/Circles
- Premium Range
 - ✓ Aluminium Litho Coils
 - ✓ “Forever” brand - Aluminium Color Coated Roofing sheets
 - ✓ Aluminium Composites Panel (ACP) Coils
 - ✓ Aluminium Fin stock and Radiator Fins

Rolling Division.. Applications



Automobile



Roofing Sheet



ACP Sheets



PS Plates



Pilfer Proof Caps



Insulation



Exports

- Exports to more than 35 countries including US, Canada, Australia, Africa, Europe & Middle East.
- Cater to more than 30 different segments in Export Market.
- Major customers include Pentair, Schneider, General Electric, Alstom, L&T, Lodec, Air Master, Oil Field Supply Center, Scope Metal etc.
- Extrusions as per EN / DIN / ASTM standards.
- Awarded Star Performer for excellence in Exports for the 11th consecutive years from EEPC, Govt of India.
- Won National Award for Export Excellence - Star Performer for the Year 2015-2016.
- 10% growth in Exports on YOY basis in 2016-17.



Excellence in Exports

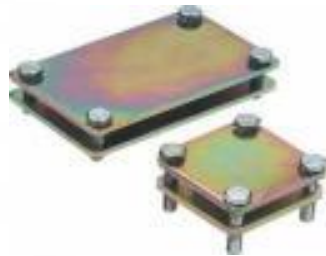


Value Added Services

Anodizing



Powder Coating / PVDF coating



Chromotizing



Secondary operations – precision cutting, punching, drilling, welding etc.

Eco-friendly Policy

- We have established 50.84 MW wind power projects for meeting 100% of our energy requirements and we are exporting excess power also.
- Established 10 MW solar power project.
- Established waste water treatment plant and recycling the water for agriculture purpose resulting in zero discharge.
- Tree planting drive (over 25000 trees) in the campus to establish a green cover.





Corporate Social Responsibility



Corporate Social responsibility

- Jindal Naturecure Institute, where drugless healing therapy using Naturopathy, Yoga and diet are practiced (www.jindalnaturecure.in)
- Two Jindal Charitable Hospitals for meeting health needs of nearly 3000 patients per day, at highly subsidized cost.
- Four Mobile medical vans visit approx. 100 villages in a week providing free medical facilities to 600 patients at their door step on a daily basis.



View of Jindal Naturecure Institute



Corporate Social responsibility

- Jindal Public School with nearly 1800 children from neighboring villages.
- Jindal Pre-University College with nearly 400 girl students.
- Jindal Degree College for Girls in Computer Science and Commerce
- Mahila Arts and Crafts Charitable Institute for teaching the art of garment stitching, computer literacy, etc. for destitute women in surrounding villages.
- Adoption and up-gradation of over 100 villages in Karnataka.
- Extending financial support to more than 500 charitable institutions annually.
- More than 10000 scholarships awarded to poor and needy students for pursuing education.
- Gold medals in various Universities and Colleges.



Thank You!

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