

Innunun

Foreseeing & Extruding The Future



An ISO 9001:2015 Certified Company

# **MAHASAI ALUMINIUM - TRULY AHEAD OF TIME**

Mahasai Aluminium Profiles Private Limited is an aluminium extrusion manufacturing company located in Hyderabad, Telangana State India. An ISO 9001:2015 certified company, equipped with right technology to produce premium quality aluminium extrusions, backed by 3 decades of experience in the business of manufacturing aluminium extruded products.

- Our product find applications in automotive, architectural, defence, electrical & electronics, transport, textiles, heat transfer, pharmaceutical and other industrial segments
- The company is equipped with state of the art manufacturing and testing facilities to produce wide range of products and meet customers' needs
- Our infrastructure includes in-house foundry, tool room and extrusion lines which are completely backed up with high precision and latest technology testing equipment to ensure best-in-class quality







#### VISION

To manufacture product of astounding quality, deliver it on-time, every time and eventually contribute towards the new era of development in pursuit of growth and productivity.

# **MISSION**

To become the most admired brand at national level by expanding our horizons and reinforcing our association with customers and employees.





## Team Mahasai



#### **TECHNOLOGY & INFRASTRUCTURE**

- Spread across 5 acres with a built-up area of 1 Lakh SFT
- In-house foundry incorporated with modern melting furnaces and hot top casting technology to achieve highly refined grain structure and oxide free logs for superior quality finish and uniform surface on the extruded profiles.
- Two extrusion presses 2500 UST and 1100 UST, backed with PLC controlled system
- Solid profiles of CCD up to 350 mm and hollow profiles of CCD up to 250mm can be extruded as per customer's specification subject to the design constraints
- Temperature controlled gas fired hot log shear synchronised to feed the required billet size to the press automatically
- Extrusion presses are equipped with automatic puller

- Auto conveyor belt handling system, totally eliminating manual interface for scratch free surface finish.
- 2500 UST extrusion press is equipped with double puller and specially design automatic quenching system suitable for hard alloys
- Die maintenance shop
- High precision testing equipment includes spectrometer, universal testing machine, hardness testers, electrical conductivity meter, surface table and other measuring tool to ensure international quality standards with the aid of progressive technics



# **VALUE ADDED SERVICES**

To meet the varied requirements of the customers, Mahasai Aluminium has made a significant investment in our processing and fabrication facilities.



#### CUTTING



PUNCHING



DRILLING



TAPPING

# FOUNDRY

At Mahasai Aluminium, we adhere to specific chemical composition for manufacturing of logs in order to ensure premium quality and durability of product with the aid of latest hot top casting technology.

Raw material and alloying elements are procured from primary producers. Ingots are melted and the process of alloying is carried out in melting furnaces. The liquid metal is then tested instantaneously in computerized spectrometer to ensure that the alloy composition is in compliance with global standards. The treated liquid molten aluminium is casted in hot-top casting system which ensures precision casting with high degree grain uniformity.





### **EXTRUSION**

At Mahasai Aluminium, we have deployed state-of-the-art manufacturing facility to produce product of impeccable quality. It starts with pre-heating Homogenised logs and feeding into the container for the process of extrusion with the aid of automated PLC control system. Application of heat and tremendous pressure forces the solid aluminium through the opening of the extrusion die to ensure high degree of structural stability. The extruded Aluminium Profiles are handled on PLC controlled conveyor system to avoid any sort of scratches, dents on the product. Manual hand contact is avoided through the entire process. The extruded profiles are stretched to enhance the straightness & stability and to relive internal stresses. Mahasai Aluminium is involved in manufacturing aluminium extrusions of different alloys depending on the application and customer's requirement, completely providing a detailed solution for the end use, these include aluminium alloy of series 1XXX, 2XXX, 3XXX, 5XXX, 6XXX, 7XXX and in tempers M, 0, T4, T5 & T6.





## **TOOL ROOM**

Dies & toolings required for the manufacturing of aluminium extruded profiles are procured from approved vendors equipped with computer aided manufacturing facilities such has Wire Cut, CNC Milling & CNC Machining Centres. They are manufactured with imported hard die steel (H13) which is subsequently heat treated to ensure high wear resistance. Frequent nitriding process of dies is ensured to improve the hardness and better surface finish of extruded profiles



# **QUALITY AND INSPECTION LAB**

Mahasai Aluminium Profiles Private limited is committed to provide its quality product which meets the requirement of contract specification to enhance customer's satisfaction. We believe in quality beyond everything. We have undertaken stringent quality checks to ensure product of global standards. Entire process is monitored with utmost care and attention at every stage. We use premium quality raw materials from primary sources so that the product is more durable and lasts longer. In addition to this, we are equipped with high-end analytical equipment to meet international standards and equipped to supply material as per IS/ DIN/ ASTM/ EN/ BS international standards or as per customer specifications subject to the designed constraints. All extruded profiles are subjected to various destructive & non destructive test in various equipment's which include:

- Computerised Spectrometer for metal analysis
- Computerised Universal Testing Machine to analyse mechanical properties of finished goods
- Straightness and Flatness checking surface table
- Webstar, Hardness Testers
- Universal bevel protractor for degree checking
- Electrical conductivity meter
- Ultrasonic machine for crack detection in billets and profiles
- Precision measuring equipment for online inspection at various levels









#### PRODUCTS

#### **Building & Construction**



Aluminium extrusions are widely used in the present day's sophisticated architecture. Load bearing structures, facades, claddings, windows, shop fronts, partitions, curtain walling, patent glazing, conservatories, glass houses, roofing scaffolding, architectural hardware, expansion joints, solar panel frames etc.

#### **Transmission & Distribution**



Aluminium extrusion is widely used in this segment due to its high electrical conductivity. Aluminium has significant cost and weight advantages over copper and is now the preferred material for electricity transmission and distribution uses. Use our aluminium extrusions for various applications like control panels, switch gears, power sub stations etc.



Critical Profiles with the tightest tolerances are required for automobile components. We are one of the top aluminium extrusion companies in India and we manufacture extruded profiles for this industry meeting all International Standards and tolerances with precision. **Automation** 

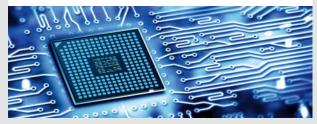


Mahasai Aluminium Profiles Private Limited is committed to cater to the automation segment with the most comprehensive array of extruded profiles for conveyors, cranes, lifts, escalators etc.

Solar Panel



Solar panels are constantly exposed to extreme weather conditions like rain, dirt, storm, humidity etc. Our aluminium profiles/sections for solar panel are available in all types of alloys and temper, meeting stringent technical expectations of all our clients from this industry. **Electrical & Electronics** 



The use of aluminium extrusion in consumer electronics and electrical products is increasing rapidly due to its properties like light weight, flexibility of design, heat dissipation qualities etc. Extruded aluminium products are used in a number of electrical and electronic appliances for mechanical and electrical purposes.





Aluminium is widely used in various medical equipments due to its unique properties of corrosion, chemical resistance, high strength-to-weight ratio, and the ability to incorporate features like snap-fit and hinge that facilitates easier assembly of components.



With the growing need of this segment Aluminium is the first choice for refrigeration and air conditioning industries. It is being widely used because of high conduction ability. Use of aluminium for air-handling units, diffusers, ducts, air grills etc can be beneficial in regard to weight, performance, defrosting, corrosion resistance and ease of cleaning.



With increasing complexities in future design, aluminium is increasingly preferred in various modular furniture industries due to its light weight, strength, corrosion resistance, aesthetic value and for ease of coating in various surface finishes to match any decor.



Traditionally all textile machinery were made of steel but slowly to increase the life of machine and to reduce its weight, aluminium has taken its place in textile machines. Now most of the textile machinery parts are being made out of aluminium including the base plates. For better movement of raw materials like cotton, silk etc the properties of aluminium like light weight, corrosion resistance play a major role for achieving better productivity.



The increasing demand and consumption of special aluminium alloys in defence segment, has now given us the opportunity to move beyond our traditional strengths in electrical, electronics, building segments and shift gears to the emerging applications offered by the defence and aerospace domains.



Being a light weight and modern metal, usage of aluminium is not restricted to above segments only, but it is used extensively for many other products and segments such as ladders, signages, muff tubes, cooling towers, bus shelters, cycle frames, turbines, green house solutions, industrial fans, blowers and antennas to name a few.

### **Committed towards...**

Providing the best quality products and services

Manufacturing products of the highest standards at a competitive price

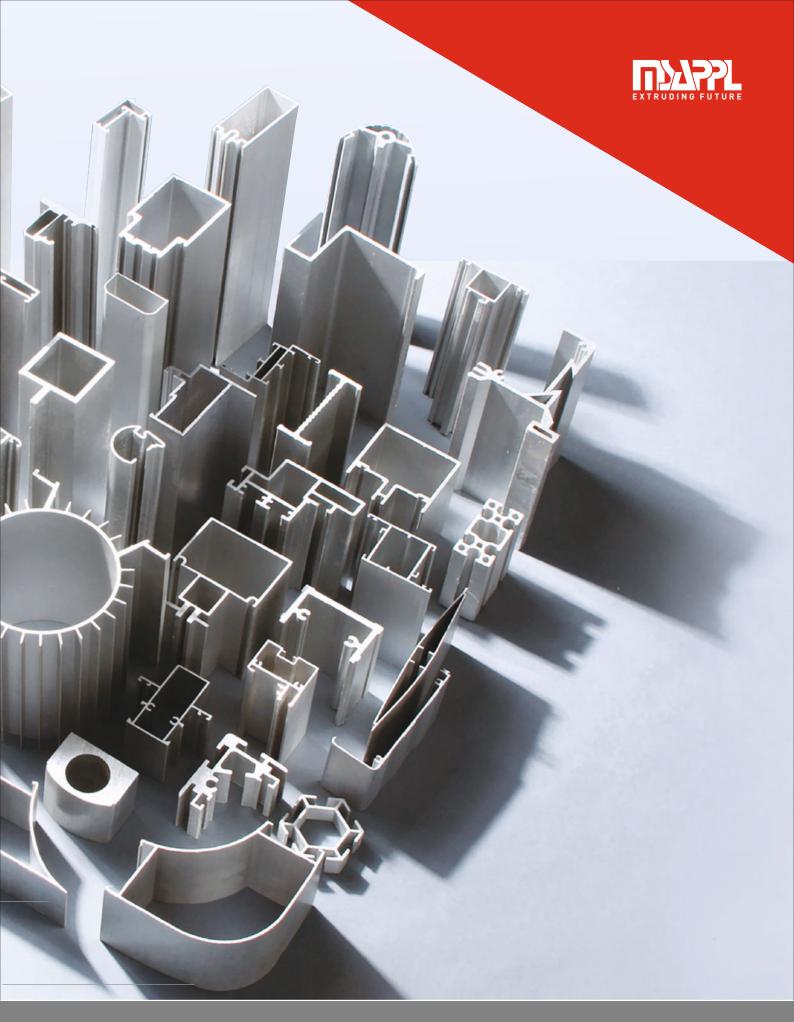
Maintaining a high level of ethics and working atmosphere within the Organization

Maintaining high level of decorum and ethical practices with all our customers, vendors and service providers

> Involving and understanding the end requirement of customer and striving to achieve the same

> > Working towards green energy and reducing energy consumption

> > > Focussing on organizational values and bringing satisfaction to one and all



...Foreseeing & Extruding The Future





#### Mahasai Aluminium Profiles Private Limited

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