

Unmatched **Quality** Meets Limitless **Value**

**PRODUCT
BROCHURE**



Presenting our High
Quality Aluminium Range
for the Automotive Segment



ABOUT US

VEDANTA ALUMINIUM

Based in India, Vedanta Aluminium, a business of Vedanta Limited, is one of the world's top manufacturers of aluminium, the '**metal of the future**'.

With a production of **2.37 million tonnes** per annum (MTPA), we are catering to the aluminium requirements of discerning customers in more than

60 countries across Americas, Europe, Asia & Oceania, Middle East and Africa.



CATERING
TO MORE THAN
60
COUNTRIES

HELPING CUSTOMERS **SHARPEN THEIR** COMPETITIVE EDGE

The most discerning of customers world-wide have chosen us for the quality of our products, global expertise in sustainable aluminium production and excellence in customer services. We take great pride in providing our customers a unique competitive edge with one of the largest ranges of aluminium products, expertly tailormade for their evolving needs.



UNPARALLELED GLOBAL EXPERTISE

With state-of-the-art assets, deep talent pool and ecosystem of global experts, our expertise in aluminium is sought-after world-wide.

TECHNOLOGY

Extensive deployment of best-in-class technology, innovation and digitalisation enables us to showcase high operational excellence and sustainable performance.

RESEARCH & DEVELOPMENT

We work with customers to co-create innovative product solutions customised to their needs, thanks to our robust R&D capabilities and a vibrant innovation hub.

CUSTOMER TECHNICAL SERVICES (CTS)

Our vibrant CTS cell works with a bevy of experts to help customers with new product development, global expertise in technical services, market development and more.

EASE OF BUSINESS

The Vedanta Metal Bazaar platform is an intuitive and easy-to-use platform built for customers of all sizes, featuring AI-based price discovery and a host of other great features that enable easy access to our wide range of products.

STRONG SUPPLY CHAIN

With access to India's abundant mineral reserves, Vedanta Aluminium's robust value chain and logistics network guarantees our customers 100% supply chain reliability.

SUSTAINABLE BUSINESS PRACTICES

Vedanta Aluminium ranked first in the S&P Global Corporate Sustainability Assessment (CSA) 2023 world rankings for the aluminium industry.

CERTIFIED BY THE BEST



ABOUT US

WORLD CLASS ASSETS IN INDIA

**Alumina Refinery,
Vedanta Ltd.**
Lanjigarh, Odisha
3.5 Million Tonnes Per Annum

**Bharat Aluminium
Company Ltd. (BALCO)**
Korba, Chhattisgarh
0.58 Million Tonnes Per Annum

**Aluminium Smelter,
Vedanta Ltd.**
Jharsuguda, Odisha
1.8 Million Tonnes Per Annum

SUPPLYING TO OVER 60 COUNTRIES GLOBALLY

AMERICAS

Brazil
Canada
Costa Rica
Ecuador
Honduras
Mexico
USA

EUROPE

Austria
Belgium
Bosnia
Bulgaria
Croatia
Finland
France
Germany
Greece
Italy
Netherlands
Poland
Portugal
Slovakia
Slovenia
Spain
Sweden
UK

MIDDLE EAST & AFRICA

Bahrain
Egypt
Israel
Saudi Arabia
Oman
Qatar
South Africa
Turkey
UAE
Rest of Africa

ASIA

Australia
Bangladesh
India
Indonesia
Japan
Malaysia
Nepal
New Zealand
Philippines
South Korea
Sri Lanka
Taiwan
Thailand
Vietnam

EXPANSIVE PORT & DEPOT NETWORK

PORTS

Visakhapatnam
Kolkata
JNPT
Haldia
Paradip
Ennore
Gangavaram
Paradip

→ EXIM

→ Breakbulk

DEPOTS

Chennai
Secundarabad
Bangalore
Vadodara
Pune
Kolkata
Jaipur
Faridabad
Raipur



OUR PRODUCT PORTFOLIO



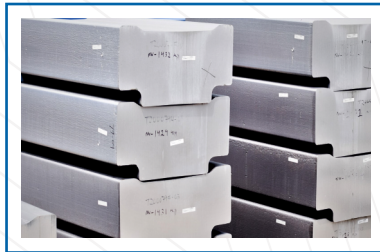
Billets
580 KTPA



Primary Foundry Alloy
160 KTPA



Wire Rods
650 KTPA



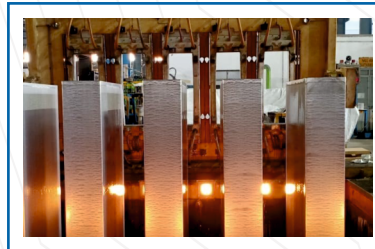
AlSi T-Ingot
90 KTPA



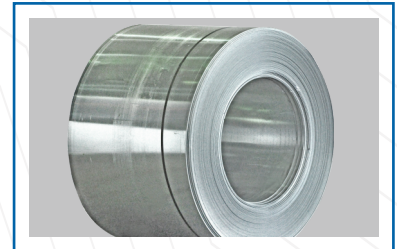
Ingot
1,280 KTPA



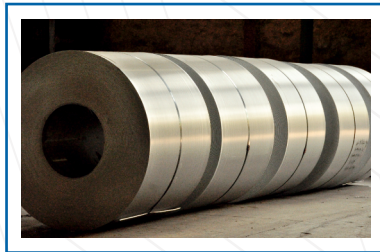
Sow Ingot
200 KTPA



Slab
100 KTPA



Flip Coil
24 KTPA



Cold Rolled Product
25 KTPA



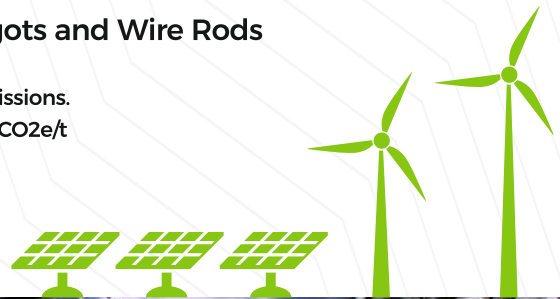
Hot Rolled Product
19 KTPA



Restora® Low Carbon Aluminium

- First from India to launch low carbon aluminium brand 'Restora' to enable customers to meet their sustainability goals
- **Restora**, low carbon aluminium, is manufactured using renewable energy
- GHG emissions intensity for Restora is within 4 tCO₂e/t*
- **RestoraULTRA**, ultra-low carbon aluminium, is manufactured with aluminium recovered from dross (a by-product of aluminium smelting process)
- GHG emissions intensity for Restora Ultra is less than 1 tCO₂e/t*
- Both products are available in the form of Billets, Ingots and Wire Rods


*GHG emissions intensity is measured as the sum of Scope 1 and Scope 2 emissions. The global requirement for aluminium to be considered as 'low carbon' is 4 tCO₂e/t (tonnes of CO₂ equivalent per tonne of aluminium produced). Both Restora and Restora Ultra are well below this threshold.



**1ST LOW
CARBON**
ALUMINIUM BRAND
FROM INDIA



Billets

Capacity	580 KT
Diameters offering	6", 7", 8", 9", 10" and 12" sizes
Technology	Wagstaff Hot-Top Air Slip Casting System
Homogenizing furnace	Continuous (from Hertwich Engineering) / Batch
Alloy offering	1xxx, 3xxx, 6xxx (Customizable)
Packaging	Packaged in plastic strapped bundles on heat-treated wooden runners (ISPM 15)
 High Speed Billets	Can improve extrusion speed by at least 25%* without compromising on the strength of the extruded profile. These products show significant improvement in process recovery as well as die life. <small>*under test conditions</small>
Application	Extrusion (automobile components, building & construction, aerospace, solar energy)

**LARGEST
BILLET
EXPORTER**
IN INDIAN
SUBCONTINENT
AND SOUTH
EAST ASIA



OUR PRODUCT OFFERINGS FOR THE AUTOMOBILE INDUSTRY

Billets

New

3xxx Billet

- Extruded into multi-port tubes used in Heating, Ventilation, and Air Conditioning (HVAC) units in automobile
- **High Thermal Conductivity**- efficiently transfers heat, aiding in the cooling of engine components and maintaining optimal operating temperatures.
- **Corrosion Resistance**- extends the lifespan of the multi-port tubes and ensures reliable performance over time.
- **Formability and Versatility**- can be easily extruded into complex shapes.

Billet 6061 and 6063

- **6063 Highly Extrudable**- allows for the production of complex shapes and profiles, can be used for making window and door frames, trim pieces, roof racks, and other exterior or interior trim elements.
- **6061 Higher Strength**- offers good strength-to-weight ratio, making it suitable for structural components in automobiles, such as chassis parts, frames, and suspension components.

New

Crash Resistance Billet

- These alloys are particularly well-suited for applications requiring high durability and impact resistance.
- Specially customized **6XXX** billets able to absorb energy and deform in a controlled manner during an impact, thereby protecting the structure and occupants.
- Significant research and development has focussed on refining these alloys to enhance their crash resistant properties.
- The use of these alloys in extruded components is a testament to their critical role in ensuring safety and performance across modern engineering applications. They can be used in making Structural Members, Bumper Systems, Crash Boxes, Side Impact Beams, Roll Cages and Roll Bars etc.

**LARGEST
BILLET
EXPORTER**

IN INDIAN
SUBCONTINENT
AND SOUTH
EAST ASIA





LARGEST EXPORTERS
OF PRIMARY
FOUNDRY ALLOYS
FROM INDIA

Primary Foundry Alloy (PFA)

Product	10 kg Ingot 10 kg Cast Bar 22 kg Ingot
Capacity	90 KTPA 50 KTPA 20 KTPA
Technology	Remetal Befesa (Spain) Continuus-Properti (Italy) Remetal Befesa (Spain)
Ingot Dimensions	725mm x 100mm x 75mm 700mm x 80mm x 59mm 740mm x 170mm x 114mm
Alloy Offering	AISI7(A356.2), AISI9, AISI11, LM series (customisable)
Bundling	93 pieces - approx. 1 MT (customisable) 107 pieces - approx. 1 MT (customisable) 44 pieces - approx. 1 MT
Packaging	PET Straps / Cross Straps
Application	Automobile sector, Energy casting, Railways, Aerospace

New



OUR PRODUCT OFFERINGS FOR THE AUTOMOBILE INDUSTRY



PFA For Alloy Wheels

- Primary foundry alloy is used by die casters to produce alloy wheels for automobiles.
- Grade - Customized A356
- Customer: All major wheel makers
- Chemical composition

Elements	%Si	%Fe	%Cu	%Mn	%Mg	%Zn	%Ti
Range	6.5 - 7.5	0.12 max	0.04 max	0.02 max	0.25-0.45	0.03 max	0.2 max

PFA For Cylinder Head

- Primary foundry alloy is utilized by die casters to produce cylinder heads for automobiles.
- Grade - Customized ALSi7Mg0.5Cu
- Customer: Export customers (leaders in automotive cylinder heads and chassis)
- ALSi7Mg0.5Cu has the advantages of light weight, high thermal conductivity, and ease of production to close tolerances.
- Chemical composition

Elements	%Si	%Fe	%Cu	%Mn	%Mg	%Zn	%Ti
Range	6.5 - 7.5	0.12 max	0.4-0.5	0.05-0.15	0.3-0.45	0.07 max	0.1 - 0.2



PFA For High Cubic Capacity Bikes

- PFA-High Mg will substitute ADC6
- PFA-High Mg is utilized in casting rear grip, handle grip, subtrain, brake lever and other crucial components
- Customer: Leading 2-wheeler OEM in India, testing under progress
- Physical properties
 - Tensile Strength - 157 Mpa
 - Yield Strength - 104 Mpa
 - Elongation - 3.5%

PFA for Die Casters

- Vedanta Foundry Alloy (VFA) is used by die casters
- VFA is cast in various automobile components by HPDC process (parts: crankcase, clutch housing, engine cover, sensor bracket etc.)
- VFA is 2% - 4% lighter as compared to the presently used PFA*
- VFA is 46% - 60% more corrosion resistant as compared to presently used PFA*
- Developed in collaboration with IIT- Delhi, patent process in progress
- VFA has higher machinability than presently used PFA*

*Under lab condition trial (PFA)



Wire Rods

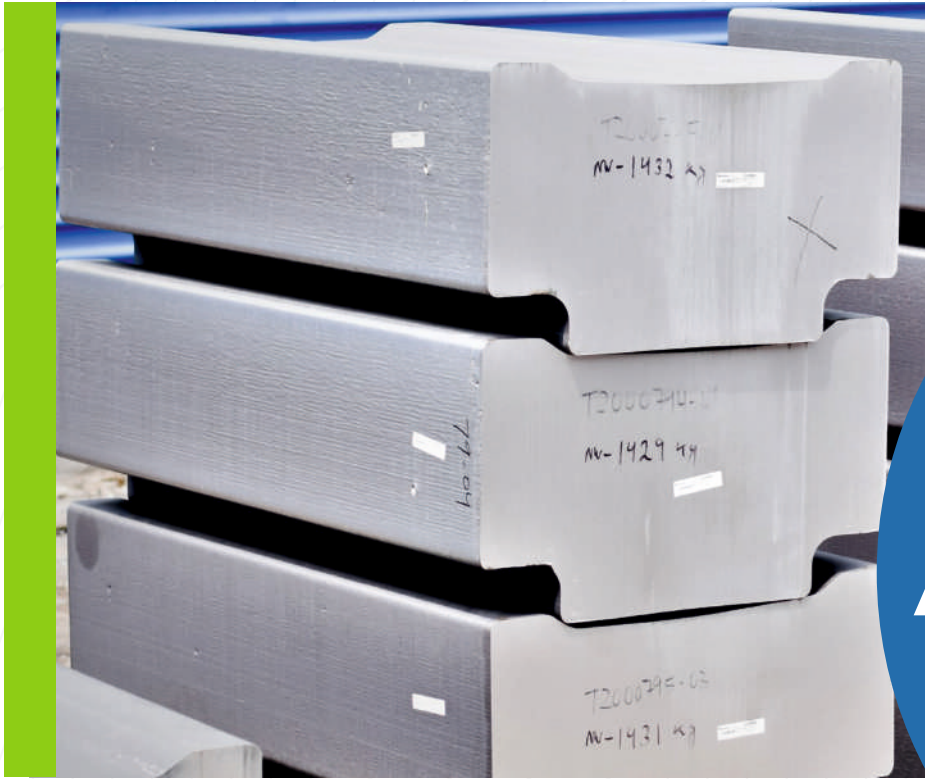
Capacity	650 KT
Rod diameter	7.6mm, 9.5mm, 12mm, 15mm
Inner diameter	570mm +/- 10mm
Outer diameter	1380-1500mm
Weight per coil	1.8-2.9 tonne
Rod dia tolerance	+/- 0.5mm
Technology	Southwire (USA) and Continuus-Properzi (Italy)
Alloy offering	AA1370, AA8030, AA8176, 6201, T4, Al59
Packaging	PET Straps / HDPE Covering / heat treated wooden saddle / silicon gel (customized packaging available)
Application	Conductors, Cables, Transformers, Winding Wires, Heat Exchanger Tubes



**WORLD'S
LARGEST
PRODUCER**

OF WIRE-RODS,
EX-CHINA





INDIA'S FIRST
PRIMARY
PRODUCER TO
LAUNCH
AlSi T-INGOT

AlSi T-Ingots

Capacity	90 KT
Dimension	480mm x 845mm 410mm x 845mm
Length	645-1500mm
Alloy offering	P1020, AlSi3
Technology	Epsilon Ingot Casting Technology by Wagstaff (USA), In-line Treatment Facility - SNIF P140 by Pyrotek (USA), CFF (23x23x2, 40 ppi), Auto Cutting Machine from Sermas (France)
Application	Steel industry for galvalume coating



Ingot

Weight	22 kg
Capacity	1280 KT
Technology	Remetal Befesa (Spain)
Alloy variant	P1020
Dimension	740mm x 170mm x 114mm
Bundling	44 pieces (approx. 1 MT)
Packaging	PET Straps / Cross Straps



INDIA'S LARGEST
PRODUCER AND
EXPORTER OF
**PRIMARY
INGOTS**





LARGEST
PRODUCER OF
SOW
INGOTS
IN INDIA



Sow Ingot

Capacity	200 KT
Technology	Remetal Befesa (Spain)
Alloy variant	P1020
Dimension & Weight	865mm x 865mm x 370mm / 540kgs 890mm x 890mm x 390mm / 590kgs 920mm x 920mm x 410mm / 630kgs
Application	Remelting for downstream applications



Slab

Capacity	100 KT
Dimension	410mm x 1270mm, 410mm x 1540mm, 410mm x 1620mm
Length	5500-5700mm
Alloy offerings	1xxx, 3xxx, 4xxx, 8xxx
Technology	Epsilon Ingot Casting Technology by Wagstaff (USA), In-line Treatment Facility – SNIF P140 by Pyrotek (USA), CFF (23x23x2, 40 ppi), Auto Cutting Machine from M/s Sermas, France
Thickness	Nominal Edge Thickness \pm 4mm Ingot Profile Thickness \pm 4mm Width \pm 4mm Convexity \pm 4mm
Application	Structural applications



STATE-OF-THE-ART
TECHNOLOGY
FOR
**BEST
QUALITY**





INDIA'S LARGEST
PRIMARY
SUPPLIER OF
FLIP COILS

Flip Coil

Capacity	24 KT
Rod diameter	9.5mm, 12mm, 13mm, 15mm
External diameter	1100-1200 mm
Internal diameter	570-590mm
Alloy offering	1xxx
Technology	Continuous-Propenzi (Italy) / Hindudyog
Packing	Flipping cage and mounted on wooden / mild steel pallet and strapped with pallet horizontally or vertically. All coils are wrapped in stretch film and palletized.
Application	De-oxidizing agent in steel industries, metal purifier for special grades



Cold Rolled Product

Capacity	25 KT
Variants	Cold Rolled Coils (CRC), Cold Rolled Sheets (CRS)
Length	Customizable
Alloy offerings	1xxx, 3xxx, 8xxx
Inner diameter	CR Coils: 200mm (for all thickness), 500mm (for thickness 0.4mm and above)
Temper	CR Sheets: H1, H2, H3, H4,O CR Coils: M, H1, H2, H3, H4,O
Weight	250-4000 kg
Width	800-1500mm (CR Sheets) 100-1500mm (CR Coils)
Thickness	0.28-5mm (CR Coils) 0.56-6mm (CR Sheets)
Technology	Cold Rolling Mill and slitting line from NKMZ (Russia) Casting station by ALMEX (USA)
Packing	Straps / HDPE Covering / wooden saddle / edge cover with flute board
Application	Foil Stock, PP Cap, Roofing Sheet, Insulation Coils, Fan Blade Sheets, Selective Automotive Parts, Bus Body, Cookware, GEQ (General Engineering Quality)





SUPPLIED
TO LEADING
AEROSPACE
COMPANIES

Hot Rolled Product

Capacity	19 KT
Variants	Hot Rolled Coils (HRC), Hot Rolled Plates (HRP)
Length	Customizable
Alloy offerings	1xxx, 3xxx, 8xxx
Width	885-1620 mm (HRC), 100- 1500 mm (HRP Trimmed), 100-1540 mm (HRP Untrimmed)
Thickness	4.5-12 mm (HRC), 6-200 mm (HRP)
Technology	Hot Rolling Mill and slitting line from NKMZ (Russia) Casting station by ALMEX (USA)
Packaging	Straps / HDPE covering / wooden saddle / edge cover with flute board
Applications	Re-rolling Industry, Electrical Busbars, Boiler Tanks, GEQ (General Engineering Quality)

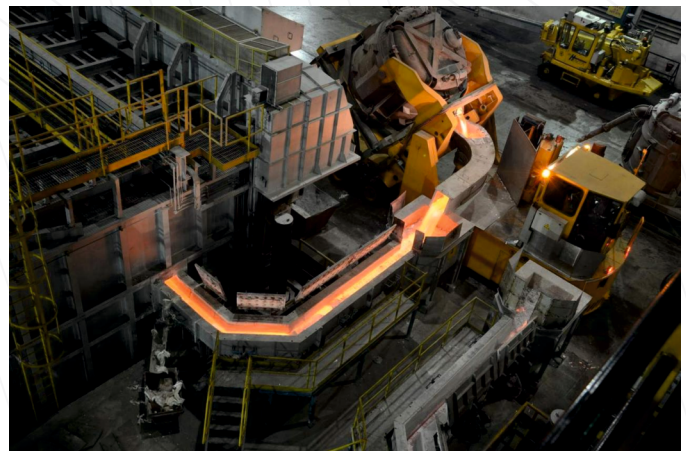


Vedanta Aluminium Park

Towards meeting the ever-increasing global demand for aluminium, we are setting up a state-of-the-art Aluminium Park near our aluminium smelter in Jharsuguda, Odisha. Spread over 253 acres, the complex allows companies to establish manufacturing units in close proximity to our operations and efficiently utilize our hot metal for their products.

The Aluminium Park offers several unparalleled advantages, including:

- **Increased Productivity:** Priority access to high-quality hot metal for enhanced productivity, production flexibility, and cost competitiveness.
- **Reduced Time:** Instant availability of hot metal to minimize transportation and remelting time, leading enhanced savings in both time and money.
- **Reduced Working Capital:** Transporting liquid metal in pre-heated ladles reduces operational costs associated with remelting.
- **Technical and After-sales Support:** Access to our Centre of Excellence, R&D facility, and global experts, enhancing specialized capabilities.
- **SEZ for Export-oriented Industries:** Strategic advantage for export-oriented industries offered by the presence of an SEZ Smelter within our Jharsuguda complex.
- **Reduction in Carbon Footprint:** Curbing carbon emissions to the tune of 60-70,000 tonnes per annum by eliminating the need for remelting and long-haul logistics.





- Available hot metal supply **300 kilo tonnes per annum (KTPA)**
- Site area **~253 acres**
- Distance from Smelter 1 (DTA) **~3.5 km**
- Distance from Smelter 2 (SEZ) **~5.6 km**
- Proximity to **Airport and Railway Station**
- Well connected to **Haldia/Kolkata, Kakinada, Paradip, Vizag & Gangavaram Ports**

For more information, reach out to aluminium.park@vedanta.co.in

UPCOMING
**WORLD-CLASS
FACILITY**



CERTIFICATIONS

We have robust systems in place to understand and exceed customer expectations. Alongside timely delivery, we strive to assure our customers of the best quality, in compliance with globally accepted technical standards and certifications, for all deliveries. These coveted certifications provide unmatched quality assurance to our valued customers. Vedanta Aluminium's products are certified by the following agencies:

ISO 9001:2015 (Quality Management System)

Certified for the production and supply of primary aluminium and alloys

IATF 16949:2016

Certified for the production and supply of PFA and Billets for various applications to the automotive industry

ISO/IEC 17025:2017

NABL accreditation for laboratory for Testing Accreditation Certification

Bureau of Indian Standards (BIS)

for Primary Ingots, Alloy Ingots and Cast Bars, Wire Rods, Rolled Products (Sheet, Plate-Conductors and Plate-General Engineering)

Environmental Product Declaration (EPD)

For primary aluminium products, including billets, Primary Foundry Alloy (PFA), wire rods and all categories of ingots

Sustainable development with ESG excellence is the bedrock upon which we conceive our growth plans. As one of the world's leading aluminium producers, we strive to make our processes and products more sustainable with each passing day. Our certifications include:

ISO 14001:2015 (Environment Management System)

Certified for the production and supply of primary aluminium and alloys

ISO 50001:2018 (Energy Management System)

Certified for the production of primary aluminium and alloys

Aluminium Stewardship Initiative (ASI)

Certified against ASI Performance Standard for operations in Jharsuguda and BALCO

Safety of our people is of paramount importance for us. We have put in place internationally recognized standards on health and safety to create a 'zero-harm' environment for everyone who works with us. Our certifications include:

ISO 45001:2018 (Occupational Health & Safety Management System)

Certified for the production and supply of primary aluminium and alloys

ASSURING OUR
CUSTOMERS
OF THE
**BEST
QUALITY**



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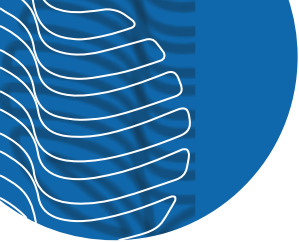
CUSTOMER TECHNICAL SERVICES

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