vedanta
transforming for good

Unmatched **Quality**, Peerless **Value**

PRODUCT BROCHURE

INDIA'S
LARGEST
ALUMINIUM PRODUCER

FIRST
FROM INDIA TO PRODUCE
LOW CARBON ALUMINIUM
'RESTORA'

SUPPLYING TO OVER
60
COUNTRIES

ABOUT 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 an installed capacity of 2.4 million tonnes per annum (MTPA), we are catering to the aluminium requirements of discerning customers in over 60 countries across Asia, Europe, Africa and the Americas.

OUR OPERATIONS

Aluminium Smelter
Jharsuguda (Odisha)

- The world's largest aluminium plant
- State-of-the-art 1.8 MTPA smelter with 3615 MW thermal power generation facility
- Only Indian smelter in the global '1 Million Tonne' club
- Aluminium Stewardship Initiative (ASI) certified for demonstrating sustainable operations

Bharat Aluminium Company (BALCO), Korba (Chhattisgarh)

- Iconic 0.58 MTPA aluminium smelter, with associated 1740 MW of power generation facility
- Owned 51% by Vedanta Limited and 49% by the Government of India
- Clocked unprecedented growth from 100 KTPA in FY01 to 580 KTPA in FY24
- Aluminium Stewardship Initiative (ASI) certified for demonstrating sustainable operations

Alumina Refinery
Lanjigarh (Odisha)

- A world-class 3.5 MTPA alumina refinery with 140 MW co-generation power plant
- Expanding production capacity to 5MTPA
- Supplying high-quality alumina to our smelters in Jharsuguda and Korba
- Brought one of the most impoverished regions in rural India into the socio-economic mainstream

GLOBAL PRESENCE

MAKING IN INDIA, FOR THE WORLD

AMERICAS	EUROPE		MIDDLE EAST & AFRICA	ASIA
Brazil	Austria	Italy	Bahrain	Australia
Canada	Belgium	Netherlands	Egypt	Bangladesh
Costa Rica	Bosnia	Poland	Israel	India
Ecuador	Bulgaria	Portugal	Saudi Arabia	Indonesia
Honduras	Croatia	Slovakia	Oman	Japan
Mexico	Finland	Slovenia	Qatar	Malaysia
USA	France	Spain	South Africa	Nepal
	Germany	Sweden	Turkey	New Zealand
	Greece	UK	UAE	Philippines
			Rest of Africa	South Korea

SUPPLYING TO OVER 60 COUNTRIES GLOBALLY

PRODUCT PORTFOLIO AND CAPACITY

Wire Rod
650 ➡ 950 KTPA

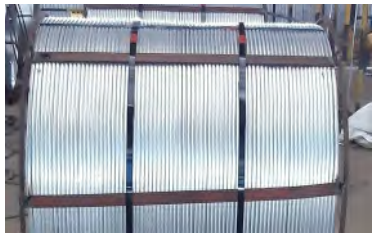
Billet
580 ➡ 1250 KTPA

Primary Foundry Alloy
160 ➡ 480 KTPA

AlSi T-Ingot
90 ➡ 140 KTPA

Slab
100 KTPA

Rolled Product
44 ➡ 100 KTPA



Flip Coil
24 KTPA

Hot Metal

Remelt Ingot (P1020/P0610/P0507/A8)

1380 ➡ 2000 KTPA

➡ *Capacity expansion in progress.*

OUR PRODUCTS

Billets

Particulars	Existing	Upcoming
Capacity	580 KTPA	670 KTPA (420 KTPA: BALCO 250 KTPA: Vedanta Jharsuguda)
Furnace	Electrically heated holding furnace	Electrically heated holding furnace + Oil fired melting furnace
Technology	Wagstaff hot top air slip casting technology	Wagstaff hot top air slip casting technology (Vedanta Jharsuguda) Hycast hot top gas cushioning casting (BALCO)
Degassing	8 Rotors ACD (STAS)	10 Rotors ACD (STAS)
Filter	40 ppi 50 ppi	40 ppi 50 ppi
Homogenising	Continuous homogenising from Hertwich, Batch homogenising Suzhou, China	Continuous homogenising from Hertwich (Vedanta Jharsuguda) Batch + continuous homogenising from Hertwich (BALCO)
Ultrasonic testing	Online 100% centre line crack detection	Online 100% centre line crack detection + volumetric
Alloy Offering	1xxx, 3xxx & 6xxx	1xxx, 3xxx & 6xxx
Length	5800 mm	Up to 8500 mm

OUR PRODUCTS

Dimensions and Tolerances

a. Diameter tolerances:

Billet diameter	Tolerance type 1	Tolerance type 2
5” (127 mm)	± 0.5 %	-
6” (152 mm)	± 0.5 %	-
7" (178 mm)	± 0.5 %	-
8" (203 mm)	± 0.5 %	+0 / - 1.0 %
9" (229 mm)	± 0.5 %	-
10" (254 mm)	± 0.5 %	-
12" (305 mm)	± 0.5 %	-

b. Length: 5800 mm, tolerance ± 10 mm

c. Bow tolerance: 2 mm per 1000 mm, 10 mm max over log length

d. Extrusion billet is normally supplied with sawn ends. The maximum allowable deviation from the square for each 100 mm (4 in) of diameter is 1 mm (0.04 in) or approximately 0.50

Our New Product Offerings

Offering	USP
High Speed Billet	• Delivers > 20% higher extrusion speed • Exhibits better physical / mechanical properties • Improves die life • Enhances recovery
High Strength 6063 for architectural applications	• Designed to sustain high wind load and fatigue • Dent resistance and 5% higher corrosion resistance • 7% increased strength over standard billets • Sleek design and better profile aesthetics
High Machinable Alloy	• 8% higher strength • Demonstrates better mechanical properties with excellent machinability without compromising on environmental aspects (lead-free product)
Crash Resistant Alloy	• Designed for crash box / bumpers for electric vehicles

Scan for more information

OUR PRODUCTS

Wire Rods

We offer several high-quality, innovative products for diverse applications within the power and transmission sectors.

Grade	EC 1370/1350			
Temper	**H-11**	**H-12**	**H-13**	**H-14**
UTS (Mpa)	80-95	95- 110	105-120	115- 130
Elongation (% at 100 mm) Min	22%	17%	14%	12%
Elongation (% at 250 mm) Min	15%	8%	8%	4%
Conductivity (% IACS) Min	61.5	61.5	61.5	61.5
Diameter (mm)	9.5+/-0.50 12+/-0.50 15+/-0.50	9.5+/-0.50 12+/-0.50 15+/-0.50	9.5+/-0.50 12+/-0.50 15+/-0.50	9.5+/-0.50 12+/-0.50 15+/-0.50

As per customer requirements, Vedanta Aluminium has the capacity of supplying 8xxx rods (8176 and 8030)

Scan for more information

OUR PRODUCTS

Primary Foundry Alloy

Product	10 kg Ingot 10 kg Cast Bar 22 kg Ingot
Capacity	20 KT, 90 KT, 100 KT
Technology	Remetal Befesa (Spain) Continuus-Properzi (Italy)
Ingot Dimensions	725 mm X 100 mm X 75 mm 700 mm X 80 mm X 59 mm 740 mm X 170 mm X 114 mm
Alloy Offering	AlSi7(A356.2), AlSi9, AlSi11, LM series (customisable)
Bundling	44 pieces (approx. 1 MT) 93 pieces (approx. 1 MT) 107 pieces (approx. 1 MT)
Packaging	PET Straps / Cross Straps
Application	Automobile sector, Railways, Aerospace, Engineering Castings

AlSi T-Ingot

Capacity	90 KT
Dimension	480 mm X 845 mm 410 mm X 845 mm
Length	645 – 1500 mm
Alloy offering	P1020, AlSi3
Technology	Epsilon Ingot Casting Technology by Wagstaff (USA), In-line Treatment Facility – SNIF P140 by Pyrotek (USA), CFF (23 X 23 X 2, 40 ppi), Auto Cutting Machine from Sermas (France)
Application	Steel industry for galvalume coating

OUR PRODUCTS

Rolled Product

Capacity	Current – 44 KT, Post Expansion – 100 KT
Variants	Cold Rolled Coils (CRC), Cold Rolled Sheets (CRS) Hot Rolled Coils (HRC), Hot Rolled Plates (HRP)
Length	Customisable
Alloy offering	1xxx, 3xxx, 5xxx, 6xxx, 8xxx
Inner Diameter	CR coils – 200 mm (for all thickness) 500 mm (for thickness 0.4 mm and above) HR coils: 750 mm (for all thickness)
Temper	CR Sheets/Coils: H1X, H2X, H3X HR Coils/Plates: M, F, O
Weight	CRC: 250 – 4000 Kg, HRC: 3500 – 4000 Kg
Width	800 – 1550 mm (CRS, HRC, HRP), 100 – 1550 mm (CRC)
Thickness	0.28 – 5 mm (CRC), 0.56 – 6 mm (CRS) 6 – 250 mm (HRP), 4.5 – 8 mm (HRC)
Technology	Hot rolling mill – NKMZ (Russia) Cold rolling mill 1 – FATA HUNTER (Italy) Cold rolling mill 2 & Casting station – CNPT CHINA (Non-ferrous technology)

Slab

Capacity	100 KT
Dimension	410 mm X 1270 mm, 410 mm X 1540 mm, 410 mm X 1620 mm
Length	5500 mm – 5700 mm
Alloy offerings	1xxx, 3xxx, 4xxx, 8xxx
Technology	Epsilon Ingot Casting Technology by Wagstaff (USA), In-line Treatment Facility – SNIF P140 by Pyrotek (USA), CFF (23 X 23 X 2, 40 ppi), Auto Cutting Machine from M/s Sermas, France
Thickness	Nominal Edge Thickness ± 4 mm Ingot Profile Thickness ± 4 mm Width ± 4 mm Convexity ± 4 mm
Application	Structural applications

Restora®
INDIA'S FIRST LOW CARBON ALUMINIUM

Our product categories are available as part of Restora, India's first and only **green aluminium product range**, proudly produced by Vedanta Aluminium. Under this range, we offer both Restora (low carbon aluminium) and Restora Ultra (ultra-low carbon aluminium).

Restora is produced using renewable energy and has a **Greenhouse Gas (GHG)** emission intensity within **4 tonnes of CO_2 equivalent (tCO_2e)*** per tonne of aluminium manufactured – the global threshold for aluminium to be considered as low carbon.

Restora Ultra is made from aluminium recovered from dross (a by-product of the aluminium smelting process) and has a **near-zero carbon footprint**.# The patented technology used to recover and process aluminium dross results in greater energy efficiency and zero wastage of materials.

Both products have been verified as **low-carbon aluminium** post assessment by an independent global verification assurance firm.

*Smelter Gate to Gate

#Smelter Scope 1 to 3

ESG HIGHLIGHTS

- GHG intensity (Scope 1 & 2) reduced by 29 % in FY24 from FY12 baseline, 10 % reduction from FY21 baseline. Target of 14% reduction from FY21 baseline in 2025
- 1.24 billion units of renewable energy consumed in FY24
- Planted over 1.3 million native saplings for progressive rehabilitation of mined-out areas
- Successfully recycled nearly 15 billion litres of water across units, equivalent to approximately 6,000 Olympic-size swimming pools
- 108 % utilization of by - products, reflecting our commitment to sustainable materials management and environmental stewardship practices
- Project Panchhi: Empowering the aspirations of 1000 young women from disadvantaged backgrounds by providing them with educational and employment support

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 pro vide 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)

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
(Environmental 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

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

GLOBALLY CERTIFIED & RECOGNIZED AS BEST-IN-CLASS

S&P Global: Placed first on the S&P Global Corporate Sustainability Assessment (CSA) 2023 rankings for the aluminium industry.

ASI: Our smelters at Jharsuguda and Chhattisgarh have been certified by the Aluminium Stewardship Initiative's Performance Standards, a well-established marker of sustainable operations.

In addition, we have received the ASI Chain of Custody certification for the sustainable sourcing of raw materials used in our production process.

IAI: Member of the prestigious International Aluminium Institute (IAI), the only body representing the global primary aluminium industry.

BIS: First primary smelter in India to be certified by Bureau of Indian Standards for the production of primary ingots, alloy ingots, cast bars, wire rods, rolled products.

GET IN TOUCH

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