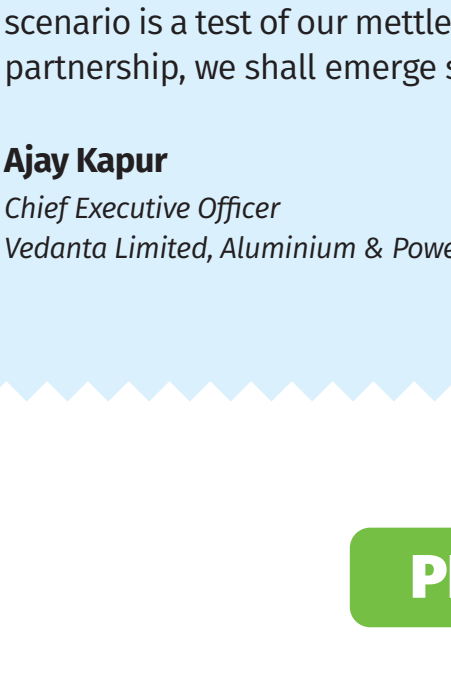


## CEO's MESSAGE

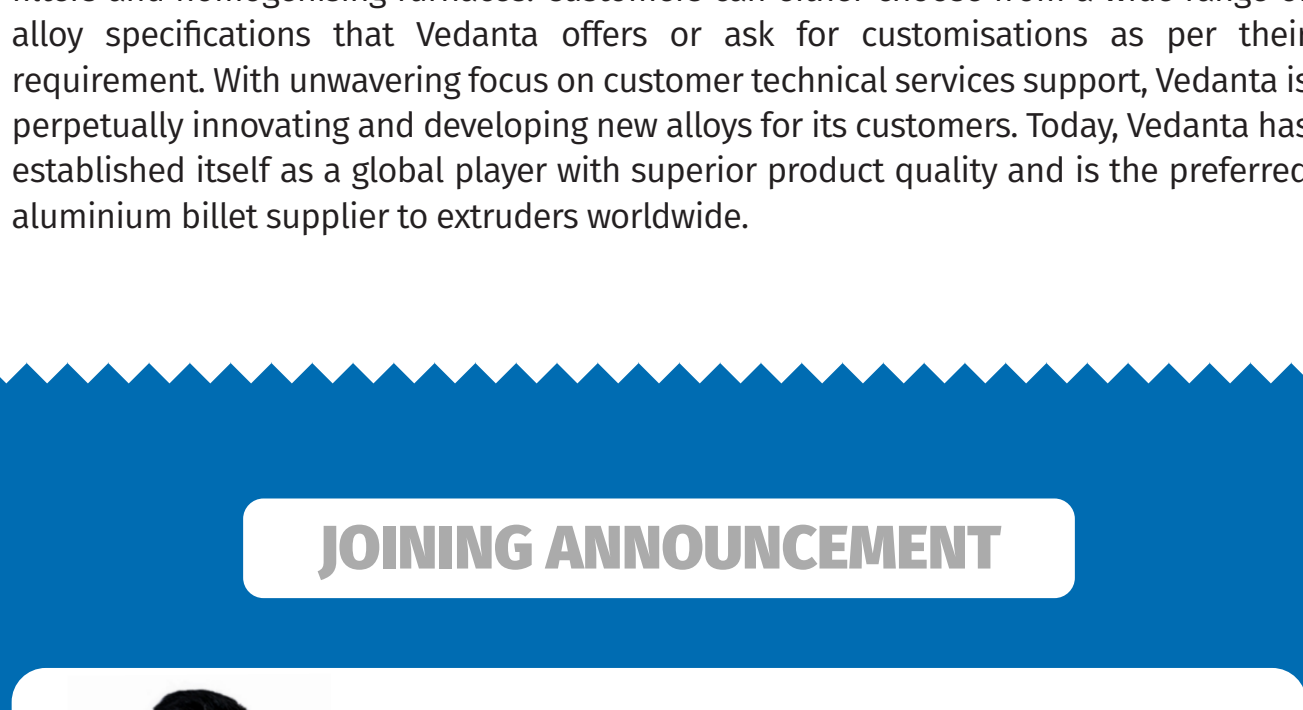


**Ajay Kapur**  
Chief Executive Officer  
Vedanta Limited, Aluminium & Power Business

"As the world's 6th largest diversified natural resources conglomerate, Vedanta's operations are focussed on the greater goal of fulfilling *Desh Ki Zarooratein*, by sustainably tapping the mineral reserves of India for the development of the nation, and transformation of millions of lives in the process. We strongly echo our Hon'ble Prime Minister's vision of an '*Aatma Nirbhar Bharat*', and have been working towards the singular vision of making India self-reliant in top-of-the-class primary aluminium for key sectors of the economy. While it is true that the pandemic has affected millions of lives and impacted businesses, we firmly believe that the current scenario is a test of our mettle and resilience, and we are sure that with your support and partnership, we shall emerge stronger than before."

## PRODUCT CORNER

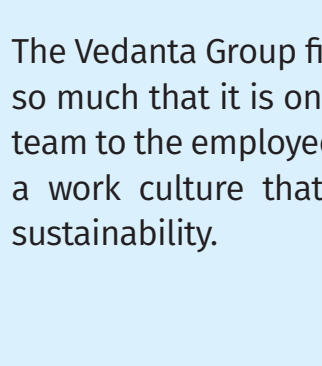
### Billet



Billet is one of the major primary products of Vedanta's Aluminium Business. Aluminium billets are made into extrusions, forgings and columns, which are then used for various applications in Building and Construction (B&C), infrastructure development, aerospace, transportation and many other sectors involving complex structure development. Aluminium is the most preferred substitute to UPVC and steel due to its physical properties and long life, making it the metal of future. Currently, India lags far behind at about 3 kgs per person per year compared to the world average of approximately 10kg per person per year of aluminium vis-a-vis B&C applications. As the focus shifts towards smart infrastructure, there is huge potential for aluminium to play a key role in developing this sector with inclusion of innovative concepts like green buildings and lighter, but resilient, structures in the future.

With 400KT billet casting capacity, Vedanta is one of the largest top-quality aluminium billet producers in India. The company's casting facilities comprise state-of-the-art Wagstaff Hot Top Air Slip casting technology, in-line degassing systems, ceramic foam filters and homogenising furnaces. Customers can either choose from a wide range of alloy specifications that Vedanta offers or ask for customisations as per their requirement. With unwavering focus on customer technical services support, Vedanta is perpetually innovating and developing new alloys for its customers. Today, Vedanta has established itself as a global player with superior product quality and is the preferred aluminium billet supplier to extruders worldwide.

## JOINING ANNOUNCEMENT



Mr Abhishek Kaushik has been appointed as the Regional Manager- North, India. You can reach out to him on:  
e-mail - [Abhishek.Kaushik@vedanta.co.in](mailto:Abhishek.Kaushik@vedanta.co.in)  
Contact No : +91- 9910998225

## INNOVATION - A STRATEGIC DRIVER FOR BUSINESS

The Vedanta Group firmly upholds that innovation is the true growth driver of business, so much that it is one of the company's 7 core values. From the company's leadership team to the employees working on shop floors, Vedanta is highly focused on developing a work culture that values and fosters innovation, as the key lever for business sustainability.

### INNOVATION CENTER

#### Our journey towards a better tomorrow!

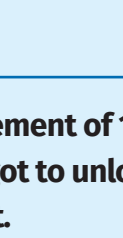
Vedanta Aluminium Business' approach to innovation is founded on a culture of continuous improvement. To that end, the company believes in fostering an environment that encourages innovations aimed at simplifying processes, lowering the carbon footprint, promoting zero waste and developing sustainable solutions for a better tomorrow. The Aluminium Business recently launched Innovation centers in all units as a cross-functional platform to create an inspiring haven for disruptive and breakthrough ideas. The idea is to build a 'social innovation community' which brainstorm and incubates breakthrough ideas across the entire value chain of the business spanning sustainable mining, logistics, operational excellence, sustainable development, new product development, customer experience enhancement and so on, culminating in making Vedanta the "Supplier of choice"

#### Vedanta's innovation centers focus on



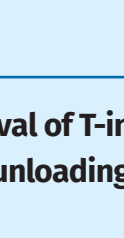
#### New Ideas

Give teams the freedom and encouragement to think, test, iterate, refine, and create innovative solutions for the future.



#### Culture of thinking beyond boundaries

Provides forums to collaborate and experiment with a view to inspire out-of-the-box thinking.



#### Connectedness

Thoughtful integration of teams across functions and geographies working in sync towards common goal.

To that effect, we have collaborated with five of India's premiere education institutions in the journey of developing and institutionalizing solutions for business growth. This partnership, named "Industry Academia Collaboration" is strongly evolving into a key lever propelling the business forward with initial focus on digitalization of important functions and processes of the business.

Vedanta also has an in-principle agreement with GE Global Research Centre (GRC-Bangalore) to harness cutting-edge technologies, process innovations and research insights aimed at collaborative development.

## CASE STUDY

### T-Ingot Cutting Capacity Enhancement

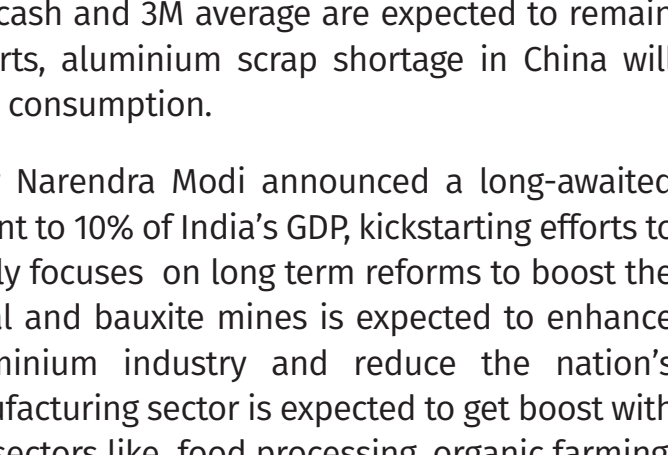
They say 'Necessity is the mother of invention'. When the evolving market scenario demanded T-ingot of varied lengths, Vedanta tapped into the opportunity to go the extra mile and fulfil the requirements of its customers. The major challenge lays in creating capability within the existing infrastructure at its Jharsuguda operations. To deliver 600 kg T-ingot from a machine built to deliver 6T slab was no mean feat for it meant that a single piece had to be cut 10X more which could potentially bring down productivity associated with handling issues. The team needed a breakthrough innovation. After multiple rounds of discussions and brainstorming, they decided to go for an inhouse modification of the existing slab cutting machine.

#### Issues to resolve:

- Increasing cutting speed of the machine.
- Movement of 1.43m T-Ingot to unloading point.
- Removal of T-ingot from unloading point.

#### Changes done:

- The slab cutting machine is designed to deliver slab of length 5.8 metres. The cut slabs are then delivered to the unloading point via conveyor where rollers are spaced at 1.25 metres. To deliver T-ingots of length 0.6 meters/1.4 meters was a challenge.
- To resolve this issue, the team carried out a Value Stream Mapping of the process before carrying out the changes, mapping value added (VA) and non-value added (NVA) activities. NVA's were eliminated in the process.
- The team carried out changes in the unloading area. Nine rollers were installed at a gap of 0.6 meters. This arrangement allowed easy movement of T-ingots without topping.
- In the previous arrangement, slabs from the conveyor area were removed by the EOT cranes with the process facilitated by horizontally placed sensors. This process was time consuming. So, the team made modifications at the unloading point by placing vertical sensors and slotted arrangement to facilitate easy lifting by forklift. This significantly reduced the cycle time.
- The team ensured safety and efficiency of operations by implementing a parallel operation for loading, realigning, crop pusher operation and roller conveyor movement with saw movement.
- The saw's forward and backward speed was optimised.
- Saw home position was moved from "0" to "550" to enable more cuts and hence reduce cycle time.



#### Benefits:

In stretching capabilities to meet customers' requirements, the team came out with a brilliant indigenous solution that not only brought down the modification cost significantly, but also demonstrated their ability and agility to think on the feet and deliver top results. With the modification in place, concerns on productivity fronts were also addressed and the team could double the production volume of T-Ingots in the shortest possible time.

- Avg. Cutting Production increased from 20 MT to 40 MT for 600 Kg T-Ingot.
- Avg. Cutting Production increased from 35 MT to 65 MT for 1400 Kg T-Ingot.
- One-time cost saving of approx. INR 1.83 crores.

## ALUMINIUM MARKET OUTLOOK

The global aluminium industry is reviving slowly, but steadily, from the impact caused by COVID-19. With gradual opening up of various sectors, the demand for primary aluminium is expected to rise in the days to come. As per market experts, the aluminium market is set to be in a 4.9Mt surplus in 2020 globally; down from 5.2 Mt in April. Global demand for aluminium is expected to steadily pick up from Q2 of CY 20 and analysts suggest that automobiles and building-construction are the two segments that will generate more demand in CY 21-24. LME cash and 3M average are expected to remain flat for the remaining year. As per reports, aluminium scrap shortage in China will provide an impetus to primary aluminium consumption.

In India, on 12th May'20, Prime Minister Narendra Modi announced a long-awaited stimulus package of \$266 billion, primarily to 10% of India's GDP, kickstarting efforts to revive the economy. The stimulus equivalently focuses on long-term reforms to boost the Indian economy. The joint auction of coal and bauxite mines is expected to enhance competitiveness of the domestic aluminium industry and reduce the nation's dependence on imports. Aluminium manufacturing sector is expected to get boost with the government announcing impetus for sectors like food processing, organic farming, iron, aluminium and copper, agro-chemicals, electronics, industrial machinery, furniture, leather and shoes, auto parts, textiles etc.

### Market Updates

- China's aluminium export is down by 15% m/m at 441,177 T, lowest since Oct 2019. With smelter closures being the primary reason, this would be positive indicator for primary aluminium, alloy and semi-finished products.
- The American Primary Aluminium Association (AAPA), United States, is approaching their government to reimpose 10% duty on import of aluminium from Canada to protect jobs in the American aluminium industry.
- Sentiments of car manufacturing segment picking up post-lockdown is being felt, with Hyundai India receiving close to 9000 new car bookings and making a delivery of 5600 cars to customers across the country within 22 days.
- India has invited bids from consultants to make an ambitious cross-border power grid plan which seeks to transfer solar power generated in one region to feed electricity demand in others.
- The Indian government has redefined the definition of MSMEs as per the latest announcement on 1st Jun'20.

#### MSME Classification - 12<sup>th</sup> May'20

Composite Criteria: Investment and Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing and Services	Investment <Rs 1 cr. And Turnover < Rs 5 cr.	Investment <Rs 10 cr. And Turnover < Rs 50 cr.	Investment <Rs 20 cr. And Turnover < Rs 100 cr.

#### MSME Classification - 1<sup>st</sup> Jun'20

Composite Criteria: Investment and Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing and Services	Investment <Rs 1 cr. And Turnover < Rs 5 cr.	Investment <Rs 10 cr. And Turnover < Rs 50 cr.	Investment <Rs 50 cr. And Turnover < Rs 250 cr.

- While the Indian government has pledged full guarantee for up to 20% additional, collateral-free working capital loans under the Rs 3-lakh-crore Emergency Credit Line Guarantee Scheme (ECLGS) for the MSMEs, banks and shadow lenders have been provided the flexibility to do their own due diligence and restrict advances below the stipulated limit.
- Recently about 4 lakh entrepreneurs from MSME sector attended a training session on rebuilding businesses post COVID-19, creating a Guinness World Record of the largest online business lesson involving 18,693 unique viewers for 30 minutes as against the previous record of 12,091 people done by a Russian gathering in 2014 and 8000 participants in a similar kind of event in US earlier to that.
- Indian exporters sending their shipments to Thailand and Vietnam under free trade agreement (FTA) will have to submit physical applications to avail the lower duty benefits against digitally signed electronic certificates as proposed by the Indian Government.

## WHAT IF MILK IS SOLD IN ALUMINIUM TETRAPACKS

Aluminium is suitable for tamper-evident seals and anti-counterfeiting security.

Aluminium's lightweight decreases processing expenses and avoids spillage of milk items.

Aluminium exhibits superior formability properties and can thus be molded into complex, intricate shapes.

Studies have shown that regular exposure to aluminium has no adverse effects.

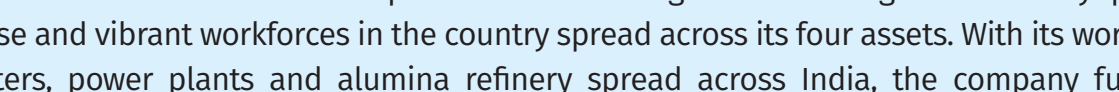
Aluminium cans comprise 73 percent of recycled metal, more than 3 times the volume of a glass or plastic container. Cans are recycled at much higher levels than competing beverage containers.

[https://www.researchgate.net/publication/283905389\\_Human\\_Health\\_Effects\\_of\\_Dietary\\_Aluminium](https://www.researchgate.net/publication/283905389_Human_Health_Effects_of_Dietary_Aluminium)

## GET IN TOUCH

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<https://vital.vedantaconnect.com/>



## ABOUT VEDANTA ALUMINIUM AND POWER

Vedanta Aluminium & Power, a part of Vedanta Limited, is India's largest producer of aluminium, producing 1.9 million tonnes per annum (MTPA) in FY20. Vedanta Limited operates a 2 MTPA (million tonnes per annum) capacity alumina refinery in Lanjigarh (Kalahandi district, Odisha), India since 2007 and an associated 90 MW captive power plant. The refinery feeds Vedanta's aluminium smelters at Jharsuguda in Odisha and at BALCO in Korba, Chhattisgarh. Vedanta Aluminium & Power operates two smelters in Jharsuguda, Odisha, and Korba, Chhattisgarh, with a combined capacity of 2.2 MTPA. Its power business includes the Mansa (Punjab) based Talwandi Sabo Power Limited (TSPPL), a wholly owned subsidiary of Vedanta Ltd. Vedanta Aluminium & Power is a leader in value-added aluminium products that find critical applications in core industries. It prides itself in having one of the largest technically qualified, diverse and vibrant workforces in the country spread across its four assets. With its world-class smelters, power plants and alumina refinery spread across India, the company fulfills its mission of spawning emerging applications of aluminium as the 'Metal of the Future' for a greener tomorrow.

For more information please log on to <https://www.vedantalimited.com>

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