

Annual Issue

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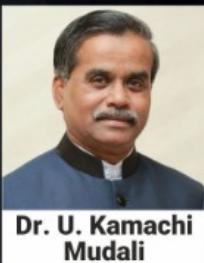
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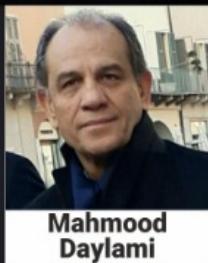
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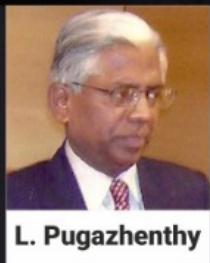
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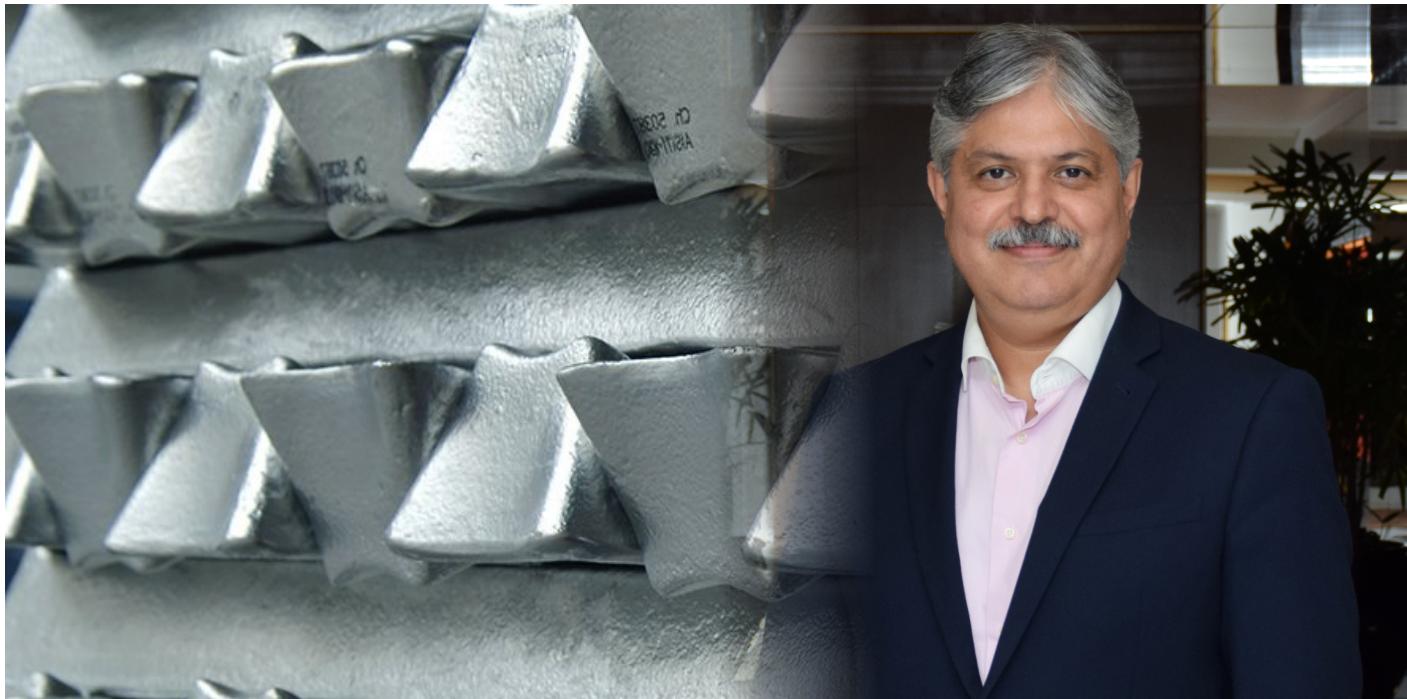
R. Harikumar



Ajay Kapur



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## Primary Foundry Alloy Expected To Grow At CAGR Of 14 PC

**A**jay Kapur is the Chief Executive Officer, Aluminium & Power, Vedanta Ltd, the country's largest aluminium producer. He is also part of Vedanta's Group Executive Committee. Kapur comes with a rich experience of over 31 years in the core sectors. At Vedanta Ltd, Kapur is responsible for unlocking the full potential of the US\$10-billion assets in the aluminium & power business and for driving further growth and expansion of the nation's largest aluminium company by production.

Kapur's focus on key priorities for the business include strong focus on health, safety and environment; marketing; technology, innovation and digitization; incorporating and promoting global best practices; advocacy and stakeholder management.

He is also the Chairman of Assocham's National Council on Mines & Minerals as well as Co-Chairman of CII's National Committee on Power, to champion the cause of growing these crucial sectors in the country with the government's support.

Kapur joined Vedanta from Ambuja Cement, now a part of Lafarge Holcim, where he was the Managing Director and Chief Executive Officer for the company's India businesses and held various strategic positions within the organization over a span of 25 years.

**- Ajay Kapur**  
Chief Executive Officer  
**Aluminium & Power, Vedanta Ltd.**

He puts a strong focus on sustainable development. Kapur has been actively involved in various international and national forums such as being the Co-Chair of the Cement Sustainability Initiative of the World Business Council for Sustainable Development (WBCSD) and a Member of the Board of Governors of National Council for Cement and Building Materials. He has won several accolades from apex bodies for sustainability initiatives.

An economics graduate from St. Xavier's College, Mumbai, Kapur holds an MBA with specialisation in marketing from KJ Somaiya Institute and is an alumnus of Wharton's Advanced Management Program.

In an interview with **Sanjay Singh**, Assistant Editor of **Metalworld**, Kapur talks in detail about the prospects and future of Aluminium and says that it has the potential to become the most important commercial metal in the near future. Excerpts

**Since aluminium is the metal of the future, what prospects you see for this metal in the coming years?**

Aluminium is the second most used metal in the world after steel, today, and it has the potential to become the most important commercial metal in the near future. Most developed countries have already designated aluminium as a core industry.

With the focus on energy efficiency and sustainability across the world today, aluminium affords endless possibilities as a 'Green Metal'. Its strength to weight ratio is about one-third of steel, so it is light-weight, strong, non-corrosive and consumes far less fuel in most applications compared to other materials. Moreover, is infinitely recyclable at a fraction of the energy required to produce it from

ores. Aluminium availability is critical to achieve low carbon footprint using wind, solar and energy storage batteries as per a World Bank study 2017.

Today, the world per capita consumption of aluminium is 11.6 kgs, whereas in sharp contrast, India's per capita consumption is merely at 2.7 kgs, and thus there is a huge growth opportunity for aluminium. Of the global aluminium consumption of 90 million tonnes, nearly 26 per cent finds utilization in transportation sector. With advancements in this segment, especially targeted innovations in developing more fuel-efficient vehicles, aluminium is expected to substitute other materials due to its good strength-to-weight ratio.

The building and construction segment follows closely with 24 per

**“ Most developed countries have already designated aluminium as a core industry. ”**

cent of the aluminium consumption pie. The highly evolved usage of aluminium in the façade and fenestration industry has provided an impetus to innovations in aluminium usage in the structural segment. This is followed by electrical, machinery and equipment, foil and packaging segments.

Its versatility makes aluminium metal of choice for transportation, power, aerospace, defence, building and construction and packaging industry, and these new value-added products will assist its adoption for important government initiatives like Smart Cities, Power for All and indigenous space programmes. Given its applications in sectors critical to growth and development, aluminium is a strategic metal for the future.

**Vedanta Aluminium has forayed into value added products of aluminium. Can you briefly describe them and what are their various applications?**

Vedanta aligns itself to meet the growing needs of diverse applications across sectors. We cater to our customers' requirements through focused R&D and carefully developed new value-added products with highest quality and sustainability standards.





## Face to Face

Vedanta is the largest primary aluminium producer of wire rods in the world, ex-China. Our capacity of 580KT is primarily used to produce electrical grade wire rods, which are then converted into wires, cables, conductors, transformer windings, etc. to cater to the electricity sector. We are the only primary Aluminium producer in India to produce flip coils for the steel industry.

Our billets are in great demand in the quality-sensitive, evolved international markets, like the US, and form the biggest chunk of our export volumes. With a production capacity of 437KT, our billets cater to sectors like building and construction industry (façade and fenestration for doors, windows, railings, elevators etc.), machinery, electrical, automotive and transportation.

Primary Foundry Alloys are the latest addition to our strong portfolio of value-added products, which are extensively used in the automotive industry for making aluminium alloy wheels, cylinder heads and parts of IC Engines. We take pride in being the first domestic manufacturer to supply PFA to the Indian market, hitherto being entirely imported into India.



Slabs and rolled products form the next segment of our value-added portfolio primarily used in packaging, consumer durables, machinery and equipment, automotive, industrial engineering and building and construction.

Besides these, we also have developed Aluminium Silicon T-Ingots which are used for coating purposes by the steel industry.

**In your opinion can aluminium replace steel in various infra sectors and is India far behind as far as per capita consumption of aluminium is concerned?**

The reason why aluminium is a metal of endless possibilities in the infrastructure sector is simple: besides being strong and durable, it also reduces the load on supporting structure. The per capita consumption of aluminium in the domestic building and construction

industry is at 0.3 kgs whereas the world average stands at 2.8 kgs, which clearly indicates that there is potential of using aluminium in various applications in this segment.

In India, the demand for aluminium in building and construction is driven by its usage in façade and fenestration. But we are yet to explore usage of aluminium in bigger infrastructural projects like domes, rooftops, bridges, etc. which can provide a huge impetus to the domestic demand for aluminium.

Let's look at a few examples of the global building and construction scenario. After parts of the Empire State Building made from steel had deteriorated, they were replaced with aluminium. The iconic spire and stunning interiors of the building are completely made of aluminium.



Aluminium's advantage of strength-to-weight ratio, corrosion resistance, endless recyclability and finished look make it a sought-after material by architects all over the world for building structures that look good and stand the test of time and nature. A testimony to that end is the Ferrari World, Abu Dhabi, which has the world's largest aluminium roof.

**Defence, space and railways has a huge potential to consume aluminium. In your opinion what policy is needed to push this metal for further usage and consumption in these critical sectors?**

Although these sectors of national importance have a huge potential to consume aluminium, as a country we are yet to explore the various applications that can cater to these sectors. There are four things we need to focus on: First, promotion of aluminium usage in government projects should be a priority area. With the aim to make India a USD 5 trillion economy, the government is rolling out numerous high-impact projects, which have ample opportunities for aluminium.

Secondly, focus should be given to building domestic capability for

critical application development for these sectors under 'Make In India'. Aluminium has potential for myriad uses, majority of which are yet to be explored by the domestic downstream sectors.

Thirdly, the potential of aluminium industry should be acknowledged and recognised as core sector with a National Aluminium Policy that will encourage, protect and boost the domestic aluminium industry.

And finally, the domestic capability needs to be harnessed for these critical sectors. It is crucial that we make the vision of 'Make in India' a ground reality in these sectors, leveraging the potential of the entire aluminium value chain, from mining to end usage. Besides enhancing domestic capacity and reducing import dependency

and subsequently trade deficit, it will also generate huge employment opportunities in our country which has a deep talent pool that needs to be capitalized for realization of our vision of a USD 5 trillion economy. We are definitely on the right path, but there is still a long way to go.

**The global economy is swiftly moving towards a cleaner, greener and more sustainable lifestyle.**

**What future you see for aluminium in Electric Vehicles (EV)?**

The global economy is swiftly moving towards a cleaner, greener and more sustainable lifestyle. For more than a decade now, concerns about fuel efficiency have encouraged OEMs to replace steel with aluminium in vehicle bodies, doors, trunks, hoods, bumpers, crash boxes, brakes, cables and wheels. With the advent of electric vehicle, OEMs worldwide are focussing on new uses for aluminium.





## Face to Face



The need for battery casings and heat exchangers in electric vehicles, combined with autonomous vehicles' demands for high visibility and structural integrity, is expected to exponentially increase the use of aluminium in future cars, trucks and buses.

Using aluminium in EVs has several advantages, foremost amongst which is the distance travelled per charge. Lighter the vehicle, the longer its range. Coming to better battery life, thanks to the thermal and anti-corrosion properties of aluminium make it ideal for battery frames. Demand for aluminium will also rise on account of infrastructure for serving EVs, since the metal is commonly used as housing material for EVs charging stations.

The average aluminium content is estimated to be 250 kg per EV majorly coming

from extrusion and rolled aluminium products. With increasing penetration of EV sale, aluminium demand for EV will continue to grow over the next few years.

**Primary Foundry Alloy (PFA) is being produced by Vedanta for the first time in the country as previously it was imported before. What future you see for this product in India and by what percentage it will grow in the coming times?**

PFAs or primarily alloys of aluminium, silicon and magnesium, are known for their excellent metal quality and outstanding cast-ability, making them a preferred choice for the automotive industry. Our PFA capacity of 240 KT aims to cater to the various needs of automotive industry parts like alloy wheels, cylinder heads, brake systems and others. Currently, the share of aluminium alloy wheels

**The share of aluminium alloy wheels in India is significantly lower compared to the rest of the world.**

in India is significantly lower compared to the rest of the world.

With increased focus on light-weighting of vehicles, better aesthetics and other advantages, it is expected that over the next few years demand for PFA is expected to grow at CAGR 14 per cent. The biggest strength of Vedanta's products is that they conform to global specifications and standards and undergo rigorous quality assurance checks to ensure that customers access products of world-class quality. Our capability to customise these alloys also equips the company to address the varying requirements of the auto customers.

The introduction of PFA in our product portfolio is in keeping with Vedanta's belief that aluminium, as the metal of the future, holds significant strategic importance for the economy.

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