

IIM Delhi Chapter

Brief Report on Webinar on *Aluminium – Strategic Metal for Indian Economy* held on 20.9.2020

Delhi Chapter of IIM organised a Webinar on Aluminium on 20.9.2020 through *Google Meet platform*. The Theme of the Webinar was “***Aluminium – Strategic Metal for Indian Economy***”.

At the outset Shri K K Mehrotra, Chairman, IIM Delhi Chapter welcomed the speakers & participants to the webinar.

Shri N K Kakkar, Hon Secretary, IIM Delhi Chapter was the moderator for this webinar. After giving brief profile of *Dr. Mukesh Kumar, Director, Steel Research & Technology Mission of India (SRTMI)*. Shri Kakkar requested him to share his perspective on Aluminium Sector.

In his presentation, Dr Mukesh Kumar stated that India enjoys 5th largest Bauxite reserves in the world. The per capita consumption of Aluminium in India is 2.5 Kg against the world average of 11 Kg. There is a large scope of exploration in Aluminium Sector. Demand of Aluminium is expected to grow at 8-10% per annum. Present demand is approximately 4.5 MT. Dr. Mukesh Kumar touched upon the existing capacity and proposed expansion plans of Hindalco, NALCO, BALCO, Vedanta and some other small producers of Aluminium. He also talked about consumption pattern of Aluminium in various sectors, like Transportation, Construction, Packaging, Electrical, Consumer Durables etc. He also gave an overview of Bauxite Resources and Reserves. He also touched upon the challenges in Aluminium Industry. These challenges are energy efficiency, Resource Utilisation, Safety, Residue Treatment, Social & Environment factors, fluoride emissions from smelters etc. He also touched upon the focus areas in Aluminium Sector. Dr Mukesh Kumar stated that the focus areas in Aluminium Sector are:

- ❖ Reduction in:
 - Perfluorocarbon emission (PFC).
 - Energy consumption.
 - Water consumption
- ❖ Removal of Silica and Iron from Bauxite
- ❖ Development of Settler cum filter for separation of solid and liquor.
- ❖ Use of Red Mud in :
 - Iron manufacturing.
 - Corrugated sheets, tiles & cement.
 - Iron Powder
- ❖ Use of low grade Bauxite for Alumina production.
- ❖ Recovery of Gallium from Alumina Refinery liquor.
- ❖ Extraction from Red Mud:
 - Alfa Iron
 - Alumina
 - Titanium Di-Oxide
- ❖ Manufacturing of Al-Si cement/Geo-concrete from Fly Ash.
- ❖ ESP modifications for Indian coal having high ash.
- ❖ Special Grade Alumina & Hydrate.
- ❖ Treatment of Spent Pot lining.

- ❖ Converting Organic waste into power using ultra high temperature gasification.
- ❖ Use of lime grit for cement and other usages.
- ❖ Alternate technology for Bayer

Dr. Mukesh Kumar also talked about the following opportunities in the Aluminium Industry in India:

- ❖ Per capita consumption likely to double due to projects viz. Smart Cities, 24X7 Power supply to all, Water ways, Infrastructure & Digital India
- ❖ Opportunities in downstream capacities around smelters for sector specific second level of value addition
- ❖ Transportation, Electrical and Construction : Driving the growth
- ❖ Rail Wagons, Automotive components and Aerospace Alloys :Focus segments for the future , Opportunities for alloys development
- ❖ Make in India Program: Focus from Raw material export to metal export.
- ❖ Reform in Mining sector: Bridging the gap for developing better communication with the local communities .

This marked the end of the presentation of Dr. Mukesh Kumar.

Shri N K Kakkar thanked Dr. Mukesh Kumar for his lucid and informative presentation on Aluminium Sector in India.

Thereafter Shri N K Kakkar introduced *Shri R K Narang, Member, Executive Committee, IIM DC*, to share his thoughts on Aluminium Sector.

Shri R K Narang in his presentation stated that Aluminium plays an important role in economic development of our country. It is the largest non-ferrous metal industry in the world economy. Aluminium is the second largest metal industry after steel. It enjoys diversified use in critical applications for energy security, national defence, aerospace, automobiles, infrastructure, electrification, consumer durables, packaging etc. Production of Alumina from Bauxite and Power for production of Aluminium metal are the main cost components. These constitute about 75% cost of production of Aluminium.

Aluminium has unique mechanical properties viz:

- Light Weight
- Good thermal / electrical Conductivity
- Recyclability
- Corrosion Resistance
- Strength and Durability
- Machining and Formability

Indian Aluminium possesses huge potential as a strategic metal of future. Major Aluminium producers in the country are:

- National Aluminium Co. Ltd. (NALCO)
- Bharat Aluminium Co. Ltd. (BALCO)
- Vedanta Limited
- Hindalco Industries Limited

The major Aluminium producing countries in the world are China, Russia, India, Canada, UAE, Australia, Norway, Bahrain, Iceland, Brazil and USA .

After the presentations of Dr Mukesh Kumar and Shri R K Narang, there was a lively question and answer interaction among the participants.

There were about 30 participants in the Webinar.

Shri K K Mehrotra, Chairman, IIM Delhi Chapter, presented vote of thanks.

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