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VIEW OF IIM-DC AUDITORIUM



VIEW OF IIM-DC SOLAR PANEL

E - Version

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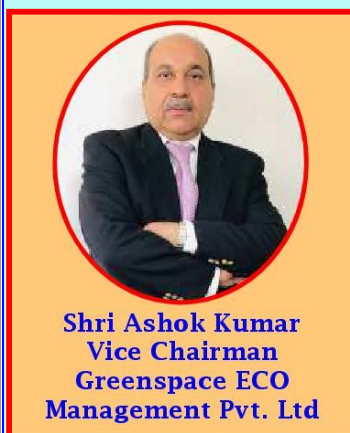
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BRIEF REPORT ON WEBINAR ON “RECYCLING OF PLASTIC / E-WASTE” HELD ON 28.11.2020

Delhi Chapter of IIM organised a Webinar on “Recycling of Plastic / e-Waste” on 28.11.2020 through Google Meet platform.

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 a brief profile of Shri Ashok Kumar, Vice President, Greenspace ECO Management Pvt. Ltd, Shri Kakkar requested him to share his perspective on Recycling of Plastic / e-Waste.



In his presentation, Shri Ashok Kumar, gave an overview of the sustainable e-waste management. It was stated by him that e-waste is resource until it is wasted. E-waste include item like computer, cellular phones, stereos, refrigerators, air conditioners, washing machine, television etc. Shri Ashok Kumar gave a world and domestic, scenario of generation of e-waste. It was informed by him that e-waste generated globally in 2019 was 53MT. E-waste generated in India in 2018 was 2MT. It is expected that by 2020-21 e-waste generation in India will be about 3MT. It will touch about 5MT by 2025 due to high growth of information and telecom sector in the country.

In India, presently 61% of the e-waste generated is recycled by informal sector and 39% by organised sector. Shri Ashok Kumar also touched upon the reasons behind slugging growth rate of e-waste. He also talked about disadvantages of recycling by informal sector. It was stated by him that recycling rate in developed countries is 70% whereas in India it is 20-25%. It is imperative that India should drive towards circular economy through efficient use of available material resource based on the principle of 6R (Refuse, Reduce, Reuse, Repair, Recycle and Re-think). 6R will help to have sustainable e-waste Management and stability of recycling in India which will help in circular economy and employment generation. It was mentioned by him that there is a rare-earth material in electronics waste which can be effectively & economically recovered.

This marked the end of presentation of Shri Ashok Kumar. After this presentation, Shri N K Kakkar gave a brief introductory profile of Shri A P Singhal, Director & CEO : Ecotex, JB and requested him to share his presentation.

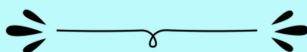


Shri A P Singhal
Director & CEO
Ecotex, JB

Shri A P Singhal in his presentation touched upon recycling of plastic. He mentioned that plastic is cheap compared to metals. He explained the benefits of plastic. It is durable and takes long time to decompose. Plastic came into existence in 1950. It is cost effective. It can be easily recycled. It is eco-friendly subject to that it needs to be handled in an efficient way. He presented the unique applications of plastic. There should be proper facilities for recycling of plastic. One should have proper & systematic collection system of plastic waste. There is a need to give thrust to huge investments in recycling of plastic. He also talked about segregation of wet and dry wastes. Need of the hour is to create awareness of plastic recycling. Support of government is needed to remove obstacles in recycling of plastic. Different kinds of plastic have different systems of recycling.

There was a lively interaction by the participants with Guest speakers after conclusion of the two presentations.

Chairman thanked the speakers & participants for making the webinar a success. The Webinar was attended by 30 persons.



BRIEF REPORT ON WEBINAR ON “FUTURE OF E-MOBILITY IN INDIA: EMERGING SCENARIO” HELD ON 30.1.2021

Delhi Chapter of IIM organised a Webinar on “Future of e-Mobility in India: Emerging Scenario” on 30.1.2021 through Google Meet platform.

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



Dr. Dipak Sen Choudhury
President – R&D
Exide Industries Ltd

Shri N K Kakkar, Hon Secretary, IIM Delhi Chapter was the moderator for this webinar. After giving an introductory brief profile of Dr Dipak Sen Choudhury, President R & D Centre, Exide Industries Ltd, Shri Kakkar requested him to share his perspective on “Electrochemical Energy Storage: Technology Options”.

In his presentation, Dr Dipak Sen Choudhury stated that electro energy is a product that, ideally should be consumed the moment it is generated. The storage of electrical energy is a technical

challenge. This challenge comes from:

- ❖ Modest storage efficiency
- ❖ Limited life of storage device
- ❖ Vulnerability of storage device's performance on operating conditions

He explained the classification of electro-chemical energy storage. He talked about the National Programmes on Advance Chemistry Cell Storage. The Programme talks about:

- ❖ Make in India; Emphasis on Value Capture & Economy Scale
- ❖ Global Competitiveness: Global Policy Benchmarking
- ❖ Strategic Reason: Energy Security
- ❖ Environment Sustainability

He spoke on Advanced Lead Acid Battery Ultra-battery Technology. This is a completely new class of lead-acid technology: a hybrid, long life lead acid energy storage device containing both an Ultra capacitor and a lead acid battery in a common electrolyte.

He dwelt on the strength and weaknesses of Advanced Lead Acid battery: Ultra battery Storage as mentioned below:

Strengths:

- ⇒ Large current charging / discharging capability
- ⇒ High efficiency in continuous PSoC operation
- ⇒ High cycle life
- ⇒ Lower footprint
- ⇒ Virtually 100% recyclable technology

Weaknesses:

- ⇒ Better suited for high power cycles than energy cycles
- ⇒ Dependent on Electronic Management System

He also touched upon Bipolar technology. However, there has been little activity in taking this technology forward as it is associated with health issues.

In this presentation, Dr. Choudhury also touched upon:

- (i) Lithium Air batteries
- (ii) Iron Air Batteries

- (iii) Magnesium Air Batteries
- (iv) Silicon Air batteries
- (v) Sodium Sulphur (NaS) Batteries

This marked the end of the presentation of Dr. Choudhury. Thereafter Shri Kakkar gave a brief introductory profile of Shri L Pugazhenthly, Past President, IIM & Executive Director, India Lead Zinc Development Association and requested him to share his perspective on electric vehicles.



Shri L. Pugazhenthly spoke on **“Will India Ride the Electric Wave”** where he highlighted the objective of development of electric vehicles in India: to comply with India’s commitment to Paris Round on Climate Change so as to bring down carbon emissions, to minimize urban transport pollution load, to eliminate noise pollution and to bring down oil import bill, thereby saving precious foreign exchange reserves.

The speaker shared data on the battery electric vehicle sales of major countries in the first half of 2019; he also informed that the original intent of Govt. of India was to have all electric vehicles by 2030 which subsequently has been toned down now.

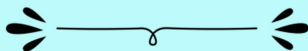
India has taken a number of positive initiatives to develop and promote electric mobility; however the various constraints being faced in the promotion of electric vehicles are as follows:

- ❖ Comfort level with fuel driven vehicles
- ❖ Subsidy support for electric vehicles
- ❖ Creation of massive charging infrastructure
- ❖ Safety concerns and hazards
- ❖ Limited global resources of Lithium &
- ❖ Initial high cost of vehicles.

While sharing the forecast for electric vehicles sales in India by 2025, Mr Pugazhenthly emphasized that electric vehicle goals will be realized in India through two wheelers, three wheelers, delivery vans and public transport buses.

After the presentations by Shri Pugazhenthly and Dr. Dipak Sen Chaudhuri, there was a lively interaction among the participants and the speakers. In all about 30 participated in the Webinar.

After conclusion of the presentations and interactions among the participants, Shri K K Mehrotra proposed a hearty vote of thanks



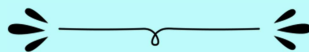
2021-22 BUDGET ANNOUNCEMENTS AND THE METAL INDUSTRY

Metals being a key raw materials in capital expenditure for infrastructure, higher focus on infrastructure spending augurs well for the metal industry. Budget has made a strong push for infrastructure led growth in the country, with capital outlay for infrastructure projects raised by almost 35 per cent for 2021-22. The Budget proposed significant enhancing of capital expenditure to Rs 5.54 lakh crore in the next fiscal.

- ❖ The increased capital expenditure for infrastructure projects in Union Budget 2021-22 will push the demand for steel in the country. Investments in core sectors like railways, roadways, urban infrastructure, affordable housing, power, and petroleum and natural gas, which have the potential for spurring demand for metals, have seen a healthy increase across the board.
- ❖ *Measures in the budget, ranging from setting of new 'smart cities' to redevelopment of airports will spur demand for metal companies. Also, measures like new ports will improve logistics.* Increased capital expenditure with enhanced outlay for infrastructure projects including highways, housing, metro, railways etc. augurs well for the long product category of steel.
- ❖ Measures like reduction in CVD and ADD on some steel products may give some short-term benefits to steel consumers. Reduction in the import duties on steel may help in bringing down the domestic prices and help the micro, small and medium enterprises using metal as input. These measures, however, may not help the primary producers. Infrastructure push in the economy, however, would aid big players with improved demand in long term.
- ❖ Steel prices in India have gone up by more than 50 per cent — from ₹35,750 per tonne in June 2020 to ₹55,000 in January 2021, supported by the recovery of domestic and global demand as well as increased raw material costs. This resulted in the cost of infrastructure projects going up 20-25 per cent over pre-Covid levels. Several industry bodies had demanded government to intervene to bring down the steel prices. To help the MSMEs and other user industries which have been severely hit by a recent sharp rise in iron and steel prices, the Budget 2021 reduced customs duty uniformly to 7.5 per cent on semis, flat, and long products of non-alloy, alloy, and stainless steels. Earlier, these products attracted 10/12.5 per cent customs duty. Import of steel at lower prices may influence the domestic steel prices lowering the realisations of the big players in the industry such as SAIL, Tata Steel, JSW Steel, JSPL and AMNS. Domestic prices, however, despite the recent increase, are below the international rates and thus imports from other countries may not lead to a reduction in prices. Unless international prices fall steeply in the coming months, there is no risk of imports hurting domestic steel players. Chances of imports from Europe and the US are slimmer as prices here are even higher, at \$800 a ton and \$1,150 a ton, respectively.
- ❖ Lowering of customs duty on steel scrap will help MSMEs and secondary steel producers, who use the scrap as an alternative to iron ore in steel making. India

imports about 6.5 million tons of steel scrap a year.

- ❖ Basic customs duty on steel grade limestone and also dolomite has been reduced from 5 % to 2.5%, both of which are used in steel making.
- ❖ Stainless steel producers will gain from an upsurge in the basic customs duty of imported flat-rolled products made of stainless steel from 5% to 7.5%
- ❖ The reduction of customs duty on steel products may have no significant impact on the steel industry as most of the steel imported into the country today comes from countries with whom we have an FTA (Free Trade Agreement) and hence they enjoy zero import duty. 60 percent of the imports are from countries such as Japan and South Korea, with whom India has a free trade agreement.
- ❖ Customs duty on several steel products, including primary/semi-finished products of non-alloy steel, flat products of non-alloy and alloy-steel and long products of non-alloy, stainless and alloy steel have been reduced. Budget also revoked anti-dumping and countervailing duties on straight length bars and rods of alloy steel, high-speed steel of non-cobalt grade flat-rolled product of steel, plated or coated with an alloy of Aluminium or Zinc. This will be in effect till October.
- ❖ Customs duty has been reduced on imports of semi-flat steel—used to make ships, bridges, line pipes and other equipment—from 12.5% to 7.5%. The government also cut customs duty on longs, used to make rails and wire rods, from 10% to 7.5%.
- ❖ The revised duty on import of coal, to 1 percent, will have little impact as the government has also proposed to levy a cess of 1.5 percent. Net, there will be no impact.
- ❖ The vehicle scrapping policy will not only help reduce pollution and accidents but will also help decentralization of the steel industry.
- ❖ The announcement of the National Hydrogen Energy Mission may prove to be a great step toward greener manufacturing and sustainable development in the country, including for steel industry.
- ❖ Reduction of customs duty on import of copper scrap from five per cent to 2.5 per cent would help the secondary copper players who import the copper scrap, recycle and sell the refined copper. But it wouldn't be of any benefit to the primary copper producers such as Hindalco and Hindustan Copper, which doesn't depend on scrap.
- ❖ In the case of the aluminium industry The Budget maintained the status quo for the industry.
- ❖ So overall there is expected to be a lot of infrastructure building activities in the coming future and all that would lead to increased steel demand. Increased capex in the infrastructure sector, including the healthcare infrastructure, will have a multiplier effect as it will create demand across product categories, including steel. Budget announcements shall help in making steel available in the right quality and quantity at competitive prices to enable speedy infrastructural development planned for the country.



REVOKING OF CVD, ADD TO HURT EARNINGS OF DOMESTIC STAINLESS STEEL INDUSTRY

Revoking of countervailing duty (CVD) and anti-dumping duty (ADD) on stainless steel products would give China a free hand in dumping cheap imports to the country, industry officials said.

In the Union Budget for FY22, Finance Minister Nirmala Sitharaman announced revoking of countervailing duty on imports of flat products of stainless steel, originating in or exported from Indonesia.

"The problem stainless steel industry faces is that it is mistaken to be part of the steel industry. It is not. It is a separate industry, which is facing dumping from China already since 2017. This move by the government will only give it a free hand to dump in the country via Indonesia," K K Pahuja, president of Indian Stainless Steel Development Association (ISSDA), told Business Standard.

All steel is iron based, but stainless steel contains chromium at 10 per cent or more by weight. While steel is susceptible to rust, stainless steel is rust resistant. Due to this, stainless steel finds application in areas of high corrosion where steel cannot survive.

"With demand expected to be strong due to thrust on infrastructure projects, traders are expected to stock up cheap imports creating huge inventories in the coming months ahead of an anticipated demand boom in the sector," said a senior official of a large stainless steel producing company.

State-owned Steel Authority of India (SAIL), Tata Steel and Jindal Stainless among others are some of the players of the stainless steel industry.

"China has 7-8 times of stainless steel capacity of India. By revoking the duty, it makes matters only worse for the domestic market. We will be making representations to the government to undo this. It is a disaster," explained Pahuja.

However, not all action taken for the iron and steel industry in the Budget has been unfriendly. The reduction of customs duty on steel scrap by 2.5 per cent to nil augurs well for the micro, small and medium enterprises (MSME).

"Reduction of customs duty on scrap will help bring the cost of imported raw material down by around Rs 500 to Rs 600 per metric tonne which will be further beneficial for the MSME industry and reduce their production cost of steel by around 1.5 per cent. This will help strengthen the MSME industry to better compete in the domestic market as well as and provide the opportunity to enhance their market share in the country," said Satish Kumar Agarwal, chairman and managing director at Kamdhenu Group.



Kamdhenu is largely in TMT bars, which find wide application in construction and infrastructure projects. The Rajasthan-based company is also into structural and colour coated steel.

Meanwhile, a reduction of customs duty to 7.5 per cent on semis, flat, and long products of non-alloy, alloy, and stainless steels has no impact on both steel as well as stainless industry.

For stainless steel, the duty was already at 7.5 per cent and hence there is no impact of the same, said stainless steel industry experts.

"Exemption of duty on steel scrap and reduction of customs duty on steel products would benefit the MSME sector. However, the reduction of customs duty on steel products will have no significant impact on the steel industry as most of the steel imported into the country today comes from countries with whom we have an FTA (Free Trade Agreement) and hence they enjoy zero import duty," said T V Narendran, chief executive officer and managing director at Tata Steel.

Source: Business Standard

UNION BUDGET OPENS FLOODGATES FOR CHINESE STAINLESS-STEEL COMPANIES: ISSDA

The finance minister's recent move to revoke anti-dumping & countervailing duty on steel and stainless steel imports during the union budget presentation may result in a jump in imports from China and Indonesia which is expected to have a negative impact on the stainless steel industry.

"The temporary suspension of the Countervailing Duties on stainless steel flat products imports has been a big unintentional gift to Chinese companies that will hit the domestic stainless-steel industry very badly, which has been in financial stress for more than a decade," said K K Pahuja, President, ISSDA.

By way of announcing a temporary suspension of Countervailing Duty, the government has enabled irrational imports of stainless-steel finished products from China and Indonesia, where injury to domestic industry had been proved after detailed DGTR investigations, said Pahuja.

The Director General of Trade Remedies (DGTR) had imposed Countervailing and Anti-Dumping duties on such non-WTO compliant imports into India during May 2018.

"Suspension of duties will undermine domestic manufacturing and open the floodgates for cheap imports of stainless-steel imports in total stainless consumption, thus damaging the 'Make in India' movement and severely impact the employment generation in the country," Pahuja added.

As per data from ISSDA, imports from Indonesia increased from 8,601 million tonne in 2017-2018 to 76,102 MT in 2018-19 and 280,575 MT in 2019-2020.

“The Government’s geopolitical stand on banning Chinese apps on one hand and easing bulk trade on the other to favors Chinese producers, where unfair trade practices have been proved, runs contrary to the Atmanirbhar Bharat and \$5 trillion economy dream,” said Pahuja.

This has more than offset the positives of the Union Budget in terms of duty exemption on scrap and higher infrastructure spending, he added.

Source: The Economic Times

INCREASED CAPEX TO PUSH STEEL DEMAND IN INDIA: INDIAN STEEL ASSOCIATION

The increased capital expenditure for infrastructure projects in Union Budget 2021-22 will push demand for steel in the country, industry body ISA said.

To augment the country's infrastructure, the Budget proposed significant enhancement in capital expenditure to Rs 5.54 lakh crore for the next fiscal, besides creating institutional structures and giving a big thrust to monetising assets to achieve the goals of the National Infrastructure Pipeline (NIP).

In her Budget speech for the financial year 2021-22, Finance Minister Nirmala Sitharaman had also announced to set up a Development Financial Institution (DFI).

The minister said that a sum of Rs 20,000 crore has been provisioned in the Budget to capitalise the DFI.

"We are happy at the proposals related to increased construction of roads and highways as well as the proposed introduction of a bill to set up an institution for financing infrastructure and development. Enhanced investments in the infrastructure and related segments will create a demand spike for steel," Indian Steel Association (ISA) said in a statement. Stepped up budgetary allocations for railways, metro services, development of more airports, the Jal Jeevan Mission, urban and the rural infrastructure development in the Budget will also help generation job opportunities besides creating demand for steel, ISA said.

It is the apex industry body representing the players of the Indian steel industry.

Meanwhile, Cold Rolled Steel Manufacturers Association of India (CORSMA), which

represents the secondary or non-integrated steel players in the country, also welcomed the reliefs announced with respect to the steel sector in the Budget.

In a letter to the Steel Minister Dharmendra Pradhan, CORSMA Executive Director N K Sood said: "We appreciate that due consideration has been given to the industry's concerns as projected by CORSMA. Two of our proposals relating to the reduction of duty on HR (hot rolled) coil and input to CRGO have been duly considered in the Budget. This would not have happened without the support of the Steel Ministry".

On the impact of the reduction in duty on input material to CRGO, Sood said this will encourage increased production of electrical steel in India, while reduced duty on HR coil will make locally-produced HR coils more competitive in the market against imported ones. For the steel industry, Sitharaman had announced reducing the duty to 7.5 per cent on products like primary/semi-finished products of non-alloy steel, long products of non-alloy, stainless and alloy steel.

The 2.5 per cent duty on iron and steel melting scrap, including stainless steel scrap, and raw materials used in the manufacture of CRGO (Cold Rolled Grain Oriented) steel has been lowered to nil in the Budget.

Source: The Economic Times

ECONOMIC RECOVERY, DEMAND REVIVAL SPARK 2021 HOPES FOR STEEL SECTOR

The Indian steel industry grappled with tough times in running their operations as well as witnessed a sharp plunge in demand for steel soon after the coronavirus pandemic and subsequent lockdowns disrupted overall economic activities.

Recovering economy, sprouting demand and improving prices raise hopes for the country's battered steel sector as it steps into the new year after pandemic-induced disruptions turned 2020 into a 'disaster' for the industry.

As the sector experiences signs of better times, the apex body of domestic steel makers, ISA, expects good days ahead and surely no more outbreak like that of coronavirus infections.

The Indian steel industry grappled with tough times in running their operations as well as witnessed a sharp plunge in demand for steel soon after the coronavirus pandemic and subsequent lockdowns disrupted overall economic activities.

Adverse market conditions forced steelmakers to cut down their operations by up to 50 per cent in April. There was a shortage of manpower as many workers migrated to their native places amid the lockdown as well as limitations on the number of staff working at an office or site after gradual unlocking.

The nationwide lockdown came into force in late March and the relaxations began in a phased manner only in June.

While terming 2020 as a 'catastrophe' for the steel industry, Indian Steel Association (ISA) Deputy Secretary-General Arnab Hazra said there is a revival in demand now which will continue to grow in 2021.

'We are expecting good days ahead and no more outbreak of any virus like corona in the future. Year 2020 was a disaster, we expect no more disaster. This will save us from further disruption,' he said.

The outlook for the sector is turning positive and the industry expects the government will spend more on infrastructure in the new year, which will have a multiplier effect on demand, Hazra said, adding that the demand will show resilience to reach to pre-COVID level in 2021.

In 2019, the demand was around 100.2 million tonne (MT) and that will fall to 81 MT in 2020, he noted. Helped by government spending and demand coming from steel-intensive sectors, the overall steel demand is expected to reach 100 MT in 2021.

'Demand is clearly visible and going forward is expected to become stronger which augurs well for the industry in 2021,' he said.

JSW Steel Joint Managing D Seshagiri Rao said, 2020 is the worst year in the last 70 years and that the unprecedented pandemic has had a devastating impact on the world economic growth. Even though the overall steel demand is expected to fall in 2020, the industry is experiencing improvement in realisation and margins, he added.

According to Rao, the company's expansion plans and inorganic growth through acquisitions are expected to come to fruition by the end of March 2021 coinciding with a rebound in economic activity.

JSW Steel's priority is to leverage the availability of additional capacities to meet the incremental demand that would arise due to economic rebound to create value to stakeholders, he said.

State-owned SAIL's Chairman said that from the third quarter of the ongoing fiscal, the market has started improving and will continue to do better in the next fiscal year.

The growth in the auto sector, infrastructure and construction, white goods and agri equipment will aid the steel demand in India, he said.

Things are improving in the domestic and the international prices are on the rise. Domestic prices are governed by the international prices whether they are of steel or iron ore.

'Looking at this, we think domestic demand will continue to be strong in the fourth quarter. Overall, this (financial) year should be good despite the pandemic in the first quarter and also the fact that we lost a lot of money in Q1. Q4 will also be good.

'Financial year 2021-22 should also be a good year for the industry because the demand has already started picking up and this buoyancy will remain,' he said.

Electrosteel Steels Limited's CEO Pankaj Malhan said in the last few months since the lockdown was lifted, things have improved and steel demand has started increasing as economic and manufacturing activity is starting to gain pace.

He also said that construction activity is also getting back to pre-COVID levels slowly and that the industry is bullish on the price of steel for the next two quarters.

'Plus, we are expecting that the government will announce favourable proposals in the (upcoming) Union Budget which will help the steel industry in terms of arresting the increasing price and shortage of iron ore which is a primary raw material for the steel industry by not only capping its price but also by stopping exports at a time when the domestic industry is facing a shortage,' he said. Rashtriya Ispat Nigam Ltd (RINL) Chairman and Managing Director P K Rath said 'the pace of recovery of the market and surge in demand of steel in the third quarter has raised the hope of closing the year on a better note. Our priorities will be definitely commissioning and stabilising the forged wheel plant and ramping up the plant production to its rated capacity.

JSPL Managing Director V R Sharma said the passing year was globally one of the most challenging years for the industry as well as mankind due to the COVID-19. Some steel companies scaled-down production of their operations some had to close their plants, he added.

Source: <http://www.businessworld.in>

STEEL MAKERS MAY NOT CUT PRICES ANYTIME SOON DESPITE EASIER IMPORTS

"This is because, by doing away with the ADD and CVD with effect from February 2, the government has clearly sent out a message to the steel industry that they cannot raise prices at their free will, inflating the cost of building infrastructure in which it is putting a lot of money," an industry source said.

Major steel producers may not resort to price correction immediately, but the reduction in customs duty on a range of products and duty exemption granted on import of steel scrap might put pressure on steel firms to hold the current prices in the medium term. Higher demand for steel may, however, may come to their aid.

Steelmakers are not perturbed with the possibility of higher imports from China, since most of the imports come from FTA countries Japan and Korea. However, they are worried about the Budget proposal to temporarily revoke anti-dumping duty (ADD) and countervailing duty (CVD) on imports from China and other countries even as the prevailing prices are way above the reference price.

“This is because, by doing away with the ADD and CVD with effect from February 2, the government has clearly sent out a message to the steel industry that they cannot raise prices at their free will, inflating the cost of building infrastructure in which it is putting a lot of money,” an industry source said.

Saurabh Bhatnagar, partner and national leader, Metals & Mining, EY India, said the reduction in customs and anti-dumping duty on steel imports and zero customs duty on scrap imports will benefit the secondary steel manufacturers to supply steel for construction of roads, ports and bridges, and add to a more cost-effective supply base for steel.

Icra's Jayanta Roy said that the 2.5% to 5% reduction in customs duty on certain finished steel products and semis from 10-12.5% would affect domestic prices of such products, and thereby, adversely impact the margins of affected players. Import duty on iron and steel melting scrap, including stainless steel scrap, has been done away with for up to March 2022.

The finance minister's proposals for the steel sector bear the imprint of minister for road transport and highways Nitin Gadkari. Gadkari had been vocal as steel companies were on the price hiking spree for the last few months, mainly taking cues from their international peers. While Gadkari took the matter to the Prime Minister seeking his intervention, steel firms justified the price hike to rising prices of iron ore.

During the April-December period of the current fiscal, India imported 3.21 million tonne (MT) steel, down 42% over the corresponding period last year. During December 2020, import decreased by 41.8% over December 2019. China's share in the total imports in December 2020 declined to 20% from 27% in December 2019.

Source: Financial Express

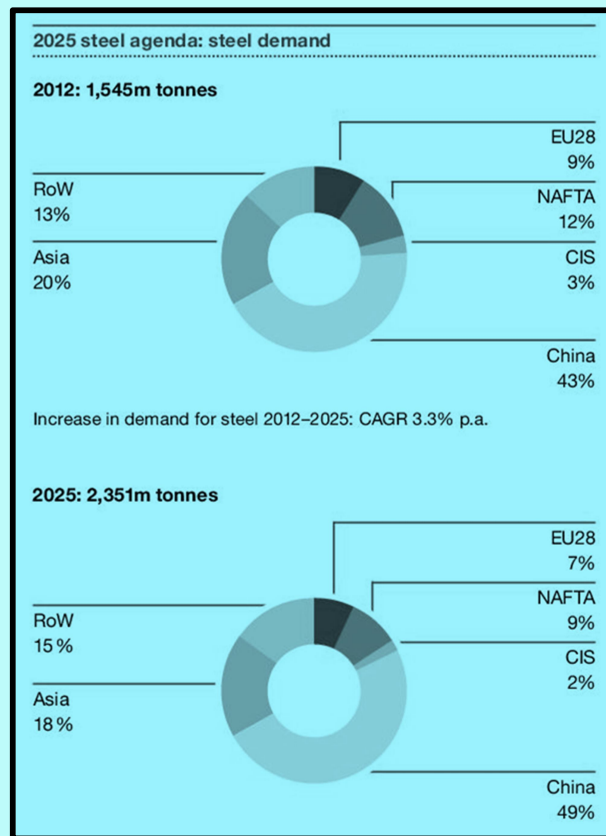
STEEL IN 2025: QUO VADIS?

The steel market of the future – strategies for success in a competitive global environment.

Moderate rise in global demand for steel: PwC forecast for 2025

In this year's steel forecast, we expect global demand for steel to be approximately 2.35 billion tonnes by 2025. That is two percentage points down from the previous year's forecast (2.39 billion tonnes) and is equivalent to an average global growth of 3.3% per annum from 2012 to 2025.

China consolidates its dominance
Based on its current low steel growth rates, one might well assume that China is principally responsible for this downward adjustment. In fact, economic growth in China is expected to average 4.7% per annum between 2015 and 2025, slightly above the previous year's forecast. This increase is due to a slight rise in forecast overall economic growth to 2025. We assume that growth will be constant in the future. However, it will be lower than present levels. China will therefore continue to consolidate its dominance in the global steel market and within just ten years will be consuming almost as much steel as the rest of the world put together. Even so, our view is that the growth in Chinese and global demand for steel will slacken year on year. On this basis we can expect Chinese demand for steel to peak around 2030.



Stagnation in the CIS countries

A major reason for the decline in 2025 demand for steel is to be found in the Commonwealth of Independent States (CIS) countries. The tense political situation and economic sanctions against Russia along with the devaluation of the rouble have dealt a major blow to demand for steel in the region. We do not expect a rapid recovery or a lifting of the sanctions, at least in the medium term. But the apparently unwelcome drop in steel demand could prove an advantage for the Russian steel export sector. This is because the depreciation of the rouble is making commodities purchased in roubles cheaper, which is due to Russia's high level of

self-sufficiency thanks to its domestic raw materials. This price advantage could have a direct impact on international steel markets and allow extremely competitive price levels to be achieved.

... and in Europe

The European steel market is also stagnating. Expected steel demand for 2025 for the EU 28 has also fallen a full two percentage points from the previous year and is now around 162 million tonnes. This is equivalent to an annual average growth rate of less than 1%. For comparison, we assume economic growth in Europe will be around 1.8% over the same period. Based on the slackening of demand and the challenges posed by the increase in imports from Eastern Europe and Asia, the steel market in Europe will remain fraught in the foreseeable future, too. Structural overcapacities and efforts to restructure the steel industry will therefore continue to dominate the scene in Europe. As our analysis confirms, Germany will continue to be the driver for growth in Europe. The German steel market and German demand for steel remain stable, buoyed by positive performances in major client industries such as the automotive industry and a slight easing on the commodities market. The market positioning of German companies is also proving to be relatively robust due to its high-value goods and integrated value chain.

Increased demand for steel in North America

The news from the North American Free Trade Agreement (NAFTA) region is positive. The resurgence of industrialisation, driven by shale gas deposits in the USA and access to cheaper energy, is already impacting on economic data and forecasts. For the NAFTA countries, we are assuming that annual growth in steel demand will match economic growth (around 2% per annum over the next few years). Expected demand for steel in 2025 has therefore risen by around 1.5% to approximately 215 million tonnes. Demand for steel is stabilising at a higher level than could have been expected just a few years ago. In the rest of the world (and Asia too, if we exclude China), there are only slight changes in the demand for steel. Economic prospects and expected trends in steel demand remain positive for the core countries of South Korea and India, for example. India in particular has shown above average growth in demand for steel due to its industrial development. We are assuming that this increase in demand for steel to generate economic growth in India will be sustained in coming years.

Who benefits most? China and Eastern Europe

Although it is still too early to make an assessment of the risks in Russia and performance in steel demand in the NAFTA region, we expect global demand for steel to continue its moderate growth, but with major differences between individual regions and countries. Europe is unlikely to recover in the medium term despite huge efforts to restructure the industry. Chinese and East European manufacturers, who can consolidate their market share or expand it at the expense of European manufacturers, have the potential to gain from this market trend.

Global competition: capacities for the future

On the basis of the 2025 forecast, the following five competences are essential if European steel manufacturers are to exploit the changes in the market as an opportunity to optimise their internal business model.

Efficient use of materials and effective investment

Improving the cost basis is, and continues to be, the focus for the European steel industry over the medium term. The key lever here is steadily increasing the effective use of materials and investments. The highly complex nature of steel production and processing means that it is vital to ensure continuous material flows. Balancing peaks in capacity and managing bottlenecks to ensure sufficient supplies of materials whilst avoiding supply shortfalls requires continuous production planning supported by Advanced Planning Systems (APS). Based on the current overcapacities in Europe, further structural adjustment of the asset and production network is advisable. Shifting and bundling production volumes at single locations achieve economies of scale manifested in terms of material, staff training and experience as well as shipping and logistics costs.

Delivery service and flexibility

High levels of delivery service, short lead times and flexibility over volume are not only of benefit internally but also help customers to increase their own value chain efficiency. Geographical proximity, high levels of flexibility and a reliable delivery service are specific competitive advantages, particularly versus overseas competitors. Supply chain management is essential within the value chain to identify the optimum compromise between delivery service, flexibility, costs and inventory.

The outcome is a delivery service, lead times and flexibility over volume that matches customer needs, leading to increased customer satisfaction which in turn increases sales. In situations where full capacity is reached, it is advisable to define delivery service and flexibility in line with internal parameters.

Product quality and innovation

Technology and innovation cycles have become much shorter in recent years. Not just for steel manufacturers but above all for steel processors. This has been matched by rapid changes to product and market segments. What just a few years ago were still technological niche products with very good margins are now high-volume markets hotly contested by cost leaders. But in order to ensure the European steel industry continues to lead in terms of innovation and quality in coming years too, the product portfolio needs to be reviewed regularly and aligned with the overall strategic objective.

Commodity management

The changes in global commodity and steel markets have caused prices to fluctuate widely and have led to limited scope for product differentiation. Business processes need to be

pegged to fluctuations in commodity prices, which can be used as control parameters to ensure they are in synch with commodity market performance. Controlling financial and material flows based on an integrated commodity management model can achieve not just process efficiencies but also purchase prices and sales margins.

Digitalisation

There are many different ways of using IT and digitalisation services systematically to increase and speed up the responsiveness of product range, pricing and delivery service to customer requirements. Any digitalisation strategy needs to focus on designing processes that are more efficient overall and integrate the customer's planning and purchasing processes. This includes joint demand forecasts, supply planning, shipping notifications and after-sales services. However, digitalisation needs to be anchored in a strategic approach that goes well beyond simply operating a simple web shop. It needs to encompass business analytics, by which we mean detailed analysis and understanding of all core processes and functions. For example, analysing pricing components as a function of demand and purchasing patterns can help to optimise pricing. Another example would be using periodic analyses of sales volumes, fluctuations in demand and margin by specification and customer to achieve demand oriented segmentation of supply chains. These analyses involve systematically evaluating data obtained from a wide range of sources based on empirical findings.

Digitalising business transactions provides the purchaser with an analytical tool, which allows a comprehensive picture of needs and requirements to be built up and any up-selling or cross-selling opportunities (offering high-value or additional products/services) to be identified. It provides them with a basis for improving and aligning their inventories by recording customer-specific needs and information. By providing the customer with regular information on current developments and trends, it also offers them the opportunity to position themselves as trendsetters.

Source: <https://www.pwc.com>

CABINET CLEARS PRIVATISATION OF RASHTRIYA ISPAT NIGAM

The Cabinet has approved privatisation of steel-maker Rashtriya Ispat Nigam Ltd (RINL), the 'navratna' PSU which runs the 7.3 million tonne (mt) capacity Visakhapatnam Steel Plant. The government currently holds 100 per cent stake in the company that makes long products used in construction.

"While approving the strategic disinvestment of RINL a few days ago, the Cabinet delegated powers to the Alternative Mechanism headed by the Finance Minister to decide whether the subsidiaries of RINL will be part of the transaction, depending on the feedback from potential investors," a government official briefed on the Cabinet decision said. RINL runs two subsidiaries – The Orissa Minerals Development Company Ltd (OMDC) and The Bisra Stone Lime Company Ltd (BSLC).

The company has been incurring heavy losses since FY17 on the back of rising interest costs, except for FY19 when it posted a net profit of Rs 96.71 crore. In September 2020, the RINL board had approved a revised voluntary retirement scheme for employees to cut costs and improve productivity. The revised VRS is applicable to employees who have completed 15 years of service and have attained 45 years.

OMDC operates six iron ore and manganese ore mining leases at Barbil in Odisha's Keonjhar district. The leases are Dalki manganese mines, Kolha Roida iron and manganese mines, Thakurani iron and manganese mines, Belkundi iron and manganese mines, Bariaburu iron mines and Bhadrasai iron and manganese mines. The lease rights of all the six mines have expired and are not in operation for want of statutory clearances, for which necessary action is being taken by the company to re-start mining.

BSLC undertakes mining and marketing of limestone and dolomite. The mines are located at Birmitrapur in Orissa's Sundargarh district, with reserves of about 287 million tonnes of dolomite and 367 million tonnes of limestone. RINL also runs RINMOIL Ferro Alloys Pvt Ltd, an equal joint venture with MOIL Ltd and RINL Powergrid TLT Pvt Ltd, also an equal joint venture with Power Grid Corporation of India Ltd.

Source: Business Line

CENTRE SET TO ALLOW STEEL FROM RECYCLED SCRAP TO BE USED IN ROAD, BRIDGE PROJECTS

"It was decided that as long as the steel from recycled scrap and such sources meets the BIS standard, there should be no problem in using them in the projects," said a senior official.

In what could be a jolt to major steel makers of India, the Centre is set to allow steel made from recycled scrap to be used in construction of roads and bridges, liberating the sector from the compulsion of having to use steel made only by the top few iron and steel companies in the country.

Sources said the move comes against the backdrop of recent deliberations in the Ministry of Road Transport and Highways chaired by minister Nitin Gadkari, wherein it has been discussed that the steel industry in general and the top few premium steel makers in India in particular have hiked the price of steel by at least 50 per cent in the past six months.

The move is expected to give a clear cost-advantage to the Centre's various road projects apart from making thousands of suppliers of recycled steel and smaller players in the sector eligible to vie for the business so long as their steel meets the required technical standard set by the ministry for roads and bridges.

"It was decided that as long as the steel from recycled scrap and such sources meets the BIS standard, there should be no problem in using them in the projects," said a senior

official. There will also be a requirement to set a stringent inspection regime for quality control at the ground level, officials said.

About 40 per cent of the expenditure in road projects goes into procuring steel and cement. Ministry sources said an estimated 10,000 suppliers in India will potentially be eligible to bid for contracts to supply steel after the move, introducing competition and also enhancing the size of the sector.

Over 60 per cent of the domestic steel demand is generated from construction sectors like real estate and roads.

The road sector the world over has been toying with a number of alternative technologies and materials that can replace steel. Composite and reinforced fibre bars claim tensile strength five to six times that of steel.

Gadkari, who had been criticising the increase in steel prices for the past two months, recently publicly warned steel makers about its impact on road projects.

A steel industry body last month wrote to Prime Minister Narendra Modi, defending the hike in prices and citing reasons behind it. Citing the pandemic, the industry body wrote that a global shortage of steel had triggered the rise in prices and that the price of iron ore had also soared.

Source: The Indian Express

13 NON-OPERATIONAL MINES HAVE AFFECTED STEEL PRICES: UNION MINISTER DHARMENDRA PRADHAN

In a reply to the Rajya Sabha, Pradhan said the government has taken steps to ramp up production of iron ore and steel to increase their domestic availability to bridge the demand-supply mismatch.

Union Minister for Steel Dharmendra Pradhan said scarcity of iron ore due to non-operationalisation of 13 mines has pushed the price of raw material with resultant effect on the steel prices in the market.

“Various factors contributing to increase in prices inter alia include increase in price of iron ore following its reduced availability with the production of iron ore in current financial year being only 112 million tonne (MT) up to November 2020 as compared to 152 MT during corresponding period last year. This was mainly due to non-operationalisation of 13 working mining leases in Odisha, post their auction in March, 2020,” he said.

In a written reply to the Rajya Sabha, Pradhan said the government has taken steps to ramp up production of iron ore and steel to increase their domestic availability to bridge the demand-supply mismatch leading to increase in prices of iron and steel in recent

months.

In a de-regulated market scenario, the domestic steel price is determined by market forces of demand and supply, trends in prices of raw materials and is also influenced by global conditions, he added.

Source: The Indian Express

HOW STEEL MIGHT FINALLY KICK ITS COAL HABIT

Coal's grip on the global electricity sector is loosening as more utilities and companies invest in renewable energy. But one major coal consumer — the steel industry — is finding it harder to kick its habit.

Steel companies make nearly 2 billion tons of high-strength material every year for bridges, buildings, railways, and roads. The furnaces that melt iron ore to make steel consume vast amounts of coal. As a result, the industry accounts for roughly 8 percent of annual carbon dioxide emissions, as well as a toxic soup of air pollutants.

Steelmakers worldwide are facing mounting pressure from government regulators and consumers to decarbonize operations. Doing so is essential to limiting global warming to 1.5 degrees Celsius and staving off most of the worst effects of climate change, experts say. In recent months, the world's three top producers — Europe's ArcelorMittal, China's Baowu Steel, and Japan's Nippon Steel — committed to achieving net-zero emissions by 2050, echoing targets set in their home countries.

But in order to curb steel's carbon emissions, the sector will have to transform how the material is traditionally made.

Outside Boston, in the industrial suburb of Woburn, one company is working to replace coal with electrons. Boston Metal, an outfit spun out of the Massachusetts Institute of Technology, or MIT, uses electric currents to heat iron ore into a bright orange-white liquid, which converts into metal and cools as gray steel blocks. The process doesn't create greenhouse gas emissions, and when powered with renewable electricity, can be completely emissions-free.

Tadeu Carneiro, the company's CEO, said Boston Metal is "ushering in a new era of metallurgy." The nine-year-old startup raised \$50 million in January from a slew of investors, including the Bill Gates-led Breakthrough Energy Ventures and the venture capital arm of BHP, one of the world's biggest mining companies. The new funding will allow it to build a demonstration plant in Woburn that can produce 25,000 tons of metal per year; so far, the company has made only several tons of steel in total.

Boston Metal's approach is one of a handful of breakthrough technologies with the potential to decarbonize steelmaking. Companies are piloting systems across Europe that use hydrogen in furnaces in lieu of coal. In Brazil, some steel mills are mixing in biochar, which is made from agricultural waste. Other firms are continuing the use of coal, but are considering retrofitting facilities with carbon capture devices to negate emissions.

Testing and scaling technologies that remove the emissions from steelmaking isn't the only challenge to decarbonizing the building material. Greener products must also compete in an industry with relatively low profit margins and an excess supply of inexpensive Chinese steel.

To level the playing field, public agencies and private businesses will need to set policies that encourage buying emissions-free steel, or make it more expensive to purchase conventional supplies, said Nate Aden, a senior fellow at the World Resources Institute who studies industrial sector transformations. (California, for instance, limits the total amount of carbon emissions associated with steel and other materials used in state-backed construction projects.)

"We haven't had nearly enough research and development in this space for the past couple decades," Aden said. "It's exciting." About 70 percent of steel today is made how it's always been made: in giant, extremely hot furnaces. Purified coal, or "coke," is heated and melted with iron oxide and limestone, then injected with oxygen to reduce the carbon content of the mixture and to remove impurities.

Almost all other steel is made from scrap metal that's melted down in an electric arc furnace. This approach doesn't use coke as a raw material. But it does require significant amounts of electricity to heat metal to nearly 3,000 degrees Fahrenheit — and most of that power comes from coal-fired power plants.

At Boston Metal's research facility, the steelmaking process takes place inside a squat metal cylinder called an electrolytic cell. Electricity is fed in from the top and flows through a chimney-like tube made from a chromium-based alloy. The electric current then passes across a liquid solution made of iron oxide and other metallic minerals. This heats the oxide melt and drives chemical reactions that result in the production of oxygen gas and liquid iron. Oxygen bubbles to the top, while fortified iron pools at the chamber's bottom and eventually hardens into steel.

Donald Sadoway, a professor of materials chemistry at MIT, said he first got the idea for "molten oxide electrolysis" decades ago while researching alternative ways to produce aluminum, another metal made via a carbon-intensive process. In 2012, he co-founded Boston Electrometallurgical (a.k.a. Boston Metal) with two partners, and they began testing the method in laboratory cells the size of highball tumbler glasses. The company now runs three pilot lines at the Woburn facility.

With the \$50 million investment from Breakthrough, BHP, and others, Sadoway said the goal is to demonstrate the technology at a scale large enough to convince investors to back construction of an industrial facility. If that future plant comes to fruition, he estimates Boston Metal's process will use about 20 percent less energy than a conventional blast furnace. And if the facility can use cheap, plentiful renewable electricity, perhaps from a hydropower plant, its steel would cost less than the competition.

“At scale, we expect to make better metal at lower cost and with no CO2 emissions,” he said. As Boston Metal expands its efforts in electrolysis, many steel companies are placing their bets on hydrogen to curb emissions.

Hydrogen doesn't emit greenhouse gases when burned and can be made by using renewable electricity to bust up water molecules (although most hydrogen today is made with natural gas, through a process called steam methane reforming). In steelmaking, hydrogen sets off a chemical reaction that removes oxygen from iron ore, eliminating the need for purified coal in the blast furnace. Luxembourg-based ArcelorMittal is building a demonstration plant using this method — called hydrogen-DRI, for “direct reduced iron” — in Germany. Japan's Mitsubishi Heavy Industries plans to trial the technology this year at a 250,000-ton per year steel plant in Austria. And in Sweden, steelmaker SSAB and its partners have built a pilot plant to produce hydrogen supplies and test hydrogen-DRI, using only hydroelectric power for both operations.

Building a hydrogen-based steel industry will require significant spending to not only build new plants but also produce, transport, and store green hydrogen. For these projects to be economically viable in the world of cheap steel, the prices of hydrogen and renewable electricity must drop considerably, while the price of carbon dioxide must rise, Aden wrote in a 2020 paper as part of an international team of experts.

There's another longer-term challenge for new, clean projects. Demand for steel is declining or stagnating in key markets, including the United States and Japan. Producers are already making more steel than the world needs. Meanwhile, construction companies and car makers are increasingly using lightweight aluminum, plastics, and even wood in their projects. That could make it harder to justify future investments or research, according to Aden. Still, the steel industry remains an essential part of the world economy — as well as a significant source of the world's emissions. “What's clear is that we'll be needing steel for the next few decades,” Aden said. “So I think all these new projects are worthwhile.”

Source: <https://grist.org>

AP CM WRITES TO PM ON REVIVAL OF VIZAG STEEL PLANT

Andhra Pradesh Chief Minister YS Jagan Mohan Reddy wrote to Prime Minister Narendra Modi to consider revival of Vizag Steel Plant (Rashtriya Ispat Nigam Limited), rather than proposed divestment.

In a letter, the Chief Minister said: "I would like to bring to your kind notice the recent decision of the Cabinet Committee on Economic Affairs (CCEA) which has given in-principle approval for 100% strategic disinvestment of Government of India's shareholding in Rashtriya Ispat Nigam Ltd., Visakhapatnam, along with management control by way of privatization and the news items being published in the media about the Union Cabinet's clearance of the same has become a point of discussion among the public in Andhra

Pradesh and a cause of concern to us."

"The Steel Plant stands as a testimony to the will of Telugu people and it is continued as an icon of Telugu achievement in our collective psyche till date. The Government of the Andhra Pradesh is ready to work with Ministry of steel to protect the jewel of Andhra Pradesh.

Therefore, I request you to kindly reconsider the disinvestment plans of RINL Visakhapatnam and explore other opportunities to put the plant back on track. I assure you that Andhra Pradesh Government will closely work with the Government of India under your able leadership in making this happen and together we can revive the plant for unlocking greater value to the society and in particular to the people of Andhra Pradesh," Jagan mentioned in the letter.

He further wrote, "As you are aware Rashtriya Ispat Nigam Limited (RINL), the corporate entity of Visakhapatnam Steel Plant (VSP), is a Navratna Company under the Ministry of Steel, Govt. of India. It is the largest public sector industrial unit in the state creating employment opportunities for close to around 20000 people directly and many other indirect employment opportunities in the city of Vishakhapatnam. It is India's first shore-based integrated Steel Plant and a producer of long steel products catering to the requirements of the Construction, Infrastructure, Manufacturing & Automobile sectors."

"This plant is realised only after many sacrifices by our people. The people of my state rallied for the Visakhapatnam Steel Plant in which 32 people have laid down their lives. On 17th April 1970, the then Prime Minister of India, announced the Government's decision to establish a steel plant at Visakhapatnam culminating the decade-long public agitation "Visakha Ukku-Andhrula Hakku" in the undivided Andhra Pradesh."

"I would like to draw your kind attention towards the fact that the plant had a good performance between 2002 to 2015 earning profits with positive Net worth. The plant has pragmatically turned-around in 2002 after being reported to BIFR as a sick company. The company has around 19700 acres of land currently and the valuation of these lands alone could exceed one lakh crore rupees due to the location of the plant in the urban area and rapidly expanding urban sprawl."

He wrote: "RINL currently has a capacity of 7.3 Million Tonnes and has taken up plant modernisation and capacity expansion recently which made the plant to borrow loans from banks to take up the expansion. Owing to the unfavourable steel cycle globally the company was making losses since 2014-15 and was finding it difficult to service the debt. One of the major structural issue that also leads to high cost of production is the absence of captive mine thereby affecting the profitability."

CM in the letter also suggested three-point plan to revive RINL Visakhapatnam.

"Sir, I can emphatically say that the plant will again become a profitable venture given some support from the Government of India instead of taking the disinvestment route by some turnaround measures such as allotting captive iron ore mines to bring down the input costs, swapping high cost debt with low cost debt, and converting debt into equity through equity

conversion. I request you to consider the following measures for revival of RINL Visakhapatnam.

a. Continuing Operations to achieve turn around

As with all the sectors of economy, the steel sector is also seeing a V-Shaped recovery. RINL has achieved highest ever capacity utilization of 6.3 MTPA against the capacity of 7.3 MTPA from December 2020 and started making a monthly profit of close to Rs 200 crores. Continuing this performance for a further period of two years will help the financial situation immensely.

b. Captive Iron Ores mine to Reduce Input Costs

Currently, RINL is purchasing iron ore from NMDC Bailadila mines at market price. This has put the RINL at a cost disadvantage of around Rs 5,260 per MT of steel (at ore level). Many of its competitors have captive mines for more than 60% their requirement and buy only the rest from NMDC. Even SAIL has own captive mines with reserves of iron ore sufficient for 200 years. This excess cost of iron ore has cost implications of more than Rs. 3,472 crores for RINL. It is essential to create a level playing field for all the players and hence allotment of captive mines for RINL will help tide over this cost disadvantage. Orissa is blessed with iron ore and the captive mine in Orissa State will go a long way in reviving the plant.

c. Financial Restructuring

Short term loans along with long term loans could be converted into equity taking off repayment pressures and interest burden. The high cost debt which is actually Rs. 22,000 crores is being serviced at interest rates as high as 14%. Conversion of these loans into equity by the banks so as to remove the interest burden totally and listing the entity (RINL, Vizag) on the stock exchange giving the banks exit option through the stock exchange route through general public may also be explored. These measures could ease the burden of debt servicing and improve the financial sustainability.”

Source: Business Line

LEAD BATTERIES ARE KEY TO INDIA'S RAPID AND SUSTAINABLE GROWTH PLANS

The lead and the lead battery industries are set to play a significant role in India's rapidly growing economy argues Dr Andy Bush, Managing Director, International Lead Association (ILA).

A key theme of this issue is the impact of the pandemic on metals. Despite disruptions, the lead and lead battery industries have proved robust during the pandemic, and lead batteries will be critical to India's plans for sustainable economic growth.



Dr. Andy Bush
Managing Director
International Lead Assn., UK

Analysts predict the market for lead batteries will continue to grow at around 8-10% CAGR to 2024. This rate of growth is predicted based on the expansion of the market of automobiles, telecommunication infrastructure, solar power projects and the ever-growing IT industry.

The automobile industry currently contributes 7% to the country's GDP, generating direct and indirect employment for approximately 35 million people. By 2025, India is expected to displace Japan to become the world's third-largest auto marketⁱ. The vast majority of these vehicles will require at least one lead battery, adding to the more than 1 billion vehicles worldwide already relying on lead batteries. In the area of e-mobility, there is a significant growth in electric rickshaws (using lead batteries) in many cities and towns.

As countries worldwide seek to recover from the economic impact of the coronavirus pandemic, many aim to build back better. This is the opportunity to recover economies sustainably with a focus on renewable energy. The demand for battery energy storage is expected to triple by 2030, and lead batteries are one of two major technologies capable of meeting this rapidly growing requirement. Globally analysts predict the lead battery market could grow from 360GWh in 2020 to 430GWh in 2030.ⁱⁱ

India's target is to achieve 175GWh of renewable energy by 2024. As a result, massive investments have been made during the last few years and this trend looks set to continue. The lead battery supported inverter market – which provides back-up energy used as a standby at homes, offices, schools, factories, shops, and hospitals – is experiencing steady growth year after year.

As countries seek to move away from their reliance on fossil fuels to renewable sources of energy, India should be at the forefront of the energy transformation. Onshore wind energy currently stands as the second-largest renewable energy source in India – the world's third largest producer and fourth-largest consumer of electricityⁱⁱⁱ. Solar power in India is a fast-developing industry while the International Solar Alliance itself, with 121 member countries, is headquartered in India. Lead's unique properties play a significant role in supporting these clean energy technologies. Lead provides longevity and reliability to solar panels, while lead batteries balance power grids and save surplus energy. Lead and lead batteries are an important part of the complex eco-system required to deliver this widescale renewable electrification.

Throughout this pandemic, lead batteries have supported applications ranging from Uninterrupted Power Supply (UPS), to telecommunications, to automotive and motive power. Lead batteries remain the dominant technology for telecommunications back-up demand, with a growth of 5GWh predicted between 2015 and 2030. Meanwhile, lead

batteries dominate the UPS battery market, providing 92% of demand, with a 7.5GWh increase predicted between 2015 and 2030.^{iv} These are few examples of how the world has relied upon the lead battery industry throughout the pandemic and the growth expected.

As we move towards establishing a more sustainable energy future, technologies that embody circular economy principles will be valued. Lead batteries are designed to be recycled at end-of-life and lead can be recycled infinitely with no loss of quality or performance.

Despite these opportunities, more work needs to be done to prevent informal and substandard lead battery recycling. Reports indicate that informal lead battery recycling still occurs throughout India. The International Lead Association (ILA) and partner associations are working with NGOs and other partners to form a global alliance to help improve standards in lead battery manufacturing and recycling.

ILA supports a sustainable future for lead through an extensive work programme with members around the world, including India. This involves promoting the responsible manufacturing, use and recycling of lead throughout the entire value chain worldwide. Specifically in India, ILA has a long history of working with the India Lead Zinc Development Association in areas ranging from informal recycling to battery technology. Through major events and other meetings, both organisations conducted several awareness programs on the environmentally sound management of lead batteries.

As an industry we have invested significantly in environmental and workplace health and safety controls and want to see an end to informal and inappropriate practices wherever they may take place.

The alliance ILA helped create aims to minimise exposure to lead in all regions of the globe. Known as the material stewardship program, it involves some of the biggest lead producers and battery manufacturing companies in the world. The project is built around a set of seven guiding principles involving companies committing to business practices that support environmentally sound manufacturing and recycling of lead batteries.

Through this global material stewardship program, we are committed to promoting the sound management of lead exposures and emissions by setting continuous improvement targets and sharing best practices. Members have also made a commitment to ensure that inappropriately recycled lead does not enter their supply chains.

At ILA, we co-authored the World Economic Forum's (WEF) recent report *Consequences of a Mobile Future: Creating an Environmentally Conscious Life Cycle for Lead Batteries*^{iv}. This report highlights the importance of safe and environmentally responsible management of lead battery recycling necessary for any country to obtain the full benefit of a product. No other battery technology comes close to the standard set by lead where on average up to

80% of a new battery is manufactured from raw materials originating from used batteries. We will continue to work with organisations including WEF, Pure Earth and UNICEF to help eradicate dangerous informal battery recycling practices. Governments must also play their part by adopting legislation and enforcing standards that ensure the safe manufacture and recycling of lead batteries.

The lead and lead battery industries can look forward significant growth over the next few years. The ILA is working with members, industry and governments around the world to ensure that this future is realised in a responsible and sustainable way.

The International Lead Association (ILA) is the only global trade association dedicated exclusively to representing lead producers and supporting a sustainable future for lead. For more information visit www.ila-lead.org.

¹ *Business Insider, Indian Automobiles Segment At The Cusp Of A Technological Revolution, 2020*

¹ *Avicenne Energy, Consortium for Battery Innovation report, 2020*

¹ *Anjali Lathigara, Offshore Wind Power in India: Key policy advances can lead to rapid gains for sector, 2020*

¹ *World Economic Forum, Consequences of a Mobile Future: Creating an Environmentally Conscious Life Cycle for Lead-Acid Batteries, 2020*

THE ALLOYING METAL PLUMMETS

Zinc, the metal used mostly to galvanise steel, which gained around 60 percent since the second quarter of 2020 on the LME as well as MCX reversed few of its gains in January'21. The significant gains in 2020 were a clear indication that the investors have put their money on zinc in critical times. But what changed the trend in this new year? Lets understand. The entire base metals pack seems to have lost their charm entering in to 2021. Major industrial metals like zinc and copper, which recorded double figure gains in 2020, remained under pressure in the first month of 2021. The prime reason behind the fall was the resurgence of the pandemic in the top metal consuming nation, China.

After successfully containing the virus in the early months of the outbreak (in 2020), China charged towards the path to recovery leaving all the nations behind. However, the lethal virus crawled back in China which undermined the demand prospects for industrial metals in this new year. The recent virus outbreak triggered renewed restrictions in major steel making provinces, like the Hebei province which accounts for a significant percent of China's galvanising capacity. Also, China's Manufacturing purchasing managers index (PMI) dipped to 51.6 in January'21 down from 51.9 recorded in December'20. With the Demand driver, China, struggling to tame the implacable virus, the base metals spectrum lost momentum. The prices were further undermined as the resurgence of the virus came in the line with the upcoming weeklong holiday in China which is further expected to dent the demand.

Zinc's hidden stocks

Along with the stellar recovery in China, supply disruption in major mining nations also played a vital role in behind the robust rally in zinc prices in 2020. The supply distress was evident as the Treatment charges for zinc concentrate in China slipped below \$100 per tonne, down from \$305 per tonne reported in February 2020. Treatment Charges are a key source of revenue for smelting capacities. Falling mine supply led to the plunge in TC's as it became harder for smelters to get concentrate for processing, forcing them to push the charges lower.

However, investors remained cautious as despite the evident supply crunch, reports from the International Lead and Zinc Study Group (ILZSG) suggested that global zinc market might land in to a surplus of 620,000 tonne in 2020. That, coupled with no signs of enormous purchases by China (unlike for copper & aluminium) raised worries of hidden zinc stocks off the market. (China's refined zinc purchases in 2020 stood at 512,000 tonne, the lowest annual total since 2016).

Apparently, those hidden stocks have now been shifted in the LME & ShFE monitored warehouses. The sudden spike in the zinc inventories raised worries of excess supply in the global zinc market which further weighed on the prices. Also, resumption in the mining operations at the Gamsberg mine (annual capacity of 250,000 tonne) in South Africa is expected to increase the global production. The mine operated by Vedanta was shut temporarily after a geotechnical failure trapped a few of their employees in mid-November 2020.

Outlook

Worries of increasing global supply as many mines and smelting capacities resume production amid bleak demand outlook might continue to weigh on zinc and other industrial metal prices. Also, no concrete sign of any additional stimulus by US in an attempt to support its economy might further pressurize the base metals complex. Despite the decrease in the number of Covid-19 reported infected cases in China, the pandemic continues to dampen the global market sentiments which might be a severe headwind for the entire base metals spectrum. We expect zinc prices to trade lower towards Rs.200 per kg. (CMP : Rs.212)

Source: MMR

RISING ELECTRIC VEHICLE SALES TO PROP UP LEAD BATTERY MARKET IN 2021

We enter 2021 with many mined commodity prices riding high after recovering from a dramatic pandemic-induced slump in H1 2020, the volatility at the fore and investors are wondering what might be next in the metal in the 12 months ahead. A lockdown of some

regions in Beijing has raised concern that demand will be impacted. This comes ahead of the normal seasonal slowdown around the Chinese Lunar New Year. China will celebrate its Lunar New Year holiday during Feb. 11-17, when metals demand usually dip as business activities slow.

Meanwhile, a recent Coronavirus outbreak in China has dampened the country's economic activities in January, dragging factory output and service activities growth to multi-month lows. LME lead inventories CMPB3 fell to their lowest since July 2020 at 94,625 tonne. Investors are expecting China to cool credit growth and scale back fiscal stimulus this year to help to stabilize debt. The Electric Vehicle sales grew 38% in 2020, despite the pandemic. So, a strong growth is expected again in 2021, supported by governments around the world targeting a 'greener' recovery from the current downturn. Li-ion may be the favoured battery technology for EVs but almost all models still also use lead batteries so the future seems bright. We remain positive about demand for metal on a forward-looking basis, with continued support from both construction and automotive industries. Looking ahead to the February month, we expect MCX Lead futures to trade mixed due to slow economic activities in China ahead of lunar New Year holidays and with another lockdown phase in the China, United States and the European Union.

On monthly charts, Lead Jan's futures contract on MCX has formed "Rising channel" pattern. The last few sessions ended up sideways along with some corrections inside the channel. The market is expected to continue on the bullish term based on the current price action, once the same breaks above a key resistance holding near 175.00. Price action suggests that after taking a healthy correction the counter may resume the bull trend and move upwards in the coming few sessions. The upside rally could be testing all the way up to 175-180 levels in the upcoming weeks. Alternatively, if the market struggles to break the resistance level, then it might retest the same and revise the trend to bearish/sideways. Key support holds at 155. Recently prices break the key moving average 50 days and sustain well above it. Technical indicators suggest that high volatility may be seen on the counter. Momentum is still positive as the MACD (moving average convergence divergence) index generated a crossover buy signal. This occurs as the MACD line (the 12-day moving average minus the 26-day moving average) crosses below the MACD signal line). Overall we may see some correction in short term but on mid to long term the commodity looks very impressive. Buying on dips would be the strategy.

On monthly charts LME Lead has formed "falling channel" pattern. After hitting bottom trend line prices bounced very sharp toward it resistance.

Source: MMR

