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## THE INDIAN INSTITUTE OF METALS DELHI CHAPTER

# NEWS LETTER

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## INTRODUCTION

This News Letter contains the write-ups on the following:

- 1 Chairman's Message.
- 2 Annual General Meeting.
- 3 Indian Steel Industry – Some Key Issues: by Mr. S C Suri, Chairman IIM Delhi Chapter.
- 4 New Hydro-Metallurgical Technology for Lead Metal Production by Mr. P R Chandna, Life Member, IIM Delhi Chapter.
- 5 SAIL-Kobe Steel Joint Venture
- 6 Various news items relating to Ferrous and Non-Ferrous Sector.

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### Chairman's Message



I have taken over the Chairmanship of Delhi Chapter of Indian Institute of Metals on 8th June 2013. I convey my sincere thanks to all the esteemed members of the Delhi Chapter for reposing trust in me to discharge the responsibilities of the Chairman of the Chapter. My colleagues on the new Executive Committee for 2013-14 also convey their thanks to the members for giving them opportunity to serve the Delhi Chapter.

At the outset, I would like to mention about the splendid work done by the outgoing Chairman and his team on the Executive Committee. Particular mention needs to be made about the **Best Chapter Award for 2012** won under the leadership of my predecessor. This is first time in the history of the Delhi Chapter that the Chapter has been bestowed the Best Chapter Award. Mention also needs to be made about the International Conference (MMMM 2012) "Resurgent India – Vision 2020 in Metals and Mineral Sector" held at New Delhi from 27th to 30th September 2012. MMMM 2012 has invited wide appreciation from various quarters, both in terms of technical inputs and also on organisational aspects. Further MMMM 2012 created a record surplus with minimal Conference set-up cost. Besides the above, a number of technical activities were also undertaken by the Chapter.

However there is always a room for improvement. The endeavour of our team will be to undertake at least one technical activity every month. I would like to request my fellow members to come forward with proposals to undertake this work. It may be mentioned that the visibility of the Chapter needs to be enlarged in the Small and Medium Enterprises (SMEs) located in Delhi and adjoining areas. Our efforts will be to approach the SMEs and discuss the issues with them where they need our technical support. This can be in the form of arranging technical programmes, organising workshops and visit to the SMEs.

The Chapter enjoys reasonably good infrastructural facilities. We have an excellent Lecture Hall and Board Room. These facilities can be made use of by our members for organising technical programmes. Besides this, we have a good library. The members are welcome to visit the Library.

Another area of thrust for the new Committee will be to increase the membership of the Chapter.

I have taken note of the various suggestions given by my fellow members in the Annual General Meeting held on 8th June 2013. The valuable suggestions given by the members in the AGM will be given serious consideration.

I would look forward to support and contribution of members of the Chapter to undertake the professional activities expected of us. I have no doubt that with the cooperation of my members, the Chapter will attain new heights.

S C SURI  
CHAIRMAN

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### Annual General Meeting

The 61<sup>st</sup> Annual General Meeting of the Chapter was held on 8<sup>th</sup> June 2013 at New Delhi. Annual Report detailing the technical activities undertaken by the Chapter in 2012-13 were presented in the AGM. The audited accounts of the Chapter for 2012-13 were adopted by the AGM. Among other technical activities presented at the AGM, the following were the flagship events of the Chapter in 2012-13.

***Delhi Chapter has been adjudged the best Chapter for the year 2012. This is the first time in the history of IIMDC that this honour has been bestowed on the Chapter by the Award Committee.***

***MMMM 2012 in terms of technical content and organisation has been appreciated by various quarters. The MMMM 2012 has generated a record surplus. The expenditure on MMMM 2012 was much less than that of MMMM 2011 owing to savings made in the expenditure on Conference part.***

The composition of Executive Committee of IIM DC for 2013-14 is as under:

Chairman	Shri S C Suri
Vice Chairman	Shri K L Mehrotra Shri V C Singhal
Hon. Secretary	Shri Manoranjan Ram
Jt. Hon. Secretary	Shri G I S Chauhan Shri M P Sharma Shri Vipin Jain
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Advisors:	Shri Arijit Roy Shri B R Thukral Shri Raj Tiwari Shri B D Jethra

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## **Indian Steel Industry – Some Key Issues**

### **Introduction**

Indian steel industry presently has a crude steel capacity of over 90 Mt per annum. Indian steel industry has ambitious development plans and the industry envisages to become the second largest steel producer in the world in next two/three years time frame.

### **Key Issues**

Given below are some key issues confronting the steel sector. Formulating action plans will enable Indian steel sector to achieve its goals and objectives within the time frame envisaged.

1. The growth in steel consumption will depend on growth of user industries such as Infrastructure, automobiles, real estate, consumer durables etc. There also exist substantial latent possibilities of increasing steel demand by increasing steel intensity in construction, deeper penetration into rural markets and through market & product development.
2. Investment in infrastructure will be the key driver of steel demand in the 12<sup>th</sup> Plan. However, the implementation of infrastructural projects has been quite slow. Large infrastructural projects are held up due to land acquisition, lack of co-ordination among various agencies, problems of financing etc.
3. To bridge the financing gap, it is essential to ensure PPP mode of investment facilitating private investment in infrastructure projects. Long term financing needs of infrastructural projects must be ensured through funding from Infrastructure Debt Fund (IDF).
4. Project management capabilities must be improved in a significant way as otherwise a substantial part of investment may not be realized and may therefore pose significant downward risks to demand projections.
5. The experience of the developed world suggests that higher usage of steel in construction activities may shorten the project execution time. Cement to steel ratio in India for construction activities is much higher than the developed world and correction in this ratio may open up latent possibilities of increasing steel demand in the infrastructure.
6. Inefficient use of resources, large scale exports of iron ore, over-dependence of industry on imported coking coal, rising labour costs, rising cost of land acquisition, rising interest rates, illegal mining and lack of commitment towards R&D activities are some of the areas which have the potential to threaten the long term economic sustainability of Indian Steel Industry.
7. Sustainable development and an inclusive growth would need to become an integral part of the overall planning and growth process of Indian steel industry.
8. Government has to ensure transparency in business transactions especially with regard to the process of public procurement and grant of mining/prospecting concessions with due preference to value addition in the larger national interest to boost the growth of Indian steel Industry.
9. The thrust on manufacturing sector augurs well for increasing domestic steel demand as the manufacturing sector is one of the most powerful driver of steel demand apart from construction sector. The proposed New Manufacturing Policy envisages raising the share of manufacturing sector in GDP from the current level of 16% to 25% by 2025.
10. The major volume of imports belongs to HR coils, CR Coils/Sheets, Plates, GPGC Sheets, Electrical Steel pipes, Tinplate and Bars & Rods with little quantity of semi-finished steel. There is need to focus on product development for some specific products which at present are being imported in significant quantities.
11. The priority areas/items for product development include CR sheets / coils for auto sector, CRGO & high grades of CRNO, over dimensional plates, quenched & tempered plates, special grades of boiler quality plates, organic / vinyl coated sheets, prime quality tinplate (OTSC grade) and API grade large dia pipes.

12. The demand for high strength steel and thinner sizes is increasing for achieving the objective of reducing the total weight and for improving the overall performance.
13. The Contribution of automobile sector to domestic steel demand would be predominant in 12<sup>th</sup> Plan period in view of increasing per capita income level and the rising aspirations of Indian population to enjoy a better quality of life. The demand for auto grade steel particularly those belonging to Dual Phase steel, Trip steel, AHSS grade, Ultra-Fine Grain steel, Nano steel, etc. would be required in increasing volume by all the auto majors in the country. The safety regulations as per Euro norms would further require stringent specification of cold rolled products by the automobile sector.
14. Pre-fabricated steel structures are now penetrating areas such as high rise buildings and infrastructure. These steel structures are not only environment friendly but make execution much faster. One of the emerging areas of application of pre-fabricated steel structures is its use in urban infrastructure. Such needs may go up significantly in future with rapid urbanization. The emerging capacity being created by Indian Steel Producers must cater to the above requirements of special grade steel structures.
15. Per capita steel consumption in rural India is low due to low purchasing power of rural populace, low availability of steel in rural India and poor rural infrastructure. Rural incomes are slowly rising as a result of schemes like Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), higher procurement prices for agricultural products, financial inclusion and pick up in agricultural growth.
16. As a result, more recently, there has been a perceptible rise in steel consumption in the rural economy. Projects like Bharat Nirman, Pradhan Mantri Gram Sadak Yojana, and Rajiv Gandhi Awaas Yojana have led to increasing demand for constructional steel items like TMT Bars, Light and medium Structurals, GP & GC sheets.
17. The demand for steel is expected to rise further in the 12<sup>th</sup> plan as the social sector investments are expected to get further boost. To tap the potential of rural economy, the following strategies are suggested:
  - a) Greater thrust on design, product development and capability building in fabrication or articles needed by the rural economy.
  - b) Mass campaign / widening of distribution network to cater the retail demand of rural population.
  - c) Subsidies for purchasing agricultural implements / machinery - through effective targeting by Unique Identification (UID) mechanism being implemented for greater efficiency in social schemes.
18. Rising domestic demand coupled with international uncertainties have been the prime reasons of lack of thrust on exports. As the developed economies of Europe and USA are struggling to overcome the sovereign debt crisis, the outlook on exports to these countries does not look promising. Diversification of markets based on the changing dynamics of growth in the world economy is crucial to ensure sustained and accelerated growth of exports.
19. As compared to developed world, the momentum of future growth would lie with Developing and Emerging Economies which are expected to register higher growth rates. The markets in Asia including ASEAN, Africa and Latin America would be important in the future. Product diversification as per the needs of importing countries and production of quality steel compatible with standards followed internationally has to become an integral part of export strategy.
20. Working out conducive trading arrangements with trading partners holds a crucial place in the entire strategy of export promotion. The efforts towards successful conclusion of free trade agreements (FTAs) with our important partners must receive utmost attention.
21. Imported technologies for beneficiation of ores have limitations to deal with Indian ores as the characteristics of different ores vary widely. It is therefore necessary to develop appropriate

beneficiation technologies through Research & Development (R & D) which are cost effective and are successful in dealing with different/specific grades of ore found in India. At the same cost effective technologies are needed to utilize slimes which at present is being dumped by the industry.

22. The dependence on imports is likely to go up further as the new capacities are expected to come mainly through BF-BOF route. Dependence on import of non-coking coal is also likely to go up to sustain the growth of power sector and other sectors including coal based sponge iron sector.
23. Indian iron ore is mostly hematite, 40% of which contains 62% Fe or lower. Similarly, Indian reserves of coking coal is low with high ash content of 30~40%. Technologies like FINEX, HISMELT, Corex and ITMK-3 that use fines, non-coking coals and natural gas need to be customized for Indian scenario. This will need collaborations across companies and research laboratories.
24. General infrastructure facilities such as all-weather roads, rails etc. are grossly inadequate in country's mining belts. Development of high quality roads and rail connection for movement of ores to steel plants rather than to ports for exports should be taken on priority basis. At present, rail and road infrastructure is suited for exports rather than for domestic value addition and there is an urgent need to correct this anomaly.
25. Funds to be made available to proposed Mineral Development Fund may be used for creation of infrastructure in the mining belts. Special attention is needed to upgrade port capacities and associated rail/road infrastructure to meet the quantum jump in the requirement of imported coking coal in future. Since import of thermal coal will also increase substantially in future, adequate increase in port capacity, handling facilities etc. may be taken on priority basis.
26. National Manufacturing Investment Zones (NMIZs) have been proposed as a part of New Manufacturing Policy. These zones will be equipped with world class infrastructure. NMIZs may provide an excellent potential location for setting up new steel plants as the transportation costs will be minimized due to close proximity to consumers of steel. However, for this to happen, it is desirable that some of the NMIZs are planned in the eastern region and mineral rich states.
27. The government may also consider setting up special purpose vehicles to execute the preliminary work such as land acquisition, land development, obtaining all government clearances in identified steel plant sites with the same to be handed over to the prospective investors on commercial terms.
28. Human resources are a valuable assets. Despite rapid growth of Indian steel industry in the post-liberalized era, overall requirement of human resources in the steel industry has not grown in a significant way due to substantial gains made by the industry in the area of labor productivity.
29. However, due to increased automation and use of Information Technology in steel industry, there have been extensive changes in the qualitative requirements of workforce. The industry's requirement is shifting in favour of Management Graduates, Metallurgists and Engineers from diversified fields, finance professionals and various specialists required at the shop floor.
30. The best of India's engineering graduates no longer prefer to work in the factories. They work for Management Consultants. IT industry or for banking / financial sector. Besides paying complete pay packages, a strategy/policy at the national level is required to ensure regular flow of talent towards Industry/Manufacturing.
31. Steel Industry must change its brand image by regular interaction with students/faculty of engineering colleges, inviting more & more students for training and increasing awareness through mass media. Moreover, there is a mismatch between the needs of steel industry and skill development process in our educational system.
32. There is a shortage of top-end engineering colleges who award a degree in Metallurgy. There is an urgent need to reorient the curriculum of metallurgical engineering courses to make them more relevant to the changing demands of the steel/metal industry.

33. There is need to revisit the curriculum to prepare metallurgists/engineers not only for steel operations but also for R&D work. The country also needs to provide greater autonomy to our best Engineering colleges to enter into collaborative R&D partnership with the best universities abroad.
34. Overall efficiency and productivity levels of Indian steel industry are below the global benchmarks. Further, efficiency levels vary widely within Indian Steel Industry. At one end we have plants with most modern facilities which are trying to catch up with the best in the world. On the other end we have small, inefficient, uneconomical and environmentally unsustainable steel units which have mushroomed due to rising domestic steel demand. Investors, in a market driven economy, are free to choose technology based on commercial considerations.
35. Government can incentivize and encourage specific technologies which are compatible with resource endowment of the country, energy efficient and help in mitigating the concerns on environment & climate change. Government can regulate adoption of certain technologies/routes which are counter-productive to above mentioned objectives.
36. Adoption/adaptation of promising/emerging technologies like FINEX, ITmk3, and HISMELT etc. in future can supplement the conventional coke oven-sinter plant-blast furnace technologies. This will help in reducing dependence on iron ore lump, imported coking coal as well as harmful emissions.
37. The lack of serious R & D activities in the Indian steel sector has resulted in high investment for modernization and building new steel capacities as India continues to depend on import of major equipment and technologies. We have failed to develop indigenous technologies which are compatible to resource endowment of the country resulting in high level of dependence on imported raw materials especially coking coal.
38. The country is yet to develop cost effective beneficiation/pelletisation technologies suited to Indian ores leading to increased threats on sustainability of resources especially adequacy of iron ore resources. R&D in product development is inadequate to meet the growing demands of growing sectors viz. automobiles, power, ship building etc. leading to large scale imports.
39. The Working Group on Steel for 12<sup>th</sup> Plan aims at achieving a strategic goal of increasing R&D expenditure to 1% of turnover, by the end of terminal year of 12<sup>th</sup> plan (2016-17) through stepping up R&D expenditure both by the Industry and Government.
40. Energy recovery and conservation technologies such as Coke dry Quenching and waste heat recovery from sinter cooler provide significant opportunities of reduction in energy consumption in BF-BOF route of steel production. At present the use of these technologies is limited to a few plants. A more encompassing adoption of these technologies would lead to substantial reduction in energy consumption by the Indian Steel sector.
41. A suitable strategy may be worked out to incentivize the industry for adopting these technologies. Other technologies such as top gas recovery turbine in BF, coal moisture control in coke ovens, OG boiler in BOF, regenerative burners etc. also provide significant opportunities of energy well as for management of CO<sub>2</sub> emissions. There is a need to look at other technologies like carbon capture and sequestration (CCS) and new routes to carbon free steel making.
42. Measures for an effective environment management in the steel sector would include reduction of fresh water usage aimed at achieving Zero water discharge, 100% recycling of wastes to achieve zero wastes generation, reduction of process dust emissions to less than 1.0 kg/tcs, staged combustion in burners to reduce NO<sub>x</sub> emissions, online monitoring of stacks in all plant and introduction of EMS (ISO-14001) in all sectors of steel making.
43. Presently the domestic Steel Industry uses mostly medium and high grade iron ore lumps and use of low grade ores and fines is limited. Given the projected growth of Indian Steel Industry, the demand for iron ore is likely to increase manifold and unless we are able to utilise the low grade ores the reserves of the high grade/medium grade ore are likely to get exhausted in the coming



20-25 years. Therefore there is an urgency to explore options for utilisation of the low grade ore including fines and slimes to sustain the industry's future growth.

44. Government has recently reduced the threshold limit of iron ore of Hematite grade from 55% Fe to 45% Fe and this also calls for economic utilisation of low grade ore up to 45% Fe. However, low grade ore cannot be utilised in the conventional process of iron making for techno-economic considerations. Such ores have to be necessarily beneficiated to produce high grade concentrate. Besides these concentrates also need to be agglomerated in the form of pellets to make them suitable for use in Blast Furnace (BF) or in sponge iron production.
45. The use of agglomerated burden like pellet and sinter also has several techno-economic benefits in iron making. But at present the domestic pelletisation capacity is limited. The slow growth in beneficiation of low grade ore and pelletisation in India has been on account of comfortable domestic availability of medium to high grade lumpy ore, high cost of setting up of beneficiation plants and lack of technology/equipment for setting up smaller production capacities suitable for smelter mine owners.
46. Global technological development would need to be adapted to Indian conditions especially with respect to indigenous raw material quality. The strength of emerging technologies can be harnessed to derive optimum benefits viz improvement in product quality, process yield, energy efficiency, material & labour productivity, operating parameters, pollution control, economy of scale, optimal utilization of available natural resources / mineral conservation.
47. This would eventually translate into cost efficiency and push forth Indian steel industry on the forefront of global competitiveness.
48. Upgradation / modernization/expansion of physical infrastructure (road/rail/port) is required through attracting private investment based on P-P-P route to sustain further growth.
49. For sustainable development of the steel industry in India, brown field industry should replace old technologies with efficient & environmental friendly technologies suitable to provide economy of scale and its integration with the existing plant environment. Green field plants should adopt modern / green technologies capable of providing flexibility in feed material and product mix. There should be increased adoption of thin slab casting & strip casting for compact, energy efficient & cost effective product mix.
50. Indian steel industry has the inherent strengths and competitiveness and in order to position and retain itself as a major global leader in steel on sustained basis, Indian Steel Industry would need to harness its strengths and competitiveness through cost efficiency / resource optimization, adoption of cutting edge innovative green technologies and ergonomic practices on continual basis.

Extracted by Mr. S C Suri, Chairman IIM DC from  
JPC Article (Feb. 2013) titled – Resilient Asia - the  
future of steel industry by Shri U K Vishwanatha &  
Shri V K Singh MECON Ranchi

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## **NEW HYDRO-METALLURGICAL TECHNOLOGY FOR LEAD METAL PRODUCTION**

P R Chandna  
Life Member, IIM &  
Senior Principal Consultant  
M/s Yashad Consultancy (P) Ltd., New Delhi

A revolutionary new hydro-metallurgical technology has been developed by two companies; Doe Run Company, USA in partnership with M/s Engitec, Italy. A commercial plant for producing 60,000 tonnes per annum of lead metal at an estimated capital cost of 150 million US Dollar is envisaged

setting up by Doe Run Company, St. Louis, Missouri, USA. The breakthrough technology not only envisages improvements in lead processing efficiencies but also is expected to drastically reduce air emissions, waste generations and water pollution and will have smaller carbon footprint.

The new process aims at achieving the following goals:

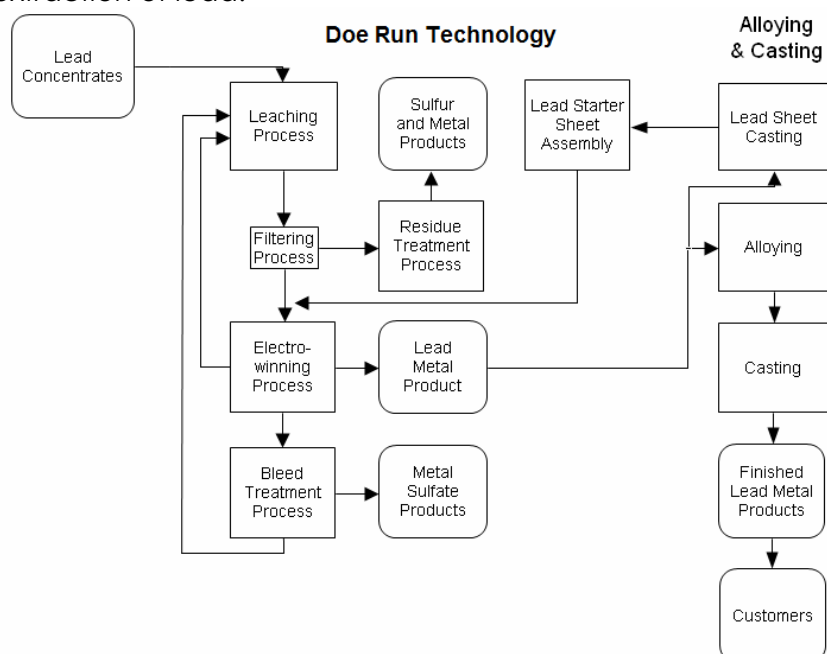
- 1) To provide a high recovery rate for lead metal from lead concentrates, more than 96%.
- 2) To achieve Doe Run's high-purity product standards, 99.99 % pure lead.
- 3) To ensure cost competitiveness.
- 4) To meet and outperform current and near future anticipated more stringent regulatory standards.
- 5) To develop a process that delivers on community and societal expectations for lead metal production.

### New Lead Technology

The new lead hydrometallurgical process is currently being referred to as the **Doe Run Technology**. The technology uses hydro-metallurgical process to selectively dissolve lead concentrates into an aqueous solution and then extracts the lead metal from the solution using an electric current. This electro-winning process is similar to the technology commonly used for extraction of zinc from zinc concentrates. The Zinc Technology has been in practice since 1915. But, it has never ever been used successfully in a commercial application for the primary lead production. However, a breakthrough came when Engitec identified a fluoborate electrolyte as a potential technology to recover high-purity lead with significant operational advantages over alternative processes based on ferric chloride. Since then a first pilot plant was established in the 1990s. A more than \$30 million has been invested in the demonstration plant, engineering studies, and design of a commercial-scale processing facility.

### **Process Description:**

A schematic showing the Doe Run technology process is given below. It uses four primary steps in extraction of lead:



1. **Leaching:** Multi-Stage Leaching and Purification
2. **Electro-winning**
3. **Bleed Treatment**
4. **Residue Treatment:** Co-Product Collection/Re-Leach

(Source: Lead Zinc 2010)

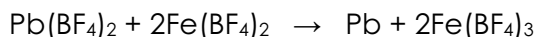
## **Schematic of Doe Run Technology for Lead Metal Extraction**

In the first stage the lead concentrate is leached with an oxidizing solution based on fluoboric acid. The leaching operation is a multi-stage, counter-current operation to maximize extraction of lead from the concentrate and remove impurities. The lead sulphide content in the concentrate is converted into soluble lead fluoborate and insoluble elemental sulphur, as below reaction:

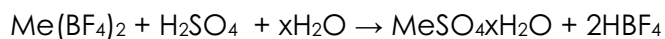


The purified lead-bearing solution from above step is fed to an electro-winning cell in which two key electro-chemical reactions take place:

- 1) Plating of pure lead in the cathodic compartment; and
- 2) Regenerating the oxidizing compound in the anodic compartment.



In the third step, the minor metallic impurities that leached into solution are precipitated and removed from the solution. Metals (Me) dissolved in a concentrated fluoboric acid solution will precipitate when sulphuric acid is added, so impurities are removed and the fluoboric acid they consumed in the leaching step is regenerated:



In the fourth step, sulphur contained in the residue is leached and subsequently recovered through precipitation, thus making the remaining residue available for further processing to recover other metal co-products. Also in this step, the small portion of unrecovered lead from the initial leaching step will be treated through a re-leaching process that will recover 75% to 80% of the remaining lead. This solution will then be recycled to the electro-winning circuit for plating. This brings the recovery of lead metal in the overall hydrometallurgical process to 99%.

## **Benefits of New Lead Technology**

Implementation of the new technology will offer a number of advantages:

1. **Smaller Carbon Footprint**
2. **Low Power Consumption:** Lead electro-winning process is a low energy consuming, since it has one of the highest electrochemical equivalents.
3. **Lower Specific Energy required:** As compared to the current pyro-metallurgical process, the Doe Run technology reduces the specific energy by approximately one-third.
4. **Environmental Benefits:** The new technology drastically reduces environmental releases, including air, water, and solid waste, that are associated with traditional technologies. Because the new process uses no furnaces, no gaseous effluents containing sulphur dioxide and particles have to be controlled and scrubbed. No acid plant is required and solid wastes also are minimized.
5. **Continuous Process:** The process is completely continuous and can easily be automated.
6. **Quality of Product:** The production of high-purity refined lead, 99.99%.
7. **Modular plant design:** The hydrometallurgical plant is modular and scalable, making it relatively economical to adjust for increases in capacity. In comparison, the larger capital investment required for pyro-metallurgical processes makes them economically viable only with large-capacity units.

The process is likely to replace the century old conventional pyro-metallurgical process of extraction of lead smelting of sinter blast furnace route, if successfully commercialised. These developments are being watched by both the metallurgical industry 'pundits' and the investors as well.

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### SAIL going ahead with Kobe steel joint venture in Durgapur

Steel major SAIL said it was going ahead with its joint venture with Japanese steelmaker Kobe steel to set up an iron ore nugget plant in Durgapur at an investment of Rs 1,500 crore for which environment assessment study is on. "The SAIL-Kobe Steel JV in Durgapur is on. This will be the second such project in the world after USA. The JV agreement has been finalised", SAIL Chairman Mr. C S Verma told reporters here. He said it would take five to six months to complete the environment assessment. Mr. Verma said the proposed plant would produce 0.5 million tonnes of iron ore nugget per annum. Turning to the modernisation of Burnpur-based IISCO steel plant, Mr. Verma said post-modernisation the plant would have a capacity of 2.5 mt. The sinter plant at IISCO has gone into production, while the coke oven plant has become operational. Wire rod mill in the plant has gone on stream for which slabs were being sourced from SAIL's Durgapur Steel Plant. The blast furnace and converter would now be commissioned and the modernisation would be completed in December this year, he said. Asked about SAIL's proposed joint venture with RITES to reopen Kulti works, he said "We have yet to register the land. No firm investment decision has been taken."

Source: The Times of India

### Parliamentary Consultative Committee of Ministry of Steel meets

Indian union minister of steel Mr Beni Prasad Verma while chairing the meeting of the Parliamentary Consultative Committee said that the Crude Steel production in India has grown by 4.3% in 2012 and that capacity of steel production in the country has increased from 66 million tonne in 2009 to about 90 million tonne in 2012. Mr Verma apprised the committee members that the per capita steel consumption has risen to 60 kg in 2011-12. The Minister stressed on the importance of conserving raw material resources in the country and elaborated on the measures taken by the government. The members were briefed about the global and domestic steel scenario, functioning of SAIL and its performance on various parameters. Details of marketing initiatives and modernization and expansion plan were also discussed. They were informed that the company achieved profit after tax of INR 2170 crore during the year 2012-13. Some of the members complimented SAIL on its working, while some expressed concern over the progress of expansion plan and profitability of the company. SAIL is the 7th World Class Steel Maker as per World Steel Dynamics. SAIL's production of Saleable Steel has been 12.4 million tonne, which is 112% of rated capacity. SAIL has five integrated steel plants that are undergoing expansion and modernization, the expansion activities of Salem Steel Plant of SAIL have already been completed.

Source: Steel Guru

### NINL Becomes a Full Fledged Steel Plant

Neelachal Ispat Nigam Limited (NINL), a joint venture company of MMTC and the Odisha government, has commissioned its 0.9 Mtpa capacity steelmaking facilities on March 31 at Kalinganagar in Odisha with an investment of Rs 1,640 crores. Though NINL had gone into production in 2002, it was only making pig iron till date. The plant has installed 110-ton capacity LD converter, one argon rinsing station and six strand continuous billet caster. Mecon has provided the consultancy

and project management services. Earlier NINL had commissioned its 418 TPD oxygen plant with the help of German company LINDE. The technology for the steel shop was provided by SMS-Siemag, Germany and SMS-Concast. Several Indian companies including HEC, Ranchi and BHEL-Bangalore were also involved in the project. The company's financial performance is expected to improve with the production of value added product like billet as it would give better sales realisations. Due to low demand for pig iron, NINL utilised half of its rated pig iron capacity at 4 lakh tonnes in 2012-13. They plan to produce pig iron and billets of four lakh tonnes each during 2013-14. Plans are also afoot to increase NINL's hot metal production capacity from 1.1 Mtpa to 3 Mtpa by adding a blast furnace, a seven-meter coke oven battery and a 60-MW thermal power unit. There are also plans to put up a rolling mill to produce bars and rods in future. The Company is also getting ready to operationalize its captive mines.

Source: Steel Tech

### **Induction Furnace route finding more acceptance in Steelmaking**

Steelmaking process is undergoing considerable changes. New processes are being developed to use various types of iron ores, scrap, coal and gas in making steel. Induction furnace route of making steel is being increasingly used as it is economically advantageous.

An induction furnace is an electrical furnace in which the heat is applied by induction heating of metal. In fact, it is an advanced version of the electric furnace. The advantage of the induction furnace is a clean, energy-efficient and well-controllable melting process compared to most other means of metal melting. Most modern foundries use this type of furnace and now also more iron foundries are replacing cupolas with induction furnaces to melt cast iron, as the former emit lots of dust and other pollutants. Induction furnace capacities range from less than one kilogram to one hundred tonne capacity and are used to melt iron and steel, copper, aluminium and precious metals. Since no arc or combustion is used, the temperature of the material is no higher than required to melt it; this can prevent loss of valuable alloying elements.

The use of induction technology for heating and/or melting metal alloys is faster and more precise in temperature than traditional furnaces, which involve heating the metal through an external means like fire, and has more widespread uses in metallurgy.

In India we started using Mains Frequency Induction Furnaces from mid-sixties and medium frequency imported induction furnaces from mid-seventies but a sudden growth took place from early eighties up to mid-nineties when indigenous manufacture of Induction Furnaces commenced. Initially we were using them for melting and making stainless steels by using imported stainless steel scrap but market condition from mid-eighties encouraged entrepreneurs to make mild steel. However, after economic liberalization in 1990s, there was considerable increase in the number of induction furnaces and also capacity per charge.

### ***Why steel in India is made from I.F. route?***

India is the first country using Induction Melting Furnaces for making mild steel. As a matter of fact, EAFs are not making mild steel of structural quality for over a decade now. The bulk of structural quality mild steel for long products is manufactured by Induction Melting Furnaces. The Electric Arc Furnace (EAF) units have also installed Induction Melting Furnaces. There are several reasons for the popularity of Induction Melting Furnaces for making steel. They consume less power compared to EAFs. Expenditure on electrode is nil. They use lesser quantity of refractory. Initial investment is less on plant and equipment. Thus, there are economic advantages in making steel through Induction Furnaces route.

Revolution is taking place to make steel in India by utilising various technologies. India is therefore, emerging as a country with innovative idea to make steel, which is not followed by other countries in the world. In the first decade of twenty first century, major existing integrated steel plants will face a

challenge in producing long products from Induction Furnaces in producing steel economically and efficiently.

The iron and steel sector has been experiencing a slowdown in the last few years. The major reasons for the slow growth in the steel sector during the last few years include:-

- (a) Sluggish demand in the steel consuming sectors
- (b) Overall economic slowdown in the country
- (c) Lack of investment by Government/private sector in major infrastructure projects.
- (d) Cost escalation in the input materials for iron and steel.

In the national steel policy recently announced by the Govt. of India, it is expected that FDI in the steel industry along with domestic investment will take place in large integrated steel plants. So, all the focus and of the steel policy is on the Primary Steel Sector while completely ignoring the Secondary Steel Sector.

Induction melting furnaces in India were first installed to make stainless steel from imported SS scrap. But in the years 81-82 some entrepreneurs, who were having small size induction furnaces making stainless steel, experimented in making mild steel from steel making scrap, they succeeded. More firms in northern India produced steel (Pencil Ingots) by using 500 kg to 1 tonne induction furnaces. The power consumption was found to be about 700 kWh/tonne, which was nearly 100 units less than EAFs. Bigger size Induction furnaces were then installed first in North India and then in other states of India. By 1985-86, the technology of making mild steel by Induction Furnace route was mastered by Indian Technicians. Induction furnace manufacturers saw the potential and started manufacturing bigger size/capacity furnaces. By 1988-89 period 3 tonne per charge induction furnaces were installed (became standard) all over India. The chemistry of melt was adjusted by adding mill scale, if opening carbon of bath was more. Good quality of steel melting scrap was used. In 1991-92, the Government license and control on steel making and rolling was removed. Then more induction furnaces were installed all over India. The use of sponge iron made it possible to adjust chemistry of melt. Thus good quality of mild steel pencil ingots are being produced with no tramp elements.

### **Type of induction furnaces**

Coreless and Channel are main types of induction furnaces. Coreless induction furnaces are used most often to contain and melt down metals. They use a large refractory envelope made of an alloy that can withstand electromagnetic forces to hold the metal being melted. The electromagnetic coil itself is wrapped around the refractory container, and a charge is applied to the coil. The combination of the electric charge and the field created by the coil itself creates strong magnetic forces in the metal, usually referred to as "eddies" that sweep through the metal's substance. These eddies create heat in the metal, a natural product of the metal's resistance to the electromagnetic field, and this heat is raised to such a level that the metal melts. After being melted, the field still creates waves in the metal and keeps it constantly moving.

Channel furnaces are used more often to hold molten metal at specific temperatures but are also sometimes used to melt metal. The coil, usually water-cooled, surrounds a refractory just like the coreless system, but instead of containing the metal, the refractory has only a channel that allows the molten metal to flow through it from a main repository. The metal flows in one end, is heated, and then flows out the other end in a continuous stream of molten metal. This means that if the furnace is being used to melt the metal, it needs to have starting mass of already molten metal to begin the cycle.

Induction furnaces can be used with almost every type of metal – especially the alloys that are more difficult to make, since the precise temperatures of the furnaces make these alloys easier to form.



Induction methods are used to melt rare-earth materials, form silicon products and create zinc or aluminium-based materials.

While a version of an induction furnace can be created at home, you will probably only be able to make a weaker version of the factory models, and even that will create several hazards such as electrocution or burns. Smaller induction furnaces are used to treat metals rather than melt them, giving them additional stability or magnetic properties they did not have before.

Pressure Pour Furnaces: A pressure pour is, in essence, a channel furnace, as described above, that is carefully sealed so that the metal can be moved out of the furnace by way of pressurizing the chamber above the molten metal bath in the furnace.

Source: MMR

### **State-run steel maker SAIL to add 6 mtpa capacity in FY'14**

State-run SAIL will add over 6 million tonne per annum steel-making capacity in the current fiscal to take the total to 19.5 mtpa as part of its ongoing Rs 61,870 crore capex programme. The expansions at Durgapur, Rourkela and Burnpur will be completed this fiscal taking overall capacity to 19.5 mtpa. The current hot metal capacity of the company stands at 13.82 mtpa. It had embarked on Rs 61,870 crore capacity expansion programme across all its five major steel plants in 2006-07 to jack up the capacity to 23.46 million tonne. All the proposed expansions plans would be completed by 2014-15, company said. Two blast furnaces of 2.8 mtpa capacity each at Rourkela and Burnpur would help the company to reach the capacity to 19.5 mtpa. Out of the total planned capex, SAIL had earmarked Rs 39,131 crore for capacity expansion; Rs 7,039 crore for value-addition or product-mix improvement; Rs 3,509 crore for technological up-gradation or modernisation and Rs 6,909 crore for de-bottlenecking. It had incurred capital expenditure of Rs 44,536 crore till April this year. It spent Rs 101 crore in 2006-07; Rs 1,060 crore in 2007-08; Rs 4,195 crore in 2008-09; Rs 9,495 crore in 2009-10; Rs 10,210 crore in 2010-11; Rs 10,059 crore in 2011-12 and Rs 8,993 crore in 2012-13. In April, the first month of the current fiscal, the company spent Rs 424 crore. SAIL has been expanding capacity at all its major steel plants at Rourkela, Bokaro, Durgapur, Bhilai and Burnpur.

Source: Indiamart SME News

### **India's steel capacity grew to 90 mn tonnes in 2012: Mr. Beni Prasad Verma**

India's steel capacity has gone up by 36 per cent to 90 million tonnes a year between 2009 and 2012, Steel Minister Mr. Beni Prasad Verma said recently. Chairing the meeting of the Parliamentary Consultative Committee attached to his Ministry, Mr. Verma said: "Capacity of steel production in the country has increased from 66 million tonnes in 2009 to about 90 million tonnes in 2012." In 2012, steel production grew by 4.3 per cent, he informed members of the committee, an official release said, adding that the functioning of Steel Authority of India (SAIL) was the agenda of the meeting. Stating that India continues to hold the fourth rank in global crude steel production for past three years, Mr. Verma said per capita steel consumption in the country has risen to 60 kg in 2011-12. "The Minister stressed on the importance of conserving raw material resources in the country and elaborated on the measures taken by the Government," the release said. The members were also briefed about global and domestic steel scenario and functioning of SAIL and its performance on various parameters. Details of marketing initiatives and modernisation and expansion plan were also discussed, it said. "Some of the members complimented SAIL on its working, while some expressed concern over the progress of expansion plan and profitability of the company," the release said.

Source: The Economic Times

### **SAIL to meet increased iron ore needs from captive sources**

Steel Authority of India is looking at meeting all its iron ore requirements from the expansion of captive sources as it ramps up the steel-making capacity to 23.46 million tonne per annum (mtpa) by

2015-16. "Iron ore production capacity will be enhanced in next two years time which will take care for the requirement for ongoing hot metal capacity expansion of 23.46 mtpa," official sources said. With an investment of over Rs 10,000 crore, the mines at Gua, Bolani, Kiriburu and Meghahatuburu are being expanded to their full potential to take the company's iron ore production capacity to 42.81 mtpa by 2015-16 from 27.86 mtpa now. SAIL which is the second largest iron ore miner in the country following NMDC, produced about 21.48 mt of the key raw material for making steel in 2012-13. As the company expands its steel-making capacity to 23.46 mtpa, its annual requirement of iron ore would also go up to 39 mtpa. The company hopes Kiriburu mine to add 1.25 mt capacity in current month only. Meghahatuburu mine's 2.2 mt additional capacity is likely to come on stream by December. Expansion at Bolani to raise the capacity to 10 mtpa from 4.1 mtpa now is scheduled for June, 2014. The expansion of the Gua mine capacity to 10 mtpa from 2.4 mtpa now is also expected by September, 2016. Chairman C S Verma had earlier said that the company's steelmaking capacity would go up to 19.7 mtpa within the current fiscal.

Source: The Times of India

### **SAIL hopes better realisation in FY14**

SAIL hopes that steel price will improve during the current fiscal. "Steel prices have bottomed out and there is no room for further slide. There can only be improvement in price," SAIL Chairman Mr. C S Verma said. He also expected improvement in EBITA margins in the Q1 period FY 2014. In Q4 2012-13, EBITA margin was 9.3 per cent, the company said. He said Q4 of 2012-13 had a onetime hit of Rs 523 crore due to actuarial revaluation which pulled down the profits. "India ultimately remains a demand centre and not like what is happening in the western world. India's steel capacity remains just 10 per cent of China's with only of 80-82 million tonne. Per capita consumption in India is just per 55 kg vs 220kg global average," Mr. Verma said when asked about global sluggish trend in steel price. And therefore, no private or public sector steel company has decided to either curb or abandon any expansion plan. Speaking about expansion plans, Mr. Verma said in the next few days the country's largest blast furnace would be operational at Rourkela. "In the current fiscal the capacity will increase to 19 million tonne from 14 million tonne. In the next 18 months the capacity will be further augmented to 24 million tonne," he said. The steel major had invested Rs 45,000 crore out of 62,000 crore for the expansion. The capex for FY 14 would be Rs 11,500 crore, Mr. Verma said.

Source: The Times of India

### **SAIL or RINL for 50 per cent of NMDC's Chattisgarh steel plant**

Steel Authority of India (SAIL) and Rastriya Inspat Nigam Ltd are the only two bidders for iron-ore minor NMDC's 50 per cent stake in the upcoming three million tonne per annum steel plant in Chhattisgarh. "SAIL and RINL responded to the expression of interest floated by NMDC," Mr. C S Verma, the Acting Chief of NMDC, said during a short visit here. Mr. Verma, who is CMD of SAIL, has been given additional charge of NMDC Chairman till the appointment of a regular CMD. NMDC was looking at garnering Rs 8,000-10,000 crore from sale of stake to a strategic partner. Since NMDC was currently a pure-play miner, it was felt necessary to bring in a partner to produce steel. NMDC would supply iron ore to the project, its maiden venture in steel-making, from its existing mines at nearby Bailadila while coking coal, also a key raw material for steel making, was planned to be imported. Meanwhile, Mr. Verma said more capex was planned for Legacy Iron Ore in Australia where it had acquired 50 per cent stake. NMDC had acquired 49.61 per cent stake in Legacy Iron Ore for USD 19 million in 2011. But the company had not taken any view on moving ahead with South African coal assets and other minerals. Four years after entering into an agreement with South Africa's Kopano for scouting mineral assets, NMDC was examining two proposals for acquiring coal mines in the African country.

Source: The Times of India

### **Steel production could not keep pace with consumption: Steel Secretary**

Even as India's steel sector grew at a compounded rate of 9.5 per cent during 2001-2010, the production failed to keep pace with consumption in the country, official sources said. "In spite of the rapid growth, production has not been able to keep pace with consumption and from a position of a net exporter of steel a short time back, India has become a net importer of steel," Union steel secretary Mr. DRS Choudhary said in a letter to Odisha Chief Secretary Mr. B K Patnaik. The Steel Secretary expressed concern over tardy implementation of steel projects in the state, rich in raw materials like iron ore and coal needed for steel industry. Stating that India became the fourth largest steel producer in the world, he said the country has produced about 78 million tonnes of steel in 2012-13. With Odisha unable to rise to satisfactory levels, the Centre has asked the state government to submit a detailed report on the progress made by different projects. Meanwhile, state steel and mines department has asked all concerned departments like Forest and Environment, Water Resources, Revenue, IPICOL (The Industrial Investment Promotion Corporation of Odisha Limited), IDCO (Odisha Industrial Infrastructure Development Corporation) and Director of Mines to furnish a detailed report on the impediments encountered by the project proponents in executing the projects. "It has been reported that some of the steel projects being executed in your state are delayed due to pending statutory approvals/clearances, non-availability of raw material linkage, issues related to land acquisition, law and order problem," Mr. Choudhary wrote to Mr. Patnaik. Stating that a vibrant steel sector is critical for sustaining growth of a rapidly industrialising economy such as India, Mr. Choudhary said: "it is imperative that steel sector continues to grow at a rapid pace.. more particularly in Odisha, which has been blessed with an abundance of raw materials required by this industry."

Source: The Times of India

### **Steel service centres expected to grow at 18 per cent in five years**

The market for steel service centres (SSC) is expected to grow at a compound annual growth rate (CAGR) of 18% during FY 2017-18 as steel makers expand capacities and more and more customers opt for customized products. With growth in the automobile and white goods segments, along with entry of multinational companies (MNCs), the domestic steel market is making a steady shift toward selling steel solutions instead of simply selling steel. With growing competition in the automotive industry, white goods, fabricators and other end-use segments (infrastructure, construction, electrical, pipes and tubes, and engineering equipment-related industries), and the need of reducing inventory cost, implementing just-in-time (JIT) is likely to become mandatory this trend is expected to aid the service center concept to grow rapidly in the next 5-10 years. The SSC concept however, is relatively new to India. According to Frost & Sullivan SSCs operating currently in India cover only about 15% of the total Indian flat steel production, which was about 5.75 million million tonne in FY 2012-13. This is very low as compared to other countries where service centers account for approximately 60-70 %. It is estimated that SSCs will process around 25-30% of Indian flat steel output (around 13.26 million million tonne in FY 2017-18). SSC is basically a "value"-adding intermediary, a connection point between steel producers and final manufacturers. The main role of a SSC is to perform processing requests on steel products as per manufacturers' specifications and supply the product in the exact dimensions, form, and quantity demanded. Prior to 1993, the SSC market in India was highly fragmented and unorganized. In 1993, the first service center was setup in the organized sector by Mahindra Group in partnership with Mitsubishi Corporation and Nissho Iwai Corporation.

Source: The Times of India

### **RINL to raise Rs 600 crore debt in current fiscal**

State-owned Rashtriya Ispat Nigam (RINL) will raise up to Rs 600 crore debt to fund Rs 1,600 crore capex programme for the current fiscal, a top company official said. "Ours have a Rs 1,600 crore capex (capital expenditure) programme for current fiscal. We intend to fund around Rs 1,000 crore

from internal accruals and the remaining Rs 600 crore would be raised by way of debt," RINL Director (Finance) P Madhusudan told PTI. The Vizag-based steel maker, which is in the process of jacking up its capacity to 6.3 million tonnes per annum (mtpa) from 3.6 mtpa earlier, said the fund would be raised either through loans from banks or by issuing bonds having a tenure of minimum five years. "A final decision on the ways of raising funds would be taken by October and the fund would be raised in the third quarter of the current fiscal," he said. RINL's debt to equity ratio is in a comfortable situation at 0.8:1 and hence, there would be no problem for exercising any of the two options for raising funds, he said. RINL is raising its steel-making capacity to 6.3 mtpa at its lone Vizag facility with an investment of Rs 12,500 crore. However, it has already spent over Rs 9,000 crore towards the purpose. Besides, the company plans to invest additional Rs 7,000 crore towards modernisation of its existing plant which would raise its capacity further to 7.3 mtpa. Last February, country's largest lender SBI had sanctioned a Rs 2,650 crore loan for meeting its capex needs. SBI Chairman Pratip Chaudhuri had also handed over the first tranche of the loan amounting to Rs 500 crore to RINL Chairman and Managing Director A P Chaudhary during his visit to RINL's Vizag plant.

Source: The Times of India

### **India outpaces major steel producers with 5.8% growth in FY'13**

India, the world's fourth largest steel maker, logged 5.86 per cent growth in production in 2012-13 - the highest among major global producers, World Steel Association has said. According to WSA, India produced 78.12 million tonne (MT) steel during the fiscal as against 73.39 MT in 2011-12. China had produced the maximum steel during the fiscal at 726.33 MT, almost half of the world's total output of 1,521 MT; but India outpaced the neighbour in the rate of growth. Production in China grew by 5.39 per cent during 2012-13 over 689.192 MT in 2011-12. Global production grew by 1.59 per cent during the fiscal. World's second largest steel maker Japan produced 107.30 MT in 2012-13, clocking 0.78 per cent growth over 106.46 MT produced in the previous fiscal. The US, the world's third largest steel producing nation, clocked a negative rate, down 1.61 per cent, during the fiscal at 86.94 MT compared to 88.36 MT a year ago. Russia produced 69.56 MT steel in 2012-13, recording just 0.17 per cent growth over the previous fiscal. South Korea has also clocked a de-growth of 1.62 per cent to produce 68.15 MT steel during the year.

Source: The Times of India

### **Tata Steel, SAIL improve global rankings among league of top 25 steel producers**

Tata Steel and Steel Authority of India Limited (SAIL) have improved their rankings in list of top 25 global steel producers in 2012, according to data released by World Steel Association (WSA). With 23 million tonne production, Tata Steel was positioned in the 11th rank along with Chinese steel maker Shandong Group during the year. In 2011, Tata Steel had secured the 12th rank with a production of 23.8 million tonne. State-owned SAIL produced 13.5 million tonne of steel in 2012 to bag the 24th rank. In the process it went up two slots compared to its previous year's ranking of 26th. SAIL had the same output of steel in 2011, WSA said in the report released on May 30, 2013. The two companies are likely to improve their rankings further this year, with both of them adding fresh steel making capacities. Tata Steel has recently implemented three million tonnes per annum (mtpa) brown-field expansion at Jamshedpur taking the plant capacity to 10 mtpa. SAIL is also in the process of hiking its capacity by five million tonnes to 19 mtpa in the current fiscal.

Source: The Times of India

### **Rupee slide to help boost Steel cos' export revenues**

The plunge in rupee value will provide much needed respite to domestic steel companies which are struggling in the face of shrinking margins and low demand. The latest drop, the worst performing Asian currency since April 1, 2013 will make India steel more competitive abroad prompting steelmakers to boost export revenues. At the same time, it will make imports relatively costlier and will

help curb the recent surge in steel imports. "The rupee fall is likely to be beneficial for steel companies. It will give us the opportunity to explore exports markets aggressively. It will also discourage imports of steel products coming into the country," Sushil Maroo deputy managing director, JSPL said.

Source: The Times of India

### **TATA Steel washery expansion project hits eco hurdle**

FE reported that ministry of environment and forests has blocked TATA Steel's coal washery expansion project, crucial to its INR 15,000 crore Jamshedpur steel plant expansion, citing discrepancies in what the company has reported and what it has actually been doing. TATA Steel reported to the MoEF that it would expand its washery capacity from 1 million tonne per annum to 2 million tonne per annum. But the MoEF's expert appraisal committee found that the company was actually setting up a new 2 million tonne per annum washery, scrapping the old one. The committee found that the sixty-year-old washery has not been compliant with the environmental norms and didn't even have a green belt to surround the project on 17 acres. TATA Steel was increasing the washery's capacity to match the washed coal requirement of its Jamshedpur Steel Plant's expanded capacity. The company is augmenting its Jamshedpur plant's capacity from 6.8 million tonne per annum to 10 million tonne per annum. The company would require 7.30 million tonne per annum washed coal after the expansion.

Source: Steel Guru

### **INR depreciation might not be that entire hunky dory for Indian steel mills**

Much shrill is being generated on the collapse of currencies of emerging market recently. Focusing on its impact on the Indian industry it is mixed bag of fortune with sectors like software and pharmaceutical gaining from remittances on of shore services. However sun is not shining on sectors like Automobiles, capital goods, petroleum, power and telecom companies will bear the brunt. Apparently steel companies in India seem to be smiling with the enhanced export competitiveness and costly imports making domestic market captive for them. So much for the euphoria which seems more flimsy with each passing day, steel companies that import iron ore will see an increase in costs and, given the slowdown in the global steel demand, their ability to pass on the cost will be limited. Most of the steel companies have huge foreign debt exposure owing to massive CAPEX projects undertaken and will take a hit on their bottom lines on interest payment.

Annoyingly most of steel consuming sector will be equally exposed to risks sapping their propensity for steel consumption.

### **Automobile Industry**

The automobile industry, which is a generous importer of auto components, could be hit because of a fall in the rupee not only against the US dollar but also against other global currencies, including the yen, euro and pound. The stress will be reflected in the financials of companies which has a sizeable exposure to foreign currency, and also to the extent of foreign currency borrowings the company may have on its books. Other unlisted automobile companies, which rely heavily on imported components for their products, will also be hurt and may have to raise prices despite the severe slowdown in the Indian auto industry.

### **Capital Goods & Engineering**

The negative impact of the rupee's depreciation on the sector will be limited to the extent of unhedged foreign currency borrowings the companies may have, though this could be neutralised to an extent by foreign exchange receipts from off-shore projects, if any.



## Infrastructure

Most infrastructure companies will have little operational impact because of the weak rupee as their projects are mainly based in India. But companies that have raised capital through foreign currency loans will have to pay higher interest. Moreover most of these companies have already been hit by the high working capital requirement and a slowdown in the awards of new projects. Only coming days will clarify the nuances of currency depreciation and how well the companies are able wriggle out but the steel industry path is not strewn with roses neither in the domestic front nor in the international market. Some cosmetic price hike notwithstanding to shake a slumberous market enthusiasm is unlikely to sustain for more than fortnight.

Source: Steel Guru

## RINL asked to set new benchmarks

Mr Vinod Kumar Thakral additional secretary & financial adviser ministry of steel on his maiden visit to RINL, was highly impressed and spell bound by the green environment at RINL. I am "thrilled with soulful vegetation", he exclaimed. Interacting with the top management, Mr Thakral appreciated RINL for its ambitious growth plan to scale up to 20 million tonne per annum and advised the RINL collective to focus further on cost reduction, higher productivity, new bench marks in techno-economic parameters to improve the bottom-line. He indicated that he is aware of the shortcomings, of RINL not having any captive source for major raw materials but expressed confidence that RINL would overcome any constraints with its dynamic leadership and efficiency of the team. Welcoming Mr Thakral, Mr AP Choudhary CMD of RINL indicated that the Company is on right path in pursuing its growth plans and briefed AS&FA about the Company's directional growth plans, strategic initiatives like raw material securitization, JV initiatives, business diversification plan etc. Mr Choudhary thanked AS&FA for visiting RINL immediately after his assumption.

Source: Steel Guru

## International Steel

### Steel Plants Closing Units in Europe and Other Countries

The demand for steel in Europe has come down to approx. 150 Mtpa against the capacity of 210 Mtpa. This has resulted in many large steel plants in Europe shutting some of the facilities resulting in large-scale job losses. Over the last few decades, one of the main industries that powered Europe's industrial revolution has suffered from waning demand across the continent. Steel demand in Europe is 29% down than before the three-year crisis and is unable to face the growing competition from around the world.

**ArcelorMittal**, the world's leading steel and mining Company said it will close a coke plant and six production lines in Belgium, in a move that threatens 1,300 jobs.

The company said collapsing demand for steel and structural overcapacity in the sector have forced it to take the measures in eastern Liege, which has had a steel industry going back two centuries. ArcelorMittal Liege CEO Bernard Dehut said lack of orders and an ailing European economy have made it "increasingly apparent that further action is required" in order to stem the continued losses in Liege. After the closures, the Company said it will be operating five steel production lines which will employ 800 people. The FGTB socialist union said the move, if fully enacted would reduce employment in the sector to some 900 workers in what was once a main steel hub with over 30,000 steel workers in the 1970s. By 2005, that total had already shrunk to some 5,000.

**Tata Steel's** convertible bonds are falling from a one-year high on concern of a plan to borrow US\$ 2.4 billion. This will worsen the finances of India's top steelmaker, after the biggest loss in more than three years. Tata Steel, which has liabilities minus cash of US\$ 10.5 billion, plans to raise as much as 130 billion Rupees (US\$ 2.4 billion) in the next six months for part of a project due to be completed by August 2014, Chief Finance Officer Kaushik Chatterjee said. Losses at Tata Steel, India's fifth most-



indebted non-financial Company, more than doubled last quarter from the preceding period as a worldwide economic slump eroded steel-industry earnings. Tata Steel plans to restructure its U.K. business, cutting 900 jobs and closing 12 sites. The reductions will include the loss of 580 jobs and the closing of its Tafarnaubach and Cross Keys plants in South Wales.

Source: Steel Tech

### **India Globalization Capital completes test delivery of iron ore**

India Globalization Capital Inc announced the achievement of a milestone in the execution of its strategic plan. IGC has completed a test shipment of 300 tons of iron ore from Mongolia to China. As previously reported, the Company established a shipping hub at the border of Mongolia and China to provide iron ore to its customers in China and source raw materials.

Mr Ram Mukunda CEO of IGC said that "Importing from Mongolia has important strategic value. Our beneficiation plants process low grade ore into high-grade ore. It has been our plan to diversify the source of raw materials, from India and Mongolia, to include grades of ore that are of substantially better quality than our reserves. This test delivery has been a big step for IGC in delivering on the opportunities before us." Mr Mukunda spoke of the comparative benefits of IGC's strategy for its anticipated Mongolian reserves. He continued, on our mine sites in Inner Mongolia, we have reserves that are 2 or 3% Fe content which is processed into 66% Fe ore using a dry magnetic separation process and a wet magnetic separation process. The 66% high grade ore is then sold to steel mills. 70 truckloads of raw material are required to produce two truckloads of higher grade iron using the dry separation process and the two truckloads of higher grade ore are subsequently processed through the wet separators to produce the end product of one truckload of 66% high grade ore.

He said that this process is profitable at higher levels of iron ore pricing. But both Mongolian and Indian ore have a base level of 40% to 50% Fe content, and in order to process these for use in steel mills, we employ just the wet separator and thus achieve considerable cost savings in producing the desired product. To illustrate, 1.3 truckloads of this type of ore can be used to produce one truckload of 66% high grade ore. Overall, this is higher margin production and is profitable even at lower sale prices." He added that we are pleased to have successfully established the logistics and supply chain of importing from Mongolia. We expect to finalize purchase and sale agreements in the very near future. Further, with iron ore prices currently depressed, we are diligently working on finalizing our acquisition strategy that can potentially add significant iron ore assets to our portfolio at a discounted cost in anticipation of a projected global rebound.

Source: Steel Guru

### **India iron ore exports shown 157% higher in 2012-13 – Study**

Business Standard reported that though the mining crisis in India led to an unprecedented decline in iron ore exports in 2012 to 13, following a regulatory crackdown. Figures compiled by the Directorate General of Commercial Intelligence & Statistics, under the commerce ministry, showed India's iron ore exports jumped a whopping 157% to 121 million tonne in 2012 to 13, compared with 47 million tonne a year ago. The same data showed the export value for iron ore declined to about USD 1.6 billion from about USD 4.6 billion through the same period. These figures vary significantly from data released by other entities. According to the Federation of Indian Mineral Industries, outbound shipments of iron ore declined from 61.74 million tonne in 2011 to 12 to 18.37 million tonne in 2012 to 13. Latest provisional data from the mines ministry showed iron ore exports during the April to December 2012 period stood at 14.2 million tonne. DGCIS Director General Mr D Sinha said Business Standard that "We have released the principal commodity wise figures for March 2013, as well as April-March 2012 to 13. The item level data for March 2013 is currently under validation." He added according to provisional figures, in 2012 to 13, iron ore exports stood at only 17 million tonne, compared with 47 million tonne in 2011 to 12. A revision would be made when item wise figures are

released shortly. To a query on whether the revision would lead to a change in the value of export figures for the item, he said that "There will be no change in the value figures for exports." To increase domestic availability of iron ore, the government had, last year, increased the duty on iron ore exports to 30%. Also, due to various illegal activities in the mining sector, exports from 2 of the largest iron ore producing and exporting states, Goa and Karnataka, were banned.

Source: Steel Guru

### **Coal import jump by 48% in April signifying desperation in Indian camp**

Despite reservations being expressed by some industry expert about the escalation in coal import as a fall out of non-commissioning of planned power projects imports have zoomed by half setting at rest complacency. A sector beset with regulatory roadblocks has coerced buyers to go in for accelerated import with power generation unable to meet its requirements solely from domestic supplier Coal India Ltd. Repeated shortfall in honoring supply commitments has made country having the 3rd largest reserve of nearly 280 billion tonne depend heavily on imports. India is 4th largest importer in the world and slated to ascend couple of notches by year end. In April coal imports soared 48 percent touching 9.95 million tonnes. India's own thermal coal production rose 3.3 percent in 2012/13 and was up just 0.76 percent in April to 39.2 million tonnes. Imports this year to March 31, 2014 could hit 165 million tonnes to meet the local supply shortfall, and another record after total imports touched 135 million tonnes in 2012/13. India imports bulk of the material from Indonesia accounting for 60.7 percent of the total shipments in April. Australia comes a distant second at 17%. Apart from accentuating need the drop in thermal coal price and pre-monsoon stockpiling has catalyzed activity. Miners consider it as boon with ban on import of LCV coal in China looming in vicinity.

Source: Steel Guru

### **Coal Videsh to fast track asset acquisition abroad**

The coal ministry wants to fast track acquisition of coal assets abroad now as sluggish prices have devalued coal blocks and it makes sense to acquire resources when valuations are down, Coal Minister Mr. Sriprakash Jaiswal told ET recently. The ministry is confident of funding overseas acquisitions as Coal India has Rs 42,000 crore reserves in its books. "We have a vision to secure coal resources overseas and should proceed faster since the market is down. Coal Videsh, which was formed to secure coal assets overseas, has acquired blocks in Mozambique. Coal Videsh went slow in acquisitions but this has benefited the country as asset valuations have come down by 50-60% now," said Mr. Jaiswal. Coal India would have reported losses if it was aggressive in acquiring international coal assets, he said. "People used to think that China is gobbling all the coal assets and their valuations were shooting up. But, appropriate time has come now for coal mines outside," said Mr. Jaiswal. Coal Videsh promoter Coal India received over 30 offers from coal block owners and mining companies in Indonesia, Australia, South Africa and Mozambique and these are being evaluated. Then there are destinations where private sector players such as Tata, Adani, JSW and Lanco have already made inroads into coal mining. Government wants to increase coal production but Coal India cannot increase production beyond its capacities. Coal India increased production by 8% in the last four years but it cannot meet the country's demand as the demand is growing much faster, the minister said. In Mozambique, Coal Videsh has completed 10000 metres of drilling in the first phase. For the next round, it recently awarded contracts for further drilling of 30,000 metres.

Source: The Economic Times

### **Development of Indian refractory sector**

The production of refractories started in India in the form of fireclay bricks at Raniganj in 1874 by Burn and Company (now Burn Standard Co. Ltd) to cater to the needs of Ordnance Factory, Railway workshops, Calcutta mint, Foundries etc. With the setting up of Tata Steel and Indian Iron Steel

Company (TISCO) in the beginning of the century the demand of refractories increased. As a result several refractory manufacturing units were set up like – Kumardhubi Fireclay and Silica Works (KFS), Bihar Firebricks, Reliance Firebricks etc. After independence a number of integrated steel plants were set up by Hindustan Steel (now SAIL) at Durgapur, Bhilai, Rourkela and Tata Steel also doubled its capacity with technology up-gradation. To meet their requirements Burn and Co. Ltd expanded their manufacturing capacity and set up more units in West Bengal, Bihar, MP and Tamil Nadu.

#### Opportunities for refractories in India

Although non-ferrous consuming industries of refractories are there in a significant number but the steel industry being the major consumer of refractory products the fortune of the refractory industry in India have invariably been influenced by the growth and technological changes in the steel industry. During the last decade, India has been witnessing a spurt in the growth of steel production by capacity enhancement of most of the integrated steel plants as well as due to the upcoming of quite a few big integrated steel plants in the private sector. Global steel production in 2009 has been to the tune of 1.22 billion tonne in which India's contribution was about 57 million tonne or 4.67 per cent. Since 2007, India has moved from seventh to fifth position in the production of steel worldwide. Now, India is targeting to become the second largest steel producer in the world by 2015. It is presently the fourth largest producer of steel in the world while China is at the top. With the current phase of on-going green-field and brownfield projects, the Ministry of Steel has projected India's steel producing capacity to touch 295 million tonne by 2020. The increase in steel production is bound to have a positive impact on refractories industry in India. Hence, India is definitely going to be one among the leading countries as far as the demand for refractories in the world market is concerned.

Source: MMR

#### Nalco set up Rs 283 cr wind power plant in Jaisalmer

In a bid to promote sustainable development by harnessing the unconventional and renewable energy sources, State-owned, National Aluminium Company Limited (Nalco) has set up its 2nd wind power plant at Ludarva in Jaisalmer district of Rajasthan. The newly commissioned power plant has a capacity of 47.6 MW. As of now, one part of the project has been commissioned successfully and power production has commenced from 18 wind energy generators. The project is scheduled to be completed by August 2013. The Rs 283-crore wind power project is being executed through Gamesa Wind Turbines Private Ltd., which involves erection of 56 Wind Turbines, each of 850 KW rating. Earlier, the company had commissioned its first Wind Power Plant of 50.4 MW capacity at a cost of Rs 274 crore at Gandikota in Kadapa district of Andhra Pradesh. Besides, aluminium major is also aiming to set up the third wind power plant in Odisha's Koraput

Source: Indiamart SME News

#### India's biggest top copper smelter may re-open soon

India's biggest copper smelter is likely to re-open after a two-month shutdown which was prompted by complaints from nearby residents about its emissions and has caused tightness in supply of the metal. A company source told Reuters on Friday that power for the smelter, which is run by Sterlite Industries, a unit of London-listed Vedanta, had been turned on. This source and one from the local pollution board said a court-appointed panel would visit the smelter and the plant would re-open then. The smelter, in the Tuticorin area of the southern Tamil Nadu state, was shut on March 30 after local people complained of breathing problems. The company has denied there were any emissions above prescribed limits. An environmental court said on May 31 it could re-open but opposition to this has continued. The Supreme Court said on June 10 the smelter could resume as scheduled. A court had earlier stipulated that this should happen in the presence of an expert panel, ahead of a hearing for an appeal against its re-start. Sterlite produces 30,000 tonnes of refined copper a month, or more than half of India's total production. The smelter's closure had squeezed domestic supplies

and boosted imports and prices, and the reopening will come as a relief to cable makers such as Finolex Cables Ltd and Precision Wires India Ltd. But it will further deplete already tight global stocks of copper concentrate, which is produced by mines and sold to smelters and refiners who treat the ore and refine the copper. A string of mine accidents including a tunnel collapse at Indonesia's huge Grasberg mine and a rock slide at Rio Tinto's operations in Utah have resulted in a scramble for concentrate. "Sterlite reopening is one more addition to a gradually tightening copper concentrate market," Natixis analyst Nic Brown said. Global miners pay treatment and refining charges (TC/RCs) to smelters to convert concentrate into refined metal, with the charges deducted from the sale price, based on London Metal Exchange (LME) copper prices. When concentrate supply is tight smelters have to compete for the work and TC/RCs tend to fall. "We're seeing evidence of TC/RCs starting to come down. It's a clear indicator the concentrates market is tightening," Brown said. The shortfall in concentrate supply has helped to underpin benchmark LME copper, which was up 0.4 percent on Friday.

Source: Reuters

### **Copper sinks to 20 month low on China growth fears and Fed**

London copper fell to a 20 month low before bouncing slightly, while Shanghai futures dropped more than 2% on fears of a slowdown in China's economic growth. Base metals have also been hammered by the US Federal Reserve's plan to curb its stimulus program which has been key in boosting commodity prices. Three month copper on the London Metal Exchange had risen 0.75% to USD 6,820.75 per tonne by 0247 GMT due to a weaker dollar but was heading for a third weekly fall. The contract earlier slipped to USD 6,692 per tonne its weakest since October 2011. The most traded copper contract on the Shanghai Futures Exchange dropped 1.16% to CNY 49,340 per tonne. It earlier fell to its weakest since late April at CNY 48,390. Ms Joyce Liu an investment analyst at Phillip Futures said that "If you look at all the indicators, China is not doing well. The economy is slowing down and the Chinese government has made it clear they are tolerating the slowdown and they are expecting it. I think the outlook for base metals is not good because it's very closely tied to the Chinese economy. By from what they are saying, the Chinese government is not going to try to ease the situation now." China's factory activity weakened to a nine-month low in June as demand faltered, a preliminary survey showed, heightening the risk of a sharper second quarter slowdown. China's two shortest term rates hit record highs recently, as the central bank again ignored market pressure to inject funds into the market, a move seen as an attempt to force banks and other financial institutions to trim non-essential businesses.

Source: Steel Guru

### **The Aluminium demand deficit is becoming less... this should reverse by 2016**

Hindalco Industries, the flagship metal company of the A V Birla Group, is completing an ambitious \$5.5 billion expansion to more than double its production capacity for aluminium to 1.3 million tonnes this year. But aluminium prices are going through a slump globally, as supply surpasses demand, leading to closure of high-cost operations. Yet, DEBNARAYAN BHATTACHARYA, managing director of the \$14.8-billion-turnover (Rs 80,000 cr.) company, is not worried. Edited excerpts of an interview with Mr. Abhineet Kumar & Mr. Shubhashish:

**When you embarked on this \$5.5-bn (billion) capital expenditure in 2009, some assumptions were made and a lot has changed. What have become challenges now?**

A lot has changed. Input costs have gone up. However, we had a certain rupee-dollar parity that has gone in our favour. What we had assumed at that time for the benchmark price at the London Metal Exchange (LME) is not much higher than currently. So is the rupee, so LME-wise, I am not surprised. We had hedged the dollar, so we pay what we had originally planned. There are some negatives but some positives as well. Overall, we will manage.

**Would you have been happier if these capacities were to come, say, two-three years down the line from today?**

No. At that time, we took advantage of the low cost for the capital goods. We have already sunk the cost, so we cannot hold on. We would like to ramp it up as soon as possible. The calculation that has perhaps gone a little awry is that we don't have coal availability.

**What is the demand-supply gap for aluminium globally and when is demand expected to surpass supply?**

As I speak, the demand is falling short of supply in spite of the very attractive growth rates in automobiles, can-body and speciality sectors. There is still a demand deficit but that is becoming less and less. By 2016, it is believed that there will be a shortfall in supply.

Why do I believe that? Because many production facilities are closing down as a large percentage of companies in China are losing cash. So are companies outside China. There is a limit till when these companies can continue to lose cash.

**China has been the biggest consumer of the metal in the recent past. How is the demand scenario there?**

I have visited China and I am almost paranoid about them. They are an absolutely unknown entity. You don't get to know what they are doing and far less of what they are going to do. They buy huge quantities of bauxite from Indonesia and India. Their energy need is also uneven. So, on the one hand, they are buying alumina or bauxite from the world and on the other hand, their power costs are going up. Third, the renminbi (Chinese currency) is hugely understated. If it appreciates, their earnings will come down but the cost structure will not.

But our new facilities will produce aluminium at one of the lowest costs in the world. China cannot compete with us. Even the old plants at Renukoot and Hirakud are producing at lower than the average Chinese costs. They (Chinese) are increasing production at a fast pace but are also shutting some plants. But net-net, China is still increasing, its aluminium production. By the current demand growth, the world will need 61 million tonnes (Mt) of aluminium from today's 41 Mt. So, I am not too concerned about the market.

**How is the India story?**

Even better. India is growing at double-digits. But what is carrying that consumption is very different from the global consumption pattern. For instance, electrification is matured and complete in almost every developed market. Here, electrification is a big market and 40 per cent of aluminium in India goes to the conductor sector. Therefore, this growth will continue for at least seven-10 years more.

I don't expect growth from the automotive industry in India. We sell about 2.5 million cars a year but these are on the plat form of value for money and whether aluminium will catch on is hard to debate. Those cars which are going to be exported will use aluminium. But the real growth will come from aluminium cans in beverages, both alcoholic and non-alcoholic.

**What is the scope for the can market in India? What percentage of Hindalco's revenues can we see from the can-body segment?**

There are already two big can makers in India, Rexam and Can-Pack. We will submit our product to them for inspection soon. I expect we should be able to do 100 kilo-tonnes (Kt) in the next couple of years. Cans are also more profitable than many of our other value-added products. We are increasing our value-added products as a percentage and to improve our product mix.

**So, in your aluminium segment, will can-body play a very major role?**

That's right. The moment you supply can-body, you are an upgraded Flat Rolled Products (FRP) player. You are in a different league.



**The first phase of this FRP can-body is 135 Kt and in the second phase it will go up to 500kt. Isn't that conservative?**

We haven't embarked on the second phase. First, we would like to consolidate on the first phase and establish our capability. We are expecting the Indian market to get into a different trajectory. Once we establish our product in the market, we will move in the next phase.

Source: Business Standard

**More capacity resting is key to shoring up aluminium prices**

Aluminium prices that peaked in 2011 have since retreated by over a third. This year, the three-month aluminium rates on London Metal Exchange (LME) have fallen over 10 per cent to \$1,857 a tonne. The price fall of close to five per cent on the Shanghai Futures Exchange (SHFE) is comparatively modest. Because of Chinese predominance, both as a producer and a consumer of aluminium and its set of controls, the market there has its own dynamics. At the current SHFE of around 14,690 renminbi (\$2,399.70), consulting firm CRU estimates that nearly a third of Chinese aluminium producers are losing money. In response to bad times China has already rested one million tonnes (Mt) aluminium capacity. But this is not enough of production discipline to shore up the market. China watchers expect further capacity decommissioning by the world's largest aluminium producer in case SHFE prices fall below 14,000 renminbi.

Notwithstanding whatever capacity has been rested, China's net production continues to rise thanks to building of new smelting capacity in the country's northwest. The region being particularly rich in coal resources, aluminium producers are encouraged to build new smelting capacity in provinces there to take advantage of low-cost, coal fired power. For a smelter, power alone accounts for 25 to 35 per cent of production cost, depending on energy base and also whether it is captive or grid power. What, however, is not understandable is, why at this stage of capacity overhang, both in and outside China, Beijing should still be offering tax incentives to new smelters, albeit selectively. A CRU report says, "Approximately 1.5 Mt capacity is in the process of being ramped up in Shanxi, Qinghai and Shandong provinces in the first half of this year, with about 700,000 tonnes already completed. We estimate that one Mt capacity will begin ramping up in the second half in Chongqing, Gansu, Inner Mongolia and Xinjiang provinces." At the same time, many grid-powered smelters in Henan, Guangxi and Yunan provinces are slipping deeper into the red at current aluminium prices. Their operational unviability, if continued for a while longer, will see quite a few going off production. It is commonly expected that another at least 300,000 tonnes Chinese capacity will stop operations before the year-end.

What China has done so far in restraining production and its plans for the future will, however, fall way short of what a CRU observer describes as "manageable surplus" "It will be a manageable surplus only if curtailments of around four Mt to five Mt are implemented over the next five years." This is based on demand growth stabilising in the high single digit level and that smelters continue to ramp up in the northwest," CRU observer Marco Georgiou told Bloomberg. According to an Indian industry official, "One can at best make an informed guess about China. As it has always done in the past with all other commodities, China will keep the world in suspense about how much more aluminium smelting capacity is to be laid off under pressure of low metal prices." Last year China alone made 21.671 Mt of aluminium, a rise of 12.8 per cent year-on-year, of the world output of 47.388 Mt. We have it from Morgan Stanley that the world will be over-supplied with aluminium till at least 2018. How much surplus will be there in a year will largely be decided by the levels of capacity used by Chinese smelters, with current capacity of 28 Mt. Incidentally, 2013 will be the seventh year in a row of aluminium surplus, it being an estimated 900,000 tonnes in 2012.

Capacity overhang and surplus production besides, what also has a bearish bearing on the market is bloated LME inventory of over 5.20 Mt. An official of Russian aluminium producer Rusal says up to 70 per cent of the white metal stored at LME warehouses are marked for financial transactions. He does



not foresee the possibility of reduction in LME stockpiles before 2014. How much aluminium capacity outside China is rendered unviable remains a debatable subject. A CRU official, however, puts it at 4.6 Mt. Much more non-China capacity would have bled had not physical aluminium premiums stayed in the range of \$260 to \$290 a tonne. A Barclays paper says world aluminium production this year will climb to 50.8 Mt. This will then be 1.2 Mt in excess of demand. While premiums are coming to the rescue of smelters, the fact remains reliance on these "makes the industry incredibly vulnerable." After all, premiums will stay high as long as financing deals find favour with funds and speculators. The industry will get back into shape only if aluminium prices claw back to \$2,200 to \$2,300 a tonne. That will, however, call for a much tighter production discipline both within and outside China. Rusal says the market is crying for industry leaders to cut production by 10 per cent. Between Rusal and Alcoa of the US, one Mt capacity is to be rested. But for the market to regain equilibrium, another at least two Mt capacity needs to be shut down. Closing and then restarting a smelter is an expensive exercise. This, in fact, is standing in the way of many loss-making smelters from stopping production.

Source: Business Standard

### **Casting Industry: From labour-intensive to capital-heavy**

The casting industry in India is going through a phase of transformation as it strives to keep up its high-growth trajectory amidst a slowdown in domestic demand. The industry's growth is currently being supported by strong exports, though the industry is hopeful of a revival in domestic demand. The sector's dependence is high on small and medium enterprises (SMEs), though in the last few years, the industry is gearing up to have large-scale units to meet the strong export and domestic demand. The casting process was there before the industrial revolution, and modern technology made it almost indispensable for end-user industries like engineering, construction, railways and automobiles. India has around 5,000 foundries, with more than 4,800 in the SME segment and they account for 75% of the nearly 10-million-tonne production. The units in the SME segment are those having a capacity of less than 2,000 tonne per annum.

Since the casting sector provides raw material for major industries like auto & auto ancillary, engineering, construction equipment, railways, power, earth-moving machinery and farm equipment, the growth of the sector is directly dependent on the growth in these industries. In the World Casting Census, published in December 2012, India is ranked third globally in terms of production, next only to China and the US. Though SMEs contribute a lion's share of the industry's revenue; their share is gradually falling, as strong growth converts a few of the medium-sized enterprises into large, professionally run organisations. From more than 80% five years back, the share of SMEs has fallen to around 75% in 2012 and is projected to go down to around 70% by 2016. However, the share is unlikely to fall below 70% as high growth attracts more foundries in the segment, thereby, keeping the ratio in favour of SMEs.

The Indian casting sector is still very fragmented, with only a few large-scale units coming up and lying scattered across the country. A majority of the medium, small and micro units are part of the ten clusters that drive the sector's revenue. Though contribution from the SME segment is higher, the sector has a high share from the organised sector, as most SMEs are part of the organised clusters, which tend to have modern technology as well as skilled labour force. Also, the unorganised sector works more in the replacement market, with relatively less manufacturing and value addition.

For its capability to handle materials like grey iron, ductile iron, steel, aluminium, super-alloys and titanium, the Indian casting sector is well-placed to become globally competitive. Also, with SMEs dominating the sector, the cost of labour for casting in India is substantially lower compared to Europe and North America, and this gives Indian manufacturers a competitive edge over their global counterparts. This is a major reason for Indian casting's strong export growth, which was in excess of 25% in the last few years. The economic slowdown of the last couple of years has affected the growth of end-user industries, and this in turn has impacted the overall growth of the casting sector.

However, with interest rates softening and infrastructure projects expected to be revived, the players in the casting sector are hopeful of growing in double digits again from the next year. Apart from a rise in infrastructure spending, the casting sector is expecting a revival in export demand from developed countries, particularly the US and Europe.

But the sector faces many challenges. Though India has an edge over competitors in cost, rising raw material and energy prices could pose a critical challenge, especially to foundries in the SME segment. Higher raw material and energy costs tend to squeeze margins and push small and micro units out of the sector by making production unfeasible. As the sector turns into capital-intensive from labour-intensive, these units also lack capital to bring new technology and modernise their foundries to global standards. Other challenges for the sector are the high logistics cost, higher cost of environmental compliance, inefficient economies of scale and perception about quality standards. Despite these challenges, SMEs in the casting sector are geared up to capitalise on the emerging growth opportunities. By 2016, the casting sector is projected to be at \$19 billion.

Source: Financial Express

### [A list with surprises](#)

India used to be the world's second-fastest growing economy, bested only by China. Before that, the story put out was that India was among the half-dozen fastest growing countries. But if you switch from pure economic growth to per capita incomes, to see which country has done best for its citizens, the picture begins to offer some surprises. You could even question the generally accepted narrative that the poor countries as a group have been doing better than the advanced economies - the "catching up" story. And if you ask who really shines when you look at the long-term record, the answers are both predictable and surprising.

The World Bank has modified national income data, using current US dollars (what it calls the Atlas method), that goes back to 1980 for most of some 213 countries. The latest multi-country data is for 2011. Over these 31 years, the runaway winner in terms of growth in per capita income is of course China, which multiplied incomes a staggering 22.5 times. No prizes for guessing the runner-up either: South Korea, which in 1979 had a much higher income base than India has today, and still multiplied incomes more than 11-fold. The dark horse that gets the bronze medal is from our neighbourhood – Sri Lanka, which despite a prolonged civil war grew income more than 9-fold.

These three winners are followed by a clutch of seven countries, which grew per capita incomes 5 or 6-fold, led by two of the Asian Tigers – Thailand which multiplied incomes 6.2 times over 31 years, and Indonesia (6-fold). The best performers from three other continents come next: Europe's Turkey, South America's Chile and Africa's Egypt. The last two countries that make up the Top Ten are India, which multiplied per capita income 5.26 times, and Spain (5.1 times). No data is presented for Taiwan, while the city-states of Singapore and Hong Kong (also part of the original "Tigers") have of course done very well. Count them all and India ranks a respectable 12<sup>th</sup>. Crucially, though, a match between China and India is like Roger Federer vs Somdev Devvarman.

The interesting discovery is that the advanced economies, supposedly slow-growing, have done well by quadrupling per capita incomes. Australia and Britain are the best performers (multiplying about 4.5 times), followed closely by Italy, Japan (surprise!) and Canada. The big economies that are traditionally seen as more successful – the US, Germany and France – grew incomes somewhat slower, but did better than a host of poor economies that are supposed to have been "catching up". Within South Asia, the ordering is equally instructive: after Sri Lanka and India, it is Nepal, Bangladesh and Pakistan (3.3 multiple), but all of them have grown incomes more slowly than the rich bunch. Not much evidence of any "catch-up" here.

Many of these scenarios could change in the troubled second decade of the new century. China is slowing down, India is searching for the growth elixir again, Europe has long-term problems and the

US has its challenges too. Brazil (which did well in 1980-2011, with an income multiple of 4.9) and Russia (which had a terrible 90s and then a spectacular 'noughties' decade) are both down to a crawl<sup>1</sup>. Japan may offer new hope while more than a dozen African countries, laggards till now, are beginning to do much better. So are places like unpretentious Philippines, which is second to China in current Asian growth listings. If India can get back up to a 7 per cent rate of growth, it could continue to feature in the top dozen. If not, it risks becoming one of the also-rans.

Source: Business Standard

## **Technology, Product Development and Application**

### **Siemens Introduces Circular Pelletising Technology**

A new generation of pellet plants featuring a circular induration furnace as its core element has been developed by Siemens Metals Technologies. Referred to as Circular Pelletising Technology (CPT), this iron ore agglomeration facility is characterised by its highly compact layout and light-weight construction design. This is the basis for efficient and cost-effective installation at a mining site or within an iron and steel complex. Pellet production capacities range from 800,000 tpa up to three million tpa and the quality of the pellets can be flexibly adjusted according to production requirements.

The ever-higher portion of fine and ultrafine iron ore from mining sites means that the pelletising process is becoming more important for ore agglomeration. This has led to an increased interest by steel producers to invest in their own pellet plants to become independent of escalating prices for pellets on the global market. Up until now, however, space requirements and high investment costs for a conventional plant generally precluded its installation within an existing steelworks.

CPT is based on the well-proven travelling-grate pelletising process. However, the circularly designed induration furnace greatly reduces the footprint of the pelletising plant. Overall space requirements for CPT are approximately one half of those needed for a conventional pellet plant. Costs for civil works, equipment and steel structure are reduced accordingly and plant installation can be completed far more quickly. The circular induration furnace also results in a more efficient utilisation of installed equipment because nearly twice the number of pallet cars are always inside of the induration furnace compared with a straight-type induration furnace of the same capacity.

The intelligent and maximised reuse of hot gases minimises the energy consumption required for pelletising and, in combination with total recycling loops for waste materials and even steel mills reverts, a low environmental impact is ensured by the process. The installation of CPT within a steelworks not only allows producers to become independent of erratic prices for commercially available pellets, but the chemistry and quality of the pellets can also be flexibly adjusted to meet the requirements of blast furnaces or direct-reduction plants.

The world's first CPT plant is currently under construction in Odisha State, India. Total space requirements for the complete facility, which extends from raw material dosing and balling to process gas cleaning and which also includes a coal-gasification plant to generate burner fuel, is less than two hectares. Start-up is scheduled for the second half of 2013 after which the plant will be capable of producing 1.2 Mt of pellets per year for the Indian iron and steel industry.

Source: Steel Tech

### **Macroeconomic indicators - Tumbling rupee hurt middle income group – ASSOCHAM**

Middle Income Group has been impacted by inflation particularly in context of falling rupee and its cascading effects on price rise of petroleum products, edible oil, higher foreign education, foreign trips to extent of 15 to 20% to manage their household budgets, according to the survey by apex chamber ASSOCHAM. The quick survey was conducted by ASSOCHAM in major places like Delhi NCR, Mumbai, Kolkata, Chennai, Ahmedabad, Hyderabad, Pune, Chandigarh, Dehradun etc. A little

over 200 employees were selected from each city on an average. The survey reveals that the cascading impact of rupee falling has hit even the middle income group to extent of 15 to 20% particularly on items related to petroleum products, edible oil, higher foreign education, foreign trips etc. ASSOCHAM nationwide survey reveals that rupee depreciation impacted the most, consumers in metros and other major cities Vis à vis tier III and semi urban area. Over 92% of the respondents said that their monthly bills have jumped by 15 to 20% in the last one month. The middle class and the lower class are the worst hit, adds the survey.

Mr D S Rawat, Secretary General ASSOCHAM said that "Despite the effort by the government to control gold imports, the Indian middle income group is bound by societal traditions and continues to buy gold even at higher prices which have increased the prices of gold due to rupee weakening." Around 55% of the survey respondents fall under the age bracket of 20 to 29 years, followed by 30 to 39 years, 40 to 49 years, 50 to 59 years and 60 to 65 years. The survey was able to target employees from 18 broad sectors, with maximum share contributed by employees from IT/ITeS sector. After IT/ITeS sector, contribution of the survey respondents from financial services is 11%. Employees working in engineering and telecom sector contributed 9% and 8% respectively in the questionnaire. Nearly 6% of the employees belonged from market research/KPO and media background each. Management, FMCG and Infrastructure sector employees share is 5% each, in the total survey. Respondents from power and real estate sector contributed 4% each. Employees from education and food & beverages sector provided a share of 3% each. Mr Rawat added that "Consumers' growing unease is reflected in their saving and spending habits, with many middle and lower income groups indicating that they are finding ways to cut back spending now or indicating they will do so in the future." He said that "The weakening rupee has made crude oil, fertilizers and iron ore, which India imports in large quantities, costlier. Though these items are not for daily consumption, but impact the finances indirectly." The survey further reveals, the crude palm oil prices set the pace for prices of other edible oils. It is imported in large quantities and any rise in its price will add to the inflationary pressure. ASSOCHAM nationwide survey revealed that Middle Income Group, uncomfortable with weak rupee and are changing their overall spending habits including dining out, vacations, electronics etc. The falling rupee will also impact itinerant Indians and vacationers to a foreign country. The air fares are going up, the foreign stay will be costlier by at least 15 to 20% while shopping can become expensive by 12 to 15%. Eating out will also be costlier by 5 to 8%.

Source: Steel Guru

### **Macroeconomic indicators - FM promises more reform measures**

In an attempt to woo investors to invest in the Indian markets and economy, Finance Minister P Chidambaram indicated that "A number of measures have to be taken to revise growth in economy, fiscal consolidation tops list, followed by moderating inflation. Stating that reviving investments is top priority, Mr Chidambaram said that after about 9 months we have acknowledgment that steps that we have taken have delivered results. Reviving investor sentiment will yield results; the world continues to repose faith in India." While acknowledging that steps taken by the government have had the desired effect, Mr Chidambaram said that the investment climate can benefit from more reforms. Reviving economy, rejuvenating investment sentiment might be slow, but we do not take our eyes off the ball, Mr Chidambaram sought to assure. He said that "It is not an ODI match, a wicket or a six is expected in every ball in an ODI, economic reforms don't work that way. We have to take long term view of what is happening in India; results have been achieved; looking forward to more reforms." Mr Chidambaram went on to highlight measures that the government will take in order to boost economic growth and contain fiscal and current account deficit. He said that "These will include gas pricing, FDI limits, steps to be taken by SEBI based on Chandrashekhar Committee report, and skill development." He added that "We will leave no stone unturned to achieve revenue and fiscal deficit targets. Coal, gas pricing issues to be resolved by June end."

Source: Steel Guru June 16, 2013



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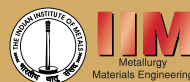


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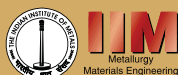


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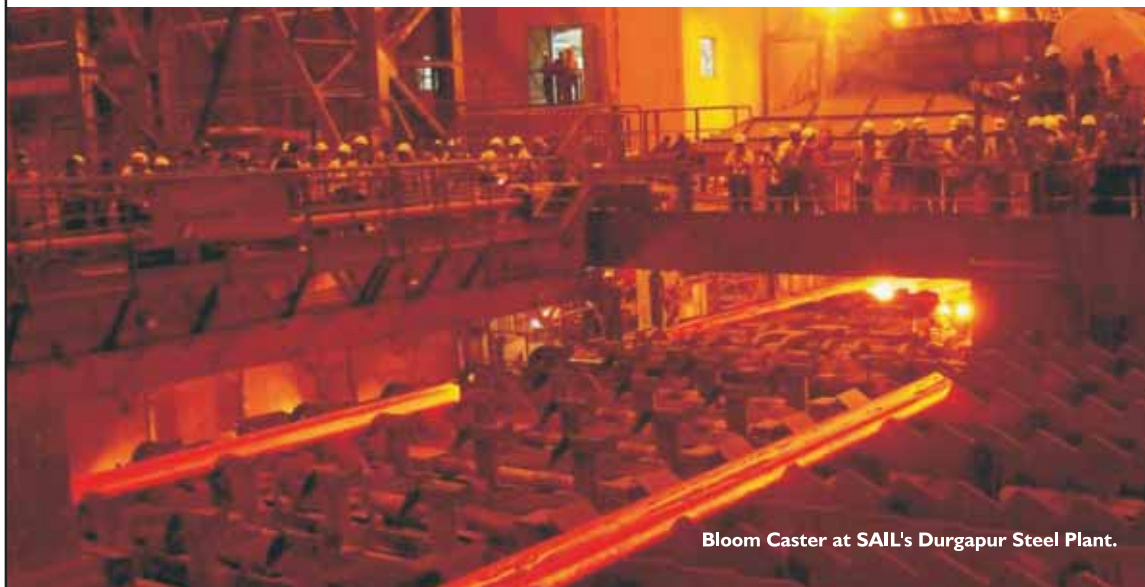
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