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STANDING CONFERENCE OF PUBLIC ENTERPRISES

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15th November, 2016

MESSAGE

I am extremely glad to learn that Standing Conference of Public Enterprises (SCOPE) is bringing out a special issue of KALEIDOSCOPE on Steel Sector. The magazine will throw light on Steel Sector in general as well as Opportunities & Challenges in Steel Sector, demand scenario of steel across the globe, challenges of low commodity prices and also future of the sector.

Steel is at the core of Nation's infrastructure development and is directly co-related to its economic prowess. The world scenario of steel is not good and it has affected Indian market too. Several steps have been taken to safeguard the interest of Steel Sector in India. The industry should also adopt newer technologies to make the steel production effective.

I would like to appreciate the efforts put together and initiatives undertaken by SCOPE towards it and wish them for all their future endeavours.

15/11/16

(Dr. Aruna Sharma)

CHAIRMAN'S DESK

At the outset, SCOPE and Public Sector Enterprises welcome the recent demonetization of currency by the Hon'ble Prime Minister of India. This will also be beneficial for Public Sector at large as the quantum of procurement in PSEs alone is running into lakhs of crores and is growing at the rate of 10 percent. The move will bring efficiency, liquidity in the country's economy and in turn less capital cost, more Capex, more employment generation and level playing field for Public Sector compared to Domestic and Global competitors.

Free flow of information is indispensible for strengthening the basic tenets of democracy and transparency. Right to Information Act (RTI Act) has provided a strong foundation for a transparent governance system by empowering citizens to access information from public authorities.

The Central Information Commission organized its 11th Annual Convention recently which was inaugurated by the Union Home Minister Shri Rajnath Singh and he also launched e-Court. The convention organized with the aim to take stock of the success and short comings in effective implementation of the Act was also addressed by the Lt. Governor of Delhi, Shri Najeeb Jung, the Minister of State for Development of North Eastern Region (I/C), PMO, Personnel, Public Grievances & Pensions, Atomic Energy and Space, Dr. Jitendra Singh and Central Information. Commissioner, Mr. R. K. Mathur. It was attended by present and former Central Information Commissioners and State Information Commissioners, senior officials from government, public sector, eminent panelists and expert in the area. During the session, it was highlighted maximum possible information is being made available by the government and its agencies to achieve transparency and better governance. Among other issues, it was also emphasized on the need for a single window mechanism with respect to RTI applications.

During the two days convention, an exclusive session on "RTI and Public Sector Undertakings" was held where SCOPE and PSEs got an opportunity to highlight their best practices that have enhanced the standards of corporate governance in PSEs and created a good brand of PSUs. The concerns of PSEs with regard to RTI were also raised which included increase in number of applications, frivolous and vexatious applications, analysis of RTI applications and widening the definition of 'public money' so that all enterprises, be it Public or Private could be brought under the ambit of RTI. Strengthening the capacity building of the institution of CIC (Central Information Commission) was also emphasized. These initiatives will further strengthen the faith and confidence in the Act, SCOPE also on behalf of all PSEs confirmed its all out support in this regard.

With the growing abundance of social media, CEO and media spokespersons need to be sensitized about the ever changing media matrix to positively represent PSEs. During the recent Media Relations Conclave for CEOs and Spokespersons organized by SCOPE, it emerged that PSEs need to embrace the digital media platform in order to promote Prime Minister's vision of e-governance through Digital India initiative. They need to build a strong relation with media and also create synergy among themselves to thwart negative publicity and also to create a brand image for themselves. It was also desired that PSEs should come out with a board approved media policy in order to establish efficient and effective communication channel with the media. A brief coverage of the Conclave is covered in this issue.

Steel industry is one of the most significant industry for the growth and competitiveness of our country. The government is investing massively for developing a robust infrastructure for sustained development of our economy. Driven by rising infrastructure development, Indian Steel Companies are going to play a major role in meeting the growing demand of steel.

Considering the importance of steel industry, this issue of KALEIDOSCOPE is dedicated to Steel Sector which includes articles from PSEs in the steel sector and experts in the area. Hope our readers will find the issue useful and informative.

Nirmal Sinha
Chairman, SCOPE

Strengthen Steel Sector to Pave Way for **Efficient Economic Growth Cycle**

Dr. U. D. Choubey
Director General, SCOPE

Steel constitutes the backbone for economic growth of any country. Its strategic significance can be seen from the fact that it provides the fundamental framework and structure for all plausible development parameters of the economy, be it industrial or infrastructural. Historically, it has been seen that level of industrial growth in a country is in direct correlation to the growth of its steel sector.

Steel industry in India has also experienced an evolution not only in its policies but also production. Increasing modernization and industrialization necessitated the country to expand its production manifold so as to accommodate and promote growth of its industrial sector. Presently, the sector contributes 2% to India's GDP and employs 6 lakh people. The sector also holds 6% share in industrial production. This percentage is likely to increase with improvement and recovery of infrastructure and automobiles sectors.

Global impact on Indian Steel Industry

The global steel sector has been witnessing falling production due to universal decrease in demand vis-a-vis excess supply of steel. This is evident from contraction of world steel production by 2.8% during 2015 and reduction of global capacity utilization levels to 64.6% in the month of December 2015. However, despite of an adverse global environment for steel, India succeeded in maintaining steel production growth rate (year on year) of 7% during the 5 months period of April 2016 to August 2016. This is in sharp contrast to 2.3% contraction of production of steel in China which is the largest producer of finished steel.

However, despite of a positive growth rate and EBITDA (i.e. earnings before interest, taxes, depreciation and amortisation), Indian steel sector has been experiencing stress and fall in consumption of domestic steel due to increase in imports at cheaper prices. For this reason the domestic industry has been forced to

take series of price cuts which has led to a severe margin squeeze. This has not only led to reduction in production but also increased financial burden on the producers/ suppliers as they are unable to pay off their debts due to weak business climate.

Statistically, production of steel decreased by 2% in comparison to previous year 2014-15. Also, exports of Indian steel decreased by 29.7% whereas imports increased by 29.2%, making India a net importer of finished steel.

Amongst multiple reasons for a fall in global steel market, reasons that have contributed to rise in imports are:

- Domestic demand of steel in China decreased manifold due to steep decline in construction, housing and infrastructure investments in the country. To counter this situation, the Chinese Government offered multiple export benefits to its steel industry enabling it to export steel at cheap prices. This move made import of steel from China cheaper as compared to use of Indian steel thereby increasing imports into the native country.
- This was further accentuated by rapid deterioration of emerging economies like Brazil and Russia and strengthening of the dollar making it more cost effective for them to shift to Chinese steel in comparison to Indian steel resulting in decline of demand for Indian steel.
- Free trade agreements signed by India with Japan, South Korea and other countries to allow steel imports at negligible to zero percent duty also contributed to an increase of 30% in import of steel in 2015-16.

However, the industry has seen a silver lining after the government intervened and imposed restrictions on rampant imports. Few of such initiatives have been with respect to imposing minimum import price on specified grades of steel at prices below marginal cost from exporting nations, imposing anti dumping duties, enhancing export duties on various grades of steel etc.

The situation has further improved with an upward movement of demand in steel within the country due to recovery of the construction sector, increase in investment in infrastructure sector and positive growth in automobiles sector. Statistically, steel demand in India is expected to grow by a healthy 5.4 % to 6% in FY 2017 as against world steel demand of 0.4 %.

Also, international bodies like the World Steel Association have projected an upward growth for the domestic steel industry due to low oil prices, the reform momentum in the country and introduction of policies to increase infrastructure and manufacturing output.

Issues and Challenges for Indian steel sector

The steel industry has been the priority sector for the government and hence has always been given strategic importance. Time and again the government has introduced slew of policy measures to provide support to the sector. However, despite of the same, there are certain challenges that the steel factors faces from time to time.

Raw Material Issues

- Ease of availability and quality of raw materials are crucial in determining the competitive growth of any industry. This is of utmost importance for an input-intensive industry like steel.
- Iron ore is one of the key raw materials required for extraction of steel. However, over time and growing export market of iron ore, selling of iron ore abroad has gained momentum leaving it in short supply for domestic consumption. Hence, it is imperative to conserve the ore for growth

in domestic production base of steel.

- However, conservation should not adversely affect the exporters of iron ore. Hence, this should be done in a phased and planned manner so as to enable the exporters of ore to re-establish their business models leading to a win-win situation for all.
- In addition planned investment needs to be made in mining of iron ore so as to increase the overall base of raw material. This can be done by improvising technology and developing infrastructure so as to make underground mining more efficient and effective.
- Another vital raw material for steel production is coking coal. However, this ingredient has limited availability in the domestic market resulting in heavy import dependence of the steel producers for procuring coking coal which in turn impacts their costs heavily. At present domestic steel makers meet 70% of their coking coal requirement through imports.
- In order to address this issue it is imperative that the available reserves of coking coal should be used judiciously and with utmost caution.
- Also, government should look at their agreement with major or key coking coal supplying countries so as to curb the volatility due to prevalence of international prices.
- Also, government should help PSUs to acquire coal assets abroad either independently or in collaboration with each other.

To mitigate the global downfall in price it is a necessity to use effective technology and efficient manpower to one's advantage so as to rationalise on the cost of production in order to be competitive in the global market. Also, the Indian steel producers have to create a distinctive brand image for themselves by engaging in aggressive brand promotion basis delivery of quality product and seamless after sales delivery service.

Infrastructural Issues

- Infrastructure plays a crucial role in steel sector. Efficient infrastructure not only ensures effective extraction of raw material for steel production but also ensures ease in availability of raw material to steel plants.
- On the sale side, efficient infrastructure facilities ensure timely supply of steel to its dealers in the primary and secondary market.
- Hence, it needs to be ensured that there are proper linkages with respect to railways, ports and roadways for transportation of raw material from one place to another.
- In order to develop seamless and efficient network for infrastructure, it is imperative to have friendly but effective policies for clearances with respect to land acquisition, environmental clearances etc.
- It is of utmost importance that infrastructure linkages should be developed with futuristic capacities in mind so that they are able to support heavy loads and requirements of steel industry for a long term horizon.

Technological Issues

- A significant gap exists between technical specifications and equipments used by Indian steel sector and the global benchmarks for best practices in steel sector.
- In order to bridge this gap, the steel sector needs to actively invest in technology so as to constantly innovate and develop state of the art technology which would not only benefit steel makers in terms of increased production but also in terms of better quality, better cost management and efficient prices.
- Appropriate and latest technologies should be developed with respect to raw material extraction/ availability, improvement in process performance and developing quality product so as to achieve global comparable benchmarks.
- In order to obtain high level of technical efficiency, it is imperative that sufficient investment in terms of time and money should be made in research activities by individual entities so as to constantly

develop and upgrade the technology thereby improving individual performances which would lead to improvement in performance of the sector as a whole.

Steel PSUs

PSUs have been termed as the 'temples of modern India'. Their contribution to the Indian economy has been beyond parlance both economically and socially. They have been the pillars for the Indian economy in the toughest of times be it revamping India post independence or the most recent being recession of 2008-09. Given their strategic importance, it was but natural for the government to develop PSUs under this sector too.

At present there are 10 PSUs under the administrative control of Ministry of Steel namely Steel Authority of India Limited (SAIL), National Mineral Development Corporation (NMDC), Kudramukh Iron Ore Company Limited (KIOCL), Rastriya Ispat Nigam Limited (RINL), Metallurgical and Engineering Consultants India Limited (MECON), Ferro Scrap Nigam Limited, Hindustan Steel Works Construction Limited, MSTC Limited, MOIL Limited and Birds Group (now bifurcated into Eastern Investment Limited, OMDC and Bisra Stone Lime Company Limited). These 10 PSUs contributed 20% to total steel production of the country during April-December 2016 as compared to 19% in 2014-15.

Most of steel PSUs have laudable achievements. To exemplify, SAIL is not only the largest PSU in steel sector but also largest producer of steel in India and 24th largest steel producer in the World. It owns five integrated steel plants, 3 special plants and 1 subsidiary. RINL on the other hand is the first shore-based Integrated Steel Plant in India and one of the leading producers of long steel products. NMDC has the distinction of being the largest producer of iron ore in India. MECON Limited expertises in Design, Engineering, Consultancy and Contracting services for setting up Greenfield and Brownfield Projects in metals, energy and infrastructure sector.

Further, steel PSUs contributed 9% to overall net profit of all operating PSUs in India in 2014-15. PSUs under this sector alone employ over 1.5 lakh employees which is 12% of the total employment by CPSEs in 2014-15. Besides, few of the ambitious projects of steel PSUs over long term horizon include:

- JV between SAIL and Arcelor Mittal SA to manufacture high-end steel products which could be used in defence and satellite industries.
- JV between SAIL and Arcelor Mittal SA to set up an automotive steel manufacturing facility in India.
- NMDC plans to invest INR 40,000 crore (US$ 5.96 billion) in the next eight years to achieve mining capacity of 75 Million Tonnes Per Annum (MTPA) by FY 2018-19 and 100 MTPA by FY 2021-22.
- NMDC Ltd also plans to set up a Greenfield 3-million tonne per annum steel mill in Karnataka jointly with the state government at an estimated investment of Rs 18,000 crore (US$ 2.67 billion).

Besides financial performance and ambitious plans, steel PSUs also outshine in their CSR contribution. They have been actively contributing to the CSR fund even much before the mandate of 2% was prescribed by the Companies Act 2013.

The PSUs conduct business in a way so as to produce social, environmental and economic benefits to communities where they operate. This helps in achieving social objective without compromising on the economic frontline of the companies. All this leads to not only creation of infrastructure but a

healthy relationship between natives and the company thereby making the latter's working smooth.

During April to December 2016, steel PSUs spent INR 126.14 crores on various CSR activities. They have engaged themselves with various programs relating to literacy, Swachh Bharat, health care, education, skill enhancement, sanitation and water facilities, rural development, environment protection etc. Few of CSR initiatives worth mentioning include development of Model Steel Villages, providing educational facilities to peripheral villages and weaker sections/ tribes in the areas where the PSUs operate, providing network of roads so as to connect remote villages to mainstream to provide easy access to water facilities, conducting regular health camps to create awareness and providing medical facilities at regular intervals, construction of sanitation facilities etc.

Future Prospects for India and way forward

India is World's third largest steel producer (after China and Japan) and largest producer of direct reduced iron (DRI)/ sponge iron in the World. The country is also the third largest consumer of finished steel. Despite of globally adverse situations, India produced 91.46 Million Tonnes of crude steel in 2015-16. The actual consumption of steel comes to 58.94MT which 4.4% higher than 2014-15. At present, India has capacity utilisation of 77% (during 9 months ending December 2016) as against global utilisation of 68%.

On the downside, India has one of the lowest per capita consumption of steel in the World despite the fact that iron and steel making is perhaps one of the oldest in the country. India's present per capita consumption of steel is far below 100 kg while the global average is little over 200 kg. This is primarily owing to delays in execution in construction projects and clearance of pending projects besides lower demand for consumer durables and automobiles.

India is World's third largest steel producer (after China and Japan) and largest producer of direct reduced iron (DRI)/ sponge iron in the World. The country is also the third largest consumer of finished steel. Despite of globally adverse situations, India produced 91.46 Million Tonnes of crude steel in 2015-16. The actual consumption of steel comes to 58.94MT which 4.4% higher than 2014-15. At present, India has capacity utilisation of 77% (during 9 months ending December 2016) as against global utilisation of 68%.

However, with increased investment in infrastructure, recovery of infrastructure and automobiles sector, steel consumption is likely to rise. In addition to the above, slew of policy and reform measures with respect to agriculture, development of smart cities, thrust on Make in India, increase of FDI in various sectors including defence manufacturing, focus on start ups and new entrepreneurs, start-ups etc. is likely to augur well for the Indian Steel Industry particularly Public Sector steel units, which are already in expansionary mode. Given the aforesaid scenario, steel consumption is expected to reach 104 MT by 2017 and steel production is expected to increase 300 MTPA by 2025.

Hence, it would not be wrong to say that the steel industry has great potential for growth in the coming years however it has to go that extra mile to bounce back and grow.

To mitigate the global downfall in price it is a necessity to use effective technology and efficient manpower to one's advantage so as to rationalise on the cost of production in order to be competitive in the global market. Also, the Indian steel producers have to create a distinctive brand image for themselves by engaging in aggressive brand promotion basis delivery of quality product and seamless after sales delivery service. A combination of reduced cost, better product and quality after sales delivery would definitely able the Indian steel producers to carve out a niche for themselves thereby benefitting not only the steel industry but the economy as a whole.

ARTICLE

An Overview of Steel Sector: Challenges and Future Outlook

P. K. Singh
Chairman, SAIL

Overview

Globally, Steel is one of the most critical commodities today and it plays a elemental role in the development of modern society. Steel is a smart material with smart properties of recyclability, reusability, sustainability, and eco-friendliness. It is the primary material for construction, infrastructure building, building smart cities, manufacturing and all other developmental projects. Moreover, steel makes construction possible in the first place by providing equipment such as cranes, drills, bulldozers, scaffolding, and reusable and portable shelters at construction sites. Steel is the basic building material of all developmental activities for any economy and thus is perceived as a major contributor to the economic growth of any nation.

Today, India is a rapidly growing economy among major world economies with a growth rate of 7.6% in the last fiscal. Along with this, next to China, India is fast emerging as the centre of gravity for steel both in terms of production and consumption. India is the third largest producer and consumer of steel with an expected growth in steel demand of 5.4% during 2016 and 5.7% during 2017 as per World Steel Association (WSA) estimates. This optimism is substantiated by India's ambitious infrastructure development programme for which the Government has announced massive investments, consumption-boosting reforms and other positive trade policies and initiatives.

In order to provide adequate momentum to economic activities in the country, the new manufacturing policy aims at increasing the share of manufacturing in GDP (which has remained stagnant at 15-16% since last 3 decades) to 25% by 2022. For this, various initiatives have been taken by the Government of India, the most significant one being 'Make in India'. A range of steps taken by GOI towards ease of doing business will aid the manufacturing activities and put India as a manufacturing hub on the world map. A broad budget allocation for infrastructure, special drive by the concerned ministries for revival of stalled projects, building of highways, Smart Cities, Airports, Ports, Inland Waterway systems are all a part of the Government's concentrated move to make India a stronger economy. Incidentally all these initiatives are steel intensive.

Currently, India's steel consumption is at a level of 60.8 kgs per capita as compared to the World average of 208 kgs per capita. This indicates towards the huge potential India has in growing steel consumption. Further, in the rural areas the steel consumption is much less than urban settlements. With many of the Government's initiatives directed towards rural development this consumption gap will be bridged significantly. For India to become a developed economy, it will need the support of a strong infrastructure. This justifies the target set in Draft New National Steel Policy (2016) for the Indian Steel Industry to achieve 300 Mt crude steel capacity by 2030-31. Most major domestic steelmakers are already on the path of major capacity addition. We are seeing both public and private sectors steel groups increasing their capacities along with undertaking modernization of the existing units.

Challenges

While increase in steel

consumption in step with growth of the economy should happen, there is a need for the world to look into the aspect of leveraging the benefits of steel to its advantage. Steel is arguably the most sustainable of major construction materials. It has numerous sustainability benefits, which are guaranteed to be realized whenever steel is used. They include: low waste, flexibility, offsite manufacture, speed, resource efficiency, adaptability, demountability, long lasting appeal, safety, reusability and recyclability. These inherent beneficial characteristics result in many social, environmental and economic gains to satisfy sustainability's 'triple bottom line" . Once produced, steel can be used again and again. With a global recovery rate of more than 70%, steel is the most recycled of all materials on the planet. What's more, 97% of by—products from steel manufacturing can also be reused

It is, however, a fact that this awareness about the benefit of using steel over other substitute materials is yet to become a common knowledge. For popularizing and educating about the benefits of steel usage among masses, it is possible only if we are able to spread the idea. This has to come by greater knowledge of life cycle cost analysis in which steel wins over other products.

Justifiably, the Ministry of Steel has started a campaign to boost steel consumption in the country through encouraging steel intensity in construction, deeper penetration into rural markets and import substitution through market & product development. Hon'ble Minister of Steel, Shri Birender Singh has time and again stressed on the need of taking innovative steps by the domestic steel industry to enhance steel consumption. In recent past, there has been rapid expansion, by both public sector and private companies in steel-making capacity and state-of-the-art mills have been commissioned. However, domestic supply in certain products, such as Cold Rolled flat products for certain uses in the auto sector, CRGO & high grade CRNO, quenched & tempered plates /special grade boiler quality plates, certain grades of coated sheets, prime quality tin plates, API grade large dia pipes etc. is yet to stabilize. This necessitates imports of steel.

In order to provide adequate momentum to economic activities in the country, the new manufacturing policy aims at increasing the share of manufacturing in GDP (which has remained stagnant at 15-16% since last 3 decades) to 25% by 2022. For this, various initiatives have been taken by the Government of India, the most significant one being 'Make in India'. A range of steps taken by GOI towards ease of doing business will aid the manufacturing activities and put India as a manufacturing hub on the world map.

During 2015 and in the first half of 2016, Indian steel industry along with world steel industry faced a number of challenges. Some of these include significant slowdown in Chinese economy with declining domestic steel demand, global excess capacity, increasingly cheaper imports from China, South Korea and Japan, sharp decline in steel prices especially import prices from China which declined by about 45-50% in 2015-16, financial stress in the steel sector and eroding profit margins of steel companies. Global overcapacity has driven predatory exports from key steel producing countries adversely impacting the domestic sector in other countries including India. Prices registered steep fall upto January 2016 but firmed up post introduction of MIP on carbon steel.

Due to continuously falling steel prices Non Performing Assets (NPAs) in steel sector have almost touched 31% of borrowings from banks. Declining profits of Indian steel companies have been associated with rapidly rising debt burden at higher interest rates due to large scale borrowings to fund their modernization cum expansion programmes. Other key policy issues affecting the Indian steel sector inter-alia include iron ore mining ban in 2011, de-allocation of coal block in 2014, procedural delays in environment & forest clearances, priority change in allocation of natural gas to sponge iron units, increase in railway

freight rates, increase in mineral taxes (royalty, DMF, NMET, clean energy cess etc).

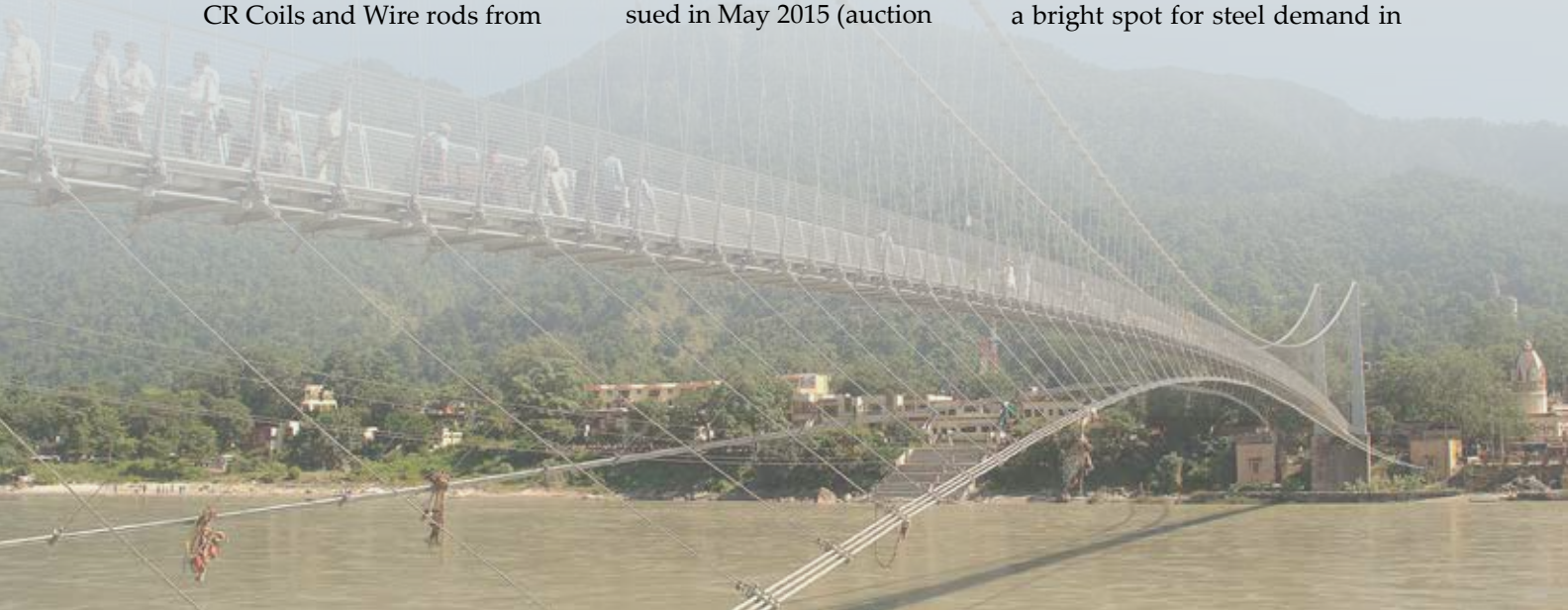
Future Outlook

Looking into the stressed situation of the domestic steel industry, Government. of India has already taken various measures and initiatives some of which inter-alia include:

- Increase in peak rate of CD on steel to 15%. Effective rates: 10-12.5%.
- Anti dumping duty on certain grades of stainless steel imposed and provisional anti-dumping duty notified on import of HR Coils, Plates, CR Coils and Wire rods from major exporters.
- Safeguard duty on HR Coils of 20% minus any existing dumping duty extended up to Sep., 2016. Thereafter, phased reduction to 18 % (till March'17), 15 % (till Sep.'17) and 10% by Mar'18.
- Govt. notified MIP on select steel products.
- MMDR (Development & Regulation) Amendment Act 2015 & rules issued (Jan'15). Act envisages iron ore allocation for specified end use / also through auction by State Govt.
- Major notified minerals incl. iron ore auction rules issued in May 2015 (auction in process). Auction of coal blocks also in progress.
- RBI introduced some policies for relief to the stressed assets by means of 5: 25 policy and S4A.

These measures have provided some temporary relief to the domestic steel producers. However, there is a need to ensure level playing field with trading partners with mature steel industry such as Japan and South Korea for bilateral / regional trade agreements. Fixation of import tariff levels for steel should be based on global oversupply/slowdown in major steel nations, erosion in domestic cost competitiveness due to raw material/energy price dynamics and cost of capital & infrastructure constraint. Free Trade Agreement (FTAs) / Preferential Trade Agreement (PTAs) should factor global competitiveness / possible trade distortion.

Recent increase in raw material prices, particularly coking coal prices, has again put pressure on the domestic steel producers, with cost escalation in excess of $200 per ton as compared to the previous quarter. Given the unprecedented volatility in international markets, and also due to the fact that India continues to be a bright spot for steel demand in



a global scenario of overcapacity, it is expected that the pressure on domestic steel industry is likely to remain in the foreseeable future. The recent trade remedial measures are expected to provide a level playing field to the domestic steel producers but in order to turn domestic steel sector competitive and support it in the immediate future to tide over the volatile market conditions, the domestic industry would require support in terms of low input & energy costs, raw material security, freight rate rationalization and adequate tariff protection from cheap imports.

Way forward

While there is a quantum capacity addition in the steel sector that will necessitate construction of new steel plants and expansion of the existing ones on a scale, which is unprecedented in India. This growth, although will provide the Indian steel industry the opportunity to grow on a large scale and prosper, however, throws up big challenges for the steel companies. The major ones are as follows:

- Land & Infrastructure
- Raw Material
- Availability of water & power
- Environmental issues
- Construction and Equipment supply
- Investment Capital
- Trained Manpower

While the growing Indian economy on one hand will provide ample scope of increasing domestic steel consumption; on the other hand the steel industry would also require massive development in the Research and Development activities in areas including production processes, product development and wider usage of steel in various sectors & segments. The Government is taking all possible steps to remove bottlenecks in the growth of steel and metal industry in India. Whether it is raw material security, dumping or excessive imports, corrective steps have been taken to improve the situation.

Today, India is a rapidly growing economy among major world economies with a growth rate of 7.6% in the last fiscal. Along with this, next to China, India is fast emerging as the centre of gravity for steel both in terms of production and consumption. India is the third largest producer and consumer of steel with an expected growth in steel demand of 5.4% during 2016 and 5.7% during 2017 as per World Steel Association (WSA) estimates.

The steel industry as a whole has an important role in reducing the cost of production. Use of low grade raw materials for production of good quality steel in the most economic way will be the future. Greater emphasis on beneficiation and alternate routes of steel production will have to be explored for being able to use these low grade raw materials which are available in abundance. The policy makers are already initiating various steps for improving the health and future of Indian steel industry. The domestic steel makers must come forward in realizing huge potential that growing India presents so that they are ready with enriched and better steel to cater to strengthening the nation's growth.

ARTICLE

Opportunities & Challenges in Steel Sector

P Madhusudan
CMD, RINL

Steel is the backbone for development of any economy and its consumption is a barometer of the state of development of a nation. The modern era has witnessed many innovations, but no material has replaced steel so far.

The Indian steel industry is on the path of decent growth, as the country is graduating from a low income country to an upper middle income country. India today has emerged as the 3rd largest steel producer in the world. The steel sector contributes nearly 2% to the country's GDP and employs over 6 lakh people. The per capita consumption of steel in the country has risen from 51 Kg to about 62 Kg during the last five years. With the steel consumption in China expected to moderate at around 3%, India is likely to emerge as the fastest growing steel consuming nations in the world.

Opportunities for Growth

The Boston Consulting Group (BCG) has observed that the real GDP of the country grew at 7 to 7.5% during the last decade and the steel consumption grew by around 8% in the same period. Over the next decade, assuming a GDP growth of even 6%, the likely growth of steel consumption is estimated at 7%. This will transform to finished steel consumption of about 170 million tonnes. Further, India's current per capita steel consumption is well below the world average of 208 kg. The rising income levels are expected to make steel affordable and there is vast scope for increasing the consumption. India's urban population is around 33% which is expected to rise to 40% by 2030.

The rural steel consumption is also very low with consumption largely concentrated in urban areas, which provides vast potential for growth. India's richness in mineral resources, particularly iron ore, will adequately support its anticipated growth. The demographic profile of the country is very favourable, with the presence of a large pool of educated work force, which can be leveraged to the advantage of the industry.

Challenges

However, there are many challenges such as:

- Inadequate Infrastructure & Logistics
- High Capital Costs
- High cost of Power & Fuel
- Non-availability of Quality Coking Coal
- Exiguous Research & Development facilities
- Increased imports due to slowdown in China's demand
- Enhancing Operational Efficiency
- Reduction of Carbon footprint
- New Product Development

which dictate the need for a comprehensive address to realize the aspiration of the progressive growth.

Key Enablers

It calls for collective efforts both from the industry as well as the policy makers and the key enablers would be:

- Technology augmentation and rapid expansion of production capacity;
- Raw material securitization and development of a strong ecosystem.

- Augmentation of power, water, logistics and human resources to meet the anticipated growth.
- Driving the demand drivers for growth of steel.

Technology

Technology in future would be a "key differentiator" and it is time for the Indian steel companies to transform them. India is still dependent on the technology suppliers from abroad and therefore the steel companies have to come together to synergize their efforts for developing appropriate technologies for production of high end value added products to meet the ever-changing preferences of the customers.

Further, recent technological developments are increasingly challenging the dominance of steel, particularly in Aviation and Auto sectors. The current trend is towards lightweight materials such as aluminum and carbon. The Indian steel companies are therefore faced with the imminent challenge of maintaining the superiority of steel, which would necessitate technological up-gradation through intensive R&D efforts for high quality steel. Some of the thrust areas for new technology to produce special steels could be Advanced High Strength Steels for infrastructure applications; Micro Alloyed Steels for high end applications, Medium Carbon Low Alloy Steel for Aeronautical applications, etc.

The Indian steel industry is on the path of decent growth, as the country is graduating from a low income country to an upper middle income country. India today has emerged as the 3rd largest steel producer in the world. The steel sector contributes nearly 2% to the country's GDP and employs over 6 lakh people. The per capita consumption of steel in the country has risen from 51 Kg to about 62 Kg during the last five years.

This calls for focused impetus to set up adequate manufacturing facilities in the country. Entrepreneurs can make a big difference in this space and can profitably harness this potential. It would also force the west to create their facilities in the country, resulting in technology penetration, competitive prices and better value addition at home. Moreover, a large amount of spares required for the steel industry are still being procured on proprietary basis due to lack of manufacturing capability in the country. This is a high potential domain with wonderful opportunities. This would open new areas of services and products for the "Make-in-India" initiative as well, for which the Government is lending a great deal of support.

Raw Materials

Raw materials is another major challenge. Cost is the main driver for competitiveness and around 60% of the steel production cost is on account of raw materials. The plants which were set up 5 to 6 decades ago were able to secure raw material deposits in the form of mining leases. However, new generation plants are not able to have the same advantage and have to source the raw material at very high prices from the market. Appropriate measures are therefore required for such plants to ensure availability of the key

raw materials at a reasonable cost to ensure competiveness in the industry.

A positive development of the raw material crunch is that it has enabled shift in focus towards low quality materials such as low grade ores and gainful utilization of these materials through beneficiation & pelletization. The Govt. is also offering incentives for establishing such units. The long term sustainability and competiveness of the steel industry will largely depend on gainful utilization of low grade ores & fines in future.

The Indian steel industry is highly dependent on imports for coking coal. Intensive research and investment in beneficiation of Indian coal is essential to substitute imported coking coal. Economic exploitation of deeper coal mines, underground mining and introduction of state of the art technology in exploration, needs to be pursued with all seriousness to enhance the coking coal production to meet the growing demand. It makes great sense for development of responsive technologies for utilizing indigenously available coal.

Demand Drivers

With regard to markets, India's domestic steel demand is primarily driven by Construction & Infrastructure, Capital goods and Auto & Manufacturing sectors. Construction & Infrastructure are the largest segments with a share of around 55%; followed by Manufacturing & Engineering @ 21%; Automobile & transport @ 15% and Capital goods @ 9%. Though the Construction sector accounts for almost 35% of India's steel consumption, the per capita use is only around 31 kg compared to an average of 111 kg of emerging economies. Therefore, there is huge scope in this segment.

The anticipated increase in urbanization would provide adequate opportunities to accelerate the steel demand with India's housing sector holding substantial potential. The steel to cement ratio in the country is far lower at 0.3 against international levels of more than 1, providing adequate scope to improve the steel consumption. A higher steel to cement ratio would also help in terms of better safety improving resilience to natural calamities such as earthquakes. "Rural housing" targets to achieve 1 crore dwelling units in the next 3 years and usage of steel based structures will provide huge impetus to the demand of steel. "Housing for all" Mission by 2022 will also lead to higher consumption of steel.

The massive investment of 1 trillion US$ in Infrastructure sector planned by the Govt. in the 12th Five Year Plan will further boost the steel demand and the opportunities have to be leveraged adequately. The "Smart Cities Mission" will also, inter-alia, provide core infrastructure, which will greatly promote the utilization of steel for development.

The Industrial sector is the 2nd largest consumer in the country after Construction with Capital goods, Manufacturing & Automobiles being the major segments. The National Manufacturing Policy envisions a share of 25% in GDP over the next decade. This would be a prominent driver, as it has a cascading effect on related manufacturing industries.

India is the 6th largest producer of Automobiles in the world and has the 5th largest passenger & commercial vehicles market. The Automobile sector contributes almost 7% of GDP and offers attractive opportunity to drive the steel consumption because of its capability to become a global manufacturing hub for automobiles, particularly small cars. Though India is the largest market for small cars, less than 10% of the small car production is done in the country. India can easily aspire to become a leader in this segment, given its high skill-low

cost labour and favourable geographical location.

Government Support

The future of the Indian Steel Industry is therefore bright. There is an urgent need for a comprehensive support system by the Government. The interest rates in the country are high when compared to western economies, resulting in higher cost of funds. Considering the significance of the steel sector for the economy, it is imperative to introduce optimum amortization terms to enable the industry to have a healthy bottom line. This will also help in generating surpluses for future investments for steel capacity addition within the country for sustainable growth of the nation.

Further, the Government also needs to support the industry in the form of:

- Strict enforcement of quality control orders for steel products;
- Maintaining optimum Customs Duty on import of steel;
- Imposing Safeguard/Anti-dumping Duty on steel products to reduce imports;

The Automobile sector contributes almost 7% of GDP and offers attractive opportunity to drive the steel consumption because of its capability to become a global manufacturing hub for automobiles, particularly small cars. Though India is the largest market for small cars, less than 10% of the small car production is done in the country. India can easily aspire to become a leader in this segment, given its high skill-low cost labour and favourable geographical location.

- Exclusion of steel products from the purview of FTAs and RECP.
- Exemption from levy of Energy Cess on coal and coke.
- Balanced logistics portfolio in view of the high domestic transportation costs.

Industry Imperatives

The steel industry, on the other hand, have to dovetail their efforts to improve their operational efficiencies in terms of techno-economic parameters, such as Specific Energy Consumption; Raw material consumption; Productivity; Waste re-cycling and waste energy recovery, by benchmarking these indices with the best in the world. The various processes have to be re-oriented through adoption of "Best Available Technology" and "Best Available Practices".

The time has come when the steel companies have to transform themselves from "niche" to "multi-niche" operators. This transformation is possible only through innovation and calls for a coherent effective strategy through R&D. Synergies for technology exchange need to be developed by meaningful R&D interventions by stepping up the R&D expenditure.

Requirement for clean steel is also of great relevance today to reduce the carbon footprint. The development of environmentally efficient processes and augmentation of renewable energy for reduced emissions and maximization of re-cycling of wastes have to assume center stage for the industry to manage its growth profitably. This will also support the well-balanced climate plan put forward by India during the COP21 Convention held recently in Paris.

I am confident that focused efforts for technology augmentation, attracted access to raw materials, enhancing operational efficiency, benchmarking, global supply network and improving steel consumption would go a long way in strengthening the Indian steel industry's capability for sustained growth and emerge as front-runner in the global industry.

ARTICLE

Iron Ore Resources in India – Exploitation Through Beneficiation & Pelletization and its Challenges

Malay Chatterjee
CMD, KIOCL

Iron Ore Resources

India is the world's third-largest producer of crude steel (up from eighth in 2003) and is expected to become the second-largest producer by the end of 2016. The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. Consequently, the steel sector has been a major contributor to India's manufacturing output.

India is rich in natural resources. The country produces as many as 87 minerals including fuel, metallic, non-metallic and atomic minerals. Among the minerals, reserves of coal, iron ore and bauxite are vast and will last decades. As per United Nations Framework Classification (UNFC) of mineral resources, total resources of iron ore in the country is around 28.52 billion tons (National Mineral inventory) as on 01.04.2010. Hematite and Magnetite are the most prominent of the iron ore found in India.

Of the estimated 17.88 billion tons of hematite available, 8.09 billion tons are under 'reserve' category and 9.79 billion tons under 'remaining resources' category. Out of 10.64 billion tons of magnetite available, 0.02 billion tons are under 'reserve' category and 10.62 billion tons under 'remaining resources' category.

Magnetite resources are not being exploited as these are mostly in eco-fragile areas of the Western Ghats. Therefore, these would remain untouched till these can be considered for mining.

Around 94 % of hematite resources are confined in the States of Odisha (33%), Jharkhand (26 %), Chhattisgarh (18 %), Karnataka (12 %) and Goa (5 %). Magnetite resources are distributed in the States of Karnataka (73 %), Andhra Pradesh (14 %), Rajasthan (5%) and Tamilnadu (5%).

The average consumption of steel in India is about 60 kg as against the world average of 222 kg and in Rural India it is close to 11 kg, there is tremendous scope of development and expansion of Mining and Steel Industries in India, in future.

Need for Beneficiation & Pelletization

The production of Iron ore and steel has significantly expanded in recent years, particularly in newly developed countries such as China and India. This has resulted in a large increase in the demand for iron ore. If we look at the life indices of Iron ore, the very long term forecast of Iron and Steel production and the consequent demand for iron ore made on optimistic assumptions shows that the steel industry can remain comfortable with domestic iron ore supplies, however, the resources of high grade lumpy ore would have exhausted much before the newly set Plants or those which are being planned to be set up.

Value addition to the Iron ore fines through various activities such as Beneficiation & Pelletization is the need of the hour which will generate economic activities as well as employment within the country and will also be economically beneficial to mining communities in the long run. Incentives have to be given for adopting latest technologies for direct use by agglomeration of fines in the form of pellets or sinters as fine forms considerable part of Iron ore resources.

India is also the largest producer of sponge iron. The uses of pellet in Blast Furnace in India is absent whereas in technologically advanced plant, the preferred burden in Blast Furnaces is a mixture of Sinter and Pellets with minimum dependence on lumps. It is obvious that increase of Steel production at the desired pace cannot sustain without securing availability of required raw materials. This calls for utilization of low grade ore and fines / slime.

The process of Beneficiation & Pelletization of low grade iron ore and slime will play a critical role in conserving good quality iron ore reserves. Ministry of Mines has already lowered the threshold values of Fe in Hematite ore from 55% to 45%. This category of ore would be separately stored in the mines and will require crushing and grinding prior to beneficiation.

Low grade iron ore, iron ore fines and iron ore tailings/slime accumulated over the years at mine heads and generated during the existing washing processes, need to be beneficiated to provide concentrate of required quality to the steel plant.

However, the concentrates is too fine in size to be used directly in existing steel making processes. To utilize these fines, Pelletization is the only alternate available. Pelletiziation transforms very fine-grained iron ore into balls of a certain diameter, known as Pellet, which is suitable for blast furnace and for direct reduction.

As for as Iron ore pelletization is concerned India is set to achieve multi-fold growth in achieving ambitious target of 126 million tons of steel production in 2016-2017. This is to the increasing demand for steel in the developing domestic market. India's pellet production capacity is estimated to reach over 100 million tons per annum, which is almost double the country's production capacity of 2012-13 @ 49 mtpa.

India is rich in natural resources. The country produces as many as 87 minerals including fuel, metallic, non-metallic and atomic minerals. Among the minerals, reserves of coal, iron ore and bauxite are vast and will last decades. As per United Nations Framework Classification (UNFC) of mineral resources, total resources of iron ore in the country is around 28.52 billion tons (National Mineral inventory) as on 01.04.2010. Hematite and Magnetite are the most prominent of the iron ore found in India.

As of today, odisha is the most preferred destination for setting up a pellet plant owing to both, good availability of high grade iron ore fines and its strategic location. Chhattisgarh is also a strong contender location wise which accounts for India's highest steel production from secondary manufacturers.

In our country, pellet is largely used in DRI units with a small portion in Blast Furnaces, although, with reducing availability of high grade iron ore lumps, blast furnaces are gradually increasing their pellet burden. Industry experts believe that pellet uses in blast furnace will increase up to 25-30% from current level of 10-15%.

KIOCL is the only Public Sector Unit which took up the beneficiation technology in enriching the magnetite ore in the Kudremukh Mines way back in 1976 followed by Pelletization with

establishment of the Country's first State owned Pellet Plant in 1987 to promote Pelletization out of low grade iron ore. The production capacity of Pellet Plant was further enhanced to 3.5 mtpa.

KIOCL is operating the Pellet Plant at Mangalore, which is one of the premier Straight Grate Iron Oxide Pelletization Plants having facilities like Roller Press, double-decker roller screen and dedicated grinding plant for grinding of additives like Bentonite, Limestone & Coal.

Challenges Faced in Mining Sector

India's multi-billion dollar mining industry faced a "tough" 2016 amid weak global markets, even as the government plans to fast-track auctions and check illegal mining with satellite-based surveillance

India's steel production expected to rise 180 million tons by 2020 and to fulfill this demand, approximately 300 million tons of iron ore will be required. To meet the demand and supply, Indian Mining Industry is facing numerous challenges in Economic, Environmental and Social issues.

The delay of commissioning of mining projects due to difficulties in getting statutory approval in time from statutory authorities.

The production of acceptable end product from low grade ore is the biggest challenge faced by the mining industry due to limitation in the beneficiation technology.

The mines are located in the remote areas. Infrastructure and ore transportation facilities to the destination are limited. Logistics of ore transportation is a major challenge faced currently in the mining sector.

A number of policy measures are being worked out to revive the mining sector that saw earnings take a beating due to softening prices and subdued demand, but experts do not see any imminent revival without a global commodity market recovery. A few major steps have been taken by the government to revive the industry includes passage of the Mines and Minerals (Development & Regulation) Act-2015 and initiating the process for starting auction of mines bearing minerals such as iron ore, bauxite and limestone.

The mining industry is also facing problems to access water and waste minimization.

India is spending about 0.5 percent of global expenditure on exploration, which is very low, so our mineral resource base is not increasing to start new mines as compared to various countries like Australia, USA, China etc., though they spend 5% to 10%.

The mining industry is not only to produce the mineral but to follow the safe working practice to ensure safety of the workers, providing relief and rehabilitation to the affected people, education and training of people, providing health care facilities to the community.

Focus to Overcome the Challenge in Mining Sector

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A few major steps have been taken by the government to revive the industry includes passage of the Mines and Minerals (Development & Regulation) Act-2015 and initiating the process for starting auction of mines bearing minerals such as iron ore, bauxite and limestone.

Introduction of Mine Development and Production Agreement (MDPA) as a part of mining lease deed will provide path for regulating the production as well as dispatch of minerals statutory payments to government.

The government also notified National Mineral Exploration Trust (NMET) to encourage mineral exploration and followed up on various rules and guidelines that can help in improving the ease of doing business for miners.

Apart from that to sustain the challenge in the mining sector, there is need to look into some of the issues like

a) Grant of mining lease on commercial basis for value addition

b) Speedy approvals and clearances for the mining projects

c) Single Window Clearances

System for approvals required to start the mining project.

d) Simplification of procedure for obtaining Environment Clearance and Forest Clearance for the project.

e) Forest Rights Act-2006 should be applicable only to tribal areas

f) Increase mineral resources/ reserves through scientific and systematic exploration of new mineral bearing potential areas.

Maximize resource utilization through

- Adoption of world's best practices in mineral beneficiation
- Utilization of low grade ore
- Enhancing the mineral resources by carrying out extensive exploratory activities.
- Optimum utilization of available mineral resource
- Large-scale scientific mining
- Strengthening of Indigenous industry for manufacturing of mining equipment and machineries.
- Introduction of Special Mining Zone and area so identified shall be out of the purview of forest act.
- Company should allocate adequate funds for local area development as Corporate Social Initiatives.

To sum up, Indian mining industry is starting to experience phenomenal changes driven by regulations and auction framework introduced for granting mining concessions to enhance transparency. Under the revenue sharing model, the states have the opportunity to be a collaborative partner. There are some strategic imperatives that still need to be addressed for achieving success and overall sustainable growth.

The market for minerals will move in tandem with the demand for finished products. As there is interplay of global and local demand supply factors, domestic demand will be a key drive for the minerals.

As mining is a long term activity and takes time to fructify, expecting new regulations to immediately rejuvenate the sector will be misplaced optimism. However, the new acts definitely go a long way to untangle and bring in transparency in the sector.

Looking at India's current political, social and economic environment, we must acknowledge that this is a unique time in history of our nation that our country is at an- inflexion point and it is now for us to make good use of this opportunity. Domestic and International expectation from the new Government are high and the challenges will be to deliver on the same. The government has made a good beginning and announced several notable initiatives in the field that would help reboot economic growth.

ARTICLE

Development of **Manganese Ore Industry in India**

Mukund P. Chaudhari
CMD, MOIL

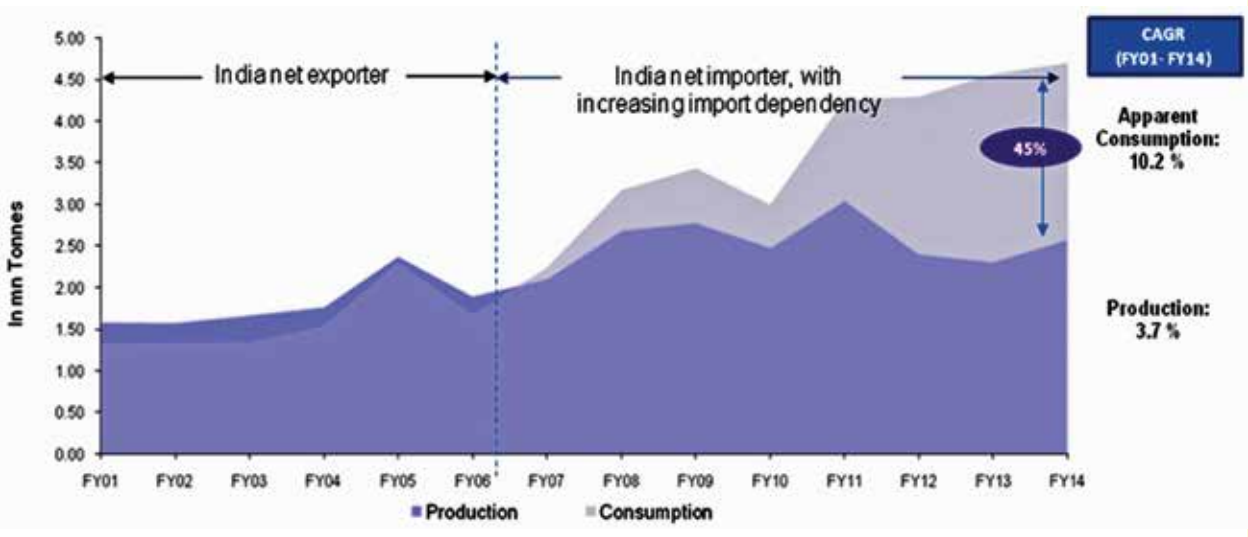
World over, Manganese is the 4th most used metal in terms of tonnage after Iron, Aluminum and Copper. Manganese improves strength, toughness, wear resistance, hardness and workability of steel and also acts as de-oxidiser and de-sulphuriser. No satisfactory substitute of Manganese has been identified in steel making process which combines its relatively low price with outstanding technical benefit.

About 95 % of the world's production of Manganese Ore is used directly or indirectly in steel making and other metallurgical usages. The remaining 5% is used by chemicals, paint etc. Manganese ore and Alloy Industry have historically derived demand from Steel Industry and hence is directly related to the volatility and movement of global Steel Industry. World demand for Manganese ore depends directly on the outlook of Steel Industry.

The Indian Steel Production has been witnessing an increasing trend in the past few years. The competitive opportunities are being seen in the steel intensive industries such as infrastructure development, construction, automobiles, etc. These industries have demonstrated huge growth potential for steel in the domestic market.

Global steel production has increased from 1220 MT in the year 2009 to 1600 MT in the year

Managese: Demand Supply Gap



2015 and the global production of Manganese Ore has increased from 35.42 MT in the year 2009 to 56 MT in the year 2015. The production growth of Manganese ore was primarily driven by South Africa, China and Australia. As against this Indian production of manganese ore reduced from 2.61 MT to 1.97 MT over the same period even though crude steel production increased from 63 MT to 89 MT.

In India, however, the usage of Manganese Ore has grown from about 3.0 MT (FY09) to 5.40 MT (FY15) including for consumption in production of Ferro Manganese and Silico Manganese meant for exports creating a large demand supply gap and making India a net importer with increasing import dependency. (Graph-I). India imports have increased from 0.85 MT (FY09) to 3.17 MT (FY15) and 2.21 MT (FY16). As against this exports have reduced from 0.205 MT to almost nil.

Although the production of manganese ore in the country is on decline, the production of value added products namely, ferro-manganese and silico manganese has witnessed substantial increase. The higher demand of manganese ore for this sector is met through imports. The country is now the second largest exporter of silico manganese in the world.

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As per the National Steel Policy, the capacity of steel production is to reach 300 MT by 2030. India's per capital consumption of steel is 59 Kg. against the world average of 225 Kg. which indicates that per capita consumption of steel is distinctly low in India and the Govt. has set an ambitious target of nearly doubling the domestic per capita consumption to 120 Kg. by 2020. This means there is tremendous possibility of increase in demand of steel of the country, which in turn will increase the consumption of Manganese Ore substantially creating demand and supply gap.

Without considering the requirement for exports, at G.D.P. growth of 7.5% expected steel production is of about 265 MT and the requirement of Mn Ore will be 8 million tons by 2030 and MOIL is planning to produce 3 mln. Tones.

The average grade of ore produced in India is low which necessitated import of High grade Mn Ore.

If requirement for exports included then the Mn. requirement expected to be about 14 MT by 2030.

Mn. Ore	(In Million Tones)									
Year	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Production	2.16	2.47	2.61	2.42	2.85	2.35	2.32	2.57	2.27	1.97
Imports	0.28	0.69	0.85	0.8	1.3	1.96	2.33	2.179	3.17	2.22
Exports	.157	.21	.21	.29	.12	.075	.072	.066	.011	.004

To meet the demand in long term

- Manganese ore production will have to be raised to fully meet the domestic demand by enhancing output from the existing mines and by opening additional virgin deposits. The industry can raise supply of manganese ores by acquiring mines overseas.
- India is deficient in high grade, low phosphorous manganese ore reserves. This necessitates imports of high grade ore to blend with domestic quality of Mn ore for production of Mn Alloys.
- Focused attention is needed to ensure higher rate of recovery of manganese and improve the quality of the ores by engaging in beneficiation and

sintering processes.

- Exploration agencies to undertake extensive drilling to identify new ore deposits in higher depths. Deep-sea nodules can be a potential resource for manganese in the future, if good grade of resources are established.

Taking in to consideration the huge demand supply gap, and in order to achieve the target of 3 mln. tones by 2030, MOIL has embarked on various projects such as deepening of its existing shafts, sinking of new shafts in existing mines and taken up development of newly acquired lease areas in Maharashtra & Madhya Pradesh.

It is worthwhile to mention here that MOIL, being a PSU has been notified under Section 4(1) of MMDR Act, 2015 as an agency for carrying out exploration of minerals in any part of India which in future will help the Company considerably for exploiting the unknown areas and for establishing manganese ore deposits for its diversification, expansion and development of natural resources so as to further expand its resource base, as a long term strategy.

In this regard MOIL has signed Memorandum of Understanding with Madhya Pradesh State Mining Corporation Limited and Director of Geology and Mining, Government of Madhya Pradesh for conducting the exploration and prospecting of ores in Madhya Pradesh. If availability of ore is proved in any area, the same will be reserved for the JV Company to be formed between MOIL and MPSMCL.

Historically, international prices for manganese ore have been volatile and subject to wide fluctuations, depending on the changes in demand and supply scenario, market uncertainties, the related cyclicality in the steel industry etc. Domestic producers are required to keep watch on the prices of international market since major global producers of manganese ore are dominant players having very high capacity with more mechanisation and are supplying ore to Indian ferro alloy producers.

This MoU will help MOIL in a long way to sustain and expand the Manganese ore business to meet the long time demand supply gap of the country to some extent.

Historically, international prices for manganese ore have been volatile and subject to wide fluctuations, depending on the changes in demand and supply scenario, market uncertainties, the related cyclicality in the steel industry etc. Domestic producers are required to keep watch on the prices of international market since major global producers of manganese ore are dominant players having very high capacity with more mechanisation and are supplying ore to Indian ferro alloy producers. Thus fluctuations in the prices of the imported ore and supply demand position in domestic market drive the pricing decision to a large extent.

In order to become competitive with import, the domestic producers in India need to adopt outsourcing for manganese mining to cut down cost and also the industry needs parity in tax structure with imports.

MSTC makes giant leap to **e-commerce sector**

B.B. Singh
CMD, MSTC

MSTC, the erstwhile canalizing agency for scrap continued to deal only in scrap upto March, 1998 even after decanalisation in 1992. In 1998-99, the Company, after seeing the market for scrap dwindled and its inability to perform, decided to expand its business activities. It primarily dealt in raw materials required for steel industry as also Naphtha for Petrochemicals industry, all on back to back basis. To continue in the business of international trading itself, it was decided, therefore, essential for the Company to build up presence in small sectors where the business partners will not be financial giants.

MSTC was incorporated in 9.9.1964 and commenced its business since 12.04.1965. MSTC had changed its role during last 52 years of existence. From export agent to import canalizing agency and in the wake of liberalization had come out from the protective region and starts doing business on their own without protection from Government.

During last 52 years, barring one year, MSTC had always made profit and all employees of the Company had shown their commitment to achieve the goal. On 28.2.1992 MSTC's activities were decanalised and due to Government's policy, import of MSTC's sole item, i.e., scrap reduced since 1991-92 but at that time domestic trade activities were strengthened. Corporate Plan was drawn at that time and it was requested that MSTC's core area of activities is steel-related items so the Company could not diverse its activities in other area and focus area was always steel industry. Like any other organization seeking to rectify a serious problem, the Company then decided to draw up a strategic revival plan with the clear intent of making a 'sustainable' one.

MSTC today rendering e-commerce services to PSEs, Central Government / State Government and Private sector companies. MSTC has contributed immensely in Government flag ship projects on distribution of Natural resources in the country through their e-commerce services.

MSTC at this juncture thought of investing in equity of manufacturing Company to take over their marketing jobs and to provide e-commerce services .

Future plans of MSTC

A. Shredding Plant – to start Scientific Recycling in the Country

MSTC has embarked upon setting

up of mechanized Shredding plant to bring a whole new method of processing of scrap from the End of Life Vehicles (vehicles like two-wheelers, cars, buses and others, which after being used for around 15 years or so reach the end of their useful life) and other white goods like air-conditioners, refrigerators, which after usage for a long period of 10-15 years become unviable for further operation. MSTC has been continuously working with Ministry of Road Transport and Highways(MORTH), Ministry of Heavy Industries(MHI), Society of Indian Automobile Manufacturers (SIAM) etc. for implementation of a law for compulsory shredding of End of Life Vehicles. It will reduce the dependence on present import of scrap of 5-6 million tonnes of Shredded Scrap in the country, consequently reduce the foreign exchange outgo. In addition, the auto grade steel of vehicles will be recycled into a similar grade of steel and not be used in making a finished product of inferior quality.

The major concerns for setting up the shredding plant as on today is the bulk availability of raw materials at economical rate. Presently Government of India is mulling 'Scrappage Policy' with a scheme of incentivizing shredding of Motor vehicles in the form of subsidy/excise duty relief and additional discounts by vehicles manufacturer. This may in line with 'Cash for Clunkers' which is in vogue in several countries in Europe and USA.

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Almost all technology providers have suggested that FERROUS SHREDDED SCRAP that will be produced by shredding plants will be more than 99.5% pure.

MSTC has signed Joint Venture agreement with Mahindra Intertrade Ltd. to set up a Shredding plant in India. MSTC has planned to set up collection centers of condemned vehicles before the setting up shredding plant .

B. MSTC Metal Mandi (M3)

MSTC has launched a virtual market place M3 for the Steel Sector where both Ferrous and Non Ferrous items are displayed by sellers and number of interested buyer visit the market for procurement of materials from the market palce. 'M3' has already become the largest initiative among all internet- based inventions and MSTC has plan to popularize the 'M3' in rural India.

C. Draft Policy for Ferrous and Non Ferrous Scrap Metal Recycling in India

MSTC has taken initiative to put up to Government a Draft Policy. Organised and efficient metal scrap recycling provides immense potential for conservation of energy and natural resources.

MSTC's vision is to become leading player in environment sound Metal Recycling and provide raw material security to domestic industry and also to be associated with on shore/ offshore Government resource allocation in a transparent manner.

MSTC always believe in the following:

- Change in mindset
- Complete customer satisfaction
- Employee empowerment
- Time based competition
- Broad banding of product basket

Steel Usage and Relevance of HSCL in Steel Sector

Moyukh Bhaduri
CMD, HSCL

Hindustan Steelworks Construction Limited was incorporated in 1964 with a mandate for implementation of Integrated Steel Plants in the Country. During the subsequent years, the Company contributed immensely in construction of almost all the Steel Plants under SAIL and Visakhapatnam Steel Plant under RINL. Till 31st March 2016, the Company executed orders worth Rs.7158 Cr. in the Steel Sector which includes mainly 4 MT and 7 MT expansion of Bhilai Steel Plant, 1.7 MT, 2.5 MT and 4 MT phases of Bokaro Steel Plant and modernization packages of Durgapur Steel Plant. At present, HSCL is engaged in implementation of Capacity Expansion Packages of SAIL Steel Plants including 4 major Civil and Structural Packages of Bhilai Steel Plant. Not relenting efforts in the Steel Sector, the Company diversified successfully in a wide range of Infrastructure Sectors through the length and breadth of the country to attain sustainability. Today, HSCL is an ISO 9001-2008 Company and its capabilities cover almost every field of construction activities.

As a CPSU under the administrative control of Ministry of Steel, HSCL has always felt the necessity and responsibility to increase the usage of Steel in the country. Apart from executing industrial structures with extensive use of steel sections, the company endeavors to take up implementation of steel intensive building structures for promoting steel usage.

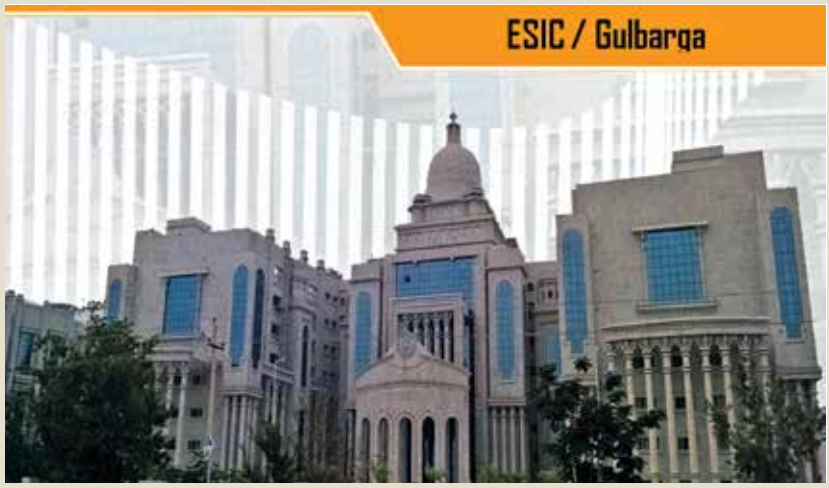
The main considerations behind steel intensive buildings are:

- Greater stability and seismic resistance.
- Higher space availability.
- Lesser construction time.

Some of the major steel intensive projects undertaken by HSCL are as below

1. Ministry of Youth Affairs & Sports, Govt. of India has an ambitious scheme of putting up small Indoor Sports Halls at block level across the country under RGKA to promote sporting activities in remote areas. HSCL has designed such Indoor Sports Halls of an area of around 4000 sq.ft. each using pre-engineered steel frames and roof truss. The roof sheeting is by way of coloured coated steel sheet. Due to the large number of units to be made nation-wide, a total steel consumption of about 10,000 tons is envisaged in the project.
2. HSCL's design of the "Anganwadi Centres" in the state of Odisha has attracted the attention of the State Govt. because of its low cost, attractive design and ease of construction. The child friendly structures are designed with pre-fabricated steel and other materials to achieve a fast response. The project has been initiated by the Women and Child Development Deptt., Govt. of Odisha in the District of Puri & Khurda. Later on, the model will be extended all over the State.
3. HSCL has signed an Agreement with Commissioner, Berhampur Municipal Corporation (BeMC), Berhampur, Govt. of Odisha for Construction of 596 new Dwelling Units (DU) and up-gradation of 459 DUs in 26 slum cluster Ph-VI for Berhampur Municipal Corporation under Rajiv Awas Yojna at Berhampur which involves 1520 MT of Steel.

4. HSCL in collaboration with INSDAG in Eastern India has designed and implemented the uniquely designed building with a frame-work of structural steel. Around 562 MT of steel has been used in the modern building of 5 (five) storey which has been successfully handed over to INSDAG for making their new office at Kolkata. This building is showcased for upcoming housing infrastructures in the seismic zones including the North Eastern States.
5. HSCL has successfully completed the work of Handloom Marketing Complex at Janpath, New Delhi which is unique in nature with Steel Framed Structure consuming 1410 MT of Structural Steel.
6. HSCL has executed an order from the Govt. of West Bengal for making a chain of food godowns designed out of structural steel. 15 nos. of such Godowns have already been handed over to the Govt. of West Bengal and the same design will be replicated through repeat orders.
7. HSCL's design of pre-engineered buildings/hutments with light steel frame structure and roofing has been submitted to the State Govt. of Meghalaya for their economically weaker sections. Once implemented, the project will provide Affordable Houses to the needy throughout the state, even in remote locations.
8. HSCL has also designed two Stadiums in the South Garo Hills of Meghalaya State using a large quantity of steel fabricated structure for construction in the highly seismic zone. The project is currently under the approval of Govt. of India, Ministry of DONER for funding.
9. HSCL has started executing the project of Shillong International Centre for Performing Arts & Culture (SICPAC) at Shillong, Meghalaya consisting of 3 Auditoriums where a significant steel structures in the form of roofing & support frames of steel are being utilized.



All the projects highlighted above are promoting the use of significant quantity of steel as compared to the traditional RCC frame structures consisting of about 40% steel components.

The upcoming NIPER projects at 3 places, Gandhinagar, Raibareli and Hajipur and Manipur University will also consume a considerable quantity of steel.

Based on the concept of steel intensive cluster and low cost housing, HSCL has sent Expression of Interest for taking up Housing projects for slum rehabilitation and affordable housing for fulfilling Government's vision of 'Housing for All Mission' by 2022. This will also involve considerable use of steel.

Based on credential and exposure in Steel and a wide range of Infrastructure Sectors especially in implementation of Residential and Non-Residential Building Infrastructures, during the recent review meeting by Hon'ble Secretary, Ministry of Steel, Govt. of India, HSCL was given mandate to take up the responsibility of offering quick and economical solution to the "Housing for all Mission", other areas beyond Housing like Sports Infrastructure, Infrastructure in Seismic zones and development of hilly terrains of North Eastern States etc., keeping in view the purpose of increasing Steel Usage in the Country.

For presenting an Approach Paper with different options and technologies on Steel Intensive Mass Housing, a Workshop was organized by HSCL on 26.08.2016 in Kolkata with a number of leading exponents in the related field of Prefabricated/Precast Housing in the Country.

The offered technological options have been taken forward with high

level officials in the rank of Chief Secretary, Govt. of Chhattisgarh, along with Secretary, Ministry of Steel, during a meeting held on 14.09.2016, at Raipur in which a Presentation was also given on Pre-fabricated/ Precast technology. A separate Presentation on the subject was made before Hon'ble Chief Minister of Chhattisgarh on the same day which was well appreciated by him and the State can start venturing into the use of these available technologies.

The matter of enhancement of Steel Usage in various Sectors has also been discussed in detail, during the recent meeting of the Consultative Committee of Ministry of Steel on 05.10.2016, at Bhopal, in presence of Hon'ble Steel Minister, Minister of State, Secretary, MoS, Joint Secretary, MoS and other dignitaries.

Some salient features of the offered technologies are listed below:

Precast Technology

Strengths

- A very rapid construction method, average pace of construction is 8-10 apartments/ day
- Complete R.C.C.Construction, quality of construction is much superior
- Zero wastage of construction material as all elements are manufactured in factories
- Studies show that service life of precast building is atleast 100 years
- Precast buildings are inherently designed to be earthquake and water proof
- Construction is not hindered by weather conditions
- It is a green construction method
- Pre-Cast Technology is best suited for mass affordable housing projects.

All the projects highlighted above are promoting the use of significant quantity of steel as compared to the traditional RCC frame structures consisting of about 40% steel components. The upcoming NIPER projects at 3 places, Gandhinagar, Raibareli and Hajipur and Manipur University will also consume a considerable quantity of steel. Based on the concept of steel intensive cluster and low cost housing...

Pre-Fab Technology

Advantages & features

- Thermally & acoustically insulated building with Doors, Windows & custom built interiors.

Bailey Bridge in Tripura.

- AC, Fan, Light fittings are panel mounted with internal/ external, electrical conduits as per customer choice
- Pantry, Toilets are placed as per requirement with suitable construction
- Floor of Service Areas as per requirement and option of having aluminium chequered plate, PVC flooring or floor tiles
- Highly Energy Efficient, meets ECBC norms
- Relocatable, very fast to commission & decommission
- Can be designed to suit all seismic zones & high wind speeds
- In case of additional floors, since the structure is very light , the dead load on the foundations do not change much

Specialties

- Prefab Buildings meets the need of Green Building Conditions
- Because Prefab Uses only 20% of Water during construction compared to other practices
- Prefabs saves 40% in Energy required during construction thus reduce Carbon–di–Oxide emission
- Prefabs System reduces 70% of construction & Demolition Waste which normally goes to Land Fill
- Prefab Saves 50% construction time, hence 100% Productivity to growth

Steel is preferred in both Pre-Fab & Pre-Cast technology due to the following advantages :

- Steel is readily available in desired or required form
- Steel is ductile hence the best flexible but strong material against high wind & best shock absorber against earth quake
- Development that meets the need of present without compromising the need of the future, focusing upon prefab System using the best re-useable material, steel as the major component of the Building.
- Usage of Steel is substantially increased in case of Prefab & Pre-cast buildings in comparison to conventional building.
- Light Weight
- Faster Construction
- Corrosion Resistance
- Better Thermal Insulation
- Sustainability & Green Technology
- Cost efficient
- Higher Wind Resistance
- Higher Seismic Performance
- National Building Code Compliant

For presenting an Approach Paper with different options and technologies on Steel Intensive Mass Housing, a Workshop was organized by HSCL on 26.08.2016 in Kolkata with a number of leading exponents in the related field of Prefabricated/ Precast Housing in the Country.

Simultaneously, HSCL has taken initiative in exploring options for substitution of RCC structures by Steel structures for Road Bridges. Feasibility Reports for rehabilitation 5 such bridges in the state have been submitted to Govt. of Chattishgarh. Implementation of the proposed schemes is likely to be taken up in phases. Besides this, effort is on to explore the possibilities of using Steel structures for Rural roads also under PMGSY in place of RCC structures.

As a Central PSU under Ministry of Steel, HSCL takes it as one of its prime responsibilities to be a part of the Ministry's initiative for increasing steel usage in the Country.

Indian Steel Industry: A Growth Story in the Making

Ashima Tyagi* **Dr. Sanak Mishra***

Prologue: India's position as a leading Growth engine of the world

In a world filled with heightening uncertainty and growth slowdown, there is unanimity amongst policy makers, economists and analysts worldwide, that India shall exhibit robust growth in the coming years, even surpassing China. Irrespective of the data-set being considered, in terms of real GDP growth, India is forecast to grow at a healthy rate compared to other major economies (Tables 1, 2 & 3).

TABLE 1: Forecasts of Real GDP growth rates & inflation for select economies during 2015-2021 (in %)

	In %	2016	2017	2018	2019	2020	2021
India	Real GDP Growth	7.3	7.5	7.5	7.4	7.5	6.9
	Inflation	5.5	5.1	5.0	4.6	4.5	4.7
China	Real GDP Growth	6.7	6.0	4.2	4.6	4.3	4.4
	Inflation	2.1	2.0	1.6	2.0	2.1	2.4
U.S.A.	Real GDP Growth	1.6	2.3	2.1	1.0	2.0	2.0
	Inflation	1.1	2.1	2.2	1.3	1.7	1.9
Japan	Real GDP Growth	0.5	0.4	0.5	0.6	-0.1	0.4
	Inflation	-0.1	0.4	0.4	0.6	1.3	0.8
Russia	Real GDP Growth	-0.8	0.7	1.2	1.1	1.6	1.5
	Inflation	7.2	5.7	4.6	4.9	4.7	4.7

Source: The Economist Intelligence Unit, Global Forecasting Service, dated November 1, 2016

TABLE 2: Overview of World Economic Outlook Projections for 2016-2017 (%)

	2016	2017
United States	1.6	2.2
Japan	0.5	0.6
China	6.6	6.2
India	7.6	7.6
Brazil	-3.3	0.5
Russia	-0.8	1.1
Mexico	2.1	2.3

Source: International Monetary Fund, 'World Economic Outlook, Subdued Demand Symptoms and Remedies' dated October2016

TABLE 3: Forecasts of Real GDP for 2016-2018 (%)

			Estimates	Projections		
	2013	2014	2015	2016	2017	2018
World	**2.4**	**2.6**	**2.4**	**2.4**	**2.8**	**3.0**
Advanced Economies	**1.1**	**1.7**	**1.8**	**1.7**	**1.9**	**1.9**
United States	1.5	2.4	2.4	1.9	2.2	2.1
Euro Area	-0.3	0.9	1.6	1.6	1.6	1.5
Japan	1.4	-0.1	0.6	0.5	0.5	0.7

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Emerging Market and Developing Economies (EMDE)	**4.7**	**4.2**	**3.4**	**3.5**	**4.4**	**4.7**
East Asia and Pacific	7.1	6.8	6.5	6.3	6.2	6.1
China	7.7	7.3	6.9	6.7	6.5	6.3
Indonesia	5.6	5.0	4.8	5.1	5.3	5.5
Thailand	2.7	0.8	2.8	2.5	2.6	3.0
Europe and Central Asia	2.3	1.8	-0.1	1.2	2.5	2.8
Russia	1.3	0.7	-3.7	-1.2	1.4	1.8
Latin America and the Caribbean	2.9	1.0	-0.7	-1.3	1.2	2.1
Brazil	3.0	0.1	-3.8	-4.0	-0.2	0.8
Mexico	1.4	2.3	2.5	2.5	2.8	3.0
Middle East and North Africa	2.0	2.9	2.6	2.9	3.5	3.6
Saudi Arabia	2.7	3.6	3.4	1.9	2.0	2.3
Egypt, Arab Rep.	2.1	2.2	4.2	3.3	4.2	4.6
South Asia	6.1	6.8	7.0	7.1	7.2	7.3
India	6.6	7.2	7.6	7.6	7.7	7.7
Pakistan	3.7	4.0	4.2	4.5	4.8	5.1
Sub-Saharan Africa	4.8	4.5	3.0	2.5	3.9	4.4
South Africa	2.2	1.5	1.3	0.6	1.1	2.0

Source: World Bank, 'Global Economic Prospects: Divergences & Risks', dated June 2016

India's well-entrenched democracy, independent judiciary and robust Financial Institutions remain the fundamental bedrock over which an upward looking GDP growth model rests. This has been further strengthened recently through passage of comprehensive tax reform in the form of a Goods and Services Tax (GST); improvement in the business climate& competitiveness; curtailment of the black economy; reforms in the energy sector; increase in government spending on infrastructure and spurt in domestic consumption.

Steel to leverage Urbanisation & Demographic Dividend in India

Since strong linkages exist between GDP growth (more so if it is manufacturing led) and consumption of steel in a country, therefore, in India, consumption of steel products shall naturally increase with the strengthening of the local economy's growth over the next few decades.

The level of per capita consumption of steel is known to be an important indicator of economic development and living standard of the people in any country. However, India's per capita steel consumption, at 59.4 Kg, is way below the world average of 217 Kg in 2014, as stated by World Steel Association (Table 4).

TABLE 4: A comparison of growth prospects of emerging economies (2014 & 2030)

	Steel Use per capita (in kg)	GDP per capita (thousand USD)		Urbanization (%)		Population (million)	
	2014	2014	2030	2014	2030	2014	2030
India	59	1.6	9.5	33	40	1267	1476
Indonesia	54	3.4	12.3	54	63	253	293
Vietnam	138	2.0	8.1	34	43	93	102
Thailand	258	5.6	14.2	50	64	67	68
Mexico	182	10.5	22.8	79	83	124	144

Source: World Steel Association, 'World Steel Outlook' dated April 2015

As per World Bank report titled 'Leveraging Urbanization in South Asia: Managing Spatial Transformation for Prosperity and Livability' (Sep 2015), Urbanization has been previously relatively slow in India, with the share of the population living in officially classified urban settlements growing at a rate of just over 1.15 percent a year from 2001-2011. However, under the leadership of Prime Minister Narendra Modi, the focus of all major programmes announced by the Government revolve around the tenets of Urbanisation which in turn are a growth opportunity for the steel sector in India. For instance, as per the Economic Survey of India (2015), EWS (Economically Weaker Sections) and LIG (Lower Income Groups) together account for 95.6 per cent of the urban housing shortage in the country, and the Government shall work towards addressing the need of this significant segment of population. Hence, a huge untapped potential exists for the steel sector in India.

Further, the demographic dividend of young and skilled population vis-à-vis other developed countries will yield a potential benefit. The young will increasingly demand a better quality of life, thanks to the rising disposable incomes, and open-up avenues for expansion of its cities, including infrastructure, transportation, healthcare, education, and recreation.In contrast, the rate of steel consumption in the developed world will slow down and such "Steel Mature Nations" would look at markets like India for exporting their products.

TABLE 5: Snapshot of India's Steel Industry, FY13-16 (in MT)

	2012-13	2013-14	2014-15	2015-16
Crude Steel Production (MT)	78.42	81.69	88.98	89.77
Crude Steel Capacity (MTPA)	97.02	102.26	110	116.74
Capacity Utilization (%)	81	80	81	77
Finished Steel				
Production for Sale (MT)	81.68	87.67	92.16	90.39
Real Consumption (MT)	73.48	74.09	76.99	80.45
Import (MT)	7.93	5.45	9.32	11.71
Export (MT)	5.37	5.98	5.59	4.07

Source: Ministry of Steel Annual Reports

India's resilient Steel Industry

The domestic industry has proved itself to be a highly dynamic industry which has survived various highs and lows of the business cycles for more than 100 years. It has even withstood various challenges which has dented its competitive edge in respect of freight costs, financial costs, infrastructure & logistics costs, raw material costs etc. It will continue to serve the domestic demand by expansion of capacities & innovation in products (Table 5).

In recent years, however, a surge in imports debilitated the growth curve of the Indian Steel Industry (Figure 1), along with a global rise in trade actions under Chapter 72 of Indian Trade Classification (ITC) – Iron & Steel (Table 6).

FIGURE 1: Surging of steel imports into India, Sep 2011- Jun 2016 (in thousand tonnes)

Source: : Indian Steel Association, constructed from Centre for Monitoring Indian Economy (CMIE) Database

TABLE 6: Summary of Global Trade Actions under Chapter 72 – Iron & Steel

During 01st January, 2015 to 15th November, 2016. [initiated, in force]	Nos
Safeguard	14
Countervailing	25
Anti-Dumping	153
Technical Barriers	25
Quantitative Restrictions	02
Others	00
Total	**219**

Source: Indian Steel Association, based on World Trade Organization Database

Steel essential to "Make in India"

While India is currently the world's third-largest producer of crude steel (up from eighth position in 2003); it is expected to become the second-largest producer and consumer of steel in due course of time (Table 7).

TABLE 7: Forecasts of country-wise Crude Steel production, 2016 - 2015 (in MT)

Figures in MT	2016e	2017e	2018e	2020e	2025e
Japan	103.0	101.5	100.7	99.2	95.6
South Korea	69.0	70.5	71.5	72.4	75.1
Western Europe	130.4	131.7	135.4	138.7	147.2
United States	81.0	82.6	84.9	87.3	93.6
China	790	760	730	706	650
India	93.3	97.5	101.7	108.5	127.3

Source: World Steel Dynamics Inside Track #150 dated October 2016

Government of India has judiciously laid out the Steel-Vision of building a capacity to the tune of 300 MT by 2025 to support the campaign of "Make-In-India". Over the medium to long term, steel using end user industries are bound to grow in line with the growth in GDP, (Table 8), which is why World Steel Association states, under its Short Range Outlook, that

"Indian steel demand is expected to report solid growth in 2016-2017 backed by consumption-boosting reforms and infrastructure investment".

TABLE 8: Growth in steel using sectors in India, 2012-2017 (in MT)

Steel Using Sector y-o-y % growth	Steel Weights, %	2012	2013	2014	2015	2016	2017
Construction	62.0	2.4	5.4	4.0	3.4	4.9	5.8
Domestic Appliances	5.0	-1.3	-0.4	8.1	5.1	5.7	7.3
Electrical Equipment & echanical Machinery	15.0	-1.2	-9.0	-7.4	2.5	5.3	6.7
Metal Products	6.0	-1.7	-5.2	13.5	-1.2	4.9	5.8
Automotive	9.0	0.5	-6.1	0.8	5.5	8.5	9.4
Other Transport	3.0	-8.6	-11.9	6.5	7.6	9.0	8.9

Source: World Steel Association, Short Range Outlook, October 2016

Large volumes import of steel products at predatory prices brought about deep dents on to the viability of the Steel Industry in India. Contemporaneously with the surge in imports, the domestic prices of steel products had declined substantially hitting the bottom-line financial performance of domestic steel producers, resulting in high degree of stressed assets within the industry. In the long term, the surge in imports threatened to distort the market structure, and stifle the growth of Steel consumption.

With prompt government intervention, especially from June 2015 onwards, to provide a level playing field and fair competition to domestic steel enterprises vis-à-vis foreign companies from steel surplus countries offered a respite to the Indian Steel Industry. The actions included hike in basic customs duty, imposition of safeguard duty and anti-dumping duties as well as Minimum Import Price (Figure 2).

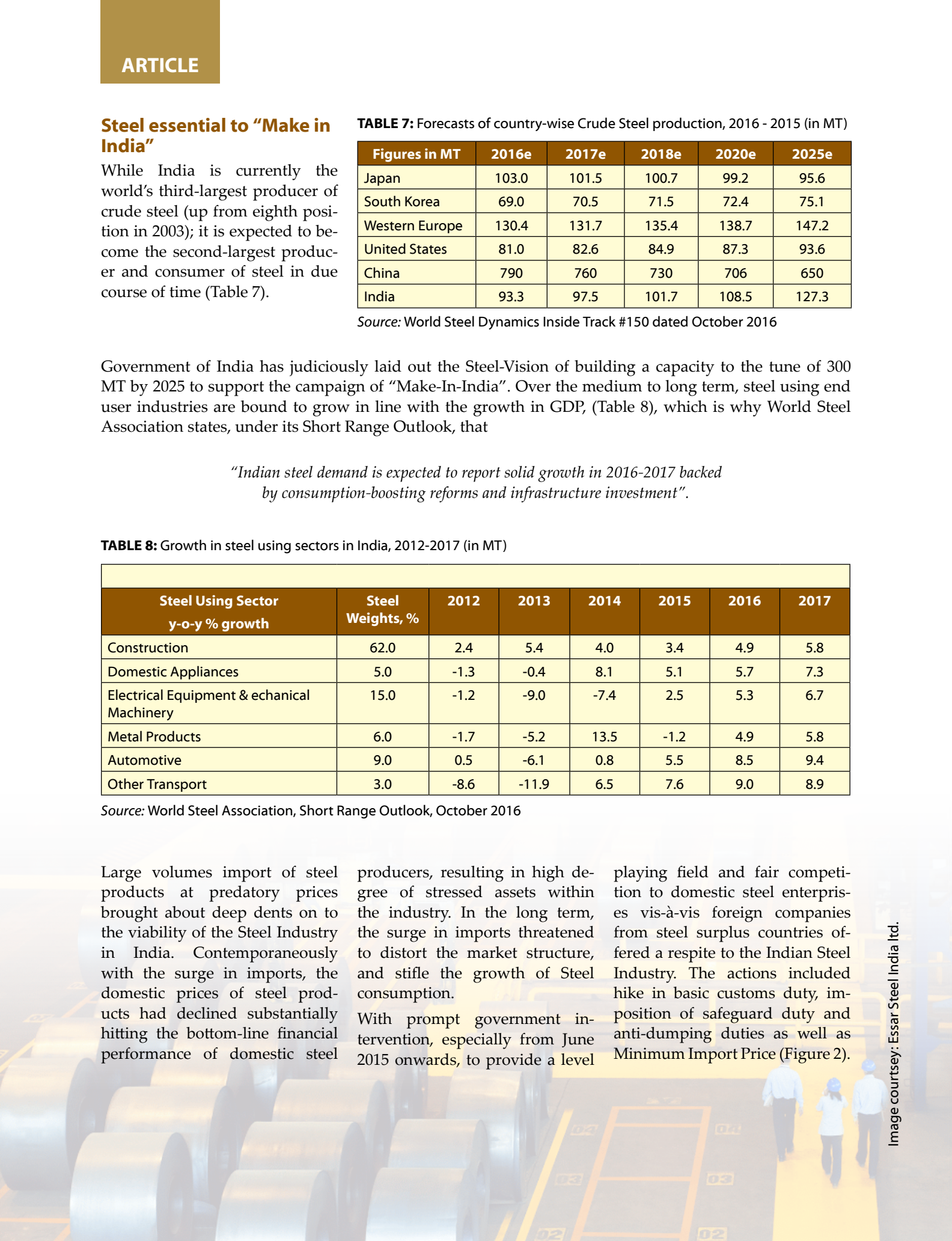
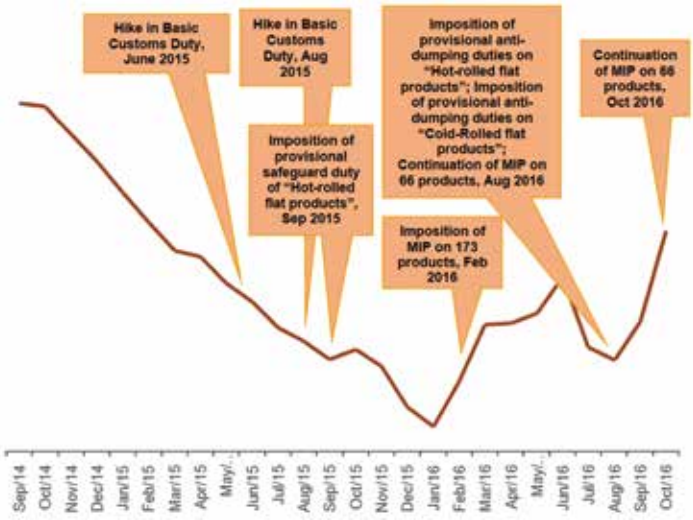


Image courtsey: Essar Steel India ltd.

FIGURE 2: Trend of Domestic HRC Price Movement during Sep 2014 to Oct 2016



Source: Indian Steel Association, constructed from SteelMint database; HRC – Hot Rolled Coil

As an outcome, imports into India have witnessed a decline in recent months of the financial year 2016-17 (Table 9).

TABLE 9: Snapshot of India's Steel Industry, April – October 2016 (in MT)

	Apr. '16	May '16	June '16	July '16	Aug '16	Sept. '16	Oct. '16
Crude Steel Production	7.409	8.06	8.151	8.072	8.175	8.088	8.230
Finished Steel							
Production for Sale	7.487	8.487	8.503	7.640	8.239	8.042	8.249
Real Consumption	5.75	7.571	6.558	6.289	6.971	6.731	7.114
Import	0.654	0.546	0.596	0.561	0.619	0.611	0.538
Export	0.308	0.381	0.509	0.468	0.680	0.655	0.536

Source: Joint Plant Committee, Ministry of Steel

Need for promotion of domestically produced "melted and manufactured" Steel

Given that Steel Industry will continue to form the bedrock for Industrialization and Nation Building India in the next decade, it is critical that proactive steps may be taken, both by steel companies and Government, to render the 300 MT capacity creation target by 2025 a major success story. Primary amongst these would be institutionalisation of a policy framework which promotes usage of domestically produced steel, which is 100 percent "melted and manufactured in India" atleast in government projects. Globally, prominent industrialized and developed countries including USA, Europe, China, Japan, Korea have witnessed their economic development and growth strongly supported by a robust, sustainable and reliable domestic steel industry. India, must, follow suit. Such a policy shall ensure:

- Timely supplies of steel of consistent quality
- Mitigation of price volatilities existing in the global steel marketplace
- Prevention of impact from global uncertainties in terms of supplies, currency, Ocean freight, Geo-Political tensions, Sovereign Policies, Tariff & Non-Tariff measures etc.
- Minimisation of multiple trade channels – thereby contain volatilities / inflation
- Prevention of drainage of precious foreign exchange outflow

Epilogue: Way forward

The Indian Steel Industry exhibits a high growth potential on account of low per capita consumption of steel in the country. Notwithstanding global surplus steel capacities, steel consumption will continue to grow in India and in turn the Indian Steel Industry will also witness expansion to meet the increase in demand. The steel enterprises are internally robust with investments in research & development, technology and automation. Concomitantly, challenges continue to prop up for the industry, for instance, sudden rise in coking coal prices recently and new environmental statutes.

If India decides to consume steel that is "Made in India", then we need to rely on developing ourown globally competitive Steel Enterprises.The Government of India has recognised this and remained supportive of the growth of the industry. It has, on merit considerations, imposed trade remedial measures that have provided much needed stability to the industry. At the same time, the Industry needs to focus stronglyon achieving market leadership, reflecting cost competitiveness and affordability.

Let there be Steel: Safe Steel, More Steel, Indian Steel

ARTICLE

A few thoughts on Indian Steel Industry

Sushim Banerjee
Director General
Institute for Steel Development
& Growth, Kolkata

What is the role of steel industry in India when the country makes a serious attempt to grow from the developing stage to a developed one? Take a look at some of the other countries like USA, Germany, Japan, Korea, France and China. Economic growth was synonymous with growth of industry, manufacturing with steel as one of the most critical elements of development. The backward and forward linkages of steel industry are well spread out and inseparable from the growth and progress of the economy. Steel had its origin in India (Sword of Porus presented to Alexander the Great, Ashoka Pillar, woodtz steel used to make arms and household items in the South in the pre-historic periods). But the world came to know the use of steel only in the last 250 years of development.

Recent growth in steel use

In India the real growth of steel industry from the mid fifties of 20th century was accompanied by a series of checks and controls that, on one hand disincentivised the entrepreneurial spirit and on the other, taught the producers to thrive on a shortage scenario. From the mid nineties till date barring a few glorious years from FY 2008 to FY 2014, the steel industry in the country had witnessed a growth which although had exceeded the global growth rate in steel consumption, but is considered tardy in the backdrop of the massive potential of enhancing the level of consumption in the country. The following table summarises the picture.

The annual average growth rate in steel consumption in China sharply dropped from 11.5 per cent during 2005-10 to 2.7 per cent in 2010-15 periods. Similar fall in steel consumption, though lower in scale, took place in India also. Thus, while India aspires to become second in terms of total steel consumption, the low per capita steel consumption in the country poses massive potential of increasing use of steel. There

Table-1 : Steel Consumption Growth: 2000-15

MT

Country	2005	2010	CAGR (%) (2005-10)	2015	CAGR (%) (2010-15)	Per capita steel consumption (Kg) 2015
China	340.2	587.6	11.5	672.3	2.7	488.6
USA	110.3	79.9	(-) 6.2	96.1	3.8	298.8
India	39.9	64.9	10.2	80.1	4.3	61.1
Japan	76.7	63.6	(-) 3.7	63.0	(-)0.2	497.3
S. Korea	47.1	52.4	2.2	55.8	1.3	1109.5
Germany	36.0	36.2	0.1	39.2	1.6	485.4
Russia	29.3	36.7	4.6	39.4	1.4	274.8
World	1044.8	1310.8	4.6	1499.6	2.7	208.1

Source: World steel Statistical Year Book 2016

are two strong reasons why use of steel is slated to rise in India. First, India is a developing nation and has massive infrastructural deficits and secondly, the fundamentals of Indian economy in terms of GDP growth, Current Account Deficits, Inflation rates, demographic dividends of maximum percentage of working population are robust to propel public investment flows into building infrastructure network.

Competition from other materials

Meanwhile since the last two decades steel has been facing stiff competition from other materials like Aluminium, Magnesium, Plastic especially Carbon Fabric Reinforced Plastic in various traditional end uses. Steel that was traditionally considered ugly, heavy, easy to melt in fire and break in tremor has been replaced by other materials. The changed scenario along with excess availability compared to slow growth in demand made it obligatory to place more emphasis on promotion of steel use in the country.

Steel lost its prominence in many uses where strength to weight ratio was not in its favour like bus body building and interiors, window sills, automobile components like fuel tanks, engine blocks, pipes and tubes, household items. Steel gained its role in all large span construction including commercial buildings, airports and warehouses. Railways traditionally relied on steel bridges. But in Road Over Bridges (ROB) and Flyovers, steel was fighting against concrete. Our engineering fraternity was by and large more exposed to RCC based construction and the engineering curricula in the degree and diploma colleges were not tuned to provide in knowledge in steel structural properties and uses. This has made the professionals, designers and architects not fully appreciative of the advantages of steel based designs. The periodic supply shortages in steel from the domestic sources in the earlier years also made the designers a little apprehensive on steel based designs.

A good deal of light and high strength steel has emerged namely, tubular, cold formed structurals, embossed sheets, hollow sections, galvanized structurals, thin dimensions of hot and cold rolled steel with more UTS and YS strengths for application in a host of uses. More use of light gauge high performance steel (MPa> 410/590) in construction and engineering sectors is also being increasingly demanded in India.

Promotion of steel use

It is now increasingly appreciated by the professionals, consultants, government and other private procurement and project authorities that promotion of steel-concrete-composite designs that combine the strengths of both steel and concrete in the interest of cost effectiveness, faster and ease of construction, environment friendliness, earth quake and fire resistance would lead to phenomenal changes in the innovative designs and flexibility. The Institute for Steel Development and Growth (INSDAG), a body promoted by all the major steel producers and Ministry of Steel, has been working relentlessly on doing research studies on various aspects of steel-concrete-composite designs and publishing reports on, assisting BIS in framing Codes and Standards for steel grades based on feedback received from the consumers and producers, conducting elaborate training programmes for Engineering students in Civil, Mechanical, Metallurgy, Electrical disciplines and their faculties and other professionals.

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The need of the hour is to convince the concerned authorities, government departments and

project execution agencies on the choice of construction material basis the Life Cycle Analysis and not simply on the current costs (L1 consideration). If the constructed structures can survive natural calamities for more number of years, yield commercial benefits by shortening the construction period, lead to lesser disturbances to the public during construction, these must be suitably factored into the tendering clauses for the respective construction jobs.

Estimates of steel consumption

The global steel consumption that went down by 3 per cent in 2015 is slated to reach 1501.3 MT in the current year, at a nominal 0.2 per cent growth over last year and reach 1509.6 MT in 2017, at 0.5 per cent growth. This is in tune with the global GDP growth projected at 3.1 per cent and 3.4 per cent in 2016 and 2017 by IMF and global trade volume is estimated to grow by 2.3 per cent and 3.8 per cent in 2016 and 2017 respectively. In all the forecasts the pulling down impact of heightened uncertainty is unmistakable. But it is also acknowledged that the uncertainties surrounding the currency movements (dollar and yen getting stronger and Pound sterling weaker), geopolitical scenario, investment measures, premature deindustrialisation, ageing populations are contained to the regional level and therefore the specific remedial steps may have a better success rate.

Indian steel consumption that was 81.5 MT in FY16 has been projected to grow at an average rate of 5.5 per cent during 2016 and 2017 to reach 89.1 MT by 2017. India would be still be 8.7 MT behind the level of consumption of USA by next year. Chinese steel consumption has been projected to drop by 20 MT between 2015 and 2017. India would lead the global steel consumption growth by adding 9 MT during these two years, the highest volume growth in the world during this period. The Demand projection for steel for the next two years is shown in the following table.

The annual average growth rate in steel consumption for India in the next two years is the highest for India.

Table:2: Steel Demand Projection for 2016 & 2017

MT

Country	2015	2016	2017	CAGR (%) {2015-17}
China	672.3	665.6	652.3	(-)1.5
USA	96.1	95.0	97.8	0.9
India	80.1	84.4	89.1	5.5
Japan	63.0	62.7	63.6	0.5
S.Korea	55.8	56.4	54.6	(-)1.1
Germany	39.2	40.0	40.4	1.5
Russia	39.4	38.0	38.4	(-)1.3
World	1499.6	1501.3	1509.6	0.3

Source: Short Range Outlook; WSA

Sectoral Growth

The growth in Construction and Infrastructure sectors accounting for more than 60 per cent of steel consumption in the country being crucially dependent on investment would lead the table of the demand driving factors. Already Roads, Railways (including Metros), Industrial Corridors projects proceed on schedule as most of these are funded by world Bank, ADB and Japanese Consortium. Significant policy changes have been made to make these projects acceptable under PPP mode. While appropriate trade measures by the government restricting cheap flow of imports and dumping of surplus steel to India (Safeguard duties, Minimum Import Price, Anti Dumping) have helped the domestic steel producers to gain additional market share, the growing requirements of value added steel, light gauge high performance steel, both in long (construction sector) and flat (manufacturing and processing sector including Automobiles) categories would prompt them to upgrade plant facilities and to give thrust to product development for rolling value added steel. High speed Head Hardened Rails for Dedicated Freight Corridors and Metro Rails, Creep resistant, Fire resistant, Fatigue resistant steel for Oil and Gas, defence sectors, High strength Plates with YS of 530-900 MPa in Q&T condition for bullet proof vehicles, security posts, penstocks, earth movers, dams and Bridges, API grades> 100X HRC/Plates/Pipes are some of the niche demand that would seriously test the capabilities of Indian steel producers

in meeting the emerging critical requirements.

Rural and retail sectors are fast emerging as new consumption centres for steel. Commonly used items, TMT Bars, Light structurals, Galvanised/Coated steel for rural housing, community halls, Primary health centres, small Bridges and Culverts, chairs, furnitures, fencing, storage Bins are in good demand. Major steel producers SAIL, Tata, RINL, JSW and JSPL have all set up rural outlets/ Shoppes/Steelmarts at remote locations to store and deliver the above steel categories in small volume and also in pieces. Various awareness programmes (Training for Masons, small contractors, fabricators) are being undertaken by SAIL, RINL, Tata in association with INSDAG for knowledge dissemination on the best practices in bar bending, safety practices, choosing quality steel for construction and related areas.

Steps for enhancing Business

Future of Steel industry largely depends on the Business outlook in the country. The World Bank report on Doing Business made little ripple as it ranked India at 130, a mere one notch lower than in the previous year and therefore a little disappointing. But then it has to be appreciated that reforms or dismantling of the barriers to efficiency and productivity have to face intense opposition from the vested interest groups especially in a Parliament Democracy like ours and therefore take time to implement.

Doing Business is not a comprehensive measure of all aspects

of conducting business and excludes critical factors like Economic strength, financial growth, market size, taxes, tariffs and subsidies, level of corruption etc. in measuring the ease with which business is conducted and in a way, penalizes or fails to give credit to those economies that display positive characteristics on all these aspects and surely, India is one of them.

The aspect of easy operations by the private enterprises in India is indeed a critical consideration for enhancing the flows of FDI and FII that the country is eagerly looking forward to supplement the capital infusion in various sectors. One of the reasons why India is looked down upon as an attractive destination for investment by the foreign entrepreneurs is India's recent abilities to unshackle the traditional hold of archaic rules and procedures, increasing the limits of FDI in Defence, retail, real estates, simplifying the contractual obligations especially in PPP mode of project implementation and introducing reforms in commercial matters. A specific reference has been made in the report on the recent amendments made in the Company Act which has facilitated the actual business operations and simplified the extant company rules. These would be further improved in the coming months including the Insolvency and Bankruptcy Codes.

During FY16 the areas where India has been complemented concern electricity connectivity by improvements in process efficiency, payment of taxes by introducing electronic systems, trading across borders by electronic submission and processing of documents for imports and exports, enforcement of contracts by expanding dedicated venues to resolve commercial disputes. Apart from these areas, India scores high in property registration within 7 days, getting credits, protecting minority investors. The weaknesses in enforcing contracts, dealing with construction permits and starting a business are found to be quite deep rooted. It is apparent that the manner in which business is conducted in a particular state in the country has far reaching consequences on the steel business as well.

The government is quite firm in implementing GST uniformly

from April'17 after achieving a political consensus. It is expected that steel would be grouped under 12-18 per cent category and may be marginally lower than the present rate. A number of other reforms involving real estate, energy, labour, environment, land acquisition, mineral exploration and mine allocation, rural development sectors and PPP mode of project management are in the final stages of implementation. All these would result in unleashing the full growth potential of these sectors and would facilitate investment flow of corporates and private entrepreneurs.

Conclusion

In world Competitiveness report, India has improved its ranking from 71 (out of 140 countries) in the previous year to 55 in FY 16. In Doing Business report the ranking of India at 130 out of 190 countries brings about the fact that competitiveness does not necessarily improve parameters in doing business. Cost competitiveness of Indian steel is well established inspite of high transportation costs, capital costs and taxes. More steps towards energy conservation, efficiency parameters and skill development would enable Indian steel industry to compete in the global market. With rise in Chinese export offers; it is likely that the global prices become attractive propositions for Indian exports and with current restrictions on cheap import flows, thanks to the efforts of an appreciative Government, India emerges as a net exporter in the coming months. During April-October'16 India has imported 4.55 MT of steel against exports of 4.23 MT and the gap is likely to turn positive in favour of exports in the coming months.

Rural and retail sectors are fast emerging as new consumption centres for steel. Commonly used items, TMT Bars, Light structurals, Galvanised/ Coated steel for rural housing, community halls, Primary health centres, small Bridges and Culverts, chairs, furnitures, fencing, storage Bins are in good demand. Major steel producers SAIL, Tata, RINL, JSW and JSPL have all set up rural outlets/ Shoppes/Steelmarts at remote locations to store and deliver the above steel categories in small volume and also in pieces.

On a medium term perspective the singular factor restraining steel demand in the country is poor growth in Gross Fixed Capital Formation as a percentage of GDP at around 30 per cent against 45 per cent in China. Adequate Public investment in major infrastructure projects in the country can only dispel the veil of uncertainty and precede private corporate investment which has been on the decline in the past few years. Growth in infrastructure and Construction sectors is likely to pull up demand for manufactured and engineering goods, prefabricated structures, the sectors which are passing through a stagnant demand phase.

The issue of Skilling in Iron and Steel sector to meet the gap between the industry requirement and the existing supply of entry level persons passed out from ITIs/Polytechnic has been plaguing the industry for long. The recently formed Iron and Steel Sector Skill Council (IISSSC) has been mandated by National Skill Development Council (NSDC) under Ministry of Skill Development and Entrepreneurship (MSDE) to develop Qualification Package (QP) and National Occupational Standards (NOS) for various job roles like Fitter, Electrician, Welder, Bearing Maintenance, Rigger, Dumper Operator, Coke oven Battery operator and a host of others related to Iron and Steel, Sponge Iron, Rerolling, Ferro Alloys and Refractory segments, arrange training (short term modular courses spanning 1-2 months with hands on training) through established Training Providers and Certify them after proper assessment through established Assessment Agencies. The certificates issued by the Council have been officially recognized for employment by the Government. The flagship programmes of the Government, Make in India, Smart Cities, Housing for All, Swatch Bharat, Digital India and Skill India have all enhanced the role of steel significantly in shaping the transformation of a new and modern India. India's dream of becoming a super powerhouse in steel would be realized only if India emerges as a robust and vibrant economy in the coming decade.

To be
Steel Strong

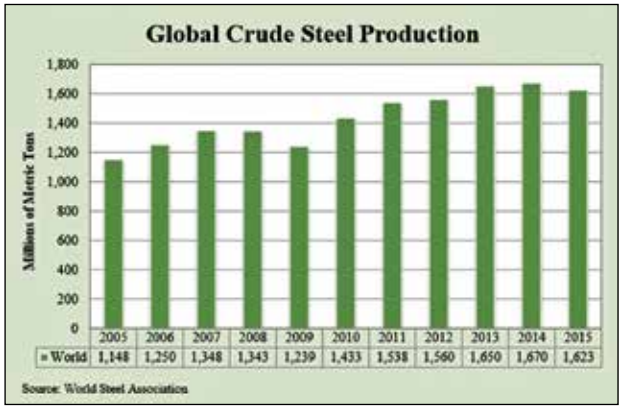
Vineet K. Choudhary*

As we have witnessed India's shining growth in sectors of ITeS, Software, BPOs, Medical tourism, can it shine in the world of steel as well? Steel as product touching everyone's life is also one of the most recyclable thing and it's the core of infrastructure development and hence an economy's strength indicator. India is among very few nations where successive governments have dedicated ministry for the industry underlying its importance in growth of economy. We try to look at trade balance of steel, growth drivers, domestic manufacturing strength and challenges to position Indian steel Industry vis-à-vis global steel industry of 1.6 Billion Ton a year.

Global Demand Evolution and the China Effect: 2008 Game Changer

Like many industries for steel too had a tipping point in 2008 economic meltdown post Sub Prime Crises led Lehmann Brothers collapse and trigger of recession. Though the global crude steel production kept increasing except immediate next year of 2009 (pic1). Global production has grown by 20% since 2008. It's interesting to note that during same period the global price average dropped almost to half (pic2)

Pic.1

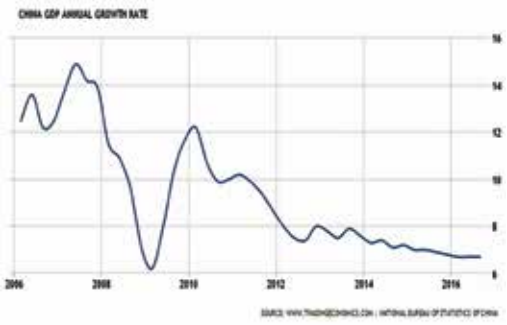


Pic.2

This defiance of demand-supply-price equilibrium level for the short run tells about the nature of this product-industry. Supply has increased more than increase in demand thus price dropped despite demand increase. A high capital intensive sector has very low capacity elasticity as for steel it is very difficult to reduce capacity for short time as the cost of restart of furnaces and coke ovens are very high. The steel story of China got momentum with run up to 2008 Beijing Olympics as the preparation required huge steel consumption as well as the famous double-digit dragon growth rate of GDP peaking to 15 % + supporting the capacity (pic3) .

*The Author is an alumnus of XLRI Jamshedpur and RMIT Melbourne, he has worked in senior positions across India, Europe and Middle East for various leading MNC organizations.

Pic.3



The egregious effect of 2008 economic crises caused sudden drop in demand and it forced Chinese govt to dole out various supports in name of subsidies and rebates to compete with low price to boost export, a mayhem in world of steel as China accounting for more than half of the world's total steel production and one extra sneeze (few Million tons of extra export to Europe or Americas) from China could bring ripples world over. Recently, disturbed by cheap Chinese imports in EU, EU applied 65.1% to 73.3% anti-dumping duty for heavy plates & 13.2% to 22.6% for hot rolled steel. Such has been China impact on global steel market.

Challenges to Steel Industry

Cost competitiveness: One of the major cost ingredients for steel mills is energy and a 27% improvement in efficiency over last two decades is not enough. (Pic 4) For integrated steel mills thus owning coal mines has increasingly become vital.

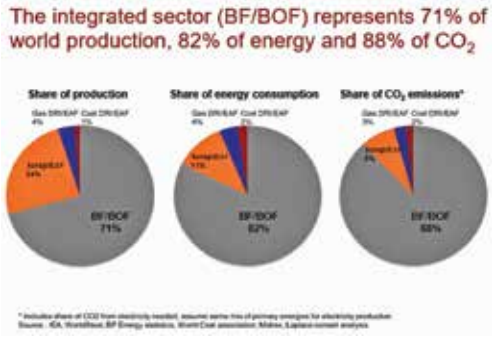
Disruptive Technologies: Integrated steelmakers with BF-BOF route find it hard to compete with scrap and DRI based steel makers in terms of cost & agility

Customer Loyalty: Time again makers have tried to tie up long term contract with organised consumers like Automobile manufacturers, Railways and Shipyards but a slight decrease in offer can swing the consumer loyalty.

Price Volatility: as the value chain up stream is very consolidated with top 3 miners (BHP-Billiton, CVRD-Vale, Rio Tinto) controlling majority of Iron ore supply, it leaves steel makers vulnerable and that's why big names like ArcelorMittal have major captive capacity for iron ore and coal.

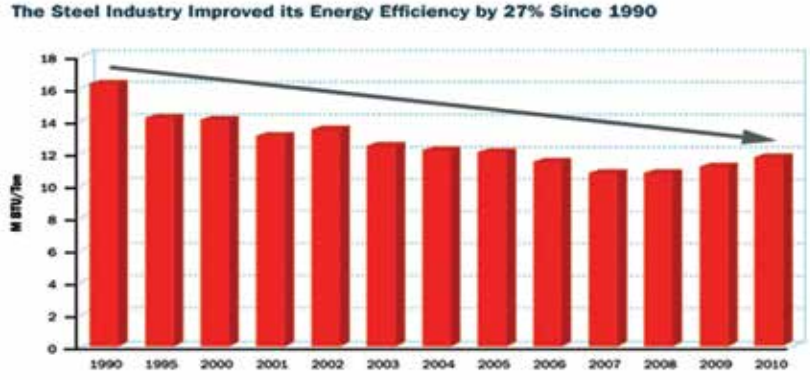
Environmental Concern: Recent lock down of Riva (ILVA) steel in Italy by authorities for pollution norms violation is nightmare for any steel maker. Entire town of Riva being dependent on the steel mill compounded the trouble and it's the story for numerous major steel mills as most of them are in themselves the economy driver of their cities. Traditional (BF-BOF route) steelmakers have bigger challenge here as emitting (88-71) 17% higher Co2 and they need to buy more carbon credit at hefty cost.

Over Supply: Since the maximum capacity glut was in commodity grade of steel thus the biggest price hit was also on commodity steel. With recent anti-dumping measures the price of steel has seen improvement and there is renewed hope for further price increase. Another measure has been global players consolidating with mergers, Nippon-Sumitomo In Japan, ArcelorMittal- SNSSMC JV in USA. Makers know that the value lies in high grade steel for Oil & Gas Industry, Automotive, Nuclear and Power Generation



Industries and need of hour is cautious capex, R&D to innovate technologically as the demand is not the worry but to produce profitably to this demand is current global challenge. Makers have borne deep cut in bottom lines and the need to increase cost efficiency is more than ever before.

Pic.4



Indian Steel Industry Dynamics: Opportunity and Future

From net Importer (2013) to

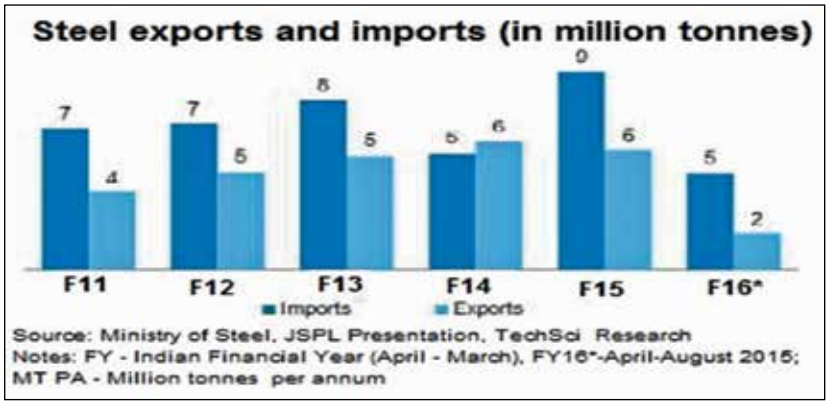
Exporter (2014) & back to net importer (2015). Where does it go now?

Trade Balance: Opportunity for India

- In 2015, import of 9.32 MT steel while exports declined to 5.59 MT in FY15 from 5.98 MT during 2013-14
- In FY15, the consumption of steel grew to 76.99 MT
- Driven by infrastructure and automotive growth consumption is expected to reach 104 MT by 2017

The macroeconomic indicators are unambiguous on growth for Indian steel demand. India is still far behind in per capita steel consumption. For FY15, per capita consumption of steel in India was 60 kg against the world average at circa 220 kg. Its still among very few economies which has sustained growth and poised for big infrastructure development in road & railway networks, ports and airports, affordable housings as well as recently announced projects of smart cities.

These all are opportunity floodgates. In coming years, a need for capacity increase can be around 50% once the consumption crosses 100 MT a year. It's a huge ramp up required lest it should open doors for imports which will hit indiscriminately to steel producers. With state having its own run SAIL and huge investments ploughed in various private players it can hardly be an option. India with its strategic relations with Africa can play stronger role in the development of African Infrastructure which will directly benefit steel makers who are already present strongly into African Import market. The Indian steel demand is slated to grow by 6.2% in 2015 and by 7.3% in 2016 as per the report by World Steel Association-WSA while global consumption is expected to grow by 0.5% and 1.4%. This is clearly a good indicator for Indian steelmakers.



So, the conundrum is despite these dynamics what is plaguing Indian Steel Industry?

Unprecedented Crises of Debt surge & price collapse

As on December 25, 2015, the total exposure of Indian banks to the steel sector was around ₹ 2,98,500 crores.* The Indian steel sector is highly leveraged (net debt/EBIDTA) basis. Balance sheets of many steel companies reveal Interest Coverage ratio of less than 1 which in any ways must be greater than 1.3*. In layman's language if this ratio is less than 1.33 then it is not able to generate enough profit to cover the interest cost. Had the prices would have been better the EBITDA or profits would have been higher to enable the producers meet its interest obligation comfortably. But the surge of interest cost and drop of prices together have been big double whammy to Indian Steel Industry bringing in precarious and volcanic situation. Government has released slew of measures

* EY report on 'Indian Steel – Strategy to Ambition'

like 20 % safe guard duty on import and fixing minimum import price (MIP) for many steel products to help producers though it will hit pockets of steel users as the prices go up and import becomes costlier.

Depth of debt effect

The average EBITDA margin of steel companies has dropped by over 40 per cent. Thus, many advances to the iron & steel sector are under stress which may soon lead to non-performing assets if not addressed now," the ISA stated. Steel EBIT margin dropped from 36% in 2011 to just above 22%.

According to an article published in The Hindu Business Line, "EBIT margin of JSPL hit the negative for years consecutive dropping from above 40 % in 2011. Indian Steel Association (ISA) is calling for restructuring of debts and moratorium which may give short term relief."

Road ahead: Invest fast & prudent on R&D, Capital Expenditure

Integrated steel mills are fast challenged by evolving steelmaking technologies like Midrex and Corex. Besides the development of ultra-high-powered electric-arc furnaces and reliable billet and bloom continuous-casting machines provided a low-cost route to produce lower quality steel long products, thus integrated steel producers have been completely displaced from this low-end segment of the steel market in developed countries. The quality of steels produced via EAF is restrained by the level of metallic residuals such as copper, nickel, and tin, in the scrap metal charge However, continuous improvements in EAF process control and the use of ore-based scrap is evolving. Besides several new processes for producing hot metal are in various stages of development around the world. For example, technologies have been developed for the reduction of iron ore or steel mill waste oxides to produce a solid direct-reduced iron product. Several processes based upon the direct reaction of coal and iron ore in a rotary kiln, such as the SL/RN process, have reached various stages of development since the 1960s.Thus mandated for integrated producers is to focus on high-quality, high grade plate and thin-gauge flat products. *(JOM journal, 53 (10) (2001), pp. 20-23)

These technological advances will keep pressure on the cost and hence price southwards. Since Indian steel Industry is dominated by integrated steel makers (from Blast Furnace route) it is more propitious for them to differentiate through their product offering and for that they should further diversify from commodity steel into high grade steel where they can own brand. Indian steel makers should invest in newer technologies to reduce dependence on traditional coaking coal requirement which is being expensive, environment unfriendly and depleting resource. Adoption of COREX technology by India's largest steel company JSW is a positive step towards this aim. There are leading examples from global leader company ArcelorMittal how efficiently it responded to crises in terms of resource allocation, capacity redistribution and customer centric missions supported by aptly calibrated R&D investments. It's a time to take a leaf or two from leaders and innovators to outpace the average with cost & technology efficiency.

For steel industry, it's not the time to top gear driving on a steep slope down (margin)and in addition the road is slippery(debt). It needs a patient yet agile maneuvering finding quickly its sweet spot in terms of niche and competitive advantage. Indian steel industry is at juncture which Malcolm Gladwell would say as **"Tipping Point"** and if the highly leveraged industry can turn this challenge into opportunity it will be steel strong.

World Steel Association share concern over Rising Steel Production

Kunal Bose*

It was no-brainer that the highly excessive steel capacity and production in China, which accounts for half the global steel output and its unfairly priced exports most of the times taking the form of tidal waves washing the markets of receiving countries would be at the top of the agenda for deliberations at the recently held annual general meeting of the World Steel Association (WSA) in Dubai. If the plaintiffs in this instance the importing countries hosting injured steelmakers expectedly peppered their submissions with strongest possible words, the defendant China, however weak might be its case made attempts to raise the bogey of protectionism and building walls against free movement of goods.

China, which alone had a share of 804 million tonnes (mt) of world steel production of nearly 1.6 billion tonnes (bt) in 2015, had to export 111.6 mt last year – higher than Japan's production of 105.152 mt - as domestic use at 672.3 mt showed a fall of 5.4 per cent over the previous year. The world outside China was proved wrong in expecting that paying heed to growing crescendo of protests, Beijing would exercise its powers to rein in production and exports this year. WSA data show China's steel production in the first nine months of 2016 was up 0.4 per cent to 603.780 mt on a year-on-year basis. Remarkably China's steel production in September advanced 3.9 per cent to 68.2 mt over the same month in. The move to lift production of this order has got much to do with benchmark steel rebar on the Shanghai Futures Exchange averaging the highest in July-September of any quarter since the first three months of 2015.

The shared concern of WSA members as was amply evident in their speeches was China raising steel exports by 2.4 per cent to 85.1 mt between January and September, the highest ever for the period. A peek into the kind of sneering that was part of Dubai proceedings could be had from interviews given to the media by some participants on the sidelines of the WSA meeting. For example, Nucor chairman and CEO John Ferriola who was elected president of WSA for 2016-17 made scathing comments in an interview with S&P Global Platts in reference to the positive outcome of the series of US trade action against steel imports from

* Kunal Bose writes from India for Metal Bulletin and Dry Cargo International, both of the UK. He is also a contributor to Business Standard.

China. He said: "Have we seen benefits from it? Certainly. The flat-rolled sheet cases – hot-band, cold rolled and galvanised – have been successful, and we've seen a reduction in the import of subsidised products in those areas. And we're pursuing trade cases now on plate; rebar is coming up again – we hope to have the same kind of results there."

While these are statements of facts that apply to other regions and countries also such as the European Union and India, Ferriola made some testy (repeat testy) remarks that must have infuriated China to no end. He made no bones about the fact that "so many cases are being filed and that they're being so successfully prosecuted are testimony to just how blatant the cheating has become... It's about time we're taking action... We have laws in place. When people break them, they need to be held accountable for breaking the law." Tata Steel Managing Director T.V. Narendran, who also headed WSA economics committee pointing to the logic of Indian trade action said the "industry that has invested, you don't want to see it suffer because of unfair trade." A year and a half ago, India's steel import duty rates were negligible that made the country a net importer of steel by a long margin last year. But when New Delhi took a series of steps such as minimum import price and anti-dumping duty on several steel products, some reactions were inevitable. According to Narendran, the Indian industry is prepared to deal with any such reactions.

At the same time, don't expect China to take things lying down. In a well calibrated response, China Iron & Steel Association Secretary General Liu Zhen Jiang claimed, which, however, the rest of the world would not buy, that his country had made "great efforts" to address the overcapacity issue in the industry. In contrast, industry spokespersons from many other countries "spoke volumes criticising China but they had little to show when it comes to capacity phasing out in their own lands," Liu said. The fact, however, remains the industry in the US and EU in particular have over the years scrapped many high cost and environment damaging mills. A few iconic names in the industry in the two regions have disappeared from the map, many mergers and takeovers have taken place and production in developed Western countries has shrunk. For example, the US steel production between 2000 and 2015 fell from 102 mt to 79 mt.

Protection from imports, specially if these are found to be backed by subsidies of kinds militating against free trade is important for the Indian steel industry, which must remain on course to build capacity of 300 mt by 2030 against about 120 mt now. The enormity of investment and mobilisation of all other resources, including skilled manpower needed to achieve the targeted capacity in less than 15 years will not be missed by any. This besides, the domestic steel market must stay in good shape on a sustainable basis to justify investments in new greenfield or brownfield capacity development and modernisation of mills in operation. Building a greenfield steel mill will cost around Rs 6,000 crore per 1 mt capacity.

Because of years of unprofitable working, steel companies owe more than Rs 3 lakh crore to various banks making the sector one of the largest contributors to non-performing assets. The government is doing its part to secure better steel prices through its trade actions and raise steel demand by launching a series of infrastructure related projects and supporting house building on a large scale so that the steel industry is able to come out of the debt trap before long. Simultaneously, the banks as they are putting pressure on borrowing steel groups to start servicing loans also remain engaged in restructuring loans. Nothing much has come out of the suggestion that steel groups in distress and in requirement of further funding get a strategic partner ready to put in money in

the businesses and draw recovery roadmaps and participate in their implementation.

The global recovery in steel is a recent phenomenon linked principally to Beijing pepping up infrastructure and house building development. Consider this observation by The Economist (repeat The Economist): "As the past decade has shown, the ups and down of China's housing market are of global significance. Totting up the property sector's impact on investment and consumption (all the furniture and gizmos that fill new homes), it accounts for about a quarter of Chinese GDP." No doubt the Beijing decision to shore up the housing market had helped the country's GDP growth to stabilise around 6.7%. This is more than what most experts thought would be the case. But is not a property bubble building up in China, which may burst at some stage? Opinions differ and steelmakers around the world are keeping their fingers crossed.

Causes for concern

Chinese land prices this year, according to an index of leading 100 leading cities, are up 66%; nearly one-fifth of house purchases are for investment and not for owner occupation. While this is national average, investment buying is three times more in leading districts of mid-sized cities; and the same with Chinese house prices – the average rise in prices in the past year is 16% but in major Chinese cities house price inflation was up to three times more. A property bubble building or not, countries hurt by Chinese steel exports must go on putting pressure on Beijing to honour its commitment to cut 150 mt capacity in the next five years. The Chinese steel industry with capacity of at least 1.2 bt is highly bloated with many mills using old technology and belching huge amounts of smoke polluting the environment. President Xi Jinping's commitment to trimming steel and coal capacity is not to be doubted. But over the decades, the local authorities have managed to subvert central economic directives whose implementation would lead to revenue losses and jobs shrinkage at the provincial level. This may happen with steel also.

Results of leading steel companies in India and elsewhere in Asia in the quarter ended September 2016 are seen as a pointer that the industry has finally reached a turning point for the better. But questions remain as to the sustainability of improvement in steel margins. In an interview with Metal Bulletin, Edwin Basson, Secretary General of WSA, said: "I am relatively confident that we (the steel industry) have negotiated the turning point."

Results of leading steel companies in India and elsewhere in Asia in the quarter ended September 2016 are seen as a pointer that the industry has finally reached a turning point for the better. But questions remain as to the sustainability of improvement in steel margins. In an interview with Metal Bulletin, Edwin Basson, Secretary General of WSA, said: "I am relatively confident that we (the steel industry) have negotiated the turning point. The question is now about future growth. I don't think it will be robust because there is no region at the moment that is strong enough." Whatever that may be, India hopefully will continue to remain an exception. In its latest short range outlook for the metal, WSA says Indian steel demand after having grown 5.3% to 80.1 mt in 2015 will rise 5.4% to 84.4 mt this year and then by 5.7% to 89.1 mt in 2017. Indian demand growth stands out as the global steel use will be up only 0.2% to 1.501 bt this year and then by 0.5% to 1.51 bt in 2017. And this is to happen on a low demand base of 1.499 bt shrunk by a 3% fall in world steel use in 2015. Nearly 50% rise in steel prices this year is to be considered in the context of recent phenomenal rise in prices of metallurgical coke, which accounts for at least 40% of steel production cost.

Steel Authority of India Limited Chairman, Mr. P. K. Singh says the world will have to contend with oversupply of steel in the "near future." This means sustainability in steel fortunes cannot be taken for granted in any geography. The situation as it obtains warrants, according to Singh, "protracted trade measures to provide Indian steelmakers with a level playing field." New Delhi sees the logic of Singh's argument as is evident from the recent imposition of anti-dumping duty on imports of wire rods of alloy and non-alloy steel from China.

ARTICLE

Indian Steel Industry on **Steady Growth Path**

Gaurav Choudhary*

At the time of independence in 1947, India had only three steel plants - the Tata Iron & Steel Company, the Indian Iron and Steel Company and Visveswaraya Iron & Steel Ltd and a few electric arc furnace-basedsteel plants.

Thus, the period till 1947 witnessed a small but a viable steel industry in the country, which operated with a capacity of about a million tonne. The entire industry was in the private sector. From the fledgling one million tonne industry at the time of independence, the industry has now risen to be the 3rd largest producer of crude steel in the world and holding at the same time the topplace in the production of sponge iron. As per official estimates, the iron and steel industry accounts fora share of about 2% in Gross Domestic Product (GDP). The steel industry in the country has also developed capabilities in producing a wide range of very sophisticated steel of global standards.

It is now capable of addressing diverse needs of the domestic end user industries as also compete globally in high value added steel products segments. In the meantime, the industry has gathered sufficientmaturity and stability in business to overcome cyclical swings in the industry's business.

India is the world's third-largest producer of crude steel (up from eighth in 2003) and is expected to become the second-largest producer by the end of 2016.

Rank	Country	Qty (mt)	% change over 2014
1	China	803.3	-2.3
2	Japan	105.2	-5
3	India	89.6	2.6
4	United States	78.92	-10.5
5	Russia	71.11	-0.5
6	South Korea	69.67	-2.6
7	Germany	42.67	-0.6
8	Brazil	33.24	-1.9
9	Turkey	31.52	-7.4
10	Ukraine	22.93	-15.6
	World	1622.8	-2.8

Source: World Steel Association (WSA)

The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. Consequently, the steel sector has been a major contributor to India's manufacturing output.

The Indian steel industry is very modern with state-of-the-art steel mills. It has always strived for continuous modernisation and up-gradation of older plants and higher energy efficiency levels.

India's crude steel production grew by 9.4 per cent year-on-year to at 8.1 Million Tonnes (MT) in August 2016.

During April-August 2016, crude steel production in the country grew by 7 per cent year-on-year to 39.98 MT.

Over April - August 2016, steel imports fell 34.5 per cent year-on-year to 3.01 MT, while steel exports rose 23.6 per cent year-on-year to 2.38 MT.

Steel consumption in the country is expected to grow 5.3 per cent year-on-year to 85.8 MT during FY 2016-17, led by growth in the construction and capital goods sector.

Besides achieving the rank of the 3rd largest global crude steel producer in 2015, Indiahas also made a mark globally in the production of sponge iron/Direct Reduced

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iron (DRI). Courtesy a mushrooming growth of coal-based sponge iron units in key mineral-rich pockets of the country, domestic production of sponge iron increased rapidly, enabling the country to achieve and maintain the number one position in the global market. With a series of mega projects, either being implemented or at the proposal stage, which once operational will re-write the structure of the steel industry and its dynamics;and a domestic economy carrying forward the reform process further, the future of the Indian steel industry is definitely optimistic.

Investments

Steel industry and its associated mining and metallurgy sectors have seen a number of major investments and developments in the recent past.

According to the data released by Department of Industrial Policy and Promotion (DIPP), the Indian metallurgical industries attracted Foreign Direct Investments (FDI) to the tune of US$ 8.89 billion, respectively, in the period April 2000–March 2016.

Some of the major investments in the Indian steel industry are as follows:

Tidfore Heavy Equipment Group, the China-based infrastructure giant, is looking to enter the Indian market by signing an investment agreement worth US$ 150 million with Uttam Galva Metallics, to expand its Wardha unit along with South Korean steel major Posco.

Steel Authority of India Ltd (SAIL) and ArcelorMittal SA are looking to set up a joint venture (JV) factory in India to manufacture high-end steel products which could be used in defence and satellite industries.

JSW Group plans to invest around Rs 10,000 crore (US$ 1.49 billion) at Salboni in West Bengal to set up 1,320 Megawatt (MW) coal-based power plant, 4.8 million tonne cement plant and paints factory over a period of next five to seven years.

National Mineral Development Corporation (NMDC) has planned toinvest Rs. 40,000 crore (US$ 5.96 billion) in the next eight years to achieve mining capacity of 75 Million Tonnes Per Annum (MTPA) by FY2018-19 and 100 MTPA by FY2021-22, compared to 48 MTPA current capacity.

Posco Korea, the multinational Korean steel company, has signed an agreement with Shree Uttam Steel and Power (part of Uttam Galva Group) to set up a steel plant at Satarda in Maharashtra.

Steel Authority of India Ltd (SAIL) and ArcelorMittal, world's leading steel maker, we have agreed to set up an automotive steel manufacturing facility in India.

Iran has evinced interest in strengthening ties with India in the steel and mines sector, said ambassador of the Islamic Republic of Iran, Mr. Gholamreza Ansari in his conversation with Minister of Steel and Mines, Mr. Narendra Singh Tomar.

Public sector mining giant NMDC Ltd will set up a greenfield 3 MTPA steel mill in Karnataka jointly with the state government at an estimated investment of Rs 18,000 crore (US$ 2.67 billion).

JSW Steel has announced to add capacity to make its plant in Karnataka the largest at 20 MT by 2022.

Government Initiatives

Some of the other recent government initiatives in this sector are as follows:

The Government of India has approved a joint venture (JV) between MSTC Ltd and Mahindra Intertrade Ltd, for setting up India's first greenfield auto shredding and recycling facility, which will aide in saving of foreign currency, as a result of import substitution of scrap.

Union Minister of Steel, Mines, Labour and Employment, has launched the National Mineral Exploration Policy (NMEP), which will help to adopt comprehensive exploration of non-fuel and non-coal mineral resources that would give a major boost to the economy.

Metal Scrap Trade Corporation Limited (MSTC) and the Ministry of Steel have jointly launched an e-platform called 'MSTC Metal

Mandi' under the 'Digital India' initiative, which will facilitate sale of finished and semi-finished steel products.

The Parliament of India has cleared amendments to the Mines and Minerals Development and Regulation (MMDR) Act, which will enable companies to transfer captive mines leases similar to mines won through an auction, and which is expected to lead to increased Mergers and Acquisitions (M&A) of steel and cement companies. The Ministry of Steel has announced to invest in modernisation and expansion of steel plants of SAIL and Rashtriya Ispat Nigam Limited (RINL) in various states to enhance the crude steel production capacity in the current phase from 12.8 MTPA to 21.4 MTPA and from 3.0 MTPA to 6.3 MTPA respectively.

The Minister of Steel & Mines has reiterated commitment of Central Government to support the steel industry to reach a production target of 300 MTPA in 2025.

The Ministry of Steel is facilitating setting up of an industry driven Steel Research and Technology Mission of India (SRTMI) in association with the public and private sector steel companies to spearhead research and development activities in the iron and steel industry at an initial corpus of Rs 200 crore (US$ 29.65 million). The Central Board of Excise and Customs (CBEC) has issued a notification announcing zero export duty on iron ore pellets, which will help the domestic industry to become more competitive in the international market.

Government has planned Special Purpose Vehicles (SPVs) with four iron ore rich states i.e., Karnataka, Jharkhand, Orissa, and Chhattisgarh to set up plants having capacity between 3 to 6 MTPA. SAIL plans to invest US$ 23.8 billion for increasing its production to 50 MTPA by 2025. SAIL is currently expanding its capacity from 13 MTPA to 23 MTPA, at an investment of US$ 9.6 billion.

Demand supply gap

With growth in demand for steel outpacing growth in domestic production over the last few years, imports have increased.

India was a net importer of steel till FY13, but turned a net exporter of the same in FY14. In 2015, India imported 9.32 MT of steel while exports declined to 5.59 MT in FY15 from 5.98 MT during 2013-14. During FY11-15, import of steel grew at a compounded annual rate of 9.01 per cent, whereas, exports increased at a CAGR of 11.32 percent.

Total domestic demand for steel is estimated at 113.3 MTPA by 2016-17.

Road ahead

India is expected to become the world's second largest producer of crude steel in the next 10 years, moving up from the third position, as its capacity is projected to increase to about 300 MT by 2025. Huge scope for growth is offered by India's comparatively low per capita steel consumption and the expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors.

World crude steel production stood at 1622.8 MT during 2015, a decrease of 2.8% over 2014 based on provisional data released by World Steel Association (WSA). During 2015, Chinese crude steel production reached 804 MT registering a decline of 2.3% over the previous year. China remained the largest crude steel producer in the world, accounting for 73% of Asian and 50% of world crude steel production during 2015.

For India, indeed for the rest of the world, the level of action in the factory floors of China is of far greater consequence given the economy's size and its influence over global commodity prices. What we are witnessing in the global steel industry is primarily of a consequence the slowdown in China's factory floors. For instance, in October, Thailand's SSI announced it was closing down its Redcar works with the loss of 2,200 jobs. If people across the world are buying fewer cars and houses, it is showing up in the slump in demand for steel.

Global steel demand has not returned to the levels seen before Great Crash of 2008. World steel demand growth fell 1.7% in 2015. Sluggish demand has led to a fall in prices. The deceleration in China has only accentuated the crises. With local demand faltering, Chinese steel and other producers, some analysts point out, had to export substantial quantities at lower prices, or even at a loss, to the rest of the world leading to accusations of "dumping."

Opportunities & Challenges in **Steel Sector**

Abhisar Jain
CFA , Research Analyst
Metals & Mining
Centrum Broking Limited

India is the third largest steel producer globally behind China and Japan and is set to become the second largest producer well before CY20 led by rising domestic consumption and healthy capacity addition. The steel sector contributes to nearly 2% of the country's GDP and employs over 6 lakh people. Current installed capacity of Indian steel industry stands at 110 MTPA with production of ~90 MTPA, implying a capacity utilization of ~80%. While long term demand growth of steel in India has been close to the GDP growth rate but the same trend has not played out in last few years with demand growth being less than half of GDP. Slower demand growth coupled with huge increase in imports has led to reduction in utilization rates, lower steel prices & reduced margins, delay in commissioning of new steel plants and ballooning of industry level debt which in turn has made steel sector the largest contributor to distress loans in the banking system.

India's steel capacity is largely concentrated in the Eastern zone with 70% share. The National Steel policy has set the goal to increase steel production to 300 MTPA by 2025 (with East zone contributing ~250 MTPA) in conjunction with new manufacturing policy which aims at increasing the manufacturing share in GDP from current 16% to 25% by 2025. The steel policy aims to develop the Indian steel industry into a global leader in terms of production, technology, quality, competitiveness and efficiency. The steel policy has been framed keeping in mind the future demand growth and for increasing the export share to 10% by 2025.

In the context of the current steel industry scenario and targeted growth under National steel policy, we take a closer look at the opportunities & challenges for the sector:-

Challenges

High level of imports and its mitigation by regulatory support – Sharp increase in cheap imports (below cost in many cases) has led to major distress

for domestic producers in last few years and GoI has acted swiftly in providing support through a series of regulatory measures in the form of tariff barriers. With global steel industry expected to remain in large surplus in steel, there would be a need of continuous monitoring and flexibility in providing new as well as altering the existing tariff protection measures on an ongoing basis to support the domestic steel industry against unfair trade practices.

Management of current financial distress – Steel industry on a whole (barring a few efficient large producers) remains in a massive financial distress with limited scope of raising capital through either debt or equity routes. However, strong regulatory support, improvement in steel prices & margins, various debt restructuring schemes by banks and reduction in interest rates have helped improve the cash flows of struggling steel players. The challenge remains in exercise of prudence and best practices from managements in turning around the operations, using the cash flows judicially and undertaking the required asset & operational restructuring.

Land acquisition, statutory clearances & infrastructure support - Land acquisition & obtaining various clearances (state, centre & environment related) has been an extremely cumbersome process in India and projects worth Rs. 900 bn have been shelved or abandoned in the past. While progress has been made in easing the clearances process through electronic windows and new land acquisition policy has also been mooted, there is still lot of finer issues which need to be addressed. Also, there would be need for large infrastructure support particularly in railways (which meets ~70% of steel industry needs) and ports.There would be a need to increase the connectivity of railways and roads to ports and to new policies would be required to provide the required technical and financial assistance in building deep-draft ports to handle large vessels, space tomanage increasing cargo volumes and mechanization for improved turnaround times. Dedicated freight corridor (under construction) is a step in the right direction for easing logistic issues. Coastal shipping and inland waterways are the other key logistic areas which need to be encouraged and leveraged for reducing costs and managing bottlenecks.

Raw material security – Passing of new MMDR bill has been a significant step in creating a level playing field for all miners (captive as well as merchant) and focuses on exploration, new mine developments and auction based resource allocation for all the major minerals. India has rich mineral resources of all key raw materials of steel like iron ore, thermal coal, manganese ore and only scarcity is of coking coal. With new MMDR bill already a reality, the need of hour remains on identification and allocation of resources by respective state governments. There needs to be a material increase in engagement between miners and state governments for exploration & development of mines. Large investments into logistics and government's infrastructure support would also remain as key factors for mining growth

Technological innovation and emission norms – India lags behind its developed peers in terms of technological advances & innovation for steel production mainly due to lack of R&D spend. India has also been slack in following strict emission norms for the domestic steel industry unlike other nations (particularly US, Europe & Japan which have strict emission norms). The long term sustenance and growth of the Indian steel industry would need major focus of the large producers on these two aspects. Indian steel industry needs to act swiftly in adopting modern technology and innovation is

required in achieving better coke oven productivity, efficient water usage, utilization of waste heat & gases and reducing dust & CO2 emissions.

Opportunities

Consolidation through M&A – With large number of small & big producers struggling on account of operational inefficiencies and debt pile-up, there is huge opportunity as well as need of consolidation in the industry through mergers & acquisitions which can help improve the balance sheet and operational efficiencies. Indian steel industry also has scores of small & mini mills producing semi-finished steel which is further processed by secondary producers and this segment is under major stress with need of consolidation & restructuring. The ability of steel industry to restructure & reinvent itself would depend on government policy initiatives, proactive steps from existing management and constructive role from financial institutions.

Demand revival through investment pick-up - Construction and infrastructure drives 55% of steel demand in India while auto and capital goods account for 20% share. Large investments are being planned in various infrastructure projects and results are already visible in sectors like roads & railways. GoI's focus on housing for all, development of smart cities and increased urbanization are expected to result in increased steel demand from real estate and construction sector. Auto sector has turned around and lower interest rates going ahead bodes well for structural increase in demand from sectors like auto & construction. Additionally, there exists a large untapped rural demand which can be catered through increased reach and cost effective innovative solutions to replace other materials in use.

Raw material security– Passing of new MMDR bill has been a significant step in creating a level playing field for all miners (captive as well as merchant) and focuses on exploration, new mine developments and auction based resource allocation for all the major minerals. India has rich mineral resources of all key raw materials of steel like iron ore, thermal coal, manganese ore and only scarcity is of coking coal. With new MMDR bill already a reality, the need of hour remains on identification and allocation of resources by respective state governments.

Increased foreign collaboration and entry of global steel giants – GoI has allowed 100% FDI in steel sector through the automatic route and there is huge scope for increased foreign collaboration between large domestic producers and global steel giants who possess cutting edge technologies and global best practices. The entry of steel giants in the past has been inordinately delayed and easing of various regulatory processes can revive the same which would create a more competitive and technologically advanced industry scenario.

Improving operational efficiencies & reducing cost structure - Domestic steel plants have huge scope to improve upon their operational parameters and reducing fixed cost structure. While Tata steel has been a pioneer in improving productivity through best coke rates, JSW steel has the best manpower productivity in the industry. PSU's have lagged the private players in operational efficiency and relentless focus on the same in next five years can help bridge the gap and make domestic steel industry cost curve being more competitive at a global level.

Build a strategy for exports – Steel producers in India have primarily been catering to domestic demand and exports account for a very small portion of their sales.This is in sharp contrast to other nations like Japan, Korea, China, Turkey etc. Export market requires a clear cut strategy which involves a long term commitment to be a trusted supplier of high quality products & services. Indian steel industry has an opportunity to focus on exports market in medium to long term and entry of global leaders into India can help bring in more competition on that front.

Media Relations Conclave for CEOs & Spokespersons

SCOPE for Board Approved Media Relations Policy by PSEs

Mr. Bimal Julka (IAS - Retd.), Information Commissioner, CIC speaking at the Conlcave. Sitting on the dais (L to R) Dr. Jaishri Jethwaney, Program Facilitator, Dr. U. D. Choubey, DG, SCOPE, Mr. Nirmal Sinha, Chairman, SCOPE & CMD, HHEC and Mr. K. N. Dhawan, Adviser (CC), SCOPE.

Chief Executive is the first person responsible for communication within and outside the organization. Most of the CEOs or Directors, who reach top of the ladder, are experts- technocrats or econocrats, who have proved their potential before reaching the position. However, handling media is a different art and all may not be well equipped with this. Understanding the media and requirements, are important facets of Media Relations Management, Standing Conference of Public Enterprises (SCOPE) organized a two day Media Relations Conclave for CEOs and Spokespersons of Public Sector Enterprises (PSES) on November 09th-10th, 2016 at SCOPE Convention Centre, New Delhi.

The conclave was inaugurated by Mr. Ved Prakash, Vice Chairman, SCOPE & CMD, MMTC while Mr. Milind Khandekar, Managing Editor, ABP News delivered the keynote address. Dr. U.D. Choubey, Director General, SCOPE delivered the welcome address. Dr. Jaishri Jethwaney, Programme Facilitator presented the overview of the conclave and Mr. R.K. Singhal, ED, SAIL gave the vote of thanks.

Mr. Bimal Julka (IAS- Retd.), Information Commissioner and former Secretary (I&B) delivered the valedictory address while Mr. Nirmal Sinha, Chairman, SCOPE and CMD, HHEC gave the special address. Dr. U.D. Choubey, DG, SCOPE, Dr. Jaishri Jethwaney and Mr. K.N. Dhawan also spoke in the valedictory session.



Speaking at the Conclave from (L to R) Mr. Nirmal Sinha, Chairman, SCOPE & CMD, HHEC, Mr. Ved Prakash, Vice Chairman, SCOPE & CMD, MMTC and Dr. U. D. Choubey, Director General, SCOPE.

The conclave was organized with the aim to provide communication inputs to the CEOs, Directors and Spokespersons to make them communication leaders who can not only transform the company but also use the power of communication for brand building & manage the media and the public support. Director General, SCOPE, Dr. U.D. Choubey in his welcome address highlighted the contribution of public sector enterprises and their best practices in corporate governance. He advised all the CEOs and media spokespersons to learn the art and science of interaction with media which is highly sensitive, to promote the brand of public sector. He said that PSEs must take the advantage of social media to promote public sector and thwart any negative publicity.

Delivering the keynote address, Mr. Milind Khandekar said that PSEs need to highlight their achievements and be proactive when it comes to approaching the media. Managing Editor, ABP News also acknowledged the immense contribution of Public Sector in Indian Economy. He stated that Media Relations is core to build the brand image of an organization.

Vice Chairman, SCOPE, Mr. Ved Prakash in his inaugural address quoted John D Rockefeller and said, "Next to doing the right thing, the most important thing is to let people know you are doing the right thing." He said that PSEs have been the backbone of national economy and they practice best ethics in the industry. It is important that they understand the importance of brand image. CMD MMTC also stressed on the fact that PSEs need to develop their communication strategy at par with the current trend and CEOs, Directors & Spokespersons who are at the forefront of any organization need to keep upgrading their skills.

In the next session on "Understanding the changing expectations of media from organizational leaders," Dr. Jaishri Jethwaney talked about the current media scenario in the country. She also said that one should track media for own benefit. Dr. Jethwaney also explained about the paradigm shift brought by the digital media. Dr. Jethwaney urged PSEs to start trending themselves with positive news as PSEs have not received the coverage it deserves. She also asked CPSEs to audit their audit Communication tool and strategies and strategize their communication by preparing media policy for their organization.

In the session, Impact of verbal and non-verbal communication when facing the camera – the do's and don'ts, Ms. Gouran Lal, TV Anchor & Inter-Personal Communication Expert, talked about the authenticity in communication. Addressing the participants she emphasized on the need of carefully designing the message one wants to convey and also be in the present. She gave some important tips regarding sitting postures, standing postures, facial expressions and voice modulation while facing the camera.

It was followed by a presentation on Converting Data into Powerful Stories by Mr. Shishir Sinha, Business Editor ABP News. Through his presentation he talked about efficiently using data to convey the message. He said that mixing data into a story is always the best way to convey the message. A Media Quiz about Know your Media Quotient was conducted by Dr. Anand Pradhan, Associate Prof., IIMC. The quiz was informative where the participants were explained about various media terminologies like Bite, Jumpcut,

Beat, Lead, Cutaways and also about the various facts related to the digital media.

After a tea break, a mock press conference was also organized on day one where the participants donned the cap of journalists in a simulation and Mr. K. Shyam Sundar, CEO, Air India Express became the chief spokesperson. After the mock press conference the whole session was analyzed by the peers and also by the experts' - Dr. Jaishri Jethwaney and Dr. Anand Pradhan.

Day two began with the presentation by Mr. Samir Kapur, Vice President, Adfactors on the big picture – understanding digital media requirements. Mr. Kapur spoke about the digital migrants and digital natives. He presented the business aspect of Digital Media and how potential consumers or organization are utilizing the digital space. He asked PSEs to use digital space for their own benefit.

It was followed by an address on Reaching out to stakeholders through Regional Language Channels where Mr. Qamar Wahid Naqvi, Ex. News Director AajTak/ Ex India TV Editorial Director. Mr. Naqvi spoke at length about the vernacular media and its reach. He also asked PSEs to maintain a good relation with the local reporters and be prompt in their reply. Mr. Naqvi asked PSEs to answer every query posed to them.

(L to R) Mr. Milind Khandekar, Managing Editor, ABP News and Dr. Jaishri Jethwaney, Programm Facilitator addressing the conclave.

Mr. Rishabh Kumar from Corporate Communication Department of SCOPE made a presentation on brand communication through digital media. He highlighted the ways through Public Sector could use Digital Platform to build their brand image. During the presentation, Mr. P.K. Sinha, DGM, HR &CC, SCOPE said that SCOPE is taking it up as a pilot project for PSEs to promote them at digital platform. He acknowledged the fact that many PSEs are doing it through a third party but he added that SCOPE would be a better partner of PSEs for it.

After a tea break, there was a session was one on one interview with CEOs of PSEs. Dr. Vartika Nanda, Former NDTV Crime beat head and HoD department of Journalism, Mr. Rajeev Ranjan Jha, Editor - Nivesh Manthan and Mr. Ashutosh from Bloomberg interviewed, Mr. K. Shyam Sundar, CEO, Air India Express, Mr. Milind Dakhole General Manager, Marketing, Maharashtra Natural Gas Ltd., Sh. S.M. Vaidya, GM (I/c), IndianOil (Mathura Refinery), Mr. Amandeep Singh Narang, GM (CC), Indraprastha Gas Ltd., Mr. Vishwa Ranjan Gupta, Joint Director (Finance), Central Warehousing Corporation, Mr. Dushyant Kr. Sood, Executive Director, NTPC Ltd and Mr. Ashish Kansal, Sr. DGM & Head (CC), BEL. Post interview interactions were evaluated by the peers, interviewee and also experts Dr. Jaishri Jethwaney and Dr. Anand Pradhan.

In the Valedictory Session, Mr. Bimal Julka, Information Commissioner, Central Information Commission, highlighted the changing scenario of media

Participants at Media Relations Conclave 2016.

landscape with the advent of digital media. Mr. Julka urged senior executives of PSUs to adapt to the change and be proactive in promoting themselves.

Delivering the special address, Mr. Nirmal Sinha, Chairman, SCOPE and CMD, HHEC said that PSUs need to embrace the digital media platform in order to promote Prime Minister's vision of e-Governance through Digital India initiative. Mr. Sinha also said that PSUs need to enhance their brand image as their contribution towards nation building is next to none. Chairman, SCOPE reemphasized about having media policy in Public Sector.

Dr. U. D. Choubey, Director General, SCOPE said that PSUs need to build a strong relation with media so that during crises and adverse situations, media persons have positive approach. He also said that Public Sector should come out with Board approved policy on media relations to establish efficient and effective communication channel.

Dr. Jaishri Jethwaney briefly spoke about various sessions held during the conclave while, Mr. K. N. Dhawan, Adviser, Corporate Communication, SCOPE presented the vote of thanks. The conclave was attended by CEOs, Spokespersons and Senior Executives of Public Sector and a number of prominent journalists and was appreciated by them.

SCOPE highlights commendable performance by PSEs in Public Procurement

Dr. U. D. Choubey, Director General, SCOPE addressing the Policy Round Table on "Smart Public Procurement of IT & ITeS".

Speaking at the Policy Roundtable on "Smart Public Procurement of IT & ITeS", held on November 17, 2016 at Indian Habitat Centre, Dr. U. D. Choubey, Director General, SCOPE emphasized the importance of public procurement which forms 30 percent of India's GDP. He appreciated that despite of multiple legislation and policy frameworks, the Public Sector have adopted e-governance and e-procurement to escape human discretion. He said that e-procurement has brought transparency and has given a system in line with world best known enterprises. Dr. Choubey expressed PSEs concern towards the malicious sincerity to delay procurement and policy decision. He also emphasized of providing a level playing field as corruption is common cancer in all sectors, be it public or private. The programme was inaugurated by Mr. K.V. Chowdary, Central Vigilance Commissioner, CVC.

Dr. U.D. Choubey, Director General, SCOPE paying tribute to Martyrs by lighting a Diya on behalf of SCOPE and Public Sector Enterprises.

Programme on **Government e-Market Place**

Dr. U. D. Choubey, Director General, SCOPE speaking at the program on GeM.

SCOPE supported a Programme on Government e Marketplace (GeM) for launching a portal, organized by Directorate General of Supplies and Disposals (DGS&D) in collaboration with National Institute of Financial Management (NIFM) on October 27, 2016 at SCOPE Convention Centre, New Delhi. The highlight of the portal was given by Mr. Binoy Kumar, IAS, Director General, DGS&D .

Speaking in the inaugural session, Dr. U.D. Choubey, Director General, SCOPE told that transparency is the most disinfecting commodity and the objective of this portal is to eliminate human discretion in procurement process thereby imparting the best practices in corporate governance. DG, SCOPE extended all the support to DGS&D in this unique initiative.

Special Technical Session by Public Sector Enterprises in CIC Annual Convention

Dr. U. D. Choubey, Director General, SCOPE speaking at the 11th CIC Annual Convention.

The two-day Annual Convention of the Central Information Commission (CIC) was held on 7th -8th November, 2016 in New Delhi. The convention was inaugurated by the Union Home Minister Mr. Rajnath Singh who emphasised on need for a transparent system and the important role of RTI in the same. The inaugural session was followed by various technical sessions. An exclusive session on "RTI & Public Sector Undertakings" was held.

The session began with address of Mr. D. P. Sinha, Information Commissioner, Central Information Commission (CIC). Dr. U.D. Choubey, DG, SCOPE also addressed the session. In his address, he appreciated and complimented CIC for introducing RTI and empowering the people of India which in turn has promoted confidence of investors and brand of Public Sector Enterprises not only in domestic but also in international market. While highlighting the impressive performance of PSEs, he mentioned that total investment of 298 CPSEs is 10.96 lakh crore while they earned a net worth of 9.85 lakh crore. He said that Transparency is the soul of corporate governance besides Integrity, Accountability & Responsibility – the four pillars of corporate governance. He also expressed a few concerns with regard to its effective implementation. He strongly emphasized for extending the provisions of RTI to non-government sectors by way of widening the definition of "public money". He added that corruption is a common cancer for both public and private sector. Both are holding tax payers money, invested in plant, machinery and day to day working capital. As such, all account payee money is public money and unaccounted money nothing but black money. Therefore, by way of widening the definition of "public money", all enterprises, public or private, could be brought under the ambit of RTI and CAG. During question and answer session, the participants appreciated DG, SCOPE for highlighting the need to extend the RTI Act to the private sector.

Earlier in the session presentations were made by NTPC, REIL, SECI & GAIL. Mr. M. K. Goyal, AGM, NTPC while giving a presentation on the RTI mechanism in NTPC gave an overview of company's 47,228 MW capacity under operation with a net worth of Rs.88,782 Cr. He said that NTPC has a centralised system for RTI at the Corporate Centre, with one single CPIO and single AA at corporate office and 46 APIO at projects and other business heads. All the matters related to RTI are dealt by CPIO heading the RTI Cell. Enumerating the status of application received he informed that in 2016, though number of applicants have increased to 12% but 1st appeal reduced by 6%. Giving an analysis of RTI application received, he said that

maximum request for information that of 32% were related to HR department but mostly related to grievances of employees. These grievances range between topics such as Recruitment, promotions, transfers, Contract Labour etc. He shared case studies to further explain the functioning of RTI Act in the company.

This was followed by presentation by Mr. A.K. Jain MD, REIL who spoke about the growing relevance of the Act today. He shared the important provision of the RTI Act 2005 and mentioned that information sought under section 4(1)b of RTI Act is covered under the RTI manual of the company. He added that the channel of queries and replies have been created in the company and how this channel has become a pertinent part of the company's culture. Sharing the status of RTI applications he mentioned that since inception of RTI Act 2005, REIL has 27 1st Appeal and 5, 2nd Appeal to CIC against total number of 168 RTI applications. He suggested the need for analysis of RTI application and one single window for RTI besides 3 'Is' for effective implementation of RTI Act which include Innovation, Infrastructure and Implementation of the Act.

Mr. Jain also emphasized on the use of technology for prestigious and big size projects, monitoring their execution and complaint redressal resulting in transparency among all stakeholders.

The next presentation was given by Mr. Rajeev Bhardwaj, Director (HR), Solar Energy Corporation of India who said that RTI had emerged with the idea of how to seek information. He gave a detailed look into the exemptions and management of RTI applications. Before the enactment of RTI Act, Right to Information was held to be a fundamental right under the constitution of India but this too was under certain restrictions. He shared that every public authority must provide its administrative or quasi-judicial decisions to affected persons. He added that though exemptions are limited to Section 8(c) and 9 only, public authorities also using sections 7(a), 10 & 11 for not disclosing the information. He stressed that mere existence or apprehensions of any exception or provisions should not be the ground for refusal of information to the applicant. He said that though PSUs are public authorities but at the same time are also business entities and competing in the market, business decisions and trading practices, hence should not be equated with Government Department.

The last presentation of the session was given by Mr. S.B. Mitra GM, Law, GAIL. Mr. Mitra gave a brief overview of the GAIL and shared the implementation process of RTI Act 2015 in the company. There was a diverse mechanism dealing with RTI matters. Single CPIO and 40 ACPIO's & 8 appellate authorities work through a dedicated RTI Cell, for the benefit of citizen. The complete structure of this cell and RTI guidelines are mentioned on the website of GAIL. Out of the application received, Mr. Mitra mentioned that 95% are from external applicants on issues such as contracts, recruitment etc. rest 5% are received from the employees of the company on issues like promotion, transfers etc.

The first appellate authority examines the appeal and gives an opportunity for personal hearing. He also shared case studies wherein the decision of 1st Appellate Authorities was challenged by CPIO through 2nd Appeal by CPIO. He expressed concern for diversified information and different verdict by CIC on the same issue. He also suggested to extend Article 21 to CPIO. Case studies of GAIL CPIO challenging a decision by FAA, proactive disclosures by the company to reduce RTI appeals were also discussed during the presentation.

Steel Pavilion at India International Trade Fair 2016

Nisha Sharma
Sr. Manager (CC), SCOPE

Lipi Singh
Executive (CC)

Digital India was the theme of 36th edition of the India International Trade Fair 2016 held in Pragati Maidan from 14th-27th November, 2016. Presenting their digital prowess, the Ministry of Steel (MoS) displayed their pavilion called 'Steel Empowers Digital India'. This was a unique presentation of working of the industry that contributes approximately 2% to the country's GDP. On display was diverse information right from the basics of how steel is made to the latest Digital technological processes being utilised in the industry. In 2014, India was the 4th largest producer of crude steel in the world after the United States of America but became the 3rd largest producer of steel in the year 2016. This was achieved owing several initiatives taken by the government to provide a conducive environment for the growth of the industry that employs over 6 lakh people in India. SCOPE representatives Ms. Nisha Sharma, Senior Manager, CC and Editor, Kaleidoscope & Ms. Lipi Singh, Executive, CC visited PSE pavilions including Steel Pavilion at IITF. A report of the same is as below.

Minister of Steel, Mr. Birender Singh inaugurating the steel pavilion at IITF, 2016. (Image courtsey: SAIL)

The Steel pavilion was a joint representation of the country's Public and Private Sector companies. The idea behind them coming together was the fact that both PSEs and Private Sector need to come up with joint strategies to become globally competitive. Various companies were part of the display. These included SAIL, NMDC, RINL, ESSAR Steel, FSNL, HSCL, JPC, JSL, JSPL, JSW, KIOCL, MECON, MOIL, MSTC and TATA Steel. Emphasis was

"My desire is that public, private sector and ministry will have to prepare a joint strategy" Steel Minister at IITF, 2016

"We are constantly working towards innovative and cost-effective R&D solutions with the aim of becoming a global hub of centre of excellences", says Steel Minister at IITF, 2016

Union Minister of Steel, Mr. Birender Singh along with Secretary, Steel and other senior officials visiting the Steel Pavilion.
(Image courtsey: SAIL)

"The entire industry will have to come up with joint strategies to take on the challenges being faced by the industry. My desire is that public, private sector and ministry will have to prepare themselves to jointly face the challenges coming from abroad. The government of India is focused on manufacturing sector and is implementing aggressive Research and Development projects in diverse realms of Iron & Steel Technology under various categories such as Plant Performance Improvement (PPI), Product Development (PD), Scientific Investigation and Development (SID), Basic Research (BR) and Technical Services (TS). The major efforts are directed towards cost reduction and improvement in quality of Indian steel, in order to develop and deliver high quality steel products that add value to the customer's business, across the value chain," said Minister of Steel, Mr. Chaudhary Birender Singh at the inaugural function of the Ministry of Steel (MoS) Pavilion at the 36th edition of India International Trade Fair (IITF).

On this occasion, Aruna Sharma, Secretary, Steel, said, "In-line with PM Narendra Modi's vision and Government of India's flagship programme - Digital India, the Indian steel industry has taken a very proactive approach and enabled seamless integration of digital technologies across processes, such as operations research, product development, robotics & mechanical engineering, mining, pelletization, raw material handling, coke oven, sinter plant, blast furnace, long product mill, continuous casting, SMS/BOF, flat product mill, supply chain management, procurement, retail and online sale of steel. The Digital Revolution holds many promises, for the steel sector in India, it has already embedded transparency, efficiency, enhanced quality of Indian steel and most importantly improved safety standards, leading to a digitally empowered society and knowledge economy."

From SAIL's Press Release

laid on the fact that the industry needs to work towards innovation and R&D to develop new products empowering industries to become self reliant and depend less on imports. Digital is the new way forward and the exhibit by the Steel Ministry was a detailed look at how digital has come to play a major role in functions like mining, pelletization and other steps in making of steel. All in all, how the entire production and supply management of steel is now digitally enabled.

Digitization of Steel Making Process

It is said that storytelling is the most effective form of communication. Making use of the same, the making of steel which could be seen as highly scientific and cumbersome process was put up in story form at the pavilion. Step by step of 'how steel is made' was put together with the help of miniature models and interesting hoardings, which made it easy to understand for the visitors. To make it even more interactive, an interesting lucky draw questionnaire was distributed among students and visitors who were asked to fill in answers to questions like how is steel made, uses of steel in day to day equipment and if steel was part of their life. This turned out to be an intriguing experience for students, who could be seen reading up the displays to understand and participate in the lucky draw.

Use of digitalization in steel production were enumerated in nine steps as follows:

Mining

Mining that is known as the first

step in production of steel is when sedimentary rocks are extracted and converted into steel. Digital technology is now being used to make this process faster. These include systematic and scientific mining, digitally controlled mechanisms for crushing and screening, automated conveyor belts systems and Digital loading systems by stacker and reclaimer mechanism. This is followed by Pelletization, which is converting iron ore fines into "Uniform size iron ore pellets" that is used in blast furnaces or for production of Direct Reduced Iron (DRI). The use of digital processes can play a vital role as India is the largest producer of DRI or sponge iron in the world.

Union Minister of Steel, Mr. Birender Singh at the Ministry of Steel Pavilion with Digi-Man and Steel-Man. (Image courtesy: SAIL)

Raw material handling through Wi-Fi

Thousands of tonnes of material are then transported across shop floors through conveyor belts controlled by Wi-Fi networks.

These play a pivotal role as utmost accuracy of conveyor belts are achieved through them. Wireless Network based systems for centralised monitoring and wireless access for monitoring parameters within these Wi-Fi zones enhance the production of conveyor belts.

Digital enhancement in Conversion of Coal

Coke is considered as an ideal fuel for production of steel and it is produced by baking coal in very high temperatures. If the coke produced is of good quality, it can enhance the quality of steel and reduce production costs of the same. The Automated process Control of Parameters such as online analysis of incoming and outgoing coal, online Cross Belt Elemental Analysers, Online blending model for desired ash percentage and improved Coke reliability are part of Digital processes being utilised in producing coke from coal.

Sinter Plants

Sinter is a much preferred input/raw material in blast furnaces. It improves Blast Furnace operation and productivity and reduces coke consumption in blast furnace. Sinter plants collect iron ore fines with other fine materials at high temperature to create product that can be used in blast furnace. The sintering technology has been developed over the years for the purpose of using iron, the metallurgical waste of a steel plant and iron ore fines in the blast furnace. Knowledge combined with innovative technologies can lift sinter plant to the next level of automation. Now digital technology is being utilised across the country to achieve with real time sinter feed basicity measurement, Analysis of data and interface with automation system, Implementation of closed loop online Limestone Dosing Control System.

Blast furnaces use Digital

Blast Furnaces are used for almost 70 percent of the global steel production. They chemically reduce and physically convert iron oxides into liquid iron called "Hot Metal" and digitization has only made this process swifter and better defined. Digital drives for blower fan speed, computerized control for auto change of Blast Furnace, Stoves, Wireless Mud Gun & Drill Machine operation and automated valve control for precise raw material input have improved the working of Blast furnaces.

Basic Oxygen Furnace

Oxygen blown through the blast furnace at supersonic speed turns molten iron into steel. The manufactured steel is customised through Digital Distributed

Control System. A distributed control system (DCS) is a platform for automated control and operation of a plant or industrial process. This has been digitized over the years to achieve better efficiency in the plants.

Continuous Casting

Molten Steel needs to be solidified into "semi finished" billet, bloom or slab for further use. This is known as the "Gym" where steel is moulded as per requirement. To achieve the correct width, length, cooling and quality digital processes come handy. The latest digital trends are - Breakout Prediction System and implementation at continuous caster, real time thermal mapping and auto width adjustment of the mould and Auto Mould Level Controller.

Long Product Mill

Long products of steel include TMT re-bars, wire rods etc that help build structures. India has produced rail tracks that can cover the distance between the earth and moon. Automated process control, interface condition & monitoring system, controlled temperature rolling and controlled cooling gives a good product with high degree of thermo mechanical properties, multi dimensional accuracy and consistent mechanical properties.

Flat product Mill

Flat products include hot rolled coil, cold rolled coil, coated steel products, tinplate and heavy plate used in pipes, heavy machinery, construction etc. Digital technology like Thickness gauges and High performance Controller (HPC) based Mill Automation System for gauge control, Provision for saving and retrieval of pass schedule through HMI Screens in Control posts and PC based operator's interface and Digital DC Drives. This concludes the different steps involved in making of steel.

The other features of the Steel Sector displayed at the pavilion were:

Online Steel Stores

The Steel Industry has become more accessible to buyers over the last few years. Online sites for buying steel are now helping buyers read and navigate about prices of steel and even request quotes online to purchase steel as per their requirement.

Steel companies both in Public and Private sector in India have adopted online mediums such as e-procurement, e-auction and online reverse auction to create transparency. With the e-Sales process, steel consumers, are assured of reliability at their doorstep. Reliable information on availability of steel and quality of material are few of the things offered on these sites.

R&D in Steel Sector

In order to provide accelerated thrust on R&D, Ministry of Steel (MoS) has been encouraging Research and Development activities both in public and private steel sectors. Under the title of "Test Tube of Steel Industry" R&D activities were mentioned at the pavilion. Steel companies have accomplished noteworthy work in the area of raw material beneficiation, agglomeration and product development. But the main focus has been to find solutions to problems faced by production units of Steel plants.

CSR in Steel Sector

Steel companies form a large part of the India workforce. They have been working towards doing business in ways that produce social, environmental and economic benefits in the communities where they operate. To better lives of citizens, steel companies have been creating opportunities and implementing CSR initiatives. Their efforts have seen underdeveloped villages turn into large industrial centres today. Institutes of technical training have also been created to impart knowledge among their workforce .Keeping in mind the need to create skilled workforce several institutes like National Institute of Secondary Steel Technology (NISST) and Institute for Steel Development & Growth (INSDAG) have been set up. IITF is a great opportunity and platform to engage with the general masses particularly youth of the country. The Steel Pavilion gave a hands-on-experience to its visitors to understand and see how Digital India has been empowering and strengthening the Steel Sector. This attempt created an interest among the array of visitors who learned about the sector that is part of one's day to day life in simple way.

Conference Facilities at SCOPE Convention Centre

The centrally air-conditioned SCOPE Convention Centre at SCOPE Complex, Lodhi Road, New Delhi provides excellent conference facilities to PSEs, Govt. Departments, Autonomous Bodies, Institutions/NGOs etc. The Auditorium and other Conference Halls are equipped with projector and screen facilities, sound & light control room with recording & P.A. facility, etc. Details of the capacity of the Auditorium and other Halls, which are available on nominal tariff are given below.

Auditorium

The Auditorium having capacity of 310 persons (300 Chairs + 10 Nos. Chairs at stage) capacity equipped with mikes on dias and podium on stage.

Mirza Ghalib Chamber

The chamber having capacity of 108 persons (102 Nos. Chairs + 6 Nos. Chairs on Dias) equipped with mikes on table, dias and podium.

Tagore Chamber

The chamber having capacity of 92 persons (86 Nos. Chairs + 6 Nos. Chairs on Dias) equipped with mikes on dias, tables & podium.

Bhabha Chamber

The chamber having capacity of 44 persons (24 Nos. Chairs on round table and 20 Nos. Chairs on sides) equipped with mikes on dias, tables & podium.

Fazal Chamber

The chamber having capacity of 25 persons (15 Nos. Chairs on round table and 10 Nos. Chairs on sides) capacity with board room type sitting arrangement equipped with mikes.

Business Centre

The Business Centre having capacity of 7 persons equipped with multi point Video Conferencing System (1+3), at three locations at a time for National & International both.

Banquet Hall

The banquet hall having capacity of 500 Persons for the purpose of lunch & dinner. Sitting arrangement could be done for 90 persons.

Annexe I

The Annexe-I having capacity of 25 Persons.

Annexe II

The Annexe-II having capacity of 25 Persons.

Tansen Chamber at UB

The Tansen Chamber having capacity of 50 persons having stage and podium.

Amir Khusro Chamber at UB

The Amir Khusro Chamber having capacity of 50 persons having facility of stage and podium.

For Booking & Tariff details please contact

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STANDING CONFERENCE OF PUBLIC ENTERPRISES
1st Floor, Core No. 8, SCOPE Complex, Lodhi Road, New Delhi - 110003 Phone: 011-24311747, 011-24360101 • Fax: 011-24361371

Conference Facilities at SCOPE Minar Convention Centre

SCOPE Minar, an architecturally conceived in the form of two high rise curvilinear tower blocks sitting on a four storey circular Podium Block, is strategically located in Laxmi Nagar District Centre, Delhi -110092 and housing around 40 PSEs of repute. It is one of the known buildings of East Delhi. It has a very size Reception Foyer giving ambience look inside the building. There is a green environment all around the SCOPE Minar with large size planters all around. The building is also having state of art Convention Centre, comprising four halls i.e.

Convention Hall

A large sized Convention hall having sitting capacity of 300 delegates. Various seminars, training programmes, presentations, get to gather etc. are conducted in Convention Hall. It provides ambient and peaceful environment for the programmes.

Meeting Hall

Meeting hall having "U" shaped table, with a meeting capacity of 65 delegates.Most widely used for small size meetings and training programmes, group discussion, power point presentations etc.

VIP Lounge

VIP Lounge having sitting capacity of 60 delegates. The executives and higher level officers, Directors, CMDs can use it as waiting lounge also.

SCOPE Academy of Public Sector Enterprises

SCOPE Academy of Public Sector Enterprises (APSE) conducts induction level programmes for PSEs executives. It has three training halls, one with capacity of 40 persons and two halls with capacity of 30 persons each for training purpose.

There is a wide space for vehicle parking that cater for a capacity of 700 cars, including the newly built good quality Banquet Hall wherein 300 delegates can comfortably dine at a time, makes it special to deliver an all-round conducive meeting environment .

For Booking & Tariff details please contact

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PSEs Ink MoU

WAPCOS signs Memorandum of Cooperation with Financial and Banking Association of Euro-Asian Cooperation, Russia

WAPCOS Ltd. signed a Memorandum of Cooperation (MoC) with Financial and Banking Association of Euro-Asian Cooperation, Russia with the objective of deepening their strong economic and trade relations and taking into account the strengths and advantages of each side, intend to support and coordinate efforts in mutually beneficial fields.

(left to right) Counselor to the President of the FBA EAC Mr. Alexander Balyberdin, General Director, FBA EAC Mr. Oleg Berezovoy, CMD, WAPCOS Ltd, Mr. R.K. Gupta and Vice President , Moscow Chamber of Commerce, Mr. Manish Kumar.

The MoC was signed by Mr. R. K. Gupta, CMD, WAPCOS Ltd. and Mr. Oleg Berezovoy, General Director, Financial and Banking Association of Euro-Asian Cooperation.

This Memorandum of Cooperation is a result of a business meeting held by Financial and Banking Association of Euro-Asian Cooperation recently in Moscow with the representatives of the company WAPCOS Ltd. The parties noted the high level of interest in the establishment and development of cooperation, attaching high priority to monitoring trends of development of the global economic and financial system, initiating of international infrastructure projects, and dissemination of efficient technologies. As per the MoC, both sides intend to cooperate in the exchange of knowledge and to exchange ideas, information and to collaborate on problems and projects of mutual interest by integrating forces to work together in the framework of the Memorandum for the successful solution of the statutory objectives of the sides on a partnership basis.

NBCC signs MoU with CII- IGBC

Dr. Anoop Kumar Mittal, CMD, NBCC (India) Ltd. and Dr. Prem C. Jain, Chairman, CII- IGBC, signed MoU at NBCC Corporate Office, New Delhi

Dr. Anoop Kumar Mittal, CMD, NBCC with Dr. Prem C. Jain, Chairman, CII- IGBC at the MoU signing ceremony.

recently for promoting green buildings, capacity building and development of green building resources. Senior Executives of both NBCC & IGBC were also present on the occasion.

Oil India signs MoU with University of Houston

Oil India Limited (OIL) with intent of augmenting its reserves base and maximising recovery from its aging oil fields has entered into an MoU with the University of Houston, one of the leading universities on Oil & Gas of the world. The MoU was

signed recently in the presence of Mr. Dharmendra Pradhan, Minister of State (I/C), Petroleum & Natural Gas at New Delhi.

The MoU, amongst others, is focused to collaborate in the fields of Improved Oil Recovery & Enhanced Oil Recovery for production enhancement from matured fields, seismic interpretation & reservoir characterization studies, improvement of drilling and well intervention practices and unconventional hydrocarbon studies.

Senior Officials from Oil India and University of Houston during the MoU signing ceremony.

It is envisaged that the collaboration will help OIL to further consolidate and upgrade the various initiatives the Company has undertaken to improve production and contribute significantly to the energy security of the country. This will also contribute towards national obligation as set by Prime Minister to reduce import dependency of oil & gas by 10 percent by 2022.

NTPC signs MoU with Andaman and Nicobar to set up 50 MW Solar Power Projects

NTPC shall be setting up Solar Power projects of 50 MW capacity with Battery Energy Storage System at different locations in Port Blair in Andaman & Nicobar Islands. A Memorandum of Understanding (MoU) was signed between NTPC, Andaman & Nicobar Administration & MNRE in New Delhi by Mr. Subhash Muley, ED(Nuclear and RE), NTPC, Mr. Sanjeev Khirwar, IAS, Commissioner cum Secretary (Power), A&N & Mr. V.K.Jain, Adviser MNRE in the presence of Mr. Upendra Tripathy, IAS, Secretary, MNRE, Mr. Gurdeep Singh, CMD NTPC, Mr. A.K.Jha, Director (Technical) and senior officials from MNRE and NTPC.

Mr. Subhash Muley, ED(Nuclear and RE), NTPC, Mr. Sanjeev Khirwar, IAS, Commissioner cum Secretary(Power), A&N & Mr. V.K. Jain, Adviser, MNRE signed the MoU in the presence of Mr. Upendra Tripathy, IAS, Secretary, MNRE, Mr. Gurdeep Singh, CMD NTPC, Mr. A.K.Jha, Director(Technical) and senior officials from MNRE and NTPC with MoU documents.

The power generated from these solar plants shall contribute towards increased Renewable Energy Deployment and Greening of A&N islands.

NRL inks MoU with Dibrugarh University for Industry- Academia linkage

An MoU was signed recently between NRL and Dibrugarh University (DU) with an objective to strengthen the Industry-Academia linkage through mutual collaboration. Registrar DU Mr. M.N.Dutta and Senior GM(HR), NRL , Mr. A.K. Bhattacharya signed the MoU in presence of Director(Finance), NRL, Mr. S.K. Barua; VC DU Prof. Alak Kumar Buragohain; Professor Emeritus DU Dr. B.K.Das;

Registrar DU Mr. M.N. Dutta (sitting right) and Sr. GM(HR), NRL, Mr. A.K. Bhattacharya (sitting left) signing the MoU in the presence of Director(Finance) NRL Mr. S.K. Barua; VC DU Prof. Alak Kumar Buragohain; Professor Emeritus DU, Dr. B.K.Das and Dean R&D, DU Dr. P.K. Borua.

Dean R&D, DU Dr. P.K.Barua and other senior officials of NRL.

The MoU shall benefit both the organizations and help foster a closer relationship that is expected to promote mutual interests including organising joint events and sharing of knowledge & information through studies and interactions. The MoU would also facilitate NRL & DU to identify areas for inter disciplinary research activities and jointly plan for collaborative research in the socially and ecologically relevant fields for the development of the region.

NMDC inks Tripartite MoU with Madhya Pradesh government, MPSMCL

In its endeavour of becoming a multifaceted and multi dimensional company, NMDC signed a Tripartite MoU with Government of Madhya Pradesh (Directorate of Geology and Mines (DGM) through Mineral Resource Department (MRD)) and Madhya Pradesh State Mining Corporation Limited (MPSMCL) recently at Bhopal in the Office of Chief Minister (MP). The MoU was signed by Mr. Manohar Dubey, IAS, Secretary, Mineral Resources Department & MD, MPSMCL on behalf of MPSMCL, Mr. P.K. Satpathy, Director (Production) on behalf of NMDC Limited and Mr. V. Austin on behalf of Directorate of Geology and Mines, Madhya Pradesh in the presence of Chief Minister Madhya Pradesh Mr. Shivraj Singh Chauhan.

Mr. Manohar Dubey, IAS, Secretary, Mineral Resources Department & MD, MPSMCL, Mr. P.K. Satpathy, Director (Production), NMDC Limited and Mr. V. Austin, Directorate of Geology and Mines, Madhya Pradesh signing MoU in the presence of Chief Minister Madhya Pradesh, Mr. Shivraj Singh Chauhan.

The MoU is for geological & geophysical exploration of various minerals in State of Madhya Pradesh, NMDC made intentions to invest during the Global Investors Summit held in October, 2016 for exploration for different minerals in various districts of Madhya Pradesh over an area of approximately 7200 square kilometers. NMDC has explored several deposits for over five decades within and outside the country and has established deposits of iron ore, copper, limestone, dolomite, bauxite, diamond, sapphire etc.

NMDC is having the expertise in multidisciplinary exploration and has recently tied up with Department of Space for Remote Sensing & GIS studies using geospatial techniques and is setting up its own laboratory for Remote Sensing & GIS studies at Hyderabad. As per the MoU, on successful establishment of mineral blocks through this proposed exploration, NMDC would be forming a JV with MPSMCL with equity 51:49 (NMDC-MPSMCL) for mining of such blocks.

NPCC signs MoU with the Ministry of Water Resources, RD&GR

National Projects Construction Corporation signed a Memorandum of Understanding for 2016-17 with the Ministry of Water Resources, RD&GR recently. The MoU was signed between Mr. Shashi

Mr. Jagmohan Gupta, Jt. Secretary & Financial Advisor, Mr. Sanjay Kundu, Joint Secretary (PP), MOWR, RD & GR exchanging the MoU documents.

Shekhar, Secretary, Ministry of Water Resources, RD&GR & Mr. H.L. Chaudhary, CMD, NPCC. The company set an ambitious target for achieving turnover of Rs.1300 cr. under excellent category for the

सत्यमेव जयते
Ministry of Steel

Buyers' Benefit

- Shopping in an open, competitive and fully transparent digital environment to get the best price
- Get detailed information on product, quantity and price at a simple click of the mouse
- A wide range of 'Made in India' products to choose
- Hassle-free shopping experience saving time and cost
- 24 X 7 support service. Operate at any time, from anywhere, about any product
- Option of door delivery

Sellers' Benefit

- Wider exposure enabling you to enlarge your market potential
- Paper free selling experience
- Opportunities for MSMEs
- Brand promotion and marketing products with ease
- Supporting 'Pull' type supply management reducing carrying cost

e-assuring iNDIA

MSTC India's NO 1 e-commerce Company

Ministry of Steel

begins a new era in metal domain with convergence of three initiatives of Government of India

Digital India | Ease of Doing Business | Make in India

with

MSTC Metal Mandi

by

एम एस टी सी लिमिटेड (भारत सरकार का उपक्रम) | MSTC LIMITED (A GOVT. OF INDIA ENTERPRISE)

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Features of

- The much awaited web portal MSTC METAL MANDI was launched on 22 October 2016
- An initiative of Ministry of Steel, Govt. of India is a part of the "DIGITAL INDIA" and "MAKE IN INDIA" initiatives of the Central Government
- portal serviced by MSTC India's No. 1 e-commerce company
- portal offers only BIS certified metal products for transaction
- MSTC has tied up with various banks and NBFC's for extending Credit facilities
- This transparent and user friendly interface will go a long way in changing the face of metal trading scenario in India
- Metal Mandi portal will provide wider market place
- An opportunity for cost effective and hassle free purchases from anywhere anytime

Financial Year 2016-17. Mr. Jagmohan Gupta, Jt. Secretary & Financial Advisor, Mr. Sanjay Kundu, Joint Secretary (PP), MOWR, RD & GR and other senior officers of MOWR, RD & GR and NPCC were also present on this occasion.

CSL & EIL Sign MoU

Cochin Shipyard Limited signed a Memorandum of Understanding (MoU) with M/s Engineers India Limited for design and construction of small scale LNG Carriers. Cochin Shipyard Ltd (CSL) inked the MoU at CSL, Kochi recently. The event was held in the presence of CMD and senior officers of both CSL and EIL. This initiative, under the ambit of 'Make in India' programme of the Government of India, aims at joint design and building small scale LNG Carriers. The MoU aims to leverage EIL's strengths in the process and systems engineering and CSL's strengths in ship design and construction. This initiative is also in alignment with the Government of India's vision of SAGARMALA and Inland Water Ways Development initiatives. The MoU shall create an LNG value chain ecosystem to cater to the coastal and inland water transport segment in the Indian sub- continent.

MoU documents being signed between CSL & EIL .

The MoU's scope also covers the mutual co-operation for the vendor development, training, certification process of skilled manpower between the organizations. CSL has also acquired license for the construction of membrane technology of Gaztransport Technigaz (GTT), France for the cargo containment systems of large LNG vessels.

Two days Mega Employment Fair at CCL

Taking forward the vision to bridge the "Skill Gap" through "Skill India" initiative under the directive of MoC, Central Coalfields have launched several skill development programmes for the youth from rural background, particularly for project affected people. The aim of these programs is to make these youths employable and self- reliant. ITI, Multi Skill Development Center (MSDC), Mining Sirdar Training, Mobile repairing etc are some of the vocational training that is being provided by CCL.

Central Coalfields under the leadership of its CMD Mr. Gopal Singh has been trying to secure employment for these skilled and educated youths of Jharkhand through "Employment Fair" i.e. Placement Drives. It is the first time that any company is conducting placement drives for electrician, welders, fitters etc, to benefit the youths from the rural and interior parts of Jharkhand. CCL had already organized two "employment fairs" earlier in January and April this year, for the students of MSDC, in which 43 students were selected by different companies. Also all the students of first batch

of ITI, Barkakana who were trained as electrician were secured job through campus placement. CCL had organized two days "Employment Fair" for dependents/wards of CCL Employees/Ex Employees at its headquarter in Ranchi. At the end of the two day Employment Fair, 421 candidates were interviewed by 34 companies. The participating companies included some big names like L&T, HEC, Cummins, Tata Motors, Usha Martin, STI Marketing, Allsion etc.

PSEs **CSR Initiatives**

CRWC contributes to Swachh Bharat Kosh

Central Railside Warehouse Company Ltd (CRWC) as part of its ongoing corporate social responsibility

MD, CRWC, Mr. K.U.Thankachen handing over the Cheque to Dr. Vivek Joshi, Joint Secretary, Ministry of Finance in presence of other officers from CRWC and the Ministry.

initiatives, contributed Rs. 11.30 Lakhs to "Swacch Bharat Kosh ."

HAL-IISc to Set Up Skill Development Centre at Chitradurga (Karnataka)

The Bhoomi puja for construction of HAL-IISc Skill Development Centre was performed at Challakere in Chitradurga district around 230 km from Bengaluru by Mr. T. Suvarna Raju, CMD, HAL, Prof. Anurag Kumar, Director, IISc and others recently. "This will go a long way in recognizing and honing skills and providing opportunities for youth at various levels in line with the Government's Skill India initiative", said Mr. Raju. Training activities are expected to begin by March 2019. Mr. V.M. Chamola, Director, HR, senior officials of HAL and senior faculty of IISc were present on the occasion.

Mr. T. Suvarna Raju, CMD, HAL, at the Bhoomi Puja for HAL IISc Skill Development Centre, Challakere, Chitradurga, Bengaluru.

The concept of a Skill Development Centre (SDC) has been in the pipeline for nearly eight years at IISc. The realization of this vision warranted working with active partners having common goals. HAL came forward to support the infrastructure for this Centre under their Corporate Social Responsibility (CSR) initiatives. HAL is shouldering the Corporate Social Respon-sibility (CSR) through various community development activities over the years. Major areas of CSR are Infrastructure Development, Health, Rural Sports, Women empowerment, Education, Skill Development, Drinking Water, Enriching the environment by Rejuvenation of River Kumudvathi, Establishment of Wind Power Project & Solar Power Projects in Schools etc.

IOC observes Swachh Bharat Abhiyan

Observing Swachh Bharat Abhiyan, IndianOil, Corporate Office, New Delhi organised several interesting activities for the employees and the general public to sensitize people and spear awareness about Swachh Bharat. To begin with, a talk on Swachhta was organised at Blind school, Sadiq Nagar in collaboration with Sulabh International. The interactive session was taken by Mr. S. Chatterjee, Retd. IAS Officer from Sulabh International who informed children about the importance of maintaining cleanliness of the surrounding, school premises, toilets etc. After the session, IndianOil handed over Educational Kits in Brail, sports kit, IndianOil T-Shirt and Caps to the specially abled kids.

IndianOil Retail Outlets being the face of the Corporation, a unique Swachh Bharat initiative was organised at company owned and company operated Retail Outlets and a few other ROs at New Delhi where a short skit was organized on Swachh

Children of Blind School appreciating IndianOil's commitment to Swachh Bharat Abhiyan.

Bharat for the customers by Delhi State Office and Delhi Divisional Office. Apart from the skit, the customers visiting the ROs were handed over a hand sanitizer and a khadi towel and were urged to contribute towards Swachh Bharat Abhiyan and maintain cleanliness all around. Swachhta Ambassadors from Corporate Office and DSO and Delhi Divisional Office also inspected cleanliness of the RO as well sanitation facilities. To encourage IOCians to continue their commitment and dedication towards Swachh Bharat Abhiyan, a nukkad natak was organised at the Corporate Office. Talking about Swachh Bharat Abhiyan at one of the IndianOil retail outlets, Mr. S. Mukherjee, ED (HR&CSR), CO said "Cleanliness cannot be taught, it has to be developed and each one of us have to commit and contribute towards this mission. With our pan India presence, we must spread awareness about cleanliness across the length and breadth of the country. This would go a long way in realising the dream of 'Swachh Bharat'.

REC extends CSR support to Indian Institute of Science, Bangalore

Rural Electrification Corporation Limited (REC) has extended financial assistance of Rs. 493.71 lakhs under its CSR initiative to Indian Institute of Science, Bangalore, for the project "Establishment of 279 KWp photovoltaic solar panels on 3 no. of sites/building on department rooftops to generate power for institutional grid and installation of 2200 no. of LED lights at various locations on the IISc, Bangalore campus" in Bangalore, Karnataka.

The main objective of this project is to establish photovoltaic solar panels for power generation and LED lighting at various locations on the Indian Institute of Science (IISc), Bangalore campus in order to reduce the campus carbon footprint and dependence on non-renewable energy sources.

Mr. P. S. Hariharan, Zonal Manager, Southern Zone, REC and Mr. V. Rajarajan, Registrar, IISc exchanging the MoA documents.

The Memorandum of Agreement (MoA) in this regard was executed between REC and IISc in Bangalore recently. Mr. P. S. Hariharan, Zonal Manager, Southern Zone, REC and Mr. V. Rajarajan, Registrar, IISc, signed the MoA in the presence of Prof. Anurag Kumar, Director of IISc, and other senior officials of REC and IISc.

Awards & Accolades to PSEs

CMD, NLC honoured with PSU Leadership Award & Lifetime Achievement Award

Dr. Sarat Kumar Acharya, CMD,NLC India Ltd. has been conferred with "PSU Leadership Award" at the 2nd eJharkhhad Summit-2016 held in Ranchi, Jharkand recently. The e-Jharkhand Summit-2016 was being jointly organized by Department of IT, Government of Jharkhand and Elets Technomedia.

Dr. Sarat Kumar Acharya, CMD, NLCI.

The Chief Minister of Jharkhand, Mr. Raghubar Das presented the "PSU Leadership Award" to Dr. S.K. Acharya during the inauguration of the Summit. The award was received by Mr. R. Mohan, Executive Director/Commercial, NLCI , on behalf of Dr. Acharya. The award was presented to Dr. Acharya for his outstanding leadership skills and commendable initiatives taken for the growth of the organization.

Also, in recognition of his extraordinary Leadership Skills and immense contribution to the field of Human Resources, Dr. Sarat Kumar Acharya was presented a "Lifetime Achievement Award" during 2nd BW "HR Excellence Awards 2016", organized by the renowned business journal, "Business World" recently at Mumbai, Maharashtra. The award was received by Mr. Y.M.S. Pillay, Dy.General Manager, NLCI on behalf of the CMD, NLC India Limited.

NMDC's Bailadila Iron Mine bags FIMI Golden Jubilee Award for Excellence

Adding yet another feather to its cap, NMDC's Bailadila Iron ore mine-Bacheli Complex bagged FIMI Golden Jubilee Award for Excellence. On the basis of best practices adopted, improvement over the last 10 years, excellence in environment management, social awareness, health and safety, overall mine performance and exemplary Reclamation & Rehabilitation (R&R) efforts by Bailadila Iron Ore Mine – Bacheli Complex, Federation of Indian Mineral Industry (FIMI) has awarded NMDC's flagship mine for this One Time Special Award.

Mr. Arun Kumar Shukla, ED & Project Head, BIOM- Bacheli Complex receiving the award from Mr. Piyush Goyal, MoS (I/C), Mines, Power, Coal, New & Renewable Energy.

The award was presented by Mr. Piyush Goyal, Minister of State (Independent charge) for Mines, Power, Coal, New & Renewable energy and received by Mr. Arun Kumar Shukla, Executive Director & Project Head of BIOM-Bacheli Complex,

NMDC recently during the 50th Annual General Body meeting of FIMI at New Delhi.

It is pertinent to mention that having stiff competition for this one time special award, FIMI has short-listed BIOM Bacheli Complex of NMDC, Noamundi Iron Ore Mine of Tata Steel and Ultratech Limestone Mine of Aditya Birla Group and based on the mine site assessment by the committee and presentation on environment, CSR, social awareness, health and safety, overall mine performance and exemplary Reclamation & Rehabilitation (R&R) efforts, the Jury Committee adjudged BIOM Bacheli Complex for "FIMI Golden Jubilee Award for Excellence 2015-16".

NMDC has been continuously working towards sustainable development and installed Sewage Treatment Plant with SBR Technology at Bacheli. The Company has undertaken Green House Gas (GHG) Assessment and disclosure of carbon emissions. Company has made significant contribution to the tribal belt of Bastar by making its presence since 1964 by opening of iron ore mine at Bailadila region. NMDC is running ITI at Bhansi, Polytechnic College at Geedam (Dantewada). The Company has also set-up and operating one of the world class Education Hub at Jawanga (Dantewada District) and has been in the forefront in extending support to the local people especially in the areas of education, medicare and infrastructure development.

NTPC Dadri bags Top Plant 2016 Award

The National Capital Power Station, Dadri (NTPC Dadri) has bagged the Top Plant 2016 award by prestigious Power Magazine of USA in the coal fired generation category. The award was announced by Power Magazine recently. The Power Magazine is the official publication of Electric Power covering Business & Technology for the Global Generation Industry.

In the October 2016 issue of POWER magazine the winning Attributes of National Capital Power Station, Dadri (coal based Station) has been mentioned as "Consistently one of NTPC's top performing plants, despite age and challenges in the Indian power market. Plant staff have worked to implement a range of innovative approaches to increase plant efficiency without increasing costs, and has achieved 100 percent fly ash recycling and implementing a zero liquid discharge system."

With the total installed capacity of 2,654 MW, NTPC Dadri is one of the largest power plants in India. It consists of six coal-fired units, (4x210 MW and 2x290 MW), 829 MW gas fired combined cycle plant, and a 5 MW solar farm. Adjacent to the plant is a 5,300 MW switchyard, the largest in the nation, which connects to a 400kv transmission line.

BEML bags India's Top Challenger Award

BEML Ltd. has been bestowed with the 'Top Challengers Award' instituted by Asaap Info Global

Mr. Deepak Kumar Hota, CMD, BEML receiving the award from Mr. Peter Huyghebaert, Belgium Counsul General in the presence of Mr. Pratap Padode, Managing Director, ASAPP Info Global Group, Mr. Raghav Chandra, Chairman, NHAI, Mr. Dilip Suryavanshi, CMD, Dilip Buildcon and Mr. Sumit Banerjee, Chairman, ASAPP Info Global Group.

Group during the 14th Construction World Annual Awards-2016. Mr. Deepak Kumar Hota, CMD, BEML received the Award of 'Buildcon India's Top Challenger 2015-16' from Mr. Peter Huyghebaert, Belgium Consul General at a function held at Mumbai in the presence of Mr. Pratap Padode, Managing Director, ASAPP Info Global Group, Mr. Raghav Chandra, Chairman, NHAI, Mr. Dilip Suryavanshi, CMD, Dilip Buildcon and Mr. Sumit Banerjee, Chairman, ASAPP Info Global Group.

BEML has won the Award for having raised its top-line and bottom-line, stayed profitable and managed to keep its financial health within defined debt limits, despite the slow pickup and sluggishness in the recent past.

IndianOil clinches 14th position in 'Platts Top 250 Global Energy Company Rankings 2016'

Indian Oil Corporation Ltd. jumped to 14th from 66th position among 250 global energy businesses in a survey conducted by 'Platts Top 250 Global Energy Company Rankings 2016'.

As many as 15 Indian energy companies made the ranks against 14 last year. Platts attributed the refining sector strength to improved margins."The ranking reflected the oil market's biggest price collapse in nearly three decades, a resulting re-drawing of the lines in the fuels mix and the successes of energy players less exposed to the price rout triggered by OPEC's defence of its global oil market prominence," it said

Mr. R.S Dahiya, GM (I/c), BSO, IndianOil receiving the leadership award from Mr. Raghubar Das, Chief Minister of Jharkhand.

PSU Leadership Award conferred to IndianOil at 2nd e-Jharkhand Summit

IndianOil was honoured with the "PSU Leadership Award" at 2nd e-Jharkhand Summit held at Ranchi recently. The award was conferred by Mr. Raghubar Das, Chief Minister of Jharkhand, who also was the Chief Guest of the Summit. The summit was attended by a galaxy of leaders and senior executives of the industry. Mr. R. S. Dahiya, GM I/c, Bihar State Office, received the award on behalf of IndianOil.

The e-Jharkhand Summit was structured by Department of Information Technology & e-Governance, Government of Jharkhand, with an aim to highlight the pro-people initiatives taken by the State Government believing that every citizen has a right to information pertaining to his own welfare needs and opportunities, to understand the process of governance and to know the rationale behind the decisions, which the State Government takes.

The inaugural session commenced with the address of Chief Minister of Jharkhand entitled "Digital Jharkhand: The Next ICTEC (Information, Communication, Technology, Electronic and Cyber) led Knowledge Hub". Apart from industry presentations, there were deliberations on DBT & Technology for BFSI Sector and Government Services, importance of new age technology for securing cities & urban infrastructure in the smart city ecosystem and on Jharkhand's new start-up policy.

PSEs Pay Handsome
Dividend to Government

NFL presents Dividend of Rs. 53.25 cr. to Government

National Fertilizers Limited (NFL) presented dividend of Rs 53.25 cr. to the Govt. of India for the year 2015-16 in respect of the shares held by it. This is the highest dividend paid by the company in the last ten years. NFL has registered a Profit after Tax (PAT) of Rs. 197.09 cr. for the year 2015-16. The company has achieved the best ever urea production of 38 lakh MT in the year 2015-16.

Mr. Manoj Mishra, C&MD, NFL presenting the Dividend of Rs. 53.25 cr. for the year 2015-16 to Union Minister (Chemicals & Fertilizers and Parliamentary Affairs) Mr. Ananth Kumar and Minister of State (Chemicals & Fertilizers) Mr. Mansukh L. Mandaviya in New Delhi recently.

Mr. Manoj Mishra, CMD, NFL paid Dividend of Rs. 53.25 cr. to the Union Minister of Chemicals & Fertilizers, Mr. Ananth Kumar recently in a ceremony held at the Constitution Club, New Delhi. MoS (C&F), Mr. Mansukh Lal Mandaviya was also present on the occasion. The programme was also attended by senior officials of the Department of Fertilizers and NFL. It is noteworthy that NFL has paid a cumulative dividend of Rs. 1,087.71 cr.s to the Government and other Shareholder till date against paid up equity of Rs. 490.58 cr.

IndianOil pays 2.29 Cr. dividend to Gujarat Governor

A Dividend cheque for an amount of Rs. 2.29 Cr. was handed over by Mr. M.R. Solanki, DGM I/C (Ops), Gujarat State on behalf of Indian Oil Corporation to Mr. O. P. Kohli, Governor of Gujarat. Government of Gujarat is holding 27 lakhs Equity shares of IndianOil. Indian Oil Corporation Ltd., had recently declared a Dividend of Rs. 8.50/- per share of Rs.10/- each (85%) for the year 2015-16. Mr. Solanki was accompanied by Mr. Jagdish Gupta, DGM (F), GSO.

Mr. M. R. Solanki, DGM I/C (Ops), GSO, IndianOil(2nd from left) handing over dividend cheque to Mr. O P Kohli, Governor of Gujarat. Also, seen (L-R)- Mr. E. Govardhanan, Sr. Manager (HR), & Mr. Jagdish Gupta, DGM(F), GSO.

Mr. Solanki apprised Mr. Kohli about various activities undertaken by IndianOil in petroleum & energy sector to make India self sustainable in the energy sector. During the occasion, the Governor evinced keen interest in the petroleum sector & appreciated the good work done by IndianOil especially in Gujarat State which is known as country's Oil & Gas capital. Mr. Jagdish Gupta, DGM (F), explained in detail IndianOil's growth plan & financial scenario.

PDIL pays Dividend for the year 2015-16

Projects & Development India Ltd. paid dividend @10.67 percent amounting to Rs. 184.58 lakh recently

for the year 2015-16 through RTGS at bharatkosh.gov.in, Govt.of India Receipt Portal. PDIL has been paying dividend consistently to the Government of India except for the year 2014-15.

Payment of Final Dividend by AAI for the year 2015-16

Airports Authority of India (AAI) is a consistently profit making Public Sector Undertaking and paying Dividend to the Government of India.

Dr. Guruprasad Mohapatra, IAS, Chairman, AAI presenting cheque as final Dividend for the year 2015-16 to Mr.P. Ashok Gajapathi Raju, Union Minister of Civil Aviation in the presence of AAI Board Members, Senior officers from AAI and MoCA.

AAI achieved a record turnover of Rs. 10825 cr., Profit Before Tax (PBT) of Rs. 3697 cr. and Rs. 2537 cr. as Profit After Tax (PAT) during the year 2015-16. AAI paid a Dividend of Rs. 761.21 cr. for FY 2015-16 to the Government of India.

AAI presented a cheque amounting to Rs. 482.21cr. as Final Dividend for the FY 2015-16 during a function held at New Delhi recently.

REIL pays an all time high dividend of Rs.2.15 Cr.

Mr. A.K. Jain, MD, Rajasthan Electronics & Instruments Limited handed over the Dividend payment of Rs.2.15 Cr. to CMD, Instrumentation Limited, Kota in the presence of Minister of Heavy Industries & Public Enterprises, Mr. Anant G. Geete and Mr. Girish Shankar, Secretary, Department of Heavy Industry (DHI). REIL paid an ever highest dividend for the year 2015-2016. Mr. Anshu Prakash, Additional Secretary, Mr. Vishvajit Sahay, Joint Secretary and Smt. Ritu Pande, Director, DHI were also present on the occasion.

Mr. A. K. Jain, MD, REIL, Mr. Vishvajit Sahay, Joint Secretary, DHI, Mr. Anant G. Geete, Union Minister of Heavy Industries and Public Enterprises, Mr. Anshu Prakash, Additional Secretary, DHI, Mr. Girish Shankar, Secretary, DHI, and Mr. M.P. Eshwar, CMD, IL Kota)

While acknowledging the work being done by REIL, significantly contributing to National missions, Mr. Anant Geete, Minister of Heavy Industries & Public Enterprises emphasized that PSUs should work in synergy with "Make in India" mission of the Government and align their activities to make India a global manufacturing hub. He advised REIL to focus on diversification and businesses in overseas market as country offers unlimited growth potential for Public Sector Industry, to increase domestic value addition and leverages across the borders.

Mr. A.K. Jain, MD, REIL, said that REIL is one of the largest off-grid SPV solution provider in the country and having very good reputation in the Dairy Sector for its milk testing equipments. Looking to the current market scenario for MW SPV Power Projects, the Company is changing its strategy and aiming to align with the prevailing business model in Solar PV sector.

NPCC pays Dividend

Mr. H.L. Chaudhary, CMD, NPCC Limited presented the dividend cheque of Rs.1.02 Cr. for the financial year 2015-16 to Smt. Uma Bharti, Union Minister for Water Resources, River Development & Ganga Rejuvenation (MoWR RD&GR) in the presence of Dr. Sanjeev Kumar Balyan, Minister of State for Water Resources recently. CMD, NPCC was accompanied by Mr. Manohar Kumar, Director

Mr. H.L. Chaudhary, CMD, NPCC presenting the dividend cheque to Ms. Uma Bharti, Union Minister (WR RD&GR).

(Engg) and Mr. Sahab Narain, Director(F) of NPCC.

The event was graced by Mr. Shashi Shekhar, Secretary, Dr. Amarjeet Singh, Officer on Special Duty, Mr. Jagmohan Gupta, Joint Secretary & Financial Advisor, Mr. Sanjay Kundu, Joint Secretary (PP) of the Ministry of Water Resources, RD & GR. Minister applauded NPCC for declaring dividend after a gap of almost 50 years.

NSPCL pays Dividend of Rs. 120 Cr. for FY 2015-16

Mr. Manash Sarkar, CEO, NSPCL along with Mr. S. V. Shahi, CFO, NSPCL presented the final dividend cheque recently to Mr. Gurdeep Singh, CMD, NTPC. Mr. A. K. Jha, Director (Technical), Mr. S. C. Pandey, Director (Proj), Mr. Saptarshi Roy, ED (CP& CC) and Mr. K. K. Sharma, Director (O) and Chairman NSPCL were also present on the occasion.

Mr. Manash Sarkar, CEO, NSPCL along with Mr. S. V. Shahi, CFO, NSPCL presenting the final dividend cheque to Mr. Gurdeep Singh, CMD, NTPC.

NTPC-SAIL Power Company Pvt Ltd (NSPCL) paid a total dividend of Rs. 120 cr. which included interim dividend of Rs.100 cr. and Final dividend of Rs. 20 cr. which works out to 12.24 percent of paid up equity capital share capital. The Dividend and Dividend distribution tax amounts to 58.50 percent of Profit After Tax of Company achieved for financial year 2015-16.

Ever since its inception in March 2001, NSPCL has been a continuous dividend paying company. Since inception, the Turnover & Profit After Tax of the Company grew at CAGR of 13.80 percent & 17.28 percent respectively. NSPCL recorded a total income of Rs.2299.87 cr. for Financial Year 2015-16 with profit before tax (PBT) of Rs.262.06 cr. and a Profit After Tax (PAT) of Rs. 246.84 cr.

BHEL pays Final Dividend for fiscal 2015-16

Bharat Heavy Electricals Limited (BHEL) paid a final equity dividend of 20 percent for fiscal 2015-16. In value terms, the total dividend paid for fiscal 2014-15 amounts to Rs. 98 Cr. With this, the company has maintained its impeccable track record of rewarding investors by paying dividends uninterruptedly since 1976-77.

A cheque of Rs.61.7 Cr. towards the final dividend for the year 2015-16 on the equity (63.06 percent) held by the Government of India, was presented to Mr. Anant G. Geete, Union Minister of Heavy Industries and Public Enterprises by Mr. Atul Sobti, CMD, BHEL, in the presence of Mr. Babul Supriyo, Minister of State for Heavy Industries and Public

Mr. Atul Sobti, CMD, BHEL, presenting the dividend cheque to Mr. Anant G. Geete, Union Minister for HI&PE, in the presence of Mr. Babul Supriyo, MoS, HI&PE and others.

Enterprises. Functional Directors on the board of BHEL as well as other senior officials of the Ministry of Heavy Industries & Public Enterprises and BHEL were also present on this occasion.

In spite of fiscal 2015-16 being an extremely challenging year, BHEL recorded the highest-ever commissioning of projects in its history and the highest order booking in the last five years in fiscal 2015-16, ending the year with significant traction in growth drivers. Enhanced focus on project execution resulted in BHEL creating history by way of commissioning/synchronizing an all-time high 15,059 MW of power generating equipment during the year. Despite intense competitive pressure in the power and capital goods markets during the year, BHEL achieved the highest order booking in the last five years, at Rs.43,727 Cr., a 42 percent leap over 2014-15. The company ended the year with a total order book of Rs.1,10,730 Cr. for execution in 2016-17 and beyond.

Cochin Shipyard Ltd's commitment towards Swachh Bharat Abhiyan and Suchitwa Mission

On the occasion of declaring Kerala as the first Open Defecation Free state in India,CMD, Cochin Shipyard, Mr. Madhu S. Nair handed over Rs.50 Lakhs to the Chief Minister of Kerala, Mr. PinaraiVijayan, for the successful implementation of the mission, in the presence of Director Technical Mr. Sunny Thomas, and Head CSR Mr. Varghese M.D, recently. Cochin Shipyard is also supporting the 'Total Sanitation Program' at Cherianthuruth village of Kadamakkudy panchayat of Ernakulam District. In order to make the village to achieve total sanitation, Cochin Shipyard is extending financial supportof Rs. 35 lakhs for providing home based toilets to all houses of Cheriyanthuruth island.

Mr. Madhu S Nair CMD, Cochin Shipyard Ltd. handing over Rs.50 lakhs to Chief Minister of Kerala, Mr. PinaraiVijayan

As a part of Swachh Bharat Abhiyan and as an effort to contribute to the total sanitation mission of Kerala, Cochin Shipyard has taken the responsibility of renovation of the Koithara Park of Panampilly Nagar, Kochi. The total expenditure is expected to be Rs.30 Lakhs. Its continued maintenance also will be taken up by CSL.

Cochin Shipyard has committed Rs. 50 lakhs for the construction of toilets in fifteen Government schools in Kannur district towards promotion of sanitation among school children. Cochin Shipyard has also earmarked Rs.1.8 cr. towards Swachh Bharat Abhiyan projects during the Financial Year.

HUDCO Pays dividend to the Ministry of Rural Development

Dr. M. Ravi Kanth, CMD, HUDCO presented the dividend cheque of Rs. 20.73 cr. to Mr. Narendra Singh Tomar, Minister for Rural Development and Panchayati Raj. Mr. N.L. Manjoka, Director (Corporate Planning), HUDCO and Mr. Rakesh Kumar Arora, Director (Finance), HUDCO were also present.

Dr. M Ravi Kanth, CMD, HUDCO presenting the dividend cheque to Mr. Narendra Singh Tomar, Minister for Rural Development and Panchayati Raj.

ITDC Declares 15 percent Dividend

India Tourism Development Corporation (ITDC) conducted its 51st Annual General Meeting in New Delhi recently. The Corporation closed the year once again with the remarkable performance. The turnover of the Corporation during the Financial Year 2015-16 was Rs.465.69 cr. The net profit before tax has been recorded to Rs.32.42 cr. during 2015-16. The profit after tax was Rs.22.55 cr. The highlights of the AGM was the declaration of a dividend of 15 percent amounting to Rs.12.86 cr. approximately as recommended by the Board in the meeting held in May, 2016. Out of Rs. 12.86 cr., an approximate amount of Rs.11.20 cr. will go to the Government of India. The meeting was chaired by Mr.Umang Narula, IAS, CMD,ITDC. The Corporation has shown a significant improvement in the operational efficiency. Overall occupancy during 2015-16 was 52 percent as against 47 percent during 2014-15 with flagship Hotel 'The Ashok' recording occupancy of 54 percent during 2015-16. To meet the challenges of dynamic market situation, the Corporation is focusing more towards improving the quality and range of services through its various verticals i.e. Ashok Group of Hotels, Ashok Events, Ashok Tours & Travels, Ashok Consultancy & Engineering Services, Ashok Institute of Hospitality & Tourism Management and Ashok International Trade Division.

To improve overall performance, the Corporation has undertaken aggressive sales and marketing initiatives in India and abroad. The Corporation has participated in many Travel Marts and Exhibitions and has tied up with on-line international and domestic travel agents. The Company has tied up with Amadeus - Global Distribution System (GDS) for three Delhi based hotels for better distribution of inventory. The Company has also implemented Channel Manager Software with facility of pool inventory for dynamic pricing. Further Smart Hotel Initiatives have been implemented to get customer experience and use analytics to improve performance and bring out change in service delivery standards. Under CSR Initiatives during 2015-16, the corporation has adopted Qutub Minar for maintaining cleanliness as per objective of the Corporation. The Corporation has also constructed two toilets at Churu (Rajasthan) under "Swachh Bharat Mission" of the Prime Minister. The corporation has decided to adopt more monuments apart from Qutub Minar under the initiatives during 2016-17 under the CSR activities.

NBCC pays Dividend of Rs.108 Cr. to the Government

Mr. M. Venkaiah Naidu, Minister of Urban Development received NBCC's Dividend Cheque of Rs.108 cr. for FY 2015-16 from Dr. Anoop Kumar Mittal, CMD of the company.

The Dividend was presented to the Minister, at

Mr. M. Venkaiah Naidu, Minister of Urban Development receiving the Dividend Cheque from Dr. Anoop Kumar Mittal, CMD, NBCC.

a function held recently and was also graced by Mr.Rajiv Gauba, Secretary (UD), Mr. D.S. Mishra, Addl. Secretary (UD), Directors of NBCC and other senior officers of the Ministry & NBCC. Considering the impressive performance of the Company during FY 2015-16, NBCC has paid 100 percent dividend this time which is an increase of 45 percent as compared to the last year.It may be mentioned that during the FY 2015-16, NBCC has posted a turnover of Rs.5759.86 cr., PBT Rs.441.33 cr. and PAT Rs.311.11 cr.

NRL pays highest ever Dividend to Government of Assam for 2015-16

NRL paid dividend of Rs. 63.6 cr. to the Govt. of Assam for the financial year 2015-16, the highest ever during a year. Govt of Assam hold 12.35 percent equity shareholding in the Company. Final dividend cheque of Rs. 31.79 cr. was handed over recently

Dividend cheque for the financial year 2015-16 being handed over to Chief Minister of Assam, Mr. Sarbananda Sonowal by MD NRL Mr. P. Padmanabhan (3rd from right) in presence of Director (Technical) NRL Mr. S R. Medhi(2nd from right); Director(Finance) NRL Mr. S. K .Barua(1st from left); Principal Secretary to the Govt. of Assam, Industries and Commerce Deptt. Mr. Ravi Capoor(2nd from left) and few NRL officials at Guwahati.

to the Chief Minister of Assam Mr. Sarbananda Sonowal by MD, NRL, Mr. P. Padmanabhan in presence of Director (Technical) NRL, Mr. S R. Medhi, Director (Finance) NRL Mr. S. K .Barua, Principal Secretary to the Govt. of Assam, Industries and Commerce Deptt., Mr. Ravi Kapoor and few NRL officials in Guwahati. This is in addition to the interim dividend of equivalent amount handed over to the Govt. of Assam in the month of March 2016.

NSIC pays record dividend

Mr. Kalraj Mishra, Minister of MSME was given a dividend cheque of Rs. 29.05 cr. for the year 2015-16 by Mr. Ravindra Nath, CMD, NSIC in the presence of Mr. Giriraj Singh, Minister of State MSME and Mr. Haribhai Parthibhai Chaudhary, Minister of State MSME. The Dividend paid by NSIC is the highest ever dividend paid by NSIC. Other officials present on the occasion were Mr. K.K. Jalan, Secretary, MSME, Mr. S.N. Tripathi, AS&DC (MSME), Mr. Manoj Joshi, JS, MSME and Mr. A.K. Mittal, Director (Finance), NSIC and officials of Ministry of MSME and NSIC.

Mr. Kalraj Mishra, Minister of MSME receiving the dividend cheque from Mr. Ravindra Nath, CMD, NSIC.

NTPC pays Total Dividend of Rs. 2762.23 cr. for FY 2015-16

NTPC Limited paid a total dividend @ 33.5 percent of its paid-up capital for the financial year 2015-16, amounting to Rs. 2762.23 cr.. The dividend payment is 4th highest among PSUs. The Company had paid interim dividend @16 percent amounting to Rs. 1319.27 cr. recently. The Company has paid the final dividend @17.5 percent amounting to Rs. 1442.96 cr. on September 30, 2016.

The RTGS advice for the transfer of Rs. 1006.38 cr. to Government of India, being the share of Government of India in the final dividend, was presented recently by Mr. Gurdeep Singh, CMD, NTPC, to Mr. Piyush Goyal, Minister of State (Independent Charge) for Power, Coal, New & Renewable Energy and Mines in the presence of Mr. Pradeep Kumar Pujari Secretary, MOP. Mr. K. Biswal, Director (Finance), NTPC, Mr. A. K. Jha, Director (Technical),

Mr. Gurdeep Singh, CMD, NTPC, presenting dividend cheque to Mr. Piyush Goyal, MoS (I/C) for Power, Coal, New & Renewable Energy and Mines in the presence of Mr. Pradeep Kumar Pujari Secretary, MOP and other senior officials from NTPC.

NTPC, Mr. U. P. Pani, Director (Human Resources), NTPC and Mr. S.C. Pandey, Director (Projects), NTPC were also present on this occasion. NTPC Ltd. has paid a total dividend of Rs. 1995.28 cr. to the Government of India for the financial year 2015-16. This is the 23rd consecutive year that NTPC Ltd. has paid dividend.

Union Minister of Shipping visits SCI

Mr. Nitin Gadkari, Union Minister of Shipping alongwith Sr. Officials from SCI.

Mr. Nitin Gadkari, Union Minister of Shipping visited the Head Office of The Shipping Corporation of India Ltd (SCI) recently. His visit began with the inspection of Guard of Honour presented by the Cadets of SCI´s Maritime Training Institute (MTI) at Powai, Mumbai. Then, Mr. Gadkari paid his respects by garlanding the busts of Indian national leaders located in the central lobby of SCI Head Office. Mr. Gadkari was escorted to the SCI Board Room where the review meeting was scheduled. Prior to the review meeting, SCI's corporate film followed by a special short film on Capt. Radhika Menon was screened. CMD, SCI informed the Minister that Capt. Menon would be receiving her IMO Bravery Award during the IMO Session scheduled recently. Minister was very impressed with the short film. He was also appreciative of the brave efforts of Capt. Menon and her team in saving the lives of seven fishermen. While addressing SCI's senior management, Mr. Gadkari shared the Prime Minister´s vision for India's growth and talked about maritime led nation growth projects such as SagarMala, Inland Waterways etc. He also highlighted on India's 'Act East' policy and the company's recent foray into Iranian market (development of Chabahar port etc). Minister reviewed the performance of SCI. He emphasized that SCI must endeavour to improve upon its operational performance and contribute to revenue growth. He also recommended that the company should look into new business opportunities and must encourage in-house innovations.

Naval War College Delegation visits SCI

A Naval War College (NWC) delegation led by Rear Admiral Monty Khanna, NM, Commandant, NWC visited the Head Office of The Shipping Corporation of India Ltd (SCI), Mumbai recently for an interaction with the senior officials of SCI. In addition to the Commandant, the delegation comprised of 2 Directing Staffs and 38 Senior Officers. On behalf of SCI, Capt. Anoop Kumar Sharma, CMD and other Directors participated in the interactive session. Rear Admiral Monty Khanna, Commandant and the Directing Staffs were welcomed with floral bouquets.

The session began with a presentation by Mr. S. Hariharan from CMD's Secretariat. The presentation was followed by a Q&A session wherein NWC Officers posed questions on maritime common interests, Indian shipping industry, current shipping freight market, security threats, strategic role of SCI in nation building etc. On conclusion of the interactive session, Rear Admiral Khanna, presented Capt. Anoop Sharma with a memento and Col. Joshi, Directing Staff, NWC thanked SCI for the arrangements.

Personalia

Mr. Rajiv R. Mishra
CMD, WCL gets additional charge of CMD, ECL.

Mr. M. V. Gowtama
takes charge as CMD, BEL.

Mr. V. Kalyana Rama
has taken over as CMD, CONCOR.

Mr. S. K. Chaudhary
is appointed as CMD, IRCON.

Mr. Saptarishi Roy
is appointed as Director (HR), NTPC.

Mr. Vinod Shenoy
takes charge as Director (Refineries), HPCL.

Mr. S. Jeyakrishnan
is appointed as Director (Marketing), HPCL.

Mr. R. K. Sabharwal
appointed as Director (Commercial), EIL.

Mr. A. K. Mishra
is appointed as Director (Tech/P&P), CCL.

Mr. Subir Chandra
takes charge as Director (Tech/Oprns), CCL.

Mr. Gautam Bhattacharya
takes charge as CVO, NALCO.

Mr. D. K. Sood
takes charge as Executive Director (CSR/R&R), NTPC.

Mr. R G Rajan, former CMD, RCF and former Chairman, SCOPE and FAI was recently given the lifetime achievement award by Indian Institution of Industrial Engineering (IIIE) at the 58th National Convention in Nagpur for his significant contribution in the field of chemicals and fertilisers, petroleum and natural gas and petrochemical industries in India.

CCL participates in
First BRICS Trade Fair 2016

CCL showcased its various new initiatives towards Skill India development and other CSR activities during the first BRICS Trade Fair 2016, organized by Ministry of Commerce in New Delhi recently. Delegates from China, Russia, South Africa and other dignitaries visited CCL stall and appreciated various new initiatives taken by the company for promoting sports, providing jobs to trained youths of Jharkhand etc. The first BRICS Trade Fair is a major initiative proposed by the Prime Minister of India Mr. Narendra Modi last year during his address at the BRICS Summit in Ufa, Russia. In line with the overall core theme for BRICS in 2016, the focus of the Trade Fair was 'Building BRICS —Innovation for Collaboration'. CCL has made an endeavor by placing CSR, an integral part of their work culture through "Kayakalp Model" and this reiterates their commitment towards inclusive and sustainable growth. CCL has showcased its education project in which meritorious boy (CCL Ke Lal) and girls (CCL Ke Ladli) are being provided free education in Ranchi. The company also showcased "Kayakalp Model of Governance" which is leading to Inclusive Growth of the company and under its many welfare schemes are undergoing the CCL including Ranchi.

Visitors at CCL's Stall at BRICS Trade Fair 2016.

Mr. Juan Rui, GM, Nanjing HuaRun Bioengineering Co. Ltd, China along with his colleagues visited CCL stall and they were briefed about the company's activities like how the company shaped career of M.S. Dhoni, Indian skipper in his early stage and selected 78 children in 2016 for grooming them in Sports Academy at Hotwar Sports Complex, Ranchi.

Prime Minister Lays Foundation Stone of Varanasi City Gas Distribution Project

Heralding the arrival of 'Urja Ganga' in the city of Varanasi, Prime Minister Mr. Narendra Modi recently laid the foundation stone of the City Gas Distribution (CGD) project in a function recently in the presence of Governor, Uttar Pradesh Mr. Ram Naik, Union Minister of State (Independent Charge) for Petroleum and Natural Gas, Mr. Dharmendra Pradhan, Union Minister of State (Independent Charge) for Communications and Minister of State for Railways, Mr. Manoj Sinha, Union Minister of State for Human Resources Development, Dr. Mahendra Nath Pandey, Union Minister of State for Health and Family Welfare Ms. Anupriya Patel, Minister of Khadi and Village Industries, Government of Uttar Pradesh, Mr. Brahmashankar Tripathi, Member of Parliament Mr. Keshav Prasad Maurya, Member of Parliament Mr. Ramcharit Nishad, Varanasi Mayor, Mr. Ram Gopal Mohale and a host of other dignitaries.

The laying of the foundation stone heralds the start of construction of the CGD project which will bring eco-friendly fuel natural gas to households, vehicles and industries in the holy city of Varanasi. The project is part of GAIL (India) Limited's Jagdishpur – Haldia and Bokaro – Dhamra Pipeline project (JHBDPL), popularly known as 'Urja Ganga'.

The Prime Minister also dedicated the 765/ 400 KV GIS Varanasi Power Station, inaugurated the Varanasi Postal Region, dedicated the Expansion Project of Diesel Locomotive Works (Phase - I), laid the foundation stone for doubling and electrification of Allahabad – Varanasi Rail Line, released a commemorative postage stamp on Varanasi City and laid the foundation stone of Perishable Cargo Centre.

The Varanasi CGD project will be developed simultaneously with the Jagdishpur – Haldia and Bokaro – Dhamra Pipeline project, which is being done for the first time in the country. The project, with an estimated capital investment of Rs.1,000 crores, is expected to connect 50,000 households with piped natural gas (PNG) and provide compressed natural gas (CNG) to 20,000 vehicles through 20 CNG stations. About 800 km of steel and medium density polyethylene (MDPE) will be laid in the city as part of the project. With the coming of the CGD project, it will be possible to give five lakh LPG connections to households in rural areas.

The 2,540 km JHBDPL project is being executed at an investment of Rs 12,940 crores, which includes 40% capital grant (i.e. Rs 5,176 crores) from the Government of India. It will pass through five states, i.e. Uttar Pradesh, Bihar, Jharkhand, Odisha and West Bengal, covering 40 districts. GAIL has also been entrusted with developing CGD network in seven cities enroute the pipeline, i.e., Varanasi, Patna, Jamshedpur, Kolkata, Ranchi, Bhubaneswar and Cuttack.

PSEs observe
Vigilance Awareness Week

Vigilance Awarness Week is observed in organisations to raise awareness and commitment of PSEs towards highest standards of ethical conduct, honesty and integrity in organisation.

Vigilance Awareness Week observed in BHEL

Mr. Atul Sobti, CMD, BHEL administered the pledge to employees on the inaugural day of 'Vigilance Awareness Week' at the Corporate Office of BHEL.

Mr. Atul Sobti, CMD, BHEL administering the pledge with employees at the Corporate Office of BHEL.

The CMD stressed that every employee should remain vigilant and work towards enhancing the reputation of the organisation through higher transparency. The messages of dignitaries were also read out on the occasion. Functional Directors and other senior officers of the company were also present at the event.

NALCO observes Vigilance Awareness Week

"While affirmative action is required for compliance of rules and regulations in a system, there is a need to upgrade technology and change organizational culture to strengthen the vigilance mechanism and curb corruption," said Dr. Tapan Kumar Chand, CMD of National Aluminium Company (NALCO). Dr. Chand made this observation while inaugurating the Vigilance Awareness Week at NALCO's Corporate Office recently.

Mr. Chand emphasized on the use of technology in controlling corruption in an organization. He said that NALCO has taken up several initiatives to strengthen the vigilance mechanism in the company, including signing of the Integrity Pact and implementing e-tendering and e-procurement. "The company is soon going to implement a Reward System to motivate the vigilant employees and to encourage others to be aware about the rules and regulations," informed Dr. Chand.

Mr. K.B. Singh, IPS, DG & IG of Police, Odisha alongwith Dr. Tapan Kumar Chand, CMD, NALCO at the inauguration of Vigilance Awareness Week.

Mr. K.B. Singh, IPS, DG & IG of Police, Odisha, graced the occasion as chief guest and stressed on conducting meaningful public participation in eradicating corruption.

Mr. Biswaranjan Samal, IAS, CVO, NALCO delivered the welcome address and introduced this

year's theme 'Public Participation in Promoting Integrity and Eradicating Corruption.' He stressed on adopting new practices to strengthen transparency in an organization and highlighted that all elements of a system should work in unison to achieve vigilance goals.

On the occasion, the Vigilance Awareness pledge and integrity pledge were administered among the employees. Mr. A.K. Murthy, GM(Vigilance) proposed a vote of thanks.

SAIL observes Vigilance Awareness Week

Observance of Vigilance Awareness Week commenced at SAIL with the administering of pledge by Chairman, SAIL, Mr. P.K. Singh. Chairman, SAIL along with Directors of the company and other officers paid floral tribute to the portrait of Sardar Vallabh Bhai Patel. Messages received on the occasion from various dignitaries were read out by the Directors of SAIL.

Officials of SAIL taking pledge during Vigilance Awareness Week in presence of Chairman, SAIL, Mr. P.K. Singh.

During the week long celebration many activities like Debate, Quiz, Essay Writing, Skits, Walk & Run and Drawing competitions were organised across SAIL plants/units and in many educational institutions.

Vigilance Awareness Week at NLCI

The Vigilance Awareness Week celebration 2016 at NLCI was inaugurated by Dr. S.K. Acharya, CMD NLCI at Learning and Development Centre. Mr. A. Kaliyamoorthy, Superintendent of Police (Retd.) was the Chief Guest.

In his chief guest address, Mr. Kaliyamoorthy, elaborated on the theme of the celebration, Public participation in Promoting Integrity and eradicating corruption. He emphasised on providing quality

Mr. Sarat Kumar Acharya, CMD, NLCI, inaugurating the Vigilance Awareness Week by lighting the traditional lamp, at Learning & Development Centre, Neyveli. Also seen are Mr. Rakesh Kumar, Mr. Subir Das, Mr. V. Thangapandian, Mr. P. Selvakumar , Directors of NLCI and Mr. A.Kaliyamurthy, Former Superintendent of Police.

education to the children who are the future citizen of India. Dr. S.K. Acharya CMD , NLCI said that he wanted every human to fight against greed and lead a disciplined life. He wanted everyone to follow the systems and procedures and not to deviate them as no one is above the system. He added that several e-portals are available nowadays with which corruption can be avoided and requested not to misuse the same for taking vengeance. Earlier Dr. Acharya released the special edition of the House Journal of Vigilance Department, Lignite Eyes.

On behalf of NLCI, special programmes in connection with Vigilance Awareness were arranged for the School and College students at Chennai, Madurai and Tuticorin. Also talk shows were arranged on behalf of NLCI in Doordarshan.

Observance of Rashtriya Ekta Divas and Vigilance Awareness Week-2016 in AAI

Dr. Guruprsad Mohapatra, IAS, Chairman, AAI administered the pledge of Rashtriya Ekta Divas and Vigilance Awareness week 2016 recently to a large number of officials gathered on this occasion.

Dr. Guruprsad Mohapatra, IAS, Chairman, AAI administering pledge of Rashtriya Ekta Divas and Launch of Vigilance Awareness Week in presence of Mr. S. Raheja, Member (Planning), Mr. S. Suresh, Member (Finance), Mr. Anuj Aggarwal, Member (HR), Mr. Yatendra Kumar, IAS, CVO and Mr. T. Premnath, Executive Director (Admn.), AAI.

Airports Authority of India observed the Vigilance Awareness Week 2016 from 31st October to 5th November 2016 at all Airports in India.

Speaking on the occasion Mr. Yatendra Kumar, IAS, Chief Vigilance Officer, AAI conveyed that Vigilance Awareness Week should be sustained and become an intrinsic part of our day to day conduct, rather than limiting to mere tokenism. Dr. Guruprsad Mohapatra, IAS, Chairman, AAI addressed the officials and highlighted the importance of Rashtriya Ekta Divas and Vigilance Awareness Week. Vigilance Department has also planned various activities during the Vigilance Awareness Week. These activities include pledge Administration and lecture by eminent speakers during the Vigilance Awareness Week 2016.

Dredging Corporation of India Limited calls for Public Participation in promoting integrity and eradicating corruption

Inaugural function of Vigilance Awareness Week (VAW) 2016 was observed jointly by Dredging Corporation of India Limited (DCIL) and Visakhapatnam Port Trust (VPT) in DCIL recently. Mr. V.V.S.Sreenivas, IRSME, Chief Vigilance Officer, in his welcome address, emphasized the need to strengthen the systems to prevent corruption rather than doing post-mortem. He further stressed on the role and importance of individuals in combating corruption as in a democracy, " Yataha praja tatha Raja" is the reality .

Chief Guest of the function, Mr. Ch. D Tirumala Rao, IPS,Addl.DGP (CID), while addressing the gathering accentuated the power and potential of an individual in combating corruption cannot be undermined as "journey of thousand miles begins with a single step". He further stressed the need for exemplary punishment and isolation of corrupt officers. Mr. Rao said corrupt individuals might escape from the eyes of the system but nobody can escape from inner conscience.

Vigilance Awareness Week observed in MCL

Mahanadi Coalfields Limited (MCL) CMD, Mr. A.K. Jha inaugurated Vigilance Awareness Week 2016 as the company organised a series of awareness programmes for spreading mass awareness to curb corruption in the society.

Mr. A.K. Jha, CMD, MCL at the Vigilance Awareness Week.

Mr. Munawar Khursheed, IRPF, Chief Vigilance Officer read out the message of the Central Vigilance Commission and formally welcomed all the guests to the seminar on ''Public Participation in Promoting Integrity and Eradicating Corruption''.

After his message to employees, Mr. Jha also administered a 'Satarkata Shapath' to all the employees and unveiled the posters created for spreading awareness, Value Card for Coal Indians, Core Values of Coal Indian.

CMD, NBCC administers Vigilance pledge to officers

Dr. Anoop Kumar Mittal, CMD, Mr. S. K. Pal, Director (Finance) and Mr. Sanjiv Swaroop, CVO, accompanied by Mr. Rajendra Chaudhari, Director (Commercial), administered Vigilance and Integrity Pledge to Officers and Staff members of NBCC Corporate Office recently to mark the beginning of

Dr. Anoop Kumar Mittal, CMD administering the pledge at NBCC.

Observance of Vigilance Awareness Week by the company. The week-long programme at NBCC, was organized by its Vigilance Division and witnessed several activities including Interactive Sessions, Debates, Essay Competition, Talk on Stress management & ethics, etc.

NFL observes Vigilance Awareness Week

Mr. Manoj Mishra, CMD, National Fertilizers Limited administering 'Vigilance Pledge' to employees in Corporate Office, Noida during Vigilance Awareness Week.

NTPC observes Vigilance Awareness Week

NTPC observed Vigilance Awareness Week in all its projects , stations and offices recently. Different programmes were organized by NTPC for creating awareness among the general masses, youth,

Vigilance Integrity Pledge being administered by Mr. Gurdeep Singh, CMD, NTPC.

employees and their family members highlighting evils of corruption and its impact on society. Vigilance Integrity Pledge was administered by Mr. Gurdeep Singh, CMD from Corporate Office Delhi to employees at all projects and offices of NTPC through Video Conferencing.

Vigilance Awareness Week-2016 observed at OIL's Corporate Office

The observance of Vigilance Awareness Week-2016, on the theme, "Public participation in

InTouch the in-house Vigilance journal, being released on the occasion of the inauguration of Vigilance Awareness Week-2016 at OIL.

promoting Integrity and eradicating Corruption", at Oil India Limited's (OIL) Corporate Office in Noida, with the pledge taking by all employees. The pledge was administered by Mr. Utpal Bora, CMD, OIL. Befitting the occasion, a special issue of 'InTouch', the in-house journal of Vigilance Department was also released by the CMD.

MRPL sets up kiosk at MCC for Integrity pledge and organizes walkathon at Surathkal

As a part of the Vigilance Awareness week, Mangalore Refinery and Petrochemicals Limited (MRPL) has set up a kiosk at Mangalore City Corporation to enable the general public to take E-Integrity pledge by visiting the website of Central Vigilance Commission, ie., www.cvc.nic.in. The kiosk was inaugurated by Mr. Harinath, Mayor of Mangalore, who also took the E-Integrity pledge on the occasion. Speaking later he complimented MRPL for setting up the kiosk at MCC to enable

Mr. Harinath, Mayor of Mangalore, Inaugurating the KIOSK at MRPL.

the citizens to take the pledge and spreading the awareness among the general public about fighting corruption. Mr. Mohammad Nazir, Commissioner of Mangalore City Corporation, Mr. Gokuladas Nayak, Dy. Commissioner, Mr. H Kumar, Managing Director, MRPL, Mr. Y Ravindranath, CVO, MRPL and other dignitaries were present on the occasion. Citizens were seen enthusiastically taking the pledge by visiting the CVC website after the program.

A walkathon was arranged in the afternoon in Surathkal, in which students of Govindadasa PU College, Surathkal, NGOs, charity institutions and citizens participated in association with MRPL.

Oil India observes Rashtriya Ekta Divas to mark the Birth Anniversary of Sardar Vallbhbhai Patel

Oil India Limited (OIL) celebrated the Rashtriya Ekta Divas to mark the Birth Anniversary of Sardar Vallabhbhai Patel in its offices across the country recently.

Oil India Limited's contingent participated in the "Run for Unity", which was flagged off by the Prime Minister from the National Stadium in Delhi, on the occasion of Rashtriya Ekta Divas.

The Pledge on the occasion of the RashtriyaEkta Divas was administered to a gathering of employees of the company in its Corporate Office by Mr. Biswajit Roy, Director (HR&BD), OIL. The Pledge was also undertaken by the Company's employees in its other offices in the country as well.A contingent of OIL's employees also participated in the "Run for Unity", which was flagged off by the Prime Minister from the National Stadium in Delhi, on the occasion of Rashtriya Ekta Divas.

Vigilance Awareness Week 2016 in REC

Vigilance Awareness Week 2016 commenced in Rural Electrification Corporation Ltd. (REC) with taking Pledge by all Senior Officials and employees. One day workshop on Principles of public life, Integrity and Preventive Vigilance was organized for its employees. REC also organized

Officials at REC taking pledge during Vigilance Awareness Week.

debate/elocution/poem competitions in schools and colleges in New Delhi during this week to create awareness regarding importance of ethics and transparency.

CONCOR organizes skit to observe Vigilance Awareness Week

Container Corporation of India Limited organized an Inter College Skit Competition at Shri Ram College of Commerce, University of Delhi recently to mark Vigilance Awareness Week 2016. The topic of the skit : "Collective Action to Fight Corruption". CMD, CVO, Directors, eminent jury members, officers of CONCOR, representatives of media & education fraternity were present at the event. Six colleges of University of Delhi viz. Shri Ram College of Commerce, Shri Aurobindo College, Ram Lal Anand College, Atma Ram Sanatan Dharm College, St Stephens College and Hindu College participated in the said event.

Skit Competition organised by CONCOR.

The Jury comprised of Mr. Robin Hibu, IPS (Jt Comm. of Police, Delhi Police), Mr. Alok Shukla (theater actor, writer, director & journalist) and Ms. Ratna Bali Kant (sculptor and performance artist). Hindu College won the 1st prize, Atma Ram Sanatn Dharm College 2nd prize and Ram Lal Anand College 3rd prize.

Oil India led Indian consortium Successfully completes two Landmark Acquisitions in Russia

The consortium of OIL, IOCL and Bharat PetroResources officials and Rosneft officials during the signing ceremony.

The Indian consortium led by Oil India Limited (OIL), including Indian Oil Corporation Limited (IOCL) and Bharat PetroResources Limited (BPRL), a 100 percent subsidiary of Bharat Petroleum Corporation Limited (BPCL), have successfully completed two landmark acquisitions of producing upstream assets in Russia.The consortium acquired 29.9 percent stake in LLC Taas-YuryakhNeftegazodobycha (TaasYuryakh) and 23.9 percent stake in JSC Vankorneft (Vankorneft) from Rosneft Oil Company, the National Oil Company of Russia (Rosneft).

The transactions received approvals from relevant government authorities of India and Russia in late September and completed simultaneously on 5th October 2016 in Moscow, Russia. The definitive agreements for the Taas Yuryakh and Vankorneft deals were signed in March 2016 and June 2016 respectively. Taas Yurakh is a producing asset and one of the largest green field developments in Eastern Siberia Region. Post this transaction, Rosneft now holds 50.1percent stake in the field. BP is the other partner with 20percent stake.

Vankor is a producing giant oilfield, also located in Eastern Siberia. It is the second largest field in Russia by production and contributes to about 10percent of Rosneft's entire oil production. Post this transaction Rosneft now holds 61.1 percent in the field. ONGC Videsh Limited currently holds 15 percent stake. The current combined production from both fields is around 440,000 bopd or ~22 MMTPA and OIL's share of current oil production is 1.7 MMTPA. The fields are also producing about 5.6 BCM of sales gas per annum. The remaining oil and gas reserve of the two fields together are approximately 3.86 billion barrel oil equivalent.

SAIL posts 20 percent sales growth during Apr-Oct'16 period

Steel Authority of India Ltd. (SAIL) witnessed a robust growth in total sales during the April-October'16 period of 20 percent over the corresponding period last year (CPLY). During this period the domestic sales went up by 15 percent with improvement in both long and flat products. Also, exports volumes rose by more than three times in the Apr-Oct'16 period over Apr-Oct'15 backed by a conscious strategy of the company to expand its footprints in the neighboring markets.

On the production front, the Apr-Oct'16 period clocked better performance with 22 percent growth in saleable steel production compared to the corresponding period last year. The Techno-economic parameters also registered an uptick over Apr-October'15 period with 7 percent improvement in BF (blast furnace) productivity and 3 percent improvement in Coke rate. Chairman, SAIL, Mr. P.K. Singh said that, "The management's sustained emphasis to improve every process from production up to reaching the consumers are beginning to show results. The stabilization of new mills under modernization programme have also contributed to the improved volumes and sales. All this would strengthen company's performance at a time when there is a pick-up in activities of steel intensive sectors. Also the positive environment brought in by Government of India, including its competitive trade policies and measures, have helped improve the market sentiments."

IndianOil proudly serves Sakshi Malik, Olympic Bronze Medalist, at Rohtak

IndianOil proudly served Rio Olympic Bronze Medallist Ms. Sakshi Malik as her 'preferred oil retailer' when recently she drove into M/s Rathi Brothers at Rohtak on request of IndianOil Dealers' Association of Rohtak District for a quick refill. Mr. Rakesh Kumar, SDRSM, Hissar DO, welcomed Ms. Sakshi Malik with a flower bouquet.

With the objective of customer acquisition and getting feedbacks from esteemed customers, Ms. Sakshi Malik gave her rating on service standards of the RO in X-Sparsh through tablet kept at the RO and displayed in LED screen. Hissar DO Officials apprised Ms. Sakshi Malik regarding the recently launched XtraMile in Rohtak City. Mr. Rajib Karmakar, Mgr (RS), Hissar DO, and Mr. Naveen Kumar, Dy. Mgr (RS), Rohtak SA, were also present on the occasion.

Ms. Sakshi Malik, being felicitated by IndianOil offcials.

IndianOil reports net profit of Rs. 11,391 cr. in H1, 2016-17

IndianOil posted a net profit of Rs. 11,391 cr. for the half year ended 30th September 2016 as compared to net profit of Rs. 6,141 cr. during the corresponding period of the previous year. The income from operations for the first half of FY 2016-17 was Rs. 2,07,475 cr. as compared to Rs. 2,11,043 cr. in corresponding period of FY 2015-16 and despite better physicals, the decrease is purely because of fall in international prices in current period. IndianOil's income from operations was Rs. 1,00,274 cr. in Q2 16-17 as compared to Rs. 97,299 cr. in the corresponding quarter of 2015-16. Profit for the second quarter of 2016-17 is at Rs. 3,122 cr. as compared to loss of Rs. 450 cr. in the corresponding quarter of 2015-16 mainly due to improved refining and petrochemical margins.

For the second quarter of 2016-17, IndianOil's product sales volumes, including exports, was 19.698 million tonnes. The refining throughput was 15.635 million tonnes in Q2 FY 16-17 and the throughput of the Corporation's countrywide pipelines network was 20.974 million tonnes during the same period. The gross refining margin (GRM) for the second quarter of 2016-17 was US$ 4.32 per bbl as compared to US$ 0.90 per bbl in the corresponding quarter of 2015-16.

Mr. B. Ashok, Chairman, IndianOil along with functional directors at IndianOil's Press Conference for declaring Q2 financial results for FY 2016-17

Secretary, Ministry of Tourism inaugurates

ITDC's 50 golden year's celebration

Mr. Vinod Zutshi, Secretary, Ministry of Tourism with others at the 50 years celebrations of ITDC.

India Tourism Development Corporation organized a function recently to mark the completion of successful 50 years of ITDC in the field of hospitality and tourism at the Convention Hall of The Ashok, A flagship property of ITDC.

Mr. Vinod Zutshi, Secretary, Ministry of Tourism graced the occasion as the Guest of Honor. Present among other dignitaries were Mr. Umang Narula, CMD, ITDC; Mr. Piyush Tiwari, Director (Commercial and Marketing), ITDC; Mr. Pradip K Das, Director (Finance), ITDC along with Ex CMDs of the organization, ITDC staff and other respected guests. Mr. Ashwani Lohani, CMD, Air India & Ex CMD ITDC also graced the occasion. Making this occasion more significant, ITDC

Contd ... to # 114

Minister of State (IC) for **Power, Coal, New & Renewable Energy and Mines, visits NLCI**

Mr. Piyush Goyal, Minister of State (IC) for Power, Coal, New & Renewable Energy and Mines, Government of India after unveiling the plaque for the inauguration of Eco Park at Mine II of Neyveli. Also seen are Dr. Sarat Kumar Acharya, CMD, Functional Directors and senior officials of NLCI.

Mr. Piyush Goyal, Minister of State (IC) for Power, Coal, New & Renewable Energy and Mines, Government of India visited Neyveli recently. The Minister was accompanied by Dr. Sarat Kumar Acharya, CMD and Directors of NLC India Ltd.

As part of his visit, the Minister visited Mine-I, and observed the mining operations. While visiting the Township view point at the high dump area of Mine-I. He inaugurated the newly developed Eco Park located over 12 acres and planted a sapling in the afforestation area of Mine-II and concluded his Industrial visit at TPS-I Expansion. In a meeting organized at Lignite Hall, Minister addressed the employees of NLC India. In the presence of Minister and Dr. S. Manian, Vice-Chancellor, Annamalai University, NLC India entered an MOU with Annamalai University, Chidambaram for starting NLCI-AU Skill Development Center and as a first step to start a Diploma Course from this academic year in Mining to realize the National Skill Development Mission of Government of India. Mr. S. Sridhar, Executive Director,CSR of NLC India and Dr. K. Arumugam, Registrar, Annamalai University signed and exchanged MoU.

Mr. Rakesh Kumar, Director/ Finance, Mr. Subir Das, Director/ Mines, Mr. V. Thangapandian, Director/Power, Executive Directors, officers and employees of NLC India Limited participated in this event. Earlier he flagged of the Swachh Bharat awareness rally organized by Neyveli School Children numbering 1200.

CPCL's 50th AGM held

The 50th Annual General Meeting (AGM) of Chennai Petroleum Corpn. Ltd. (CPCL) was held in Chennai recently. Mr. B. Ashok, Chairman, IndianOil Group Companies, Mr. Gautam Roy, Managing Director, CPCL, S. Venkataramana, Director (Operations), Mr. U. Venkataramana, Diector (Technical), Mr.Krishna Prasad, Director (Finance), Directors on the Board of CPCL, Mr. Alirea Zamani, Naftiran Intertrade Co Ltd, Tehran Iran, Mr. G. Ramasamy, Independent Director, Mr. K. M. Mahesh, Director (MoP&NG), Mr. Raju Ranganathan, ED (CS & Law), representing IOCL and Mr. P. Shankar, Company Secretary, were present.

Addressing the shareholders, the Chairman said CPCL made a remarkable turnaround during the year, after four years of consecutive losses, by registering a Profit Before Tax of Rs. 787.45 cr. The Chairman attributed the turnaround mainly to improvement in operational performance and excellent financial performance, support from the Holding Company Indian Oil Corporation Ltd., softening of prices and good margins across the slate of products. "Softening of crude and product prices in the international market also led to reduced working capital requirement and management of this along with borrowings in a judicious manner also contributed to a healthy bottom line," he further added.

Mr. B. Ashok, Chairman, IndianOil Group Companies, Mr. Gautam Roy, MD, CPCL and other senior officials during 50th AGM of CPCL.

CPCL Board announced a dividend of 40 percent on the paid-up equity share capital, amounting to Rs. 4 per equity share.

GSL's MCG Victory embarks on its maiden voyage

RAdm. Shekhar Mital, NM (Retd), CMD, GSL facilitating Lt. Cdr Y. Pramod, CO, CGS.

MCG Victory, the first Fast Patrol Vessel (FPV) designed and constructed by GSL for Mauritius, embarked on its maiden voyage to Mauritius recently at GSL, catapulting GSL to the elite league of select few Defence vessel Exporter from the country. The ship was ceremonially seen off by RAdm. Shekhar Mital, NM (Retd), CMD, Goa Shipyard Ltd who facilitated Lt. Cdr Y. Pramod, CO, CGS Victory and the entire crew members on the occasion. Mr. S. P. Raikar, Director (Operations), GSL, Cmde. B.B. Nagpal, Director (CPP&BD) besides other dignitaries were present on the occasion.

RAdm Shekhar Mital said, "Contract of the vessel was signed and the keel of this vessel was laid in May 2014. The vessel was launched on 29th February 2016 by Ms. Smita Parsekar, wife of Chief minister of Goa. Despite all the challenges, including delay of over six months in supply of steel and being the first ship of the series, GCL successfully delivered this ship on 26 Sept 2016, 45 days ahead of contractual schedule. Further, one month was utilized by crew for its training and work up by Navy. CMD thanked Government of Mauritius, Ministry of Defence, State Government and local authorities for providing all the necessary assistance, which has enabled GSL to achieve new milestones in the performance.

Prime Minister Dedicates 1732 MW -Three Hydro Projects in Himachal

Prime Minister, Mr. Narendra Modi appreciated the contribution of Public sector companies and said these hydro projects will bring prosperity to the State of Himachal and other parts of the country while dedicating the flagship 800 MW Hydro Power Station of NTPC-Koldam, 520 MW Parvati Project of NHPC and 412 MW Rampur Hydro Station of SJVNL to the Nation in Himachal Pradesh recently. Acharya Devvrat, Governor of Himachal Pradesh, Mr. Vir Bhadra Singh, Chief Minister, Himachal Pradesh, Mr. Jagat Prakash Nadda, Union Minister of Health and Family Welfare; Mr. Piyush Goyal, Union Minister of State (I/C)for Power, Coal, New & Renewable Energy and Mines and eminent dignitaries from Himachal Pradesh were present on the occasion. Mr. Gurdeep Singh, CMD, NTPC shared the salient features and highlights of the Koldam Project through the model displayed at the venue to the Prime Minister. Mr. S.C Pandey, Director (Projects), Mr. K. K. Sharma Director (Operations) NTPC and Mr. K. K. Singh, RED (Hydro Region)were present.

Prime Minister, Mr. Narendra Modi, inaugurating Hydro Power Projects.

Vizag Steel signs PV Sindhu as Brand Ambassador

Mr. P Madhusudan, CMD, RINL and PV Sindhu after signing up as "Brand Ambassador of Vizag Steel". Mr. P Raychaudhury, Director (Commercial) RINL is seen (left to RINL CMD).

Rashtriya Ispat Nigam Limited, the corporate entity of Vizag Steel has roped in top ranked Indian Badminton Player PV Sindhu as its brand ambassador. The deal facilitated by Baseline a sports marketing and a brand licensing firm will see Vizag Steel become the major partner of the athlete and will also have the brand logo on the top chest of Sindhu's playing jersey in international and domestic tournaments under the aegis of Badminton World Federation Events (BWF) and Badminton Association of India sanctioned events respectively. The event was held at a function in Hyderabad recently.

Sindhu, currently amongst the top 10 ranked players in the world is the first Indian female athlete to

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Minister of Civil Aviation inaugurates AAI's booth in the ICAO World Aviation Forum at Montreal, Canada

Airports Authority of India recently participated in the ICAO World Aviation Forum & 39th ICAO Triennial General Assembly which was attended by delegates from 191 countries. Indian Delegation led by Minister of Civil Aviation Mr. Ashok Gajapathi Raju participated in the event. Minister also inaugurated Airports Authority of India's booth in the presence of Mr. Alok Shekhar, Representative of India in Governing Council of ICAO, Mr. Anuj Aggrawal, Member HR, AAI and other senior officers and delegates from India, during the IWAF & 39th ICAO General Assembly held in Montreal, Canada.

Minister of Civil Aviation, Mr. Ashok Gajapathi Raju inaugurated the Airports Authority of India's booth in the presence of Mr. Alok Shekhar, Representative of India in Governing Council of ICAO, Mr. Anuj Aggrawal, Member HR, AAI and other senior officers and delegates from India, during the IWAF & 39th ICAO General Assembly held in Montreal, Canada.

Speaking on the occasion the Minister lauded Airports Authority of India for showcasing its expertise in the field of Airports Consultancy, Development, Operation & Management of Airports, Flight Calibration Services, NOCAS, GAGAN, Consultancy in ATFM & flight procedure design and also SKYREV360- a comprehensive e-business solution for data gathering, invoicing and collection under one of the ICAO missions ''No Country Left Behind''. AAI also participated in World Triennial General Assembly of Airports Council International (ACI) event which was also held during the same period. More than 2000 Airport Industry decision makers participated in the event. Dr. Fang Liu, Secretary General, ICAO while addressing the august gathering at ICAO museum at ICAO Hqrs in Montreal, Canada lauded the role of AAI for imparting training to its senior level officers on the prestigious Airport Management Professional Accredited Program (AMPAP) which is a strategic initiative of ACI and ICAO. The Secretary General, ICAO congratulated AAI for having maximum numbers of International Airport Professionals (IAP).

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win the Olympic silver medal at the Rio Olympics and she is also the first athlete to win back-to-back medals at the World Badminton Championships. The endorsement is the first of many for PV Sindhu post her Olympic exploits.

Mr. P Madhusudan, CMD, RINL said, "In PV Sindhu, we see our unique value system: IDEALS (Initiative, Decisiveness, Ethics, Accountability, Leadership and Speed)- everything that our products convey. Both, Sindhu and Vizag Steel, are priceless assets of India and this bond will make them famous far and wide and do the country proud. We are sure that the 'Vizag Steel- Sindhu' association will be a fruitful one and will go a long way in imprinting in the minds of the people the attributes of toughness, resilience, endurance and quality that symbolise our traits."

GAIL places order for **345 km Pipeline Laying Contract for Jagadishpur Haldia Bokaro Dhamra Pipeline**

GAIL has initiated a major step towards the construction of the Jagadishpur - Haldia - Bokaro-Dhamra Natural Gas Pipeline (JHBDPL), by approving placement of orders for pipeline laying work of 345 km from Phulpur to Dobhi under phase-IB at an estimated cost of Rs.306 cr. under two sections to be executed simultaneously by JSIW Infrastructure Pvt. Ltd. and IL&FS Engineering & Construction Co. Ltd.. Laying works under phase-IB shall commence by the end of October, 2016 and targeted to be completed by December, 2018.

Cabinet Committee on Economic Affairs approved Capital Grant of 40 percent, amounting to Rs. 5,176 Cr. over 5 years, for the pipeline project, to be implemented by GAIL at an estimated capital outlay of Rs. 12,940 Cr. It is the first time ever that Central Government has approved capital Grant for a Natural Gas pipeline project.

On the development, Mr. Dharmendra Pradhan, Minister for Petroleum & Natural Gas said- "Our Prime Minister has taken a clear and committed stand to move towards a cleaner fuel regime. It is a delightful moment for us as cleaner and greener energy path has been chosen for Eastern India that shall be affordably accessible to the masses."

Post approval of the pipeline laying award contract under phase-I B, Mr. B C Tripathi said – "Pipeline and city gas projects under JHBDPL in Eastern India are a big step towards accomplishment of National development goals based on natural gas and the Company shall expeditiously work to execute the entrusted projects in tune with the Government's objectives as per schedule."

The first phase at a project cost of Rs 3,200 cr. will cover 755 km to cover Phulpur, Mani, Gorakhpur, Varanasi, Dobhi, Silao, Patna and Barauni spread across various sections. Pipeline construction is already under progress along Gaya-Barauni–Patna section.

The 2,539 km long JHBDPL is scheduled for completion by December 2020 and will connect major cities and towns enroute for commencing piped natural gas to homes across UP, Bihar, Jharkhand, West Bengal and Odisha in addition to supplying feed gas to anchor fertilizer units at Gorakhpur, Barauni and Sindri. The Line Pipes supplies against orders are expected to commence soon from M/s Jindal Saw Limited, M/s MAN Industries (India) Limited, M/s Essar Steel India Limited and M/s Zhongyou BSS (Qinhuangdao) Petro pipe Co. Ltd, China.

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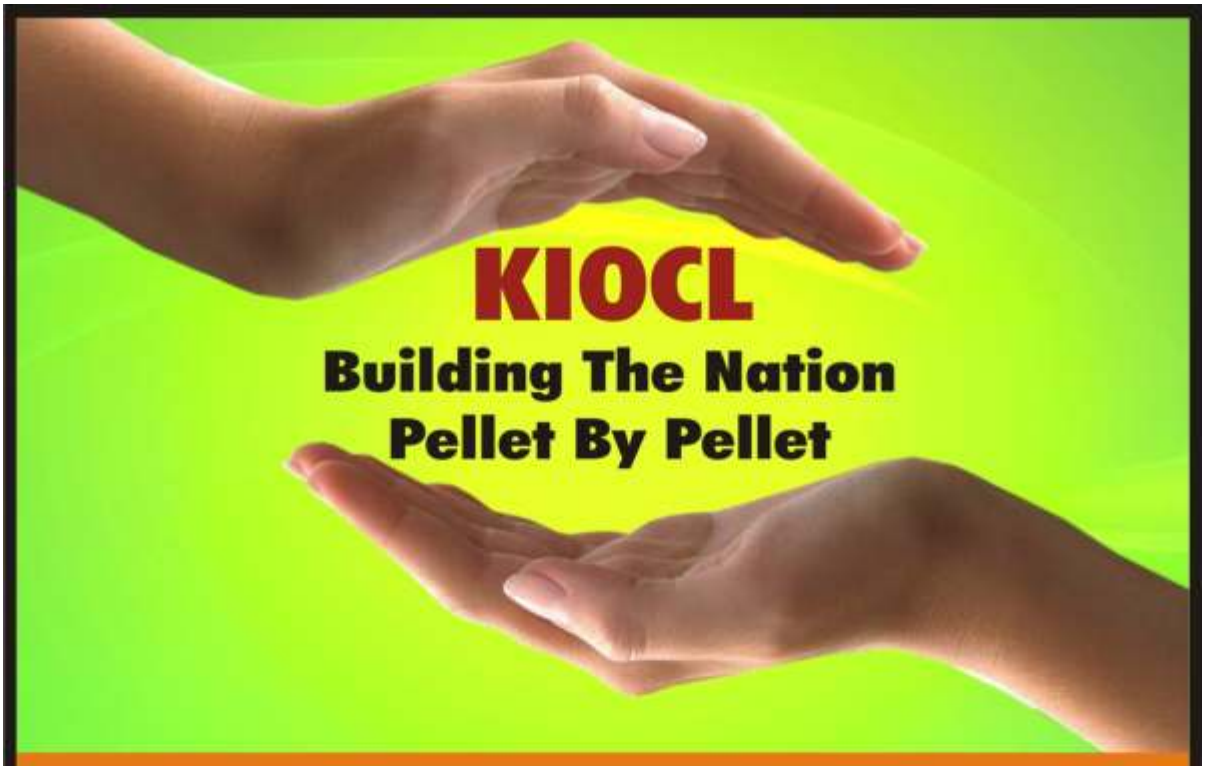
announced free sound and light shows for the Indian Armed forces and their immediate family members at Purana Quila and Red Ford. The free service for the armed forces will be available till March 2017.

Congratulating ITDC, in his message Dr. Mahesh Sharma, Minister of State (Independent Charge) Tourism & Culture, said, "Heartiest congratulations to ITDC for completing 50 years of unparalleled and diversified services to the Nation in travel, tourism and hospitality sector. While addressing a large conglomeration of directors, government officials and ITDC employees at this occasion, Mr. Vinod Zutshi, Secretary, Ministry of Tourism said, "We have been knowing Ashok as the brand ICON of India, I congratulate ITDC for being a diversified self-rejuvenating organization, attaining institutional excellence and becoming a renewable goldmine of tourism and hospitality."

"Ability Unlimited" an organization made for the benefit of differently abled people performed some beautifully choreographed and extraordinary performances at the golden jubilee celebration of ITDC.



KIOCL

Building The Nation Pellet By Pellet

The Iron Oxide pellets produced at the Pellet Plant Unit at KIOCL, Mangalore, have exceptional chemical, physical and reduction properties. Conforming to International Standards, the pellets are ideal for hi-tech steel plants anywhere in the world. Outcome of most modern production techniques and constant R&D, KIOCL's pellets are the choice of quality conscious consumers in Japan and China.

Delivering on the motto 'Clean Green Living', the Pellet Plant has EMS in place. The Environment Cell takes care of the pollution control systems, monitoring of environmental parameters, green belt development and compliance of legal requirements. The Plant recycles the entire waste water generated in the Cooling pond and is a zero discharge unit. Afforestation is being done even outside the Plant premises.

View of Pellet Plant

Pellet Stock Yard

Pellet Reclymer

Pig Stock Yard

KIOCL Limited

(A GOVERNMENT. OF INDIA ENTERPRISE)

An ISO 9001, ISO 14001 & OHSAS 18001 COMPANY

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