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K L Mehrotra - Chairman, Delhi Chapter | **S C Suri** - Editor-in-Chief (IIM-DC Newsletter)

In The Issue


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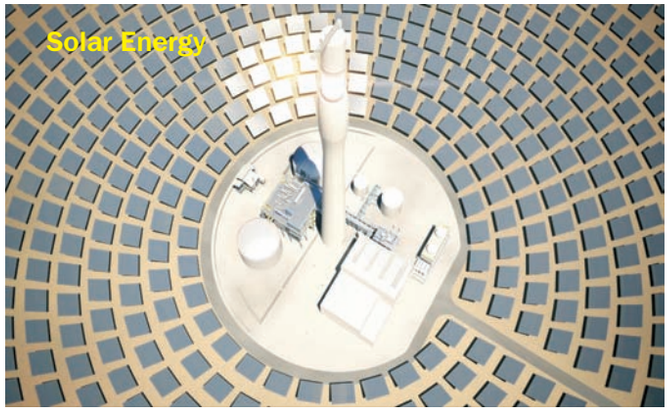

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Shri S C Suri Hon. Member IIM &
Editor-in-Chief, IIM DC Newsletter

175 GW of RE: Paradigm Shift in India's Power Sector

The Indian power sector has undergone significant changes since reforms were introduced in 1995 that allowed private sector participation in distribution and generation. Thereafter the Electricity Act of 2003 further streamlined the market through unbundling of State Electricity Boards (SEBs) into separate entities for generation, transmission and distribution. It seems that the stage is set for another step change after the current government announced aggressive goals for renewable energy capacity addition – 100 GW of solar and 75 GW of wind by 2022. These targets significantly eclipse previous goals and are crucial to ensuring India's energy security and the objective of pursuing a low carbon growth.

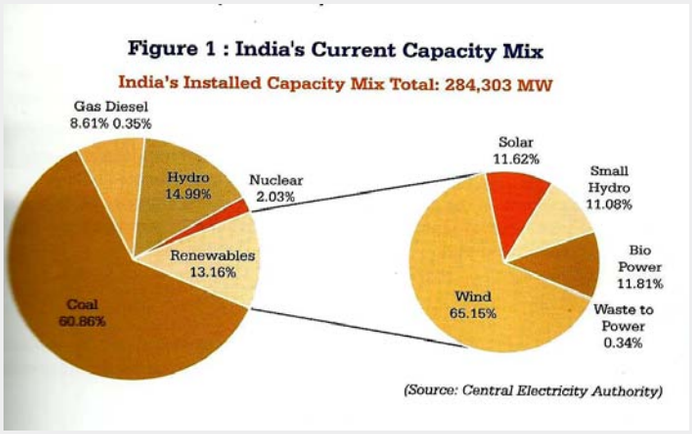
1. India's Expanding RE Sector

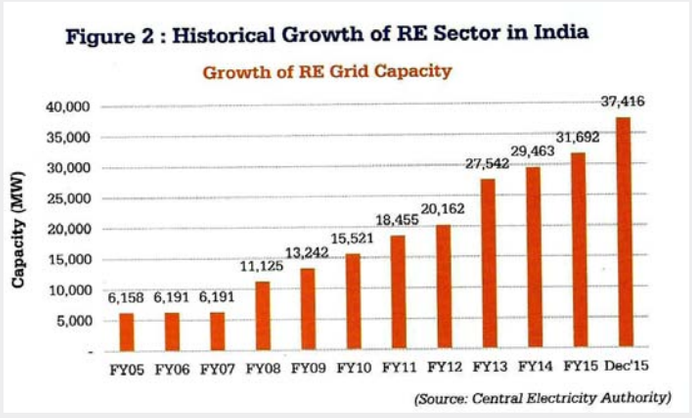
India is the fourth largest power system in the world with an installed base of 284,303 MW, next only to the United States, China and Russia. Although the capacity mix has diversified, coal continues to be the fuel of choice owing to its large reserves and easy availability.

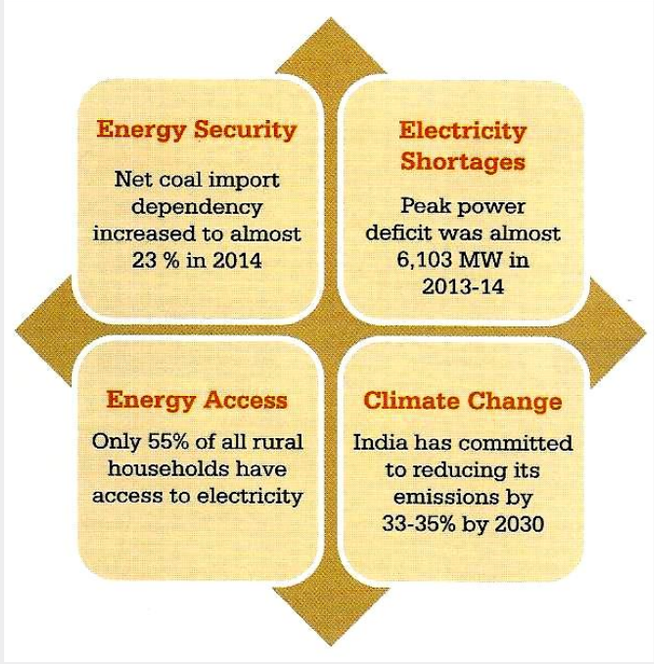
India is now running one of the largest renewable capacity expansion programs in the world. Between 2005 and 2015, renewable grid capacity has increased from 5% (6.2 GW) to around 13% (36 GW). Current RE capacity stands at 37,416 MW (as on 31.12.2015) with wind power being the largest constituent (24,376 MW) followed by a rapidly growing solar base (4,347 MW), small hydro (4,147 MW) and bio power (4,419 MW).

Wind power has been the fastest growing element in the RE sector, registering a steady annual growth rate of almost 18 percent in recent years. However, after a sluggish start, even solar has picked up pace owing to major policy thrusts and an overhaul of the National Solar Mission.

Core drivers for development and deployment of new and renewable energy in India appear to be – Energy Security, Energy Access and Climate Change. Significant reduction in the cost of solar energy and quick capacity addition (as against conventional capacity) have also been major factors in accelerated uptake of renewable energy.







2. RE Potential in India

Despite impressive growth in the RE sector, there is still a vast untapped potential of RE resources in the country. India has an estimated renewable energy potential of about 1,095 GW from commercially exploitable sources viz. Wind – 302 GW; Small Hydro – 20 GW; Bio-energy – 25 GW and 748 GW of solar power, assuming 3% wasteland is made available for renewable development.

Table 1: Installed capacity, Potential and Targets for different RE Technologies

Resource	Current Installed Capacity	Potential	2022 INDC Target
Solar	4.1 GW	748 GW	100 GW (40 MW distributed, 60 MW grid-connected)
Wind	23.8 GW	302 GW	75 GW
Biomass	4.4 GW	25GW	10 GW
Small Hydro	4.1 GW	20 GW	Unspecified

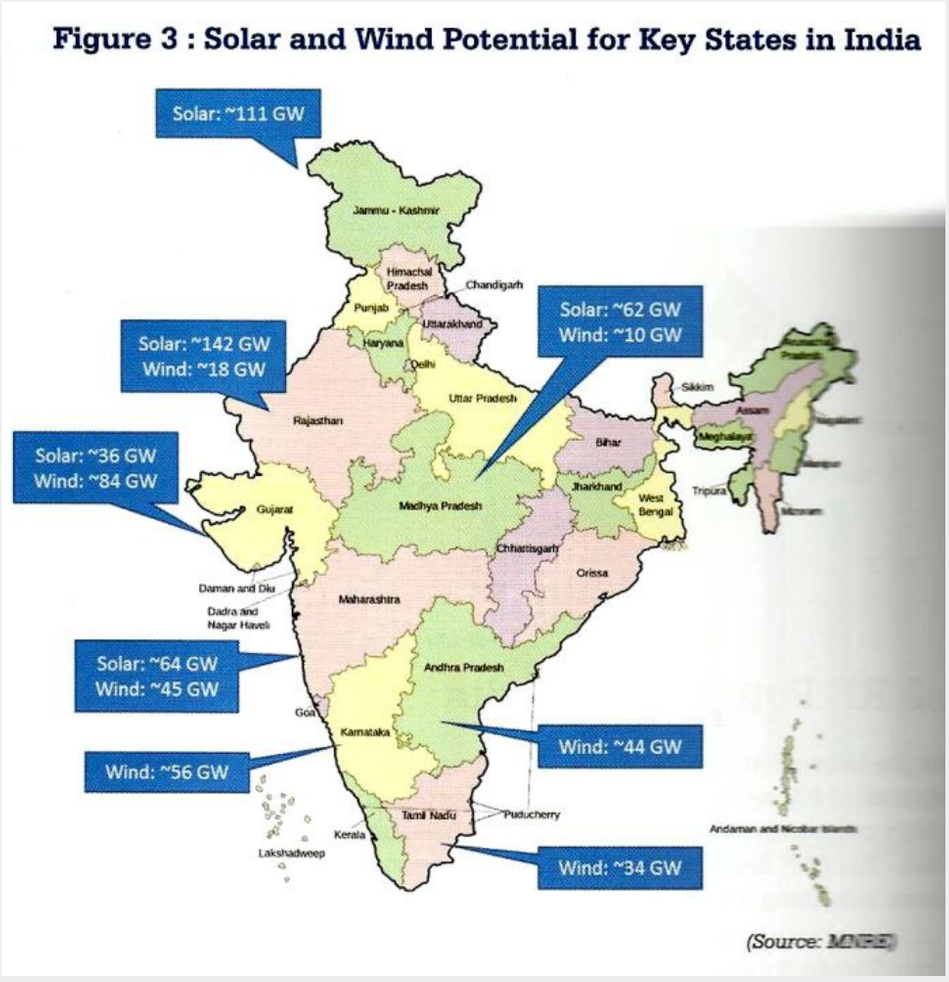
Details of wind and solar energy potential for some of the key states are shown in the following figure:

3. COP21 and India's INDC Targets

India reiterated its commitment to install 175 GW of renewable by 2022 in its Intended Nationally Determined Contribution (INDC) document released at the recently concluded COP21 summit in Paris. India's INDC outlines a vision of reduction of 33%-35% in emission intensity of India's GDP by 2030 from 2005 levels and achieving 40% of generation capacity based on non-fossil fuels (i.e. Large Hydro, Nuclear, Small Hydro, Wind, Solar PV/TH and Biomass). The targets include:

- Ramping up of solar and wind capacity from current 4,060 MW and 23.76 GW in 2015 to 100 GW and 60 GW by 2022 respectively.
- Increasing biomass installed capacity to 10

Figure 3 : Solar and Wind Potential for Key States in India



GW by 2022 from current capacity of 4.4 GW.

- Promotion of small and mini hydel projects through special programs as was done through new and efficient designs of water mills for electrification of remote villages.
- Promoting nuclear energy and ramping it up from the current capacity of 5,780 MW to 63 GW installed capacity by the year 2032, if supply of fuel is ensured.
- Producing clean power from coal plants by imposing stringent efficiency standards and assigning mandatory targets for improving energy efficiency of old & inefficient thermal stations.

The document forecasts average annual electricity demand growth of 6.7% between 2012 and 2030 and also outlines various means of reducing electricity intensity of GDP. These ambitious objectives are bound to have far-reaching impacts on the power system and across the spectrum of stake holders in the energy and power business. Some of the key questions raised by these targets are:

- Central planning agencies:
  - How can the demand forecast be made more systematic?
  - It remains to be seen what is more optimal for the system to add, solar or wind?
  - How different the system would look like if it were solar dominated v/s wind dominated? And what would be the balancing requirements in each case.
  - Policies to enable use of existing gas based capacity in peaking mode and to enable new plants to be set up in open cycle mode.
- Coal based capacity
  - How will coal-based assets be impacted – especially the imported coal based and inefficient ones?
  - Lenders need to do more rigorous scrutiny of proposed coal based capacities. How will the current capacities be affected? What will the dispatch levels be?
  - How EPC majors respond to the slow coal based capacity addition? How much coal will we need and what do we do with the surplus?
- Gas based capacity
  - Can the system incentivize gas based capacity to operate at very low utilization to balance the grid?
  - How will the current gas based capacity operate?
  - What can change the load factor significantly and what impact it will have on gas demand in power generation?
  - How much capacity is required for balanced integration of RE sources and how would it change (i) with increasing load factor of system, and (ii) in wind dominated system v/s solar dominated system.
- Transmission
  - Which transmission corridors should be strengthened and by how much?
  - How would power flow change under RE dominated scenario v/s the current coal dominated scenario?

While in reality we will probably see an 'in-between' scenario i.e. neither full INDC nor business as usual scenario, it is an interesting time and all stakeholders – investors, developers, EPC players, lenders – need to review their outlook on the sector and realign their respective strategies. It is expected that the targeted reductions in emissions will be achieved not only through renewable capacity addition but also via energy efficiency measures. ICF has presented an analysis of the impact of these targets on the Indian power system, using our proprietary long-term power sector planning model, Integrated Planning Model (IPM®). IPM® can help stakeholders answer these questions and plan their future strategies.

Extracted from ICC 4th Green Energy Summit
By Shri S C Suri
Hony Member, IIM

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Global Slowdown Hurting Indian Steel Industry

The dreary global market scenario for past two years has been pulling down Indian steel industry. In the present state of affairs, declining steel prices in global as well as domestic markets has emerged as the biggest concern for the Indian sector.

Prolonged low steel demand, continuously falling raw material prices, overcapacity of steel in China and availability of low-priced imported steel in global market is running steel business worldwide.

China – The Biggest Threat

China produce 800 mnt of steel in a year – four times more than any other nation has ever produced. The Chinese steel industry is now in severe overcapacity of about 400 mnt amidst construction slowdown in the country.

Apparent steel consumption in China, the world's largest steel producer and consumer, fell 5.7% to 591 mnt in the first ten months of 2015, as per China Iron and Steel Association. But facing overcapacity, Chinese steelmakers are exporting bulk quantities to other nations at very low rates. Recently, steel prices in China hit record low at USD 270-281/mt. This in turn is hurting the global steel sector and prompting trade participants to cry foul.

Steel dumping by Chinese steelmakers has affected other nations badly, especially Europe; India is relatively better off. Steel 360 compared Indian steel industry performance in Q1 FY16 to Q2 FY16.

In terms of pricing, raw materials like iron ore, pellets and scrap declined upto 22%, 7.6% and 17% respectively in Q2 FY16 against Q1 FY16. Meanwhile, semi finish and finish long prices fell in the range of 11-15% compared to Q1 FY16. Raw material and semis rates in global market fell by upto 13% in the period.

Rising import from China, Russia and Japan

Another concern for Indian steel industry is continuous rise in flat and long steel import from China, Russia and Japan. In order to protect domestic steelmakers, the Indian government took few measures such as hike of 5% (2.5% in June'15 and 2.5% in Aug'15) in import duty along with 20% safeguard duty on flat steel products and making BIS norms mandatory for long steel imports. However, based on data maintained by SteelMint, it seems that these measures have not proven to be very effective in curbing cheap steel imports and such inflows are still hampering the Indian domestic market.

Long & Flat Steel Trade						
Particular	Flat Import			Long Import		
	FY16 (Apr-Sep)	FY15	FY14	FY16 (Apr-Sep)	FY15	FY14
China	0.56	1.07	0.43	0.10	0.54	0.12
Japan	0.99	1.27	1.15	0.03	0.07	0.17
Russia	0.19	0.20	0.13	-	-	-
Others	1.74	2.52	1.71	0.22	0.31	0.05
Total	3.48	5.06	3.42	0.35	0.92	0.34

Year	Flat Steel	Long Steel
FY14	4.28	0.65
FY15	4.06	0.47
FY16	1.479	0.2

Ferro Alloys Marred by High Power Tariffs

Currently, Indian alloys prices are declining due to low procurement in a highly volatile market. Producers are curtailing production since export enquiries are frequent and hardly any business has been materializing in the domestic market. Demand is very low as there are hardly any buyers. Therefore, stocks have begun piling up at

almost every plant and situation is grim now.

Most producers have curtailed their production by about 40% in Durgapur, West Bengal. The crisis in the industry is manifested in a major way in Andhra Pradesh (AP), where high power tariff is playing havoc. In AP, only 7 units out of 37 are operational. As the crisis is deepening in the state, ferro alloys exports from the state have drastically reduced.

On the other hand, the alloy industry capacity is increasing by the day in ASEAN countries especially Malaysia. An Indian industry official tracking the Malaysian development says, "The principal action is at Samalaju Industrial Park at Sarawak's Bintulu region." Industry official have apprised the government that as power rates in Sarawak will be considerably lower than power tariff in India, Malaysian ferro alloy factories getting ready for likely commissioning by Dec'15-Jan'16 will have a competitive edge in world market. Therefore, Indian industry has no chance of finding a level playing field to compete with them in the coming days. Import of ferro silicon from Malaysia (to India) has already begun, and there are reports that silico manganese may also come in from Malaysia by January.

Chhattisgarh is one of the states where the impact of power tariff hikes has been severe on the ferro alloys industry. Chhattisgarh government increased power tariffs wef June'15. Also, there has been a sharp fall in ferro alloys prices. As such, the ferro alloys industry is facing a slowdown of its own and making adjustments to remain operational.

On the basis of capacity analysis, the estimated capacity of ferro alloys in Chhattisgarh is about 547.7 mva. The estimated production works out to be about 594,972 mva pa on the basis of 65-70% capacity utilization.

Evidently, only a few out of 31 units operate on captive power, thus shielded from the harsh effects of power tariff hikes in the state. These units constitute only 15% of total installed capacity in the state. These units constitute only 15% of total installed capacity in the state. (Power connected with CSEB and OP Jindal industrial Park at Raigarh).

As such, the Chhattisgarh ferro alloy industry is suffering at the hands of high power tariffs and is unable to offer any competitive prospect in the market, resorting to production cut to remain viable.

Indian ferro alloys production capacity is in excess of domestic demand. Hence, the industry is always dependent upon the export market. Supposing the market would support manganese alloy prices in future and sentiments would be better subject to demand of primary steel, producers will increase production immediately. At present, however, manganese alloy producers are adopting a cautious approach, as they are unwilling to take definitive position looking at the downturned market.

Domestic Market

Recently, Indian SiMn market prices noticed a sharp fall. Currently, SiMn prices are being quoted at around INR 41,500/mt for 60/14 grade and INR 42,500/mt for 60/15 grade on ex-plant basis at Raipur. Trading at discounted rate, prices in West Bengal are at around INR 41,000/mt for 60/14 grades and INR 41,500/mt for 60-15 grade on ex-plant basis at Durgapur. Ferro manganese prices are highly volatile with grade 70/75 being traded at INR 41,000-41,500/mt at Raipur.

Export Market

Export prices have declined as well. Producers are quoting and trading SiMn 60/14 grade at USD 610/620/mt FoB, 65/15 grade at about USD 670-780/mt FoB. Export price of FeMn 75 grade is at about USD 660-670/mt FoB.

Source: Steel 360

World steel output falls 2.8% in 2015; first decline since 2009

Global steel production dropped by nearly 3 per cent to 1,622.8 million tonnes (MT) last year, registering its first fall since 2009. According to industry body World Steel Association (WSA), the last decline in global steel output was witnessed in 2009, when production fell by 8 per cent to 1,238.8 MT from 1,343.4 MT in 2008. Since then it has continuously risen till 2014. Global steel production stood at 1,433.4 MT in 2010, 1,538 MT in 2011, 1,560.1 MT in 2012, 1,650.4 MT in 2013 and 1,670.2 MT in 2014, the data released by WSA showed.

"World crude steel production reached 1,622.8 MT for the year 2015, down by 2.8 per cent compared to 2014. Crude steel production decreased in all regions except Oceania in 2015," WSA said. Market insiders said the decline is on account of steel firms cutting down on production to rationalise their costs as the industry faces the twin menace of falling demand and decreasing prices. Prices of some steel products plummeted to 10 year-lows in 2015, they added. Annual production of crude steel in Asia was 1,113.8 MT in 2015, a decrease of 2.3 per cent compared to 2014.

Crude steel output in China -- the world's largest steel maker -- fell by 2.3 per cent to 803.8 MT in 2015 compared to the year-ago period. However, its share of world crude steel production increased from 49.3 per cent in 2014 to 49.5 per cent in 2015. Japan produced 105.2 MT in 2015, down by 5 per cent compared to 2014, while output in India grew by 2.6 per cent to 89.6 MT during the same period. South Korea produced 69.7 MT of crude steel in 2015, a decrease of 2.6 per cent compared to 2014. In 2015, the European Union produced 166.2 MT of steel, a decline of 1.8 per cent against 2014, whereas the output in North America decreased by 8.6 per cent to 110.7 MT during the same period. The US produced 78.9 MT of crude steel last year, down by 10.5 per cent compared to 2014. Production in the Commonwealth of Independent States (CIS), which includes Russia, showed a decrease of 4.3 per cent in 2015 with an output producing 101.5 MT of crude steel.

Annual crude steel production for South America was 43.9 MT in 2015, a decrease of 2.5 per cent on 2014. Brazil produced 33.2 MT in 2015, down by 1.9 per cent from 2014. In December 2015, the world steel production for the 66 countries reporting stood at 126.7 MT, a fall of 5.7 per cent compared to the year-ago period, WSA said. Crude steel capacity utilisation ratio for December 2015 was 64.6 per cent lower by 4.9 percentage points than December 2014. The average capacity utilisation in 2015 was 69.7 per cent compared to 73.4 per cent in 2014, it added.

Source: Metaljunction

European steel market crisis hits global operations of Indian firms like Tata Steel, ArcelorMittal

The crisis in the European steel market seems to be taking a toll on the global ambitions of Indian producers. Poor demand conditions coupled with rising imports of steel from China seem to have added to the woes of steelmakers in Europe and the US, including Indian owned ones. Tata Steel has had to shut down or find buyers for some of its European plants that supply steel to the construction and railway sector. Essar Steel is reportedly looking for buyers for Algoma Steel in Canada. The news of ArcelorMittal deciding to mothball one of its plants in Spain due to adverse market conditions adds to this growing list. Some, like Tata Steel in Canada, have also had to scale down mining plans. "In Europe and US there is little growth in demand. Companies operating there are suffering badly and Indian owned assets have also been impacted. Moreover, high labour costs make it less competitive. On top of it, cheaper steel imports from China have compounded the problem. The situation is complex and there seems to be no immediate respite," said Goutam Chakraborty, metals analyst at Emkay Global. Earlier this week, ArcelorMittal said it has decided to idle one of its plants at Sestao in Spain indefinitely. A spokesperson for the world's largest steel company, which produces nearly 56% of global steel output said its operations are facing "such challenging market conditions that keeping the plant open in the current economic environment is not viable." The LN Mittalrun company has been a beacon for Indian steelmakers looking to expand their horizons abroad. Similarly, Tata Steel, which bought AngloDutch steel major Corus in 2007 for $13.7 billion, making it one of the largest acquisitions in the industry, is facing adverse demand conditions and cheap imports from China. In December 2015, it announced that investment group Greybull Capital had agreed to buy its long products business. This month it confirmed plans to cut 1,050 jobs in the UK, including 750 at Port Talbot, the UK's biggest steelworks. In October 2015, it had announced 1,200 jobs losses at Scunthorpe. The same month, Swraj Paul's Caparo Group also called in the administrators to restructure its business before the Liberty group stepped in to buy some of its companies. "The situation is tough in the manufacturing space abroad and an Indian company would definitely look twice as hard before acquiring any new global asset. I think the present situation will force buyers to focus strictly on good strategic buys like mining properties in coal and iron ore," said R Muralidharan, senior director, Deloitte India. The situation is vastly different from that in 2007 when Essar Steel bought Algoma Steel in Canada's Sault Ste. Marie for $1.6 billion and Minnesota Steel for $100 million. Essar Algoma Steel laid off 100 people in October last year, facing a high interest burden and later filed for bankruptcy protection. It's now looking for a major investor or buyer for Algoma. The Algoma story is part of an industry crisis that has led to a major shutdown of mills across North America and Europe. It's sparked a clamour for tariffs on imports from China that have led to a sharp 40% fall in benchmark steel prices from 2014 levels.

Source: Metaljunction

Steel consumption in manufacturing needs to rise significantly

Even the hardened critic of India's economic growth would agree that all the major economic parameters of the country are showing reasonably good signals. GDP growth at 7.4% is one of the highest in the world; inflation measured by Consumer Price Index is contained at around 5.5-6%. The current account deficit stands at 1.2% of GDP and is therefore manageable. The foreign exchange reserves at $351 billion is comfortable with exchange rate nearly stable per dollar at Rs 66-67. The RBI has reduced the repo rate to 6.75% with the objective of bringing down the cost of capital, although the rate is still considered high to promote investment.

Despite these positive developments, two factors are causing roadblocks to sustain the journey to a good growth path. First, there is a lack of investment to translate the positives into sustainable realities. It is seen that Gross Fixed Capital Formation as a percentage of GDP (proxy for investment) has steadily come down from 33.6% in FY12 to 28.3% in Q2 FY16. Notably the component of private corporate investment has seen a steep fall to less than 9% in FY15. And secondly, the country is taking steps to ease the various restraints of doing business in India, but the procedural complexities and the clearances of different departments that are required prior to setting up of a business entity in India are still considered enormous and too many.

The sharp decline in commodity prices, particularly oil, metals and minerals, have contributed to bringing down the inflation and CAD and partially helped raise the forex reserves. The same factor, however, has negatively hurt the bottom lines of a host of units in these sectors and as manufacturing has a strong multiplier impact on both upstream and downstream units, the declining commodity prices have adversely affected a much wider component of related industries.

The downswing in the profitability indices of a large part of the manufacturing sector is also responsible for decline in private corporate investment as the rate of return on investment and the pay-off period of investment are not favourable. That brings us to the question of hedging the business risk of investment. The government is trying to make the PPP mode of investment more attractive by issuing guidelines that would facilitate this type of investment by the corporate sector in railways, roads, defence equipment manufacturing, urban infrastructure building to name a few.

As regards the steel industry, the demand from various end using segments is subdued. One of the major factors responsible for the mess is lack of adequate investment in the finished products, be it in energy, construction and manufacturing, processing and consumer durable segments. The increased public investment in some of these areas could have crowded in corporate investment by minimizing the associated risks. Another factor that is crucially significant for the steel sector is the declining steel intensity in growth in value addition in GDP and manufacturing. This implies that the growth rates in manufacturing may not reflect the commensurate growth in steel consumption.

As per the new series of GDP (2011-12 bases), the steel intensity in manufacturing has come down from 4.79 in FY12 to 4.33 in FY15. The nearly 10% drop in the index implies that growth in manufacturing sector need not necessarily translate into the growth of the steel industry. Rightly so steel consumption has grown at an annual average rate of only 2.7% between FY12 to FY15. In the manufacturing sector nearly 30% of the sub segments comprising basic metals, fabricated metal products, machinery and equipment, electrical machinery, motor vehicles, other transport equipment and furniture manufacturing may be grouped under steel-intensive segments. These segments have contributed not more than 58% of 10.6% growth achieved by the manufacturing sector in October 2015. The steel intensity in manufacturing sector therefore needs to rise significantly to boost up the growth in the ailing steel sector.

The author is DG, Institute of Steel Growth and Development. Views expressed are personal.

The Financial Express

Solar Tariff trends for 2016

Solar tariffs have touched a record low this year. This is likely to spur lower rates, more competitive bidding and a further push for renewables.

India crossed the 5-gigwatt-solar-installations mark in mid-January but there was a bigger development a few days later: solar tariffs touched a new record low of Rs 4.34 per unit ($0.06) at an auction in Rajasthan.

Finnish company Fortum Finnsurya submitted the winning bid for a 70-megawatt plant to be built at National Thermal Power Corporation's solar park in the state. This was not an outlier bid: the other winners quoted tariffs of Rs 4.35 and Rs 4.36 per unit. "Solar rates now seem to have reached grid parity," B K Dosi, managing director of Rajasthan Renewable Energy Corporation told Bloomberg New after the bid results were announced.

Just two months ago, the lowest tariff "discovered", through a reverse auction for a 500-megawatt project in Andhra Pradesh was Rs 4.63 per unit, which was bid by SunEdison. In December, S B G Cleantech, a joint venture of SoftBank, Bharti and Foxconn bagged another 350-megawatt project at the same park, sparking off concerns about irrational bids, optimistic assumptions and unviable projects.

Competitive tariffs for solar have been declining globally, driving record installations of 57 Gw in 2015, according to Bloomberg New Energy Finance numbers, whereas 64 Gw of wind was commissioned. Solar and wind accounted for more than 80 percent of global clean energy investment last year, which reached a record $329 billion. We expect solar PV installations of around 67 Mw this year, surpassing wind farm capacity added.

Here are four trends we are likely to see evolve in 2016 in India, and globally:

Further lowering of solar tariffs:

With the panels being built more cheaply, and lower financing costs, tariffs in India could reach or breach the Rs 4 per unit mark. The power minister has already indicated that the government was targeting that number. Tariffs are sliding in the rest of the world too. China, the world's largest clean energy investor, reduced solar feed-in-tariffs from January 1.

Competitive bidding picks up pace:

The move towards competitive markets and competitive tariffs will intensify in markets where this is not already the case. Germany held its first solar auction last year. This market-led mechanism would extend to technologies that have been kept out of the bidding arena so far, for example, wind projects in India. Some markets in Europe, such as Finland, offer a feed-in premium to renewable energy generators on top of the whole-sale power price to meet a pre-decided target price per unit of power.

Pollution concerns mount, so does action:

At a time when there is more oil, gas and coal to burn per unit of currency, concerns about poison-air will continue to rise. China is working on a national carbon market while India is moving to Bharat VI (Euro VI) fuel standards by 2020, ahead of the original target. Both the countries are also talking about electric vehicles. Iran could join the list of countries imposing emergency measures to control particulate matter in the air: Schools had to be shut in the country last month as pollution levels surged due to a combination of vehicle exhaust and weather conditions. Some cities in India could move to a permanent odd-even scheme.

New markets, new states and new countries opt for renewables:

Many states in India are yet to tap their renewables potential: The commissioned solar capacity of Uttar Pradesh is a mere 140 Mw, while the target is to achieve over 10,000 Mw by 2022. Countries such as South Africa, Morocco, Chile, Pakistan, Philippines and Kenya are ramping up clean energy investments. Bangladesh – the world's largest market for solar home systems which typically include home lights and a charger – will soon boast its first set of megawatt-scale plants.

Source: Business Standard

CHAPTER LEVEL NMD CELEBRATIONS

The IIM's Chapter level NMD was celebrated at its Delhi Chapter on 16th January 2016. Dr. G Mukherjee, former Vice Chairman, SAIL, was the Chief Guest on the occasion.

At the outset, Shri K L Mehrotra, Chairman delivered a Welcome Address and presented a bouquet to the Chief Guest.

Thereafter Shri S C Suri, immediate Past Chairman, gave introductory remarks about Dr. G Mukherjee. He also enumerated the activities of IIM and about the role of Delhi Chapter. He also spoke about the Chapter Level NMD Celebrations. He informed that as a part of the Celebrations, Shri K L Mehrotra will give a presentation on "Attributes of Corporate Leadership for Effectiveness of the Board"

Shri K L Mehrotra, Chairman, gave a presentation on "Attributes of Corporate Leadership for Effectiveness of the Board". In his presentation he touched upon the various facets of Leadership Attributes. These, among others, included competence, integrity, team building, vision, strategy, communication, listening, etc. This was a lucid presentation and well received by the audience.

After conclusion of the presentation, the following luminaries of our Chapter were honoured with Chapter Level NMD Awards for their outstanding contribution to the cause of the metallurgical profession.

(i) Shri Raj Tiwari

(ii) Shri V C Singhal

(iii) Dr. Vipin Jain

(iv) Shri Gautam Bhatia

On this occasion, a suitable memento and a stole were given away to them by Dr. G Mukherjee, Chief Guest. However Shri V C Singhal could not

receive the award in person owing to his personal engagements. This will be delivered to him. After receipt of the awards they shared their experiences in the area of metallurgy.

After conclusion of the award distribution ceremony, Shri K L Mehrotra was also honoured with a befitting memento and a stole by Dr. G Mukherjee. Shri S C Suri, immediate Past Chairman, was also honoured with a stole for his relentless contribution to further the activities of Delhi Chapter. Shri Bhim Sain, Executive Officer, Delhi Chapter, was also honoured with a memento and a stole for his dedicated services to the Delhi Chapter.

Dr. G Mukherjee shared his seventy years experiences in the area of ferrous sector. During his address, Dr. Mukherjee compared the






production / techno-economic scenario of steel of our country vis-à-vis other countries. He urged the younger generation to work hard to achieve the higher levels of performance in various fields.

The Chief Guest was honoured with a memento and a stole from Chairman and immediate Past Chairman.

Shri Manoranjan Ram, Hon. Secretary, Delhi Chapter, delivered vote of thanks.

The event was attended by about 60 persons including Executive Committee members of Delhi Chapter, IIM-DC Members and students from "Student Chapter of University of Petroleum and Energy Studies(UPES)", Dehradun with their faculty members.

The function ended with a lunch.

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BRIEF ON INTERACTION WITH DEHRADUN STUDENT CHAPTER

Chapter-level NMD Celebrations were held at our Chapter on 16th January 2016. On this occasion Student Chapter of University of Petroleum and Energy Studies (UPES) Dehradun which has been created recently was invited. About ten persons including their faculty participated in the event. Before the start of the event, an interactive session was held with them. The following were present in the interaction:

IIM DC

1. Shri KL Mehrotra
2. Shri SC Suri
3. Shri Manoranjan Ram
4. Shri Bhim Sain

UPES

Students

Shri Lovish Gupta
Shri Shashank Sharma
Shri Abhinav Nair
Ms Anshumita Sarangi
Ms Parul Batra
Ms Harpreet Khanna
Shri Akhil Tewari

Faculty

Dr SV Garimella, Asstt Professor, Deptt of Mechanical Engineering, UPES

Mr Dishant Beniwal, Assistant Prof, Deptt of Mechanical Engg, UPES

At the outset the students and faculty were welcomed to be affiliated to our Chapter. They were briefed about the activities of the IIM and the Delhi Chapter. They were also informed about our forthcoming programmes, particularly our MMMM 2016 event. They exhibited their keenness to participate in our programmes. They also showed their interest to present technical papers in our programmes.

They also informed that they are going to arrange inauguration ceremony of opening of their Students Chapter at Dehradun. It was also informed that they are arranging more membership of students under their Chapter.

It may be mentioned that while Dr Garimella teaches Steel Making Process, Mr Beniwal teaches Material Science and Nano Technology at UPES.

The interaction was very informative for the students as also for us.

We will be keeping them associated with our various programmes to be held by us from time to time.

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Government to take a call on fixing minimum import price on steel: Commerce Secretary

There has been a lot of discussions on the minimum import price (MIP) on steel and a decision in this regard would be taken by the government, Commerce Secretary Rita Teaotia said recently. "On the MIP on steel, yes, there has been a lot of discussions on the steel sector and the difficulties being faced by the integrated steel units. There is also the downstream sector, which has been representing and arguing for their continuing access to low cost imported steel to balance the domestic supplies," she told reporters here. Fixing of MIP, she said a decision on this "is to be taken by the government". However, she added that one has to look at the total macro picture of the sector including the total steel consumption of the country. Up to last year, India's imports were about 9 per cent of what it consumed and this year, it is somewhat higher, Teaotia said adding "the peak that we reached is 15 per cent".

"Nevertheless, 85 per cent of the steel is met domestically. This is the bottom-line that we continue to utilise domestic steel largely. So imports are not a huge element of our total steel consumption," she said. She also said the country has considerable installed capacity and it is operating at about 80 per cent, which is a higher load factor than the rest of the world, averaging about 68 to 70 per cent. Commerce and Industry Minister Nirmala Sitharaman had recently said the government will not rush into fixing a minimum import price (MIP) for certain steel products. The domestic steel industry is mainly worried about cheap imports from China. The proposal to fix a minimum price for in-bound shipment of certain steel products is aimed precisely to keep those imports in check.

Source: The Economic Times

Steel: A longer data series of minimum 10 years is needed

It is important to know that all data, be it for the whole economy or for any specific part of it, must be comparable at all levels. Adequate and representative data is the best indicator to evaluate the performance and health of any sector as qualitative judgment without the appropriate data support loses its sheen and can always be challenged.

Data compilation is a challenging task specifically for a country like ours not only because of the sheer size but mostly due to the variations embedded in the source of data. It is an acknowledged fact that for the organised sector reliable data is generally available, but the same cannot be said for the unorganized segments of the economy and industry. An intelligent assessment on its performance based on other available trend and indirect indicators is possible to make and this has been accepted as a standard practice all over the globe.

For iron and steel sector the intelligent assessment to capture the performance of small and medium enterprises is being done by JPC backed up by periodic survey, organizing interactive meeting with them and over the years this data is used for taking relevant policy decisions. The complexities of comparison of data for the sector with that of other countries arise due to the non-uniform definition of what categories are grouped under steel.

Till a decade back, iron and steel in the standard categories was almost similar in all countries. The emergence of special steel, value added products and the practice of many large steel producers going in for

production of various downstream products requiring further processing of steel enlarged the scope of definition of steel as a product. The inability of many producers to come out the contours of standard basic categories of steel particularly in the developing countries to widen their production range to cover items like sheet piling, forged bar, wires, cold formed sections, etc. resulted in narrow and wider definition of steel.

World Steel Association, the body compiling global steel data on production, consumption and trading, defines steel that include various items which is outside the scope of our definition of steel categories. A decade back, the role of these segments was insignificant not only in India but also in many other countries. It is no longer so. The development and growth of oil and gas sector and urban infrastructure (demand for welded and seamless tubes and pipes), the fast growth in pre-engineered buildings and pre-fabricated structures, the increasing need for cast and forged steel and wires had widened the gap between coverage of steel items by India and other major steel producing countries.

For instance, WSA data on Sheet Piling (HS Code:7301), Seamless Tubes (HS Code: 7304), Welded and Riveted Tubes (HS Code: 7305), Tube Fittings (HS Code: 7307), Wires (HS Code: 7217/ 7223/7229), Steel Castings (HS Code: 732599), Forged Bar/ Spring Steel (HS Code: 721410/ 722230/722840), Cold Formed sections including coated sections (HS Code: 721661/721669/721691) is considered a part of steel categories and their non-inclusion in Indian data on steel industry has led to some amount of non-compatibility of these two series of data.

Apparently there is a possibility of double counting in taking into account the volume of processed steel when its base material has already been considered like in case of welded tubes and tube fittings that are processed out of tubes only. Thus if the process of production is different and can be sourced from material other than the base categories of the same, it justifies inclusion, otherwise not. It is not known if we can develop an appropriate mechanism to obtain reasonably reliable data on the above categories after the necessary corrections. There also remains an issue of developing the past series with these revisions as a longer data series of minimum 10 years is needed for an econometric analysis on production, consumption and trade.

A beginning, however, is to be made some day, otherwise there is likely to be a shortfall of roughly 2.0-2.5 million tonne in Indian steel production and consumption when compared with WSA data on steel.

The author is DG, Institute of Steel Growth and Development. Views expressed are personal.

The Financial Express

Volume-based indices signal revival of steel industry

The power of data is unlimited. It creates and destroys many beliefs, apprehensions, generates hopes and despair, but continues to be the strongest tool in the hands of statisticians and analysts. First, the mid-year review of the economy puts real GDP for FY16 at 7-7.5% and nominal GDP at only 8.2%. The projected real GDP for the full year is therefore 1% lower and nominal GDP is more than 3% lower than what was envisaged in the Budget. The drop in nominal GDP can be explained by widening gap between WPI and CPI used as deflators, which have reached 8.5% in Q2 of FY16. It would only make the fiscal deficit considered to be 3.9% of GDP, larger by another 0.2%.

The primary source of revenue for the government would be higher tax collections as the latest data show, but would be constrained by slower realization of PSU disinvestment. The current account deficit in H1 of the current year is contained at 1.2% of GDP. Foreign exchange reserves rose to

$352.1 bn in first week of Dec '15 and net FDI inflows have grown to $17 bn in H1 of FY16. Two critical elements of the economy are private final consumption expenditure which has been growing at the rate of 6.8% in Q2 of current year (down from 7.9% in Q4 of FY15) and Gross Fixed Capital Investment (GFCF) rising at 6.8% in Q2 of current year compared to 4.1% in Q4 of the previous year.

However, it is also true that the share of GFCF as a percentage of GDP has been continuously coming down from average 31% in 2011-12 to 2014-15 to 28.1% in H1of FY16. Aggregate capital expenditure has risen by 0.5% of GDP. Particularly with respect to agriculture and rural development the government expenditure has risen by 9.9% in H1 of the current year. Also there is a predominant trend of replacing current expenditure with capital expenditure. Public investment, however, still continues to be the weak link in pushing up the growth.

The other two related elements to boost the economy are government expenditure and private corporate sector investment. The latter is either stagnant or coming down in the past few quarters due to depressed prices and subdued demand that bring down the prospective return to investment. The corporate balance sheets being highly stressed with high indebtedness have further pulled down the enthusiasm for investment. The additional factor causing worry is the lower contribution of exports to economic development. The credit growth by scheduled commercial banks to manufacturing, mining and construction sectors has sharply dropped from the average 22% to 4.5% in H1 of FY16 as compared to the previous year. Does lower demand for credits indicate less working capital requirements because of subdued demand for end-products? It also points out the existence of uncertainty plaguing the fate of all investments. It must be acknowledged that parliamentary logjam in getting through GST and other important Bills that could have dispelled or minimized the shade of uncertainty in the business environment is yet to happen.

The volume-based indicator Index of Industrial Production is showing signs of green shoots in the economy and may help the steel industry. In October, growth of industrial production at 9.8% is contributed by significant growth in manufacturing (10.6%), which is boosted by growth in capital goods of 16.1% and by consumer durable segment by 42.2%. Have these indices impacted the steel industry? In November, real steel consumption has sprung up by as high as 11.2% over the last year. It is noted that there was a substantial reduction in inventory accumulation by major producers from 1.3 million tonne to 0.5 million tonne. As prices of steel continue its southward journey, the release of accumulated stocks was driven by the market realities. Summing up, despite contradictory movement of some economic indicators, the volume-based indices signal a revival of fortunes for the steel industry. Latest import restrictive measures and the mandatory quality notification by the government must reiterate this trend.

The author is DG, Institute of Steel Growth and Development. Views expressed are personal.

The Financial Express

IISCO Plant Crosses Production Magic Figure of 1MT

The new blast furnace at IISCO Steel Plant, Burnpur crossed the magical figure of producing one million tonne of hot metal recently in less than a year of its commissioning. Christened "Kalyani", the country's largest blast furnace was "blown in" on November 30 last year. Built by POSCO (Engineering and Construction), South Korea and NCC Ltd, India, the furnace has a useful volume of 4160 cubic meters, and can produce about 8,000 tonne of hot metal per day. With an enhanced campaign life of 20 years, the blast furnace is equipped with system such as pulverized coal

injection, cast house fume extraction, cast house slag granulation, high top pressure operation coupled with top pressure recovery turbine, recovery and conveyor belt charging system. It incorporates level-II automation and has twin flat cast house with four tap holes.

Source: JPC Bulletin

Tata Steel pares stake in Tata Motors, mops up Rs 1,251 crore

Tata Steel sold 3.85 crore shares of Tata Motors to institutional investors recently this month for Rs 1,251 crore. The sale was part of its June, Tata Steel owned about 16 crore shares, or 5.54 percent, in Tata Motors. The company said that the price was discovered through a book-building process. In August, Tata Steel sold 2.18 percent (1.94 crore shares) of Titan to Tata Sons for a net consideration of Rs 637 crore. The steelmaker has been selling its assets down the interest outgo on its debt of about Rs 70,000 crore. Last fiscal year, the interest cost rose 12 percent to Rs 4,848 crore. Hit by the sharp drop in metal prices on the back of weak demand, Tata Steel has been reassessing its portfolio investments and cashing out to book profit. The company had invested Rs 22,000 crore in the first phase of the 6 million tonnes per annum plant at Kalinganagar in Odisha. The much-delayed project is expected to go on stream in a few months even as steel companies battle the onslaught of imports from China and other countries.

Source: JPC Bulletin

Tata Steel Inaugurates Odisha Plant

Indian steel major Tata Steel inaugurated the Odisha steel plant recently, but the plant may not be able to start producing hot metal as the key steel making units like blast furnace, sinter plant and steel melting shop are not yet ready and still awaiting clearance from the Odisha Pollution Control Board.

The company had started heating the coke oven battery in the 2nd week of May and began producing coke in August. At that time the company had intimated the government that it'll take at least 200 days (7 months) to fully commission the phase-1. As per the timeline set by the company, it would take 100 days from the heating of the first battery to heat the second one. In the subsequent 30 to 45 days the company would commission the pellet and sinter plant and then the blast furnace. After 10 days of commissioning the blast furnace, the steel melting shop would be commissioned. If we go by this time line and the ground realities, the plant is not yet ready to start producing hot metal.

STEEL OUTPUT

'India bucks global trend in 2015; production rises 2.6%'

India is the only country among major steel producing nations, such as China, Japan, South Korea and the US, which witnessed growth in production in 2015, according to World Steel Association (WSA) data.

2.6%

rise in production in India to 89.6 million tonnes (MT) in 2015 against 87.3 MT in 2014.

2.8%

drop in world steel production to 1,622.8 million tonnes in 2015.

AS PER THE steel ministry, India is the only country among major steel producing countries which recorded a positive trend in steel production and consumption last year.

"INDIA BECAME the third largest producer of steel in the world in January 2015, leaving behind the US as the fourth largest producer," the ministry said in a note.

2.3% FALL in crude steel output in China — the world's largest steel maker — fell by 2.3% to 803.8 MT in 2015 compared to the year-ago period.

JAPAN PRODUCED 105.2 MT in 2015, down 5% compared to 2014, while output in South Korea decreased by 2.6% to 69.7 MT during the same period.

IN 2015, the US produced 78.9 MT of crude steel, a decline of 10.5% compared to 2014, whereas Russia showed a decrease of 4.3% in 2015 with an output producing 101.5 MT of crude steel.

AS PER WSA, the last decline in global steel output was witnessed in 2009, when production fell by 8% to 1,238.8 MT from 1,343.4 MT in 2008.

Nevertheless, Tata's Kalinganagar steel mill is the largest single location Greenfield steel project in India. The first phase (3 mnt pa of planned 6 mnt pa) capacity will produce world class flat, lighter and high tensile strength steel. The company will

augment its Indian production to around 13 mnt pa crude steel in India and will now expand its portfolio to high grade flat products meant to be utilized in ship building, defence sector, power & energy sector, infra building, aviation, and lifting & irrigation sector.

Built at an investment of INR 250.6 billion in the first phase, the Kalinganagar plant boasts of India's largest blast furnace at 4,330 cubic meter with production capacity of 3.2 mnt pa.

Meanwhile, sourcing raw material will not be a problem for the plant, given the captive mines Tata steel has in the state. According to Tata Group Chief Cyrus Mistry, "The plant will source raw material from its own Khandabandh iron ore mine located in Joda mining circle. Tata steel will invest INR 200 billion to develop the mine."

Source: Steel 360

Automakers See Steel Import Curbs as Body Blow

Industry fears production would stop if govt. enforces BIS certification from March 15

Some of the top players in India's automotive industry are worried about the government's decision to ban production, storage and sale of steel without Bureau of Indian Standards (BIS) certification, a step that they fear would hurt, even halt, their manufacturing operations.

The ban, which will take effect on March 15, though is seen by the steel industry as the most effective move so far to curb steel imports, which have been on the rise at the cost of local producers. While the compulsory BIS certification is good news for the steel industry, it is not so for auto makers.

Car makers currently import high-tensile automotive steel from Japan and Korea for production of critical components, top sources in the auto industry said. If the steel ministry's order to make BIS certification compulsory, production will come to a stop across the passenger vehicle industry, they claimed.

"The auto industry uses its own proprietary technology to certify its vehicles and chooses the appropriate steel for such certification. BIS standards are much more relaxed than the international standards of Japanese and Korean manufacturers, where the auto industry is mostly importing from," said a senior executive at a leading car maker, who did not want to be named. "This order will adversely affect manufacturing in the country."

Though no official numbers are available on the import of automotive steel, industry estimates suggest at least 20% of steel used by passenger vehicle manufacturers come in from Japan and Korea.

Some industry experts say steel similar to what these companies import is available locally, and the auto makers are trying to protect their long-term contracts with foreign steelmakers.

Vishnu Mathur, director-general of the Society of Indian Automobile Manufacturers, however, said even if the technology is available, the volume of imported auto grade steel is low and does not justify local production. "Currently, the industry has inventory for a month or so. But if the government does not remove the requirement or extends the time for certification, production across the PV (passenger vehicle) industry will stop. It's not about the quantity imported. The fact is even if one small part is unavailable, manufacturing will be affected," he said.

Vinnie Mehta, director general of the Automotive Component Manufacturing' Association, echoed the sentiment. "Over 70% of the cost of a component is raw material, which is largely steel. Even if we were to take BIS certification for imported steel, which is of higher quality, it is a time consuming process. It cannot be completed within three months (the government issued the order in December)," said Mehta.

BIS certification involves a visit of Indian government officials to steel mills overseas to certify their products and processes. This usually takes 6-12 months, Mehta said.

While the automobile industry alleges that local steel manufacturers had put their force behind the current order to block imports, which could hurt their business, industry experts say the situation

may not be as dire as they project.

"Imported automobile steel is used particularly in door and roof panels. Imported sheet metal is required so as to keep light the weight of the vehicle, without compromising on strength of the material utilised," said VG Ramakrishnan, managing director at consulting firm Avanteum Advisors. But he said the technology has been introduced locally by steel producers like JSW Steel, Tata Steel and Steel Authority of India.

According to him, those who have a problem with the move are Japanese and Korean car makers. 'Nearly 80% of the passenger vehicle market in India is dominated by Japanese and Korean car makers, who have long-term cost-competitive contracts with suppliers in their home market," Ramakrishnan said.

The government issued the Steel and Steel Product Quality Control Order 2015 in December to curb production, sale or distribution of any steel product that does not meet BIS guidelines. It was part of an overall effort to rein in increasing steel imports for which the government has already issued safeguard duty and anti-dumping duty on steel products.

The steel industry has defended the move. Dr. Sanak Mishra, secretary general of the Indian Steel Association, a grouping of steel majors, said: "We have said all steel, irrespective of whether it is produced here or abroad for consumption in India, should be subjected to quality standards. So there is a level playing field."

The steel products under mandatory BIS specifications include cold rolled (CR) steel strips, hot rolled (HR) steel flat products and HR steel strips for cold rolling purposes. Some of these are used in manufacturing automobiles.

Imports of steel into India shot up over 41% to 5.42 million tonne in the April-September period of fiscal 2016, according to data from the steel ministry's Joint Plant Committee.

Source: Economics Times

Commerce min takes wider view of steel import surge

In a tussle between manufacturers and the end-user industry over imposition of steel imports curbs, the department of commerce has recommended introduction of standards on certain grades, as a way to keep shipments from South Korea and China at bay.

This comes as India is preparing itself for a mid-term review of its trade pact with Korea, where steel is an important component. Even as the ministry of steel and the department of financial services back an anti-dumping duty, safeguard measures and a minimum import price, to address a surge in inflow which is affecting home manufacturers and bank's asset quality, the commerce department is batting for non-tariff measures.

This is to avoid being dragged to a dispute at the World Trade Organisation (WTO), it argues. "Tariff barriers don't work. We have done it and it didn't take us anywhere. One way is to bring in robust standards of grades of steel that we manufacture and not allow anything that do not comply with those," said a senior commerce department official. "We will support anti-dumping and safeguards only if there is strong factual evidence, as we can be challenged at WTO."

The steel ministry had notified mandatory Bureau of Indian Standards certification for 15 grades of steel last month and is in the process of notifying 16 more. The grades included hot-rolled flat products, cold-reduced carbon steel sheets, carbon steel billets and slabs to check imports of sub-standard items. Therefore, companies will have to get the imported steel certified. "The steel ministry and commerce department are on the same page on notification of standards and this will allow us to be clear about what is really needed for the country," said the official. While India also has the opportunity to re-look at the India-Korea free trade agreement, it cannot go back on what it committed on steel. "(However) the way out is to bring in robust standards. Half-baked standards are not going to help. We will also calibrate positions on certain products and open access on some other things," said the official.

By the FTA with Korea, the import duty by India is only 0.85 percent on a majority of steel products.

Source: Business Standards

India Third-largest Steel Producer in the World: WSA

India has emerged as the third-largest steel producer in the world after China and Japan, beating the US to the fourth position. However, there is little reason to cheer as steel production in India rose 2.6% in 2015 to 89.6 million tonne (MT), even as world steel output went down 2.8% to 1.6 billion tonne, according to data released by the Brussels-based World Steel Association (WSA), whose members present 85% of world steel production. Almost all steel producing regions reported lower output led by China, which produces more than half of total world steel output.

However, a closer look at the absolute numbers show that the increase in crude steel production was not significant and it came on a small base.

A steel industry veteran Seshagiri Rao, group CFO at JSW Steel, explained: "As on date, the country's installed steelmaking capacity is 120 MT. With 89.6 MT of production, the capacity utilisation was estimated at only around 74.6%." The other point to note is that finished steel is estimated to have risen by a mere 1.4%, he said.

"The domestic steel remains subdued. Producers are facing difficulty in selling even this additional production in the market and it is largely adding to inventory. In fact, incremental demand growth is mainly being met by imports," Rao said.

In the US, steel output shrank nearly 10.5% in 2015 to 78.9 MT during the year. The fall in the US steel output was the second biggest after Ukraine, which saw a 15.6% decline in steel output to 22.9 MT during the year.

Overall steel production in North America fell 8.6% to 110.7 MT in 2015. In the CIS countries, steel output showed a 4.3% decrease in 2015 to 101.5 MT, with Russia's production at 71.1 MT, down 0.5% on 2014. In South America, steel production showed a 2.5% decrease on 2014 to 43.9 MT as Brazil produced 33.2 MT lower by 1.9% over its production in 2014.

In the Asian region, China produced 803.8 MT of steel in 2015 down 2.3% against 822.8 MT it had produced in the previous year. Japan saw a 5% drop in steel output to 105.2 MT in 2015 over 110.7 MT of steel produced in 2014. South Korea saw a 2.6% decline in steel production to 69.7 MT compared with 71.5 MT a year ago. The European Union (EU) produced 166.2 MT of crude steel in 2015, a decrease of 1.8% compared to 2014. Germany's production was down by 0.6% to 42.7 MT in 2015, while Italy's output went down 7.1% to 22 MT and France posted a crude steel output of 15 MT that was 7.2% lower than the previous year. Within the EU, Spain was the only exception with a 4.4% increase in crude steel output to 14.9 MT in 2015.

Source: The Economic Times

India must take drastic steps to protect steel sector

The global slowdown has roiled commodity markets and lowered steel prices to more-than-a-decade-low levels. Speaking to Bloomberg TV India, Kalyani Steel Managing Director RK Goyal said China's decision to cut steel capacity may not be of any relief to India as they already have a massive production capacity of around 1.25 billion tonne, and produce 800 million tonne. Until and unless the Centre takes some drastic measures of anti-dumping or safeguard duties or minimum import price, everything is going to be very gloomy, he said.

- **The last two years have been terrible for the steel industry, with producers losing pricing power and facing the onslaught of dumping from China. As China starts to cut capacity, do you foresee better times for the industry?**

  Yes. First of all, China has a production capacity of around 1.25 billion tonne. And they are producing around 800 million

tonne. So, if they announce that they will reduce capacity, maybe they will do so. But does it really means that they will reduce production? We are not very clear. Now, until and unless they reduce production the global steel market and global economy linked to steel and steel-related raw materials is not likely to improve. So it is very important they reduce the production also. And, as per reports, since the growth in China is coming down, the investment in real estate is coming down, and the demand for steel within China will be substantially lower as compared to last year. So if they reduce production by 50-100 million tonne, I think to that extent it will take care of only reduction in their domestic demand and the need (to cut output) is much larger.

- **While China is planning a capacity cut, the capacity utilisation at present is at around 70 per cent. So even if they are taking out capacity, what is the impact in terms of the steel pricing outlook?**

  As far as steel prices are concerned, as long as China and some other countries are dumping metal in India, I don't see any improvement.

- **As we know, over the last few weeks steel prices have been cut by about ₹2,000-3,000 per tonne. Also, if we look at the industry scenario, there is very low capacity utilization at present. How do you see the margins and utilization shaping up over the next 12 months?**

  Until and unless some drastic measures of anti-dumping or safeguard duties or minimum import price are taken by the government I think everything is going to be very gloomy —whether it is capacity utilization, whether it is the prices or whether it is the profitability of the steel industry in the country.

- **NMDC has seen a bit of a change in their pricing scenario as well. How are the input prices looking like at this point?**

  They (NMDC) are reducing price a little bit but that will hardly take care of the requirement of the industry. Today, we are competing with irrational prices and dumped prices from China. And you can't compete with that. As long as rationality is there in the market you can compete and generate some money. Otherwise, it's very difficult and you definitely incur losses.

- **At present, the margins of steel companies are at very low levels — many are almost operating at loses or at barely break-even levels. All the steel companies have been underperforming at the bourses over the last 24 months. Over two-three years, as the capacity gets out of the system, how much margin improvement do you see?**

  Even if some plants in India close down, the capacity may go down by 10- 20 million tonne. But the capacity which is available in China is almost 1.25 billion tonne and their production is 800 million tonne. And if they export just 10-15 million tonne, the capacity evacuation by closure of plants in India will be taken over by China. And I don't think they will rationalize their prices. Hence, Indian steel industry will be continuously in stress until and unless we have some trade barriers internally.

- It appears that you are in a Catch-22 situation right now. What do you do? Do you cut production or cut prices?

  We are doing several things. We are cutting production, we are reducing prices and we are reducing our costs substantially. We have cut all the flab, which is somewhat helping us.

Source: metaljunction

WOULD THE BOY YOU WERE BE PROUD OF THE MAN YOU ARE?

Living a double life will get you nowhere twice as fast. "Thoughts lead on to purposes; purposes go forth in action; actions form habits decide character; and character fixes our destiny". Proverbs asserts, "A good name is rather to be chosen than great riches." Character is something you either have or are. Don't try to make something for yourself; instead, try to make something of yourself.

Character is the real foundation of all worthwhile success. A good question to ask yourself, is "What kind of world would this world be if everybody were just like me?" You are simply an open book telling the world about is author. "No man can climb out beyond the limitations of his own character."

Would your reputation recognize your character if they met in the dark? Desire what Psalms declared, "Create in me a pure heart, Oh Lord, and renew in me a right spirit." To change your character, you must begin at the control center – the heart. A bankruptcy of character is inevitable when you are no longer able to keep the interest paid on your moral obligations.

Henry Ward Beecher said, "No man can tell whether he is rich or poor by turning to his ledger. It is the heart that makes a man rich. He is rich according to what he is, not according to what he has." Live so that your friends can defend you, but never have to do so.

Consider what Woodrow Wilson said: "If you think about what you ought to do for people, your character will take care of itself." Excellence in character is shown by doing unwitnessed what we would be doing with the whole world watching.

You're called to grow like a tree, not like a mushroom. It's hard to climb high when your character is low. The world's best sermon is preached by the traffic sign: Keep Right.

This is the twentieth of series of "Nuggets of truth" which are our sound food for soul. Get ready to blow the lid off our limited Thinking & create your recipe for happiness & success.

Compiled by Shri K L Mehrotra
Chairman – IIM-DC & Former, CMD – MOIL
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Probe into aluminium foil imports from China

The government has started an anti-dumping probe into imports of aluminium foil, widely used by food and pharma firms, from China to protect domestic producers from cheap imports.

Hindalco Industries, Ravi-raj Foils and Jindal India have approached the Directorate General of Anti-Dumping and Allied Duties (DGAD) for initiation of an investigation and imposition of anti-dumping duty on imports of aluminium foil from China.

RISING DEBT LEVELS IN STRESSED COMPANIES

(Data in ₹ crore)

Company Name	Debt in 2012-13	Debt in 2014-15
Ankit Metal & Power	823	1,201
Coastal Projects	3,996	5,809
Electrosteel Steels	7,150	10,235
Gammon India	10,269	11,061
IVRCL	2,832	4,759
Jyoti Structures	976	2,635
Monnet Ispat	8,606	12,500
Rohit Ferro-Tech	1,330	2,248
Shiv-Vani Oil & Gas	2,740	3,598
Visa Steel	2,220	2,981
TOTAL	40,944	57,028

Source: Religare Institutional Research

In a notice, the DGAD said "prima facie" Sufficient evidence exists to justify initiation of an anti-dumping investigation. The "authority (DGAD), hereby initiates an investigation into the alleged dumping, and consequent injury to the domestic industry… to determine the existence, degree and effect of alleged dumping and to recommend the amount of anti-dumping duty, which if levied, would be adequate to remove the 'injury' to the domestic industry," the notice said.

Aluminium foil is used extensively for protection, and storage of foods and beverages. Major applications of aluminium foil are in the pharmaceuticals industry for packing medicines; food industry for packing processed foods, and cigarette industry for wrapping cigarettes, among others.

The DGAD notice said the applicants claimed that imports have spurted from China and the shipments are threatening "material injury to the domestic industry". It also said there was significant increase in imports, decline in import price, and significant surplus capacity.

Source: Business Standard

JSW charts big cement, energy plans

After wresting control in the steel business, the $11-billion JSW group is looking to do an encore in the cement and energy space.

"It is the philosophy of the group to be among the top three in the country," Chairman and Managing Director Sajjan Jindal told this newspaper when asked about plans for the cement and energy businesses.

JSW has initiated talks with Lafarge to buy its India assets. Lafarge has a capacity of 11 million tonnes of cement making in India. If the deal comes through, it would take JSW's capacity from the current six mt to 17 mt in one stroke.

Holcim, through its control of Ambuja Cement and ACC, has 60 mt of capacity. UltraTech Cement has 64.7 mt.

JSW had also been discussing with the Jaypee group for a while to buy its entire cement business of 2022 mt. funding, it appears, is not a constraint for the group, as Jindal recently said.

"No acquisition or expansion would be taken up unless they were value-accretive and contribute to the bottomline. I do not find any constraints in funding good acquisitions or expansions," he had said in a recent interview to Business Standard.

In the energy space too, JSW is looking to grow both organically and inorganically. It took over Jaypee's hydro projects and was believed to be in discussion for acquiring thermal projects, too. In Bengal, Jindal recently announced the group would set up two units of 660 Mw at Salboni in West Medinipur, for Rs 8,000 crore. JSW Energy produces 3,140 Mw of power, with a capacity of another 8,630 Mw under implementation and development. However, to be among the top three, it would have some catching up to do, as Adani Power has a generation capacity of a little over 10,000 Mw and Tata Power has 8,669 Mw.

JSW has achieved the said goal in steel, being the second largest in India, with a production capacity of 14.3 mt. Government-owned Steel Authority of India is the first, at 19.5 mt. In 2009, JSW surpassed the century-old Tata Steel on commissioning a three met blast furnace at its Vijayanagar (Bellary, Karnataka) plant. It took

JSW's capacity to 7.8 mt; Tata Steel acquired Ispat Industries. The next target JSW Steel has set is to take its installed capacity to 40 mt over the next decade, through expansion of existing units.

Source: Business Standard

Economy Pattern of India and World

- No doubt India is aiming to speed up economic growth by 8-9% over the next five years, a pace that would put it on track to move from being the World's 10th largest economy to 3rd largest by 2025. And also to be noticed that India is a home to 18% of the world's population, living off in 2.4% of the world's land area.
- In this context, one might ask what are the throughputs being used to feed and build the country, and how sustainable can these growth rates be? To answer questions of sustainable growth, we must first explore what we mean by growth, and then dissect the sustainable part. And also dissect the economies of top 10 countries in World and their sustainability.
- Sustainability means development that meets the needs of the present without compromising the ability of future generations to meet needs. Sustainable development also means "enough for all forever".
- The six largest middle-income economies – China, India, Russia, Brazil, Indonesia and Mexico – account for 32.3% of world GDP, whereas the six largest high-income economies of US, Japan, Germany, France, UK and Italy account for 32.9%.
- United States economy is the largest economy of $17.41 trillion in the world in terms of nominal GDP. Which accounts for approximately 22.44 percent of the gross world product? United States economic is based on advanced technology, infrastructure and has abundant natural resources. 36% by manufacturing sector. In terms of GDP based on PPP (purchase power parity) US GDP is $17.41 trillion. GDP per capita (PPP) approx. $54,678.
- China is currently a 2nd largest economy of $10.35 trillion propelled by manufacturing (45%) and services (45%) with a 10% contribution by the agricultural sector. In terms of GDP based on PPP (purchase power parity) China's GDP is $17.63 trillion. GDP per capita (PPP) approx. $12,893.
- Germany is Europe's largest and strongest economy and also 4th largest economy in terms of nominal GDP at $3.82 trillion. Germany's economy is based on exports of machinery, vehicles, household equipment, and chemicals. (70% service sector & 29.1% manufacturing sector). GDP in terms of purchasing-power-parity is $3.62 trillion and GDP (PPP) per capita is $44,741.
- United Kingdom with a $ 2.85 trillion GDP is the world's 6th and Europe's 3rd largest economy. The economy of UK is primarily driven by service sector (75%), agriculture (1%), manufacturing (24%). Although agriculture is not a major contributor to GDP, the country produces 60% of its food needs domestically by employing less than 2% of its labour force. The economy in terms of GDP purchasing-power-parity stands at $2.43 trillion with a GDP (PPP) per capita of $37,744.
- Brazil with its $2.24 trillion economy is the 7th largest economy by nominal GDP. The Brazilian economy is based on services (68%), manufacturing (26%), and agricultural (16%). Brazilian GDP (PPP) is $3.07 trillion, GDP per capita (PPP) is $15,153.
- India ranks 10th in terms of nominal GDP of $ 2.04 trillion and 3rd in GDP (PPP) at $7.28 trillion. The country's high population drags its GDP (PPP) per capita down to $5,778 which puts India to rank poorly at 127th place as compared to the US at 12, Japan at 33 and China at 99.
- India's GDP is still dependent on agriculture (17%), compared to western countries. However, the services has picked up in recent years and now accounts for 57% of the GDP, while industry contributes 26%.
- Sustainable growth exploration lies in a mix of all three sectors i.e. manufacturing, service & agriculture. All the three sectors require innovation to sustain growth in long terms. In our country we fail to understand that Innovation is the basis for sustainable growth which provides interaction between science and business.

- Promoting sustainable growth by financing needs-driven R&D and developing innovation systems is the key to success. Strengthening research cooperation between universities, research institutes, companies and other actors is equally important.
- Much of the growth all over the World is due to innovation – this has been the case since the Industrial Revolution. Today, innovative performance is a crucial factor in determining competitiveness and national progress. Moreover, innovation is important to help address global challenges, such as climate change and sustainable development.
- We once again fail to understand that development does not necessarily coincide with the possession of educational degrees or the capability to launch satellites but also require innovation, connectivity between the basic & applied science, connecting productivity with education or connecting lab to land or education for benefit of society.
- Even though we are launching satellites for European countries but do not stand anywhere when it comes to technological advancements.
- Narayan Murthy (Infosys) & CNR Rao (IISC)

Data for 2013-14

- *No. of patent filed:* China (6.5 lakhs), US (5.4 lakhs), & Japan (3.4 lakhs) & India stands at 8th position with 43k.
- *Patent granted:* Japan (2.7 lakhs + Us 2.5 lakhs + China 2.1 lakhs India not in top 10 countries)
- Top scientific nations in the word based on (a) No. of academic papers (b) no. of patents (c) GDP on R&D (d) Science & engineering Phd awarded. India not listed in top best 25 scientific nations in the world.
- World education ranking in terms of reading, maths & science does not display India in top 34 ranking.
- Now World have come up with measure of scientific input in terms of h-index (J E Hirsch, professor of physics University of California) which attempts to measure productivity and citation impact of published work.
- *H-index:* Countries in the top 10 are 10 Sweden, 9 Switzerland, 8 Netherlands, 7 Italy, 6 Japan, 5 Canada, 4 France, 3 Germany, 2 UK, 1 US. China ranks at 17. The other BRICS do not even crack the top 20. (Russia 21, Brazil 22, India 23 and South Africa 35).

For overall global technology Index there are three criteria to judge

1. *The % of economic output countries devote to R&D investment:* U.S. ranks 6th, Israel 1st, followed by Sweden, Finland, Japan, and Switzerland, in top five. South Korea, Germany, Denmark, and France form top 10. BRICs are further down list, with Russia 22nd, China 26th, Brazil 31st and India 38th.
2. *Scientific and engineering researchers per capita:* The US ranks 7th, Finland takes the top spot, followed by Sweden, Japan, Singapore, and Denmark. Norway, Australia, Canada, and New Zealand round out the top ten. As for the BRICS: Russia is 12th, India 36th, China 39th, and Brazil 43rd.
3. *The innovations, measured as patents per capita:* US States takes 1st place, followed by Japan, Switzerland, Finland, and Israel. Sweden, Germany, Canada, Denmark, and Hong Kong round out the top ten. Turning to the BRICs, India is 26th, Russia 34th, and Brazil 41st.
    - By combining all three of these measures, we end up with an overall Global Technology Index, a broad assessment of technological & innovative capabilities of the world's leading nations. The US ranks 3rd. Finland takes the 1st spot, followed by Japan. Israel's 4th place finish may come as a surprise to some.
    - None of the BRIC countries ranks very highly on the Global Technology Index. Russia, in the 21st spot, ranks highest, China ranks 30th (about the same as Lithuania), Brazil is 41st, and India 42nd.
    - Israel has the highest concentration of engineers in the world – 135 per 10,000 people, compared to 85 per 10,000 people in the United States.
    - R&D Magazine, in 2014, the U.S. has invested $424 B in R&D, while China roughly half that amount ($220 B). Amazingly, the

U.S. invested more than all of Europe combined ($350 B). India $40 B.

- India spent 0.88% of its GDP on R&D in 2012-13, in BRICS countries Brazil 1.17%, Russian 1.25%, China 2.08% and South Africa 0.93%. South Korea (4.36%), Israel (3.96%), Japan (3.67%), US (2.7%).
- Per capita expenditure on R&D in India ($30/capita), US ($1270), China ($248), South Korea ($1347), Israel ($1153).
- At the end I would like to say that sustainable growth of a country is a complex process and enterprenuers, industrialist, engineers, scientists and researchers can play an important role in determining those choices and implementing sustainable strategies.

Extracted from presentation made by Dr. Anupam Agnihotri, Director, Jawahar Lal Nehru Aluminium Research Development and Design Centre, at a summit held by Indian Chamber of Commerce (ICC)at New Delhi on 5th January 2016

IIT-M: DESIGNER ALLOYS BY CHEMICAL REACTIONS

Nothing whatsoever will happen if large chunks of silver and gold kept in proximity even for infinite period. But the same cannot be said when the two metals are at nanoscale.

A path-breaking work by a team led by Prof. T. Pradeep, Department of Chemistry, IIT Madras has shown that two nanoscale pieces of metals react spontaneously at room temperature even in solution to make new alloys of well-defined composition. The study was published recently in the Journal of American Chemical Society (JACS).

"This means that metals with well-defined properties may be created in solution, just by chemical reactions. From a scientific perspective, this study shows that nanoparticles are similar to molecules and reactions between them can be written like chemical reactions:

A + B → C + D. This is a big step forward in the chemistry of nanomaterials," said Prof. Pradeep. "So far we wrote such reactions only with organic and inorganic molecules, as:

2H + O → 2H2O. Alloys are made mostly by heating the constituents, often to high temperatures. But in this case, the researchers have been able to make alloys in solution at room temperature with precise composition control, to the extent that each atom is controlled.

The team of researchers led by Prof. Pradeep has shown that nanometre-sized particles or clusters of gold and silver react spontaneously in solution at room temperature to make alloy clusters of precise structure and composition.

"Metal clusters comprise a few atoms of matter and are very different from their bulk powders. Reactions happen between clusters and not between bulk powders of gold and silver. This is because nanomaterials are 'metastable' and are more reactive than their bulk counterparts," he said.

As a result, clusters of gold and silver produce new alloys when in solution. The clusters of gold (Au) and silver (Ag) used in the study were Au25 and Ag44. These are precise molecules composed of 25 atoms of gold and 44 atoms of silver respectively, and are under 2 nanometresin diameter.

A chemical reaction between Au25 and Ag44 in solution will give rise to alloys of AgAu and AuAg composition. The reaction can be represented as:

Au25 + Ag44 → AgAu24 + AuAg43. In this case, the reaction products are alloys of precise composition. "The final composition of the product will depend on the composition of the reactants. So more of Ag and less of Au will give rise to an alloy of Ag type," Prof. Pradeep explained.

Such reactions may be made to happen to make alloys of many different metals such as platinum, palladium, iridium, nickel, etc. and new materials may be made, all in solution, at room temperature.

"The excitement in nanotechnology is due to the unusual properties of materials when sizes of particles reduce to nanometres. This happens because of 'electronic confinement' — an effect when electron motion is limited to extremely short distances, of the order of nanometres," he said.

This kind of reactions would mean that metallurgical processes may be done differently tomorrow. "Many nanoscale materials have new properties which are useful in catalysis. They

could be luminescent or magnetic. Designer alloys with new properties may be made by these reactions," he added.

Source: The Hindu

Heavy metal

Scientists create the world's most expensive material, valued at $145 million per gram

IF YOUR life's ambition is to become very, very rich, consider getting into the business of producing 'endohedral fullerenes', the world's most expensive material. Scientists at Oxford University in the UK announced that a spin-off lab called Designer Carbon Materials is now producing endohedral fullerenes. And it recently sold off its first sample of the material to the tune of $32,000 for 200 micrograms (1 microgram is equal to one-millionth of a gram), which is about one-fifteenth the weight of a snowflake, or one-third the weight of a human hair.

First discovered in 1985, endohedral fullerenes are created by incarcerating an atom (not necessarily nitrogen) into a cage of 60 carbon atoms. In these cages, also known as 'buckminsterfullerenes', carbon atoms align in a similar way to the vertices of a football, which is where their nickname 'bucky balls' comes from. These caged molecules have greatly enhanced physical and electronic properties compared to 'normal' ones. In case of N@C60 (that is, nitrogen atom-based endofullerenes), the 'super power' is a long electron-spin lifetime.

The research of one of the most expensive materials on earth hasn't been cheap either. In 2013, Oxford University, together with two partners, received a 1.5-million-pound research grant to develop manufacturing methods 'for increasing the production of endohedral fullerenes to the gram scale'.

These things aren't just outrageously expensive curiosities—when they contain nitrogen atoms, they actually have the potential to change how we keep time because of their extra-long electron spin lifetime. Scientists are now investigating the possibility of using them in atomic clocks—the most accurate time-keeping system in the world—and the Oxford team expects that, in the future, they could be used to make all kinds of devices more accurate than ever.

This is because endohedral fullerenes have the potential to downsize atomic clocks from the size of a cabinet to a microchip, so we could, for example, install them in our phones or integrate them with our GPS devices.

The only other material on earth that could rival the astronomical cost of endohedral fullerenes is antimatter, but no one's in the business of producing antimatter to sell commercially just yet. We're still several years away from mini atomic clocks going into our portable devices, but Designer Carbon Materials founder Kyriakos Porfyrakis was quoted as saying that the consortium of UK and US researchers that bought their first sample of endohedral fullerene is on the case.

Source: Financial Express

STRATEGIC DEBT RESTRUCURING CASES TO DATE

Company Name	Date of SDR Announcement	Lenders Consortium	Lead Banker	Debt (₹ crore)
Adhunik Power and Natural Resources	Dec-2015	12 lenders	SBI	3,120
AMW Motors	Dec-2015	9 lenders including IDBI, PNB, OBC	IDBI Bank	1,430
Ankit Metal and Power	Dec 16, 2015	14 lenders including SBI, IDBI, IOB	SBI	1,280
Coastal Projects	Aug 22, 2015	Includes SBI, PNB, ICICI	SBI	5,810
Electrosteel Steels	Oct 20, 2015	27 lenders	SBI	10,990
Gammon India	Nov 04, 2015	19 lenders including ICICI Bank and PNB	ICICI Bank	14,810
GOL Offshore Ltd	Dec 02, 2015	Axis Bank and ICICI Bank	NA	2,000
IVRCL	Sep 22, 2015	21 lenders	SBI	10,340
Jyoti Structures	Aug 10, 2015	21 lenders	SBI	2,640
Lanco Teesta	Aug-2015	NA	ICICI Bank	2,400
Monnet Ispat	Aug 20, 2015	16 lenders	NA	12,500
Rohit Ferro-Tech	Nov 30, 2015	NA	SBI	2,630
Shiv-Vani Oil & Gas	Sep 24, 2015	Includes ICICI Bank, SBI, Yes Bank	ICICI Bank	4,010
Transstroy	Dec 2015	14 lenders including Uco Bank	NA	4,300
Visa Steel	Sep 22, 2015	20 lenders	SBI	3,090
TOTAL				81,340
EXPECTED TOTAL DEBT	By March, 2017			1,50,000

Production of Non-Ferrous Metals (Tonnes)

	2012-13	2013-14	2014-15
Aluminium	1720189	1515787	1600484
Copper (Cathodes)	685096	627114	765620
Zinc	704228	788903	737830
Lead (Primary)	118316	122864	127142





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