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CAPACITY OR DEMAND OF STEEL WHAT'S THE LONG-TERM VIEW?

The steel industry is an unhappy lot. It's not that the government has not taken any measures. In fact, these initiatives, to bail out a once-thriving domestic steel industry, is being acknowledged by the latter too.

Right from anti-dumping levies to safeguard duties to minimum import price on 66 types of steel products (back in February, the list included as many as 173) – a lot has been done to give some breathing space to the domestic steel makers grappling with cheap imports from China, Japan, South Korea, Malaysia, among others.

However, the cause of concern is elsewhere.

At the time of Independence, India was making more steel than China. And today, some 70 years later, China is producing 10 times more than what we do.

The biggest worry is India's gross domestic product (GDP) grew 7.6 percent in financial year (FY) 2015-16. The anomalies are stark. For one, in spite of the enviable growth numbers, per capita consumption of steel is as low as 60 kg compared with the world average of 216 kg and hence a laggard production system that's lacking China's drive.

Second, India is known for high-cost steel production. Even in the face of cut-throat global competition, a lean model leading to low cost of production seems a far cry. A case in point being hot-rolled steel, which costs around \$330 a ton in China, around \$480 a ton in India and at least \$500 per ton in the US.

However, before announcing the death knell for the steel sector, its legacy may help us understand the situation better.

Steel: it's long journey

India's steel industry has come of age since the country's liberation 7 decades ago. Possessing a small but viable steel capacity of around 1.3 million tons (mt) per annum at the time of Independence, India overtook the US last year

Details of Steel Capacity in India				
Company	Plant	Year	Capacity at inception (MT)	Capacity 2016 (MT)
SAIL	Bhilai Steel Plant	1955	1.0	3.92
	Durgapur Steel Plant	1956	1.0	1.8
	Rourkela	1953	1.0	4.4
	Bokaro Steel Plant	1955	1.7	4.36
	IISCO Steel Plant	1939	0.42	2.5
	Salem Steel Plant	1993	NA	0.18
	VISP	1936	NA	0.11
	Alloy Steel Plant	1965	0.001	0.23
				17.5
RINL		1992	3.0	6.3
Tata Steel		1907	0.085	9.6
Essar		1989	0.9	10
JSW Steel		1994	1.2	16.6
JSPL		1979	NA	4
Others	IF/EAF & Secondary Steel Producers			54.18
Total				118.18

Source: Steel Insight

to become the third largest producer of crude steel after China and Japan, according to data compiled by the World Steel Association. The country's provisional crude steel production capacity stood at 118.18 mt as on March 2016.

As in many sectors, commercial production of iron and steel took off during the pre-Independence era with the Tata Group setting up the Tata Iron and Steel Co Ltd (TISCO) at Sakchi (now Jamshedpur) in 1907. TISCO's original plant was engineered and constructed with US assistance to produce 35,000 tons of pig iron and 50,000 tons of saleable steel. Next came the Indian Iron and Steel Co. Ltd (IISCO) in 1918 while Mysore Wood Distillation and Iron Works started operations at the same time.

Mild steel production was commenced in the latter in 1936 and the firm's name was changed to Mysore Iron and Steel Works. It was later rechristened as Visvesvaraya Iron and Steel Ltd, or VISL.

After Independence, the government focused on all core industries, including iron and steel, thus leading to increased public sector investments, enhanced production and new manufacturing units.

In 1953, agreements were signed to set up the first integrated public sector steel plant (with a capacity of 1 mt per annum) at Rourkela in Odisha with collaboration from the erstwhile West Germany. Three years later, two more pacts were signed for setting up steel plants at Bhilai (with

assistance from the erstwhile USSR) and Durgapur (with collaboration from the UK) having similar capacity. A new plant at Bokaro, with a capacity of 2.5 mt per annum, went into production in 1973-74 while another facility at Salem in Tamil Nadu went live in 1972. The government also set up Hindustan Steel Ltd (HSL) for the supervision and management of these facilities. Also with capacity augmentation happening across these plants in phases, the total crude steel production capacity of HSL rose to 3.7 mt in 1968-69 and subsequently to 4 mt in 1972-73.

But there was more in terms of quality and capacity building. India's first coastal public sector integrated steel plant, Rashtriya Ispat Nigam Ltd, or RINL (also known as Visakhapatnam Steel Plant), came up in August 1992. It had a capacity to produce 3 mt of liquid steel per annum, which is currently being expanded to 6.3 mt per annum.

Keeping in mind the complexity of a fast-expanding infrastructure sector, the then-ministry of steel and mines formed the Steel Authority of India Ltd (SAIL) in 1973 as the holding company to manage the industry. SAIL had an authorised capital of Rs 2,000 crores, and was made responsible for managing the five integrated steel plants at Rourkela, Bhilai, Durgapur, Bokaro and Burnpur, as well as three special plants – Alloy Steels Plant in Durgapur, Salem Steel Plant and VISL. In 1978, SAIL was restructured as an operating company.

According to information available on the website of the Ministry of Steel, during the first two decades of planned economic development – 1950-60 and 1960-70 – the average annual growth rate of steel production exceeded 8 percent. But during 1970-80, the growth rate fell to 5.7 percent per annum and then went up marginally to 6.4 percent per annum during 1980-90.

With liberalisation came the dismantling of the licensing regime, and iron and steel got taken off the list of industries reserved for state-owned firms. The benefits were many. Compulsory licensing was scrapped, prices were progressively deregulated, foreign investment up to 74 percent was allowed, and the import duty on capital goods was lowered.

This paved the way for private entities finally entering a heavily controlled industry segment.

Among these, the most significant are JSW Steel Ltd, Essar Steel Ltd, Jindal Steel and Power Ltd (JSPL), Bhushan Steel Ltd, Electrosteel Steels Ltd (ESL) and Usha Martin Ltd.

While the new companies courted cost-effective, state-of-the-art technologies from the very start, the state-run companies opted for modernising and expansion as well.

Beginning 1991-92, production rose from 14.33 mt to touch 21.4 mt by 1995-96 and to 29.27 mt by 2000-01. Since then, it has been a roller-coaster of sorts, with periodical booms and slumps, but the industry entered a new development stage back in 2007-08, riding high on a resurgent economy and a rising demand for steel.

China's overcapacity

Experts have been saying how China triggered the steel sector crisis. With its economy slowing down, there has been a dip in overall steel demand, leading to depressed pricing. As its domestic market got flooded with oversupply, China went all out for cheap exports, thus grabbing the largest share of the global market. China is selling below marginal cost and a report, citing Chinese customs data, states that steel exports from China have shot up by 28 percent to 52.4 mt in the six months to July 2016.

Add to that a large-scale holdback on fixed asset investments across the globe – making up for nearly 80 percent of global steel demand – and it predicts a bleak time ahead even for global large producers such as Nippon Steel and Sumitomo Metal Corp, JFE Steel Corp, POSCO and Hyundai Steel Co. Ltd. These firms are cutting production and reducing prices, a move that mercilessly squeezes their margins.

Needless to say, this does not bear good news at home.

According to Indian government data, steel imports rose by 25.6 percent to 11.71 mt during financial year 2015-16 compared with 9.32 mt in the year-ago period. India was a net importer of the alloy in the last fiscal. On the other hand, India is rapidly losing its export competitiveness, selling just 7.6 mt during the last financial year, which was just a fraction of China's export of 111.6 mt, as per World Steel Association. Historical data shows that in 2003-04, India's steel imports were

1.5 mt and exports stood at 4.5 mt. In 2014-15, the country's steel imports raced up to 9.3 mt while exports barely rose to 5.5 mt.

In sync with the depressed domestic and global markets, capacity utilisation fell from 91 percent in 2010-11 to 77 percent in 2013-14 (the fall in iron ore production also contributed here), but it is not the only cause for concern. According to the Reserve Bank of India's Financial Stability Report, "Five out of the top 10 private steel producing companies are under severe stress on account of delayed implementation of their projects due to land acquisition and environmental clearances, among other factors."

And to top it all, the industry owes around Rs 3 trillion to debt-laden Indian banks, around a tenth of the bad loans, making the sector one of the largest contributors to non-performing assets in the country.

Capacity utilisation to improve

Capacity utilisation of the domestic steel industry is expected to pick up by about 5 percent in the current financial year on the back of protective measures laid down for producers to shield them from cheap imports and also because of a likely rise in demand for the commodity October onwards.

"Demand is expected to be a mixed bag coming from both the flat and long products division and since monsoons have been good, rural consumption for steel is expected to spurt in the coming months taking capacity utilisations higher than last year," said Sanak Mishra, Secretary General and Executive Head of the Indian Steel Association.

In the year ended March 31, 2016, the domestic steel industry's average capacity utilisation stood at 75 percent. At present, the domestic steel industry, which has been beleaguered by cheap imports, is getting protection from an anti-dumping duty on hot and cold-rolled products with a minimum import price levied mainly on long products of steel.

"There has been demand for flat steel products since the last few months and we expect demand for long products to pick up in the coming months as construction activity will pick up once the monsoons end," said Jayant Acharya, Director

Commercial at JSW Steel.

Long steel products are used in construction and infrastructure industries, while flat products find wide application in the automobile industry.

Meanwhile, steel producers were of the view that though imports have declined since the government brought in several measures to help the industry, the overall demand pattern in July-September has been largely the same as it was in the corresponding period last year in the absence of any fresh consumption.

"The market size of domestic steel producers has improved after the trade measures came and hence volumes have picked up but since demand overall has remained stagnant, realisations have not picked up," said an industry source.

Steel-makers had a similar view to share.

"Year-on-year there has not been much change in the demand pattern. The demand growth is almost flat. This is clearly reflected in lower GDP growth. However, flat steel production is up by approximately 6 percent, necessitating higher exports. Exports are up by 12 percent April-July this year compared to last year," said an industry insider.

Domestic steel producers have raised product prices in August as well as in September but analysts are of the view that higher raw material costs will not allow companies to benefit from price increase. Rise in rail freight for coal is also expected to hurt steel companies.

"The price revision in products reflects the inching up of the cost curve as coking coal and iron ore prices have moved up. Due to this, domestic steel companies may continue to see volume growth but realisations could move up only marginally year-on-year in the July-September quarter," said an industry analyst.

Tata Steel, Bhushan Steel, state-owned Steel Authority of India, Jindal Steel & Power and Rashtriya Ispat Nigam are among the top integrated steel producers in the country.

During April-July, crude steel production was 31.825 million tons, up 5 percent over the same period of last year. Imports, on the other hand, were down 34 percent to 2.39 million tons. Consumption of steel in the domestic industry was

a tad up by 0.5 percent at 26.18 million tons year-on-year, according to steel ministry data.

SteelMin in talks with other ministries to boost demand

To increase consumption of steel in India, the steel ministry is talking with the ministries of road transport, shipping and railways to explore ways to raise demand for the metal, a top government official said.

The official also said per capita steel consumption in the country needs to be doubled in the shortest possible time and for this the industry also has to chip in.

"We have been talking about increasing demand and have been in dialogue with the concerned ministries of infrastructure as to how to get into it.

"We have to come up with modular structures for bridges etc. Because, in the case of modular, the cost will come down, which is very practical," Steel Secretary Aruna Sharma said at an event.

The Secretary added that the steel ministry is talking to the ministries of rural development, road transport and highways and shipping and railways in this direction.

The ministry will talk to real estate sector association CREDAI among others in this regard, she said.

On consumption, Sharma said it is only 60 kg per capita, which is very low and needs to be increased. "We must double it as early as possible and at the shortest timeline and this conference should come out with suggestions on how to do it and the ministry is completely in support of this," She told the steel industry during a recent MMMM conference at Delhi.

She stressed that the percentage of steel used in the construction sector is low and needs to increase.

"We need to ask ourselves what percentage of steel is used in the infrastructure expenditure that is happening in the country. Unfortunately, we have not got into the discipline of having heavy steel-based structures in the country," she added.

Sharma further said: "That is where we lose the deal and that is where we all stakeholders have to put our thoughts together as to whatever money is going into infrastructure and what percentage of that is flowing into steel."

The ministry is very clear on this account and that entire policies and efforts will be to enhance the contribution of the steel sector in infrastructure, she assured the industry.

On the Quality Control Order on Stainless Steel, the Secretary said more than 12 domestic manufacturers have been registered, 14 international are in the pipeline and 8 more are in process.

"Our target to the Bureau of India Standards (BIS) was that 50 percent of the suppliers must be registered before the D-date of September 9, 2016.

"So that we get into the discipline of quality, get into the discipline of quality standardisation and we get into the discipline of marking the quality of the products that we have," she added.

SAIL plans capacity expansion

India's largest steel-maker, SAIL, has said it plans to raise up to Rs 5,000 crores via private placement and the proceeds will be utilised for modernisations programs, among others.

The state-run firm will seek shareholders' nod for a special resolution at its annual general meeting next month, it said in a regulatory filing.

SAIL will approach shareholders to allow its board to make offer an "to raise funds through private placement of secured non-convertible debentures/bonds of up to Rs 5,000 crores, during a period of one year from the date of this AGM..." the filing added.

Besides eligible investors, the firm will approach NRIs, FII, venture capital funds, foreign venture capital investors, state industrial developments corporations, insurance companies, provident funds, pension funds, development financial institutions, among others.

Explaining the rationale, SAIL said: "The company has already spent about Rs 62,441 crores on an expansion programme till April 30, 2016. In order to part finance the expansion, your company plans to borrow about Rs 5,000 crores during the next year."

On analysis of the various options of raising funds through borrowing in domestic and international markets, it has been decided by the board to raise the funds through private placement of secured

non-convertible debentures/bonds to the extent of Rs 5,000 crores during the year, it added.

The maharatna company is in the process of enhancing hot metal production capacity to 23.46 million tons per annum (mtpa) and crude steel to 21.04 mtpa under its expansion and modernisation programme, which is expected to be completed by fiscal 2016-17.

Recently, SAIL has received an Environment Clearance (EC) for a Rs 5,419-Crore expansion and modernisation project at its Rourkela plant in Odisha.

SAIL's proposal was examined in the recent meeting of the Expert Appraisal Committee (EAC) under the environment ministry.

The company had proposed modernisation of its Rourkela Steel Plant (RSP) by setting up a new hot strip mill with a production capacity of 3 mtpa, beneficiation plant of 3.3 mtpa and pellet plant of 2 mtpa. It also seeks to enhance production capacity of special plates from 0.003 to 0.015 mtpa within the premises of RSP.

State-run Steel Authority of India Ltd is spending \$598 million this year on increasing capacity about 43 percent to 21.4 million tons by 2018, part of a longer term goal of achieving 50 million tons in the next decade.

"We're one of the largest economies," SAIL Chairman P K Singh said. "Demand for steel will grow – it will boom. Unless we create this capacity, we'd be short sighted."

Producers such as Steel Authority of India and JSW Steel Ltd plan to add capacity even as a global glut weighs on profitability. They were wagering that Prime Minister Narendra Modi's focus on investing in infrastructure and keeping economies growth above 7 percent will expand steel purchases over time.

For now, potential supply outstrips demand in India.

The New-Delhi based PSU will cut costs by 10 percent in the 12 months ending March. A voluntary retirement programme announced earlier this month is expected to save about Rs 100 crore a year.

The alloy's price has probably bottomed out. A Rs 1,000 per ton move in the steel price affects the

company's revenue by Rs 140 crore. Steel prices have dropped about 9 percent from this year's high of Rs 32,000 a ton in May.

India, the world's third-biggest steel producer, has imposed anti-dumping duties, minimum import prices and safeguard taxes to protect domestic manufacturers as nations such as China export excess supplies at low cost.

While the industry globally is facing challenges today, steel-makers said India has to invest now to add mills as the process can take up to a decade.

India's steel industry should be safeguarded for larger interests and prodded to create capacity or else, when demand picks up, the country will be a net importer of steel like it is today, Shivramkrishnan Hariharan, Director Commercial at Essar Steel, said.

"If the government does not give us an environment to survive and create capacity then when demand picks up we will be net importer of steel," Hariharan said while speaking at the 10th Indian Coal Markets Conference organised by junction services limited and Cement Manufacturers Association.

"Moreover steel-makers had invested huge sums of capital of around Rs 4 lakh crores, anticipating higher demand but lower sales of products has made loan servicing difficult for them," he said.

"Another 31-40 million tons of steel capacity is scheduled to be commissioned in the next few years. It takes around 6-6 ½ years for commissioning a steel plant.

"It is estimated that steel demand will increase with the government giving stress on infrastructure, automotive, consumer durables and consumer goods sectors," Hariharan said.

Tata Steel

Tata Steel Ltd has invested more than Rs 25,000 crores in its greenfield steel project in Kalinganagar in Odisha and has plans for further expansion, according to T V Narendran, Managing Director of Tata Steel India and South East Asia. Despite financial troubles at its European operations, Indian operations have got all the funds that it has asked for from the Tata Steel board, Narendran said.

Tata Steel conceived this plant in 2005-2006 but work was delayed owing to land acquisition problems and could start only in 2010. The delay increased the project cost that now stands at Rs 25,000 crores in the first phase. The first phase of the project of 3 million tons (mt) was commissioned in 2016. Once the two phase of this project are fully operational, Tata Steel's current capacity will increase from 10 mt to 16 mt.

"Even as recently as four years ago, there was nothing much in Kalinganagar. Today it is buzzing with activity and this is just the beginning. The operation has the potential to become, in a decade, bigger than the Jamshedpur plant. Kalinganagar is one of the biggest Make-in-India stories," Narendran said.

NMDC

The company is expecting commercial production of its 3-mtpa capacity proposed steel plant in Chhattisgarh to commence by the middle of 2017. The plant is expected to be ready by December 2016 and trial of the same will start by December 2016.

The Union Ministry of Steel & Mines has plans of doubling the installed capacity of NMDC Ltd's proposed 3 mtpa integrated steel plant coming up at Nagarnar in the Bastar district of Chhattisgarh in due course once it is commissioned.

In order to increase the domestic capacity of steel production, a concept of a special purpose vehicle (SPV) has been introduced, officials stated. Two MoUs have already been signed by the states of Chhattisgarh and Jharkhand for setting up greenfield steel plants with an initial capacity of 3 mtpa each, to be later enhanced to 6 mtpa. More than Rs 70,000 crores will be invested for setting up these steel plants.

Bhushan Steel

Bhushan Steel informed the exchanges that it has completed the capacity expansion programme of its hot strip mill at Dhenkanal in Odisha.

The capacity of the unit has increased to 5 tons per annum from 4 tpa. The company had shut down its mill for the same purpose, it said in a notice to the exchanges.

Steel production expected to grow over 7% annually

Steel production in India, the world's third largest producer, is expected to grow annually at an average of 7.3 percent during 2016 to 2020, and touch 127.1 million tons (mt), a report by BMI Research said.

The growth will be driven by state-run giant SAIL and Tata Steel, the firm, part of the Fitch Group, said.

"India will be the global steel production growth bright spot as demand from construction, auto and infrastructure industries continues to accelerate," it said.

Besides, the government has been spearheading the push towards boosting steel production capacity, with upgrades being made to existing steel mills and state-owned companies stepping in to build new steel plants, it added.

"We forecast India's steel output to average an annual growth of 7.3 percent during 2016-2020, higher than 5.3 percent during 2011-2015. India's steel output will grow from 92.7 mt in 2016 to 127.1 mt by 2020," BMI Research said.

The country's share of global steel production will accelerate from 5.8 percent in 2016 to 7.8 percent in 2020, it added.

On the global steel market, the research firm said it will remain in oversupply as a slowdown in Chinese consumption will push the market into surplus. From 2017 onwards, steel prices will gradually edge higher as the global steel surplus will narrow due to Chinese supply moderation.

The global steel market will see a surplus of 5.2 mt in 2016, a decrease from a 2015 surplus of 13.8 mt. From 2018 onwards, the global market will tighten, with the surplus decreasing to 1 mt in 2017, shifting into deficit thereafter.

Overall, the market's deficit will deepen from 0.8 mt in 2017 to 4.3 mt by 2020. While trending lower, this supply metric will remain elevated by historical standards, capping price growth, it said.

The road ahead

For industry experts and policymakers, the way India's steel story is unfolding today is quite daunting.

Industry insiders say India has to adopt a market-linked production and costing structure, much like what we are seeing in China today. In the

present scenario, the key is to adapt, adapt, adapt and change, keeping in mind the ultimate goal. The government and the industry have to work together to put steel back on track, but a new regime of protectionism won't do the trick," sources say.

Even policymakers are aware of that. It's not surprising, therefore, that the steel ministry has asked the industry to prepare a roadmap for sustainability in the next six months, instead of banking on the trade protections (many of these are World Trade Organisation-compliant) the NDA government has doled out so far.

However, an industry executive, believes that the government is now coming up with a bunch of dynamic strategies, designed to trigger consumption-driven growth.

The flagship Make in India campaign is one such move in the right direction, throwing open huge manufacturing possibilities. Of the nearly two dozen focus sectors identified by the government, as many as nine industries - automobile and automobile components, construction, Defence manufacturing, electrical machinery, railways, renewable, thermal power, and oil and gas - would depend on large-scale steel buying for the next stage of growth. The government is also talking to infrastructure-related ministries, including railways, shipping and road transport, to ensure increased steel purchase.

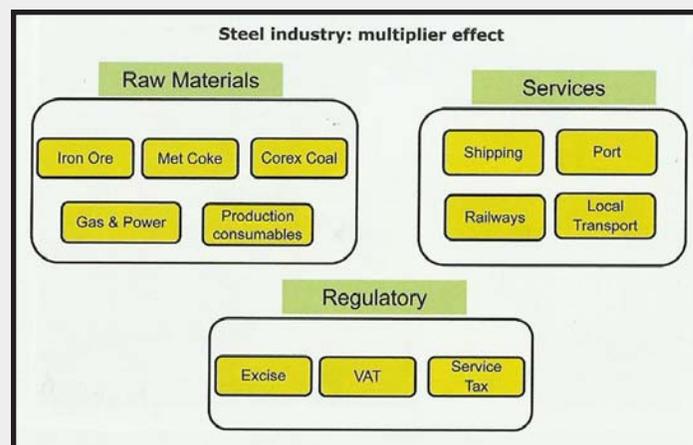
And, it may actually work. "Rising domestic demand by sectors such as infrastructure, real estate and automobile can put the Indian steel industry on the world map. Growth in the private sector is expected to be boosted by new policies such as Make in India, import of foreign technology and foreign direct investment," said an industry analyst.

Steel-makers agree. "There is a lot of scope still for steel consumption to shore up in this country. People still don't have pucca housing and a lot of infrastructure needs to be built, railway network needs to be expanded, where steel is the most essential input," they say.

Interestingly, Narendra Modi's government seems to be taking a page out of China's playbook and aims to drive up production in spite of a subdued global market. The government has mooted

a perspective plan to boost domestic steel production to 300 mt per annum by 2025 and four mineral-rich states-Odisha, Chhattisgarh, Jharkhand and Karnataka have been identified for setting up of integrated steel plants with collaborations from central and state public sector undertakings via the special purpose vehicle route.

RINL Chairman and Managing Director P. Madhusudan believes this is the road ahead.



"Indian steel industry has come a long way and potentials are still very good for the industry. Right now there are many challenges, but these can be overcome. As for low per capita consumption, a lot of initiatives are being taken in terms of building infrastructure, waterways, ports, smart cities and so on. All these augur well for the growth of steel consumption," he said.

"India can actually beat China at its game if it can become the lowest-cost producer of steel with enough to spare for overseas markets. Incidentally, 20 percent of China's GDP comes from exports and a long-term vision in this respect may augur well for India."

According to a report by the Working Group on Steel for the 12th Five-Year Plan, there is a potential of raising the per capita steel consumption in the country. These include, among others, an estimated infrastructure investment of nearly a trillion dollar, a projected growth of manufacturing from the current 8 percent to 11-12 percent, increase in urban population to 600 million by 2030 from the current level of 400 million and emergence of the rural market for steel which currently consumes around 10 kg per annum. In addition, schemes such as Bharat

Nirman, Pradhan Mantri Gram Sadak Yojana and rural housing programme can drive consumption.

Adds another analyst. "With a strong economic outlook and plans to increase steel production, it is likely that India will be on a fast-track growth path and become the second-largest steel producer within a few years," he adds.

Incidentally, steel production in India climbed the most in at least a year as producers fired up capacity in expectation of growing demand in Asia third-biggest economy.

Output in August advanced 12 percent to 8.24 million tons from a year earlier, the biggest gain since at least August 2015, according to monthly data provided by the steel ministry. Demand in the world's third-biggest producer rose 1 percent to 6.97 million tons, while imports tumbled 36 percent to 619,000 tons.

Top producers such as JSW Steel Ltd and Steel Authority of India Ltd are aiming for record output in the financial year ending March 31 amid forecasts of demand growing as much as 5 percent.

Steel-makers may boost market share as imports slid for a fifth month after the government in August extended restrictions on imports to protect domestic mills from cheaper exports by China, the world's top producer, Russia, South Korea and Japan. India extended the floor price mechanism on some imports for two months until October 4, and levied anti-dumping taxes on hot and cold rolled coils purchases.

Exports surged 87 percent to 680,000 tons in August from a year earlier, according to the provisional data from the ministry.

For the April-August period, imports were down 35 percent to 3.01 million tons, production rose 7.9percent to 40.5 million tons and consumption advanced 1.3 percent to 33.74 million tons, it said.

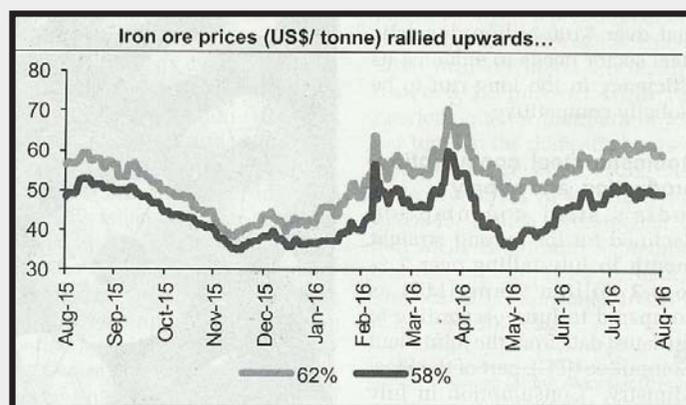
The main difference between China and India today is infrastructure, say analysts. While growth in China's manufacturing, housing and other steel reliant sectors has plateaued, the same in India have just started to rise. There's also heavy demand for automobiles in India, leading to its strong performance in steel sector.

Source: Steel Insights

STEEL

Steel making nations pledged to boost sluggish global growth

Global steel prices moved in the upward direction in August as some buying was reported in most parts of the world while slight decline was seen in Chinese output which probably helped the rise in prices. Domestic steel prices too after weakening a bit started stabilizing in the later part of August. But in the near future, steel prices are likely to remain under stress until demand improves and gradual capacity curtailment takes place. Contradictory to this, raw material prices are likely to remain volatile.



There was a fear of a potential trade war over steel at the G-20 summit hosted this year by China. But finally, global leaders at the summit reached an agreement acknowledging that overcapacity in the steel industry is a global issue, although some nations continue to blame China for the bulk of the problem. Countries agreed to form a steel forum that would research a global solution to the glut and report back next year.

As a result, soon after the G-20 meeting, steel making key ingredient iron ore prices dipped as China agreed to work on reducing steel exports after the meeting. China agreed to cooperate more closely with its trading partners on its politically volatile steel exports as leaders of major economies ended a summit with a forceful endorsement of free trade and a crowded agenda that included the Koreans, Syria and refugees. In a joint statement, Chinese President Xi Jinping, US President Barack Obama and the leaders of Britain, Japan, Russia and other Group

of 20 nations pledged to boost sluggish global growth by promoting innovation.

Any reduction in demand for the key steelmaking ingredient of iron ore could put pressure on prices, particularly when most analysts already expect supply to outstrip demand over the short- and medium-term. On the other hand, Chinese infrastructure investment that have supported iron ore over the last several months, is still widely expected to drop back into the low \$US50s or \$US40s over the rest of this year and next.

In order to protect the domestic steel manufacturers, the government had extended minimum import price on 66 steel products and also levied an anti-dumping duty on steel imports from six countries. In its preliminary findings, the Directorate General of Anti-Dumping and Allied Duties (DGAD), under the Commerce Ministry, has found that hot-rolled flat products of alloy or non-alloy steel has been exported to India from China, Japan, Korea, Russia, Brazil and Indonesia at "below-normal value".

New usages in sectors like railways & defence to drive the copper wave

In the present scenario copper is a critical input for various industries, viz. power, defence and infrastructure and a key indicator of a country's economic development. India has huge potential for increasing copper consumption with the current per capita consumption in India (about 0.6 kg) being just one-tenth of that in China. However, the raw material of the industry, i.e. copper concentrate, is available very scarcely in India, making it imperative for the country to either import refined copper or import copper concentrate. Nearly, 96% of the requirement for copper concentrates is met through imports.

In the backdrop, India produces only 0.77 million tonne (MT) of refined copper every year. The copper smelters in India, have to depend 95% on import of copper concentrate because India has negligible copper reserves. The industry has infused huge capital exceeding Rs 10,000 crores and deploys more than 15,000 workforce with a significant generation of indirect employment in the country. It also supports development of large ancillary SSI/SME industry and vendor base in the neighbourhood.

The capacities were set up with world-class technologies having environment performance at par with the best in the world. Currently, while the industry's capacity stands at 10 lakh tpa, domestic market is around 5 lakh tpa which forces the industry to export a significant part of its output.

The establishment of domestic refined copper industry has not only helped in import substitution, but has been instrumental in the development of a downstream industry, featuring around 800 units predominantly in the SME sector. The country's copper capacity will be crucial in meeting the large requirement for copper that would arise due to the focus on development of the infrastructure.

J C Laddha is the Vice President of Indian Primary Copper Producers Association (IPCPA). IPCPA is an apex body, registered under Societies Registration Act, XXI of 1860 with an objective to promote the utilization and growth of primary copper industry in India. The Indian primary refined copper industry comprises of three major players namely Hindustan Copper Ltd, Hindalco Industries Ltd and Vedanta Limited having a combined capacity of 10 lakh per annum of refined copper with the total capital employed nearly Rs. 10,000 crores. Among these three primary producers, Hindustan Copper is the pioneer in the industry and has integrated facilities. The other two producers in the private sector are custom smelters and process imported copper concentrate.

Mr. Laddha has shared his views on behalf of IPCPA regarding the biggest challenges and opportunities coming up in copper market along with the global excess capacity led to significant pressure on global copper prices. He also shared Government intervention measures like Safeguard Duty to protect the domestic manufacturers.

Excerpts

- Q. What are the biggest challenges and opportunities coming up in the copper market?
- A. The opportunities in the domestic market is slated to grow at a steady pace and indicators point to a growth of 10 - 12% on the back drop of various investments in power sector, building & construction (smart cities), auto sector, railways, defence etc, supported by "Make in India" campaign.

There can be new usages emerging in sectors like railways and defence.

Among the biggest challenges faced by domestic suppliers includes the Trade Agreements / FTAs, which are allowing cheaper imports into the country and have been detrimental to the domestic industry, as a result of which we have seen rising imports as well as falling realisations. Secondary industry segments like tube manufacturers have been closing their manufacturing facilities as they become unviable vis a vis imports and in turn reducing the domestic manufacturing output.

- Domestic manufacturers need both, investment in new generation equipment as well as additional capacity in various segments so as to meet the rising demand. Primary producers and selected end users are investing to overcome this gap, which is likely to be bridged in coming 2-3 years time.
- Reprocessing of scrap in facilities which are not environment friendly, impacts the usage of refined copper. There is a need to have stricter rules that highlight need to have cleaner facilities and avoid pollution of the environment.
- Some of the projects like railways, defence etc can be quite time consuming and uncertain with respect to time lines. Investment in infrastructure can be very fluid. Currently, while power sector, especially generation is poised to grow at the ground level, there has been no clear positive indicators and sectors like transformers continue to languish.

Statutory laws and regulations have not been industry friendly, which lead to high spending on logistics as well as making imports attractive. With implementation of GST, some of these aspects are likely to be resolved.

Export incentives has been withdrawn from 1st April 2015, which also has been a setback in pursuing exports. Exports were limiting the increasing trade gap with China.

Q. Amongst the key challenges, what do you suggest to tackle the excess capacity which led to significant pressure on global copper prices?

A. The global copper market is facing excess capacity mainly on account of slowdown in copper consumption from China coupled with increase in mine production due to commissioning of new mines. While the concentrate supply globally is expected to go up by 5.3% during CY2016, the demand will be lower at 4.3%.

We expect this situation to be corrected in next few years as globally the investment in new copper mine development has been significantly reduced to match the slowdown in demand. This will result in lower production growth during coming years which will re-balance the supply-demand situation.

Q. Your association views on the status of Chinese copper smelters capacity expansion.

A. The copper smelter expansions in China are likely to continue due to attractive Tc/Rc which is the main source of revenue for any custom smelter (The new copper smelter being commissioned in China is 400 Kt during CY 2016 which is expected to go up to 725 Kt during CY 2017). Since China is net importer of refined copper currently and hence investment in new smelting capacity will help them to reduce the import of refined copper.

Q. How do you see the demand prospects for copper tubes & pipes, wires and rods in the domestic and global market?

A. Demand for wires and rods in the domestic market has been steady in the last 2 years, indicating a growth of 10-12%. Global rod and wire market is expected to grow at the rate of about 1.9% as per CRU indications as against 2% growth of copper consumption.

HVAC (heating ventilation and air conditioning) segment is the major user of copper tubes in the country. While demand for HVAC in India is estimated to grow at about 11% in next 3-4 years, the domestic manufacturers of copper tubes have been in a bad shape due to cheaper imports and resultant closure of operations. Thus, increasing demand in HVAC has not been beneficial to the domestic copper industry. The global market for tubes ex expected to grow at the rate of 3.6% as per market research report.

Q. Could you please let us know how are the association members going to strategize the supply glut which is weighing on copper prices?

A. Due to subdued copper prices for around two year now, the investment in new mining projects have thinned down considerable during last 18 months. This is expected to push the copper market back to deficit over the next 2-3 years which will again boost the copper prices.

Meanwhile, in order to address the falling copper prices, many of the mines have undertaken drastic cost cutting measures including manpower rationalisation and overhead reductions. Besides this, the drop in oil prices as well as depreciating currencies of local countries vis-à-vis USD has also contributed to help the mining companies float.

Since custom smelters (like major Indian smelters) operate on a conversion model with copper prices being back to back hedged, the fall in copper prices does not have any major impact on their bottom line. The main source of revenue for custom smelters are Tc/Rc as well as copper premium. However, the lower demand globally has severely impacted the copper premiums which has put pressure on the profitability of custom smelters.

Q. Also let us know the trends in high treatment and refining charges (TC/RCs) to weigh on copper market?

A. The copper treatment and refining charges (Tc/Rc) movement reflects the demand - supply situation in copper concentrate market. The Tc/Rc is expected to remain at current high levels during the rest of the current year as well as next as the availability of copper concentrate has improved globally due to improved availability especially with new mines from Peru having started production. However, over the medium term, with the reduced investment in new mine development, the copper concentrate production will not be able to cater to increased demand from smelters which will bring the Tc/Rc down at the same time improving the Copper prices.

Q. Which are the major sectors that will drive the demand for copper?

A. Building & construction will be the biggest driver for growth of copper in the country. Investment in power generation, coal as well as other non-conventional energy sectors like solar and wind power, auto, railway freight corridors are some of the main sectors which will drive growth.

Q. What would be your suggestion to mitigate the rising imports from China and South East Asian countries into the domestic market?

A. Working with Government agencies to have level playing field, relook at FTAs which have not been supportive to the domestic Industry, building new capability within the country, to improve the quality of products etc are areas which will help in limiting imports into the domestic market.

Q. Your association views on Government steps like safeguard duty to protect the domestic players?

A. Measures like safeguard duty can surely help domestic industry to improve margins as well as give them some time to build up capabilities and improve ability to service the market better. We need to understand that this is a short term measure.

Source: MMR

G20 NATIONS FOR GLOBAL FORUM TO ADDRESS EXCESS STEEL CAPACITY

The development assumes significance in the backdrop of the problem caused in international markets due to excess steel capacity amidst softening of prices. Major steel producers China, India and Japan along with other G20 nations have called for increased sharing of information as well as more cooperation by forming a global forum to address the issue of excess steel capacity. The development assumes significance in the backdrop of the problem caused in international markets due to excess steel capacity amidst softening of prices, which eroded sales and profits of firms across countries, especially at a time when the global economy recovery is weak. G20

leaders in a communique recently recognised the "structural problems, including excess capacity" in some industries, exacerbated by a weak global economic recovery and depressed market demand that have caused a negative impact on trade and workers. "We recognise that excess capacity in steel and other industries is a global issue which requires collective responses," it added.

The joint statement said the leaders' also recognised that "subsidies and other types of support from government or government-sponsored institutions" can cause market distortions and contribute to global excess capacity and therefore require attention. The leaders' committed to "enhance communication and cooperation" and take effective steps to address challenges so as to enhance market function and encourage adjustment. "To this end, we call for increased information sharing and cooperation through the formation of a Global Forum on steel excess capacity, to be facilitated by the OECD with the active participation of G20 members and interested OECD members. "We look forward to a progress report on the efforts of the Global Forum to the relevant G20 ministers in 2017," the Communique said.

The joint statement also comes in the backdrop of nations such as the U.S. imposing heavy duties on imports of cheap steel from countries such as China. India, the world's third largest steel producer, too is facing a spate of cheap imports from China, Japan and Korea. This has hit the sales and profits of domestic steel producers and also impacted their liquidity, which in turn has affected their capacity to repay loans and meet interest payment deadlines having a cascading effect on the number of non-performing assets (NPAs) with the banks. Steel sector in India accounts for the highest number of NPAs with the banks.

Source: www.metalljunction.com

STEEL MINISTRY WANTS MIP CONTINUATION FOR 21 PRODUCTS

The steel ministry has recommended continuation of minimum import price (MIP) for 21 flat-rolled products of non-alloy steel such as corrugated products while suggesting no action on 30 semi-finished products. The steel ministry has

recommended continuation of minimum import price (MIP) for 21 flat-rolled products of non-alloy steel such as corrugated products while suggesting no action on 30 semi-finished products. The government imposed recently provisional anti-dumping duty on 15 wire rod of alloy or non-alloy products. Following the imposition of MIP on 173 steel products in the range of \$341-752 per tonne for six months in February, aimed at containing imports, the government extended MIP on 66 items in August for two months. The term is set to expire on October 4.

Steel ministry sources said no recommendations have been made for 30 semi-finished products such as slabs and billets, mostly used by secondary producers, as imports of these items have been "negligible" so far. Currently, MIP on these items is in the range of \$341-364 per tonne. The domestic industry has already sought protection in the form of anti-dumping duty on the 21 products of coated sheets where MIP is in place now. Indian Steel Association (ISA), an industry lobby, however, recently urged the government to extend MIP on 66 products by another six months from its scheduled expiry on October 4. The situation would be adverse if these are now imported at dismally low prices leading to an unwarranted glut in the domestic market, it said.

Steel imports to India increased to 12.7 MT, at an average of over 1 MT a month, in 2015-16 from 10.2 MT in 2014-15 and 5.7 MT in 2013-14. China, Japan and Korea accounted for three-fourths of total steel imports last fiscal. Once the dumping duties are imposed, the MIPs become redundant. India has been under pressure in multilateral fora to remove the MIPs seen as an outdated measure that is WTO-incompatible. Shortly after MIP was imposed, steel imports started falling and the domestic industry's sales and margins picked up. But after correcting positively till May, steel prices became very volatile. Replacing MIP, the directorate general of anti-dumping in August recommended provisional duties in the range of \$69-152 per tonne on hot-rolled coil and "HR not in coil" from specified producers in China, Japan, Korea, Brazil, Russia and Indonesia, after concluding these items are being imported into India at below normal (cost) price. In the same month, it had also slapped anti-dumping duty

on certain cold-rolled flat steel products from four nations, including China and South Korea, to guard the domestic industry from cheap imports. The government has also taken a series of other measures to bail out the domestic steel industry which was reeling under severe stress for the last two years due to imports at predatory prices, subdued demand and poor prices. It raised the rate of basic customs on both flat and non-flat steel to 15% from 10% in the Budget for 2016-17 and hiked import duty in August 2015 on flat steel from 10% to 12.5%, long steel from 7.5% to 10% and semi-finished steel from 7.5% to 10%. The government had also imposed in June 2015 an anti-dumping duty for five years on imports of certain varieties of stainless steel from China (\$309 per tonne), Korea (\$180 per tonne) and Malaysia (\$316 per tonne). Further, safeguard duty of 20% was imposed in March 2016 on hot-rolled flat products of non-alloy and other alloy steel, on coils of width of 600 mm or more.

Source: The Financial Express

GOVT TO IMPOSE ANTI-DUMPING DUTY ON 36 PRODUCTS: STEEL SECY

As the minimum import price is set to lapse on 66 steel products, sources say that the government is unlikely to extend MIP on steel products. Steel Secretary Aruna Sharma said anti-dumping duty is the long-term arrangement for imports. She added that of the 66 items, 36 items will be pushed under the ambit of anti-dumping duty. Sharma said that the anti-dumping is WTO-complaint and can be levied for five years. She added that anti-dumping duty per country will be imposed based on evidence. Further, she said that the government will opt for MIP in TMT and Slabs if international prices fall but presently there's no need to have antidumping duty on TMT due to higher international prices.

Below is the verbatim transcript of Aruna Sharma's interview to Nigel D'Souza on CNBC-TV18.

Q: We want some clarity on those 66 products. We believe that minimum import price (MIP) is not going to be extended but as you had told us earlier, you were working on some

anti-dumping duty. On how many of those 66 products will we see some extension, we will see anti-dumping duty coming in and MIP going off the table?

A: The MIP is a patchwork kind of an arrangement and the long-term arrangement is always anti-dumping. Therefore, on August 4 when we examined the whole thing, out of 173 products, which in February '16 wherein MIP, we pushed 107 tariff lines into anti-dumping, so now that is a long-term thing of five years and that is based on evidence. So this kind of a trauma of having MIP or not having MIP after every couple of months is done away with. However, what was balanced was 66 tariff line - that is 173 minus 107, out of that on 27 already orders have been issued for wire rods, so that is 15 tariff lines are gone. So out of 66, 15 are out. Coated sheets, which covers 21 tariff lines - that will be issued in a fortnight, so that will also shift into anti-dumping. So you will be left with only 30 tariff lines and that is of TMT and slabs. Let me explain. In TMT the import is only 3 percent of the total steel and today's price of TMT is USD 330 free-on-board (FOB); ranging from USD 330 to USD 340 and China it is 449 to 451. Our domestic price is lower than that, so there is no need to have an anti-dumping here unless and until these people suddenly reduce the price lesser than the domestic price and lesser than their cost of production, so only then there will be a need for having any MIP arrangement to give the protection for the TMT. The same applies to semis. Semis import is only 5 percent and today price is USD 345 and our MIP, in the old one, was USD 341. So in case these prices start falling, so we as a watchdog are observing it, so that immediately we can go with an evidence for the MIP for these 230 lines which is in TMT and slabs that is semis.

Q: Out of these 66 products, you told us that for 36 products, there is going to be some kind of protection that will come in?

A: Issued.

Source: Metaljunction

GLOBAL STEEL DEMAND: A SLIPPERY CUSTOMER

The steel industry refuses to be held hostage to a trend. In April, the World Steel Association said it expected global steel demand in 2016 to decline by 0.8%, after having fallen by 3% in 2015. That forecast, its biannual Short Range Outlook on steel demand, has changed. Its October statement expects steel demand to actually grow by 0.2% in 2016, a full percentage point higher. Ordinarily, one would expect the steel industry to change course gradually. The constantly shifting backdrop in which these forecasts are made may explain the volatility in numbers. Take China. Its economic rebalancing remains on paper but it slipped in a stimulus package which is partly responsible for higher steel demand. China's steel demand for 2016 is now forecast to decline by only 1% instead of 4%. That's a massive shift for a country that accounts for 44% of global demand. Even in 2017, the country's demand is expected to decline by 2%. This is conservative and is being attributed to expectation that the revival in the real estate market will falter, pulling down steel demand. If these expectations are proved wrong, this forecast may be at risk as well.

What about the rest of the world? Among major steel consuming blocks, the European Union is slipping, with steel demand forecast to grow by 0.8%, from the earlier 1.4%. The NAFTA region too has suffered a similar fate (NAFTA is the North American Free Trade Agreement). However, both regions are expected to see a better time



in 2017. India's demand growth outlook remains unchanged in 2016, though it steps up a bit in 2017.

Developed economies are expected to see flat growth in steel consumption in 2016, but will recover in 2017. Excluding China, emerging and developing economies could see growth increase by 2% in 2016 and by 4% in 2017. Global steel demand in 2017 is expected to rise by 0.5%, marginally higher than the April forecast (but on a higher base now since 2016 has been revised upwards). An improved global steel demand outlook is good news for producers. China's improved demand outlook also points to why iron ore prices remain firm. Any sharp turns in China's policies are a main risk as is the continued weakness in developed economies. India's steel industry appears to be in a good place as demand has begun to recover and so have prices. It needs global steel demand to hold up so that prices stay up. In fiscal year 2017, its exports have risen sharply, making it more sensitive to global steel prices than earlier.

Source: www.livemint.com

ALUMINIUM – THE METAL OF THE FUTURE...

Aluminium has been one of the fastest growing metals globally as well as in India in the last several decades. The versatility of aluminium and its excellent properties have been the drivers of this rapid pace of growth, making it one of the most preferred engineering materials. It is a relatively new metal and has seen widespread applications across both the industrial and consumer sectors. On the industrial side, aluminium is heavily used in electrical power transmission, machinery and equipment, and construction. On the consumer side, it is used in a variety of retail products, including cans, packaging, air conditioners, furniture and vehicles.

More recently, aluminium has also gained the title of being a 'green metal' due to its recyclability and its potential to reduce energy consumption of vehicles significantly. Automakers have long faced competing demands to make their vehicles both greener and safer. Many of the benefits of fuel efficient engines have been undercut by

increase in weight that come with added safety and comfort. But, with increasingly stringent fuel economy standards coming around the world, the automakers are increasingly focused on making cars lighter accelerating a shift to new materials and here aluminium is the preferred choice.

These macroeconomic trends and rising share of emerging economies is aiding the aluminium consumption and the consumption is projected to accelerate further in the coming years. The global aluminium consumption is expected to grow at around 5% to over 61 Mn tonne in 2017 and to 70 Mn tonne by 2020.

Indian AI industry at the inflexion point...

The Indian aluminium demand is expected to get a boost following the steps taken by the government to increase industrial production and infrastructure. The government's thrust on power sector reforms augurs well for the industry as the power sector is a dominant consumer of aluminium in India. The demand is also expected to rise following the focus on smart cities and improving prospects of business and construction industry. Rapid urbanization, as the country continues to develop towards a more consumer-focused economy, should augment consumer-driven demand and will help in sustaining strong growth in aluminium demand into the next decade. The per capita aluminium consumption in India is still much below the global average and India needs to do lot of catch up given our demography and economic outlook. In the recent past, there is an evidence of deepening of penetration of aluminium in India. Per capita consumption, which is undoubtedly still significantly lower than in most other nations, has increased from 1.1 kg in FY06 to around 2.8 kg in FY16.

There are a few implications of these trends in per capita consumption. The penetration of aluminium is surely deepening – and is ahead of the rate of general economic growth. It also means an opportunity for aluminium to play a catch-up over the years to come. Thus, on the consumption front the outlook is very encouraging.

Looking at the bright consumption prospects, the Indian Aluminium industry has made significant investments in the recent past and is looking forward to a continuous leap ahead. Most of the major players are through with their capex

program to set up new, world-class facilities – increasing their capacity multi-fold.

The projected growth in India's aluminium production implies that the role played by the industry in India's economic development is set to enlarge significantly – be it in terms of direct and indirect employment or contribution to tax collections. More importantly, the large capital investments that the industry is undertaking will ensure substantial value addition to the country's mineral resources. As these projects are coming up mostly in underdeveloped regions, they also hold the potential to dramatically improve these local economies – providing new sources of prosperity and livelihood to people in the vicinity.

Near term challenges faced by the Indian AI industry

In the last few years despite robust demand, the aluminium prices have been very volatile and have remain depressed. This was on account of surplus attributed to overcapacity in China. In 2015, a sharp decline in realisations forced Chinese producers to curtail capacity to the tune of over 4 Mn tonne. However, the recent rally in aluminium prices due to restocking demand has put a question mark on these curtailments and around 40% of the smelters have reportedly re started. China with over 50% consumption and production is a most dominating factor that decides the fortunes of the industry. The unpredictable nature of Chinese production along with significant over capacities have made the global aluminium industry vulnerable to macroeconomic shocks.

This creates a significant uncertainty on the viability of Indian aluminium industry. The Indian industry witnessed a strong surge in imports in various forms; from the countries that subsidise their aluminium industry in some form or other. This adversely impacted the Indian aluminium industry as it had to compete against low cost imports.

Some of the challenges faced by the aluminium industry in India are...

Rising imports – The imports from China and Middle East are increasing at an alarming rate; and during last fiscal year at 1.7 Mn tonne, constituted over 50% of Indian consumption. Many of these exporting countries provide significant support

to their industry. This has exacerbated the overcapacity in the global aluminium industry resulting in depressed aluminium prices for an extended period. Thus while many developing economies such as Brazil, China and Russia give a lot of incentives for aluminium manufacturing, in India, despite possessing the natural advantage of access to key resources like bauxite and coal, Indian producers have been disadvantaged by non-competitive energy and logistics costs.

Low Capability utilisation – The Indian primary aluminium industry has invested nearly 1.2 lakh crore in the last few years to increase the capacity from 2.1 Mn tonne to around 4.1 Mn tonne. This capacity is currently operating at suboptimal level.

During the last quarter of FY16, the import duty on aluminium was increased from 5% to 7.5%. However, there are no benefits from the increase in import duty from 5% to 7.5% as these have been negated by doubling of clean energy cess on coal.

The import duty on scrap was untouched in the budget. Scrap imports have been incentivized by a concessional duty of 2.5% on aluminium scrap (vs. 7.5% on primary metal). These have also been growing incessantly and were 30% of the total aluminium consumption in India. This not only deprives employment benefits to India but also create various hazards like duty evasion, inferior quality and safety issues.

The government should support the industry and the association to address the above mentioned challenges. I believe, it's time to realize that value addition to resources within the country is the best solution – both for the industry and for the communities surrounding the resource-rich areas. The coal sector reforms, MMDR act are good steps in this direction and bring certainty on some of the policy aspects.

The industry also needs to tackle the challenges around the local environment and issues of key resources. On one side, the R&D efforts will have to be focused on improving the energy efficiency and other resource-related efficiencies. At the same time, a wider stakeholder consultation and development approach will be necessary to manage the local environment.

The resource-based nature of the industry has implications in terms of the social aspect of sustainability. In fact, this was a major driver for shift of the industry from the developed West to the developing countries. Most mines and upstream plants are located in resource-rich, but remote locations where the industry has to shoulder the additional responsibility of the overall social development of the community in which it operates. If neglected, this issue can derail the economic viability of aluminium plants.

Besides energy efficiencies, there are many sustainability-related issues that are becoming increasingly relevant for the aluminium industry. As an industry, which generates many waste products (like fly ash, red mud, spent pot lining), aluminium industry has large stakes in making sure that these waste products are disposed off in an eco-friendly manner; or used for value addition.

Way forward....

The domestic industry will have to keep finding opportunities for deepening the usage of aluminium in various applications, to convince the potential users about aluminium's value proposition, to participate in the design of the application and to support the users in every way – especially during the initial phase of trials. That's the way to convert the potential of aluminium consumption in India into reality. The industry needs to understand the trends evolving in its broader environment and within the value chain; and respond to them – often proactively rather than waiting for the trends to dictate it.

The thrust should be on increasing the deepening of aluminium usage. From the point of view of the downstream applications, material substitution is an important, though slow-evolving process. However, addressing these opportunities will also require a lot of R&D efforts, to take on a stiff competition from steel and polymer sectors. The industry will need a lot of perseverance and innovative attitude to leverage the full potential of aluminium in India's growing economy.

At Hindalco, moving up the value chain is an option that we are pursuing apart from cost reduction measures. Our product mix, market mix and customer centricity are the aspects that should differentiate us and the focus is on certain target segments and markets. Hirakud

FRP, Mouda Foils are some of the examples... These factories would produce some of the new products in India, where we see a great scope.

To sum up

Aluminium industry globally and in India seems to be currently caught in a mix of very bright medium-to-long term prospects and some formidable challenges. This challenging phase will require many of us in the industry to show our mettle; and also to work sincerely towards addressing the structural challenges. The long-term prospects for the 'wonder metal' are exciting for those who are willing to put in these efforts.

Source: MMR

AUTO RECYCLING: CAN INDIA BE THE NEXT US, EUROPE OR CHINA?

India has always been a decade behind the developed nations like the USA, China and Europe. Take for instance, the interest was introduced in US & Europe during the 1980s but only in 1995 did India get introduced to it. Similarly, auto-recycling has existed for over a decade in the developed countries and even Indonesia but the Indian government has only recently taken a stand for environment & against old-polluting vehicles and even recycle them. However, the major question is can India become a US, Europe or China in auto recycling?

India is truly rising up to become a global economy, be it manufacturing or IT services, it is today at par with the bests in the world. Vehicle Scrap Recycling or Auto Recycling may bring about major impact on the Indian economy. The National Green Tribunal (NGT) has given out orders to remove 10-year old diesel vehicles from the capital, Delhi, NCR and said no 15-year old diesel vehicle can be resold anywhere across the country and it will only have to be scrapped. The government is trying to implement vehicle recycling policies by next year and also provide an incentive of INR 25,000-35,000 for a car, INR 10,000 for a two-wheeler and INR 150,000 for commercial vehicles, thus promoting a voluntary scheme for surrendering old vehicles. To further encourage this notion, the Society of Indian Automobile Manufacturers has asked the finance ministry to

offer a 50% rebate on excise duty, VAT and road tax to vehicles that have been purchased after their owners have submitted their older vehicles for scrapping. Although the major problem is even if these vehicles are removed, India does not have an organized scrappage policy.

Let's look at some statistics from around the world:

United States	The United States recycles about 12-15 million cars every year and the famous \$3 billion US federal 'cash for clunkers' scheme succeeded in improving fuel efficiency by 58% in the country.	
China	China recycles about 5-6 million cars a year and substituted an estimated 2.7 million high polluters from the national car fleet by offering rebates of \$40 to \$900 from June 2009 to May 2010.	
Europe:	UK	UK recycles about 9 million cars a year and introduced a scrappage incentive scheme in the 2009 budget whereby scrapping a car more than 10 year old allowed for a £2,000 cash incentive with the money being shared equally between the government and the auto industry.
	Germany	The largest scrappage scheme ever, Germany paid a premium of €2,500 (USD 3,320) to every owner of a car older than nine years when buying a new car.
Japan	Japan recycles about 5-6 million per year and introduced a program for 1 year from 1st April 2009 onwards, offering up to 250,000 yen (USD 2,500) to trade in vehicles 13 years old or more for new environmentally friendly cars.	
India	If India abides by the auto-recycling policy then tentatively 3-4 million cars could be recycled in a year.	

India's future in recycling looks bright as studies show that by the next decade the vehicle density in India would grow from 20 for every 1000 people to 65 for every 1000 thus estimating roughly a growth of 6.7% compared to China which grows around 5.7% every year. India's take on this issue is relatively new and also it is one of the few countries that has to deal with a huge amount of 2 wheeler vehicles. Certainly, the country has to invest heavily on its infrastructure and systems for proper certification and efficient disposal of old

vehicles.

India imports about 6 million tonnes of steel scrap, 2 million tonne of aluminium scrap and copper scrap. Auto-recycling can reduce the cost and dependence on importing of some of these metal scraps. As a matter of fact, a single car can help conserve about 2,500 kilograms of iron ore, 1400 kilograms of coal, 125 tonnes of limestone, reduce the release of 1000 kilograms of carbon dioxide, and save more than 1 MW of energy.

Two million tonnes of steel, rubber, plastic and aluminium can be recovered by effective recycling and this will make a great mark especially on the steel industry and according to the Indian government, with this the demand for steel will increase 4X. This is India's best option to get rid of the old cars and reap benefits through it by adopting a strict and environment friendly Auto recycling policy. Many businesses can crop up with this such as shredding, recycling, scrap handling, exports etc. With proper awareness of the opportunity at hand and the government trying to take various measures along with incentives, India's future in auto recycling is looking big and bright.

Source: Steel 360

TURN TO SUN

The renewable energy sector growth in India during the last few years has been significant, even for electricity generation from renewable sources. The need to increase the use of renewable energy sources for sustainable energy development has been recognized by the Government. The Government has given significant thrust to the research, development and induction of renewable energy technologies in different sectors.

Solar Cities

The government has approved a proposed master plan to develop 50 solar cities, for which master plans have been prepared for 46, an official statement said. Three of these cities under the programme are planned to be set up the national capital region, the ministry of new and renewable energy said in a status note. At least one city in each state to a maximum of five cities

in a state may be supported by the ministry. Out of the proposed 60 solar cities, sanctions have been issued for 50 cities that include New Delhi, Agra, Chandigarh, Gurgaon, Faridabad, Amritsar, New Town (Kolkata), Howrah, Madhyamgram, Kochi and Bhopal. Master plans have been prepared for 46, including Agra, Gandhinagar, Rajkot, Surat, Thane, Shirdi, Nagpur, Aurangabad, Imphal, Chandigarh, Gurgaon, Faridabad, Bilaspur, Raipur, Agartala, Guwahati, Jorhat, Mysore, Shimla, Hamirpur, Jodhpur, Vijayawada, Ludhiana, Amritsar, Dehradun, Panaji and New Delhi. Further, in-principle approvals have been given to five cities – Thiruvananthapuram, Jaipur, Indore, Leh and Mahabubnagar. Master plan of Indore has been prepared and the other corporations/state nodal agencies are in the process of engaging consultants for preparation of master plans. The ministry had empanelled 26 consultants in June 2009 to prepare the master plans. Eight cities are to be developed as "Model Solar Cities", the ministry said, adding Nagpur, Chandigarh, Gandhinagar and Mysuru have so far been selected for this. Fifteen cities will be developed as "Pilot Solar Cities" of which 13 including Agartala, Coimbatore, Rajkot, Shimla, Faridabad, Thane, Raipur, Shirdi, Leh, Aizawl, Puducherry, Vijayawada and Amritsar have been named. The new and renewable energy ministry has been implementing the programme under which a total of 60 cities and town are proposed to be supported for development as "Solar or green cities. The criteria set for identification of such cities include a population between 50,000 to 50 lakh.

Source: The Economics Times

DOMESTIC STEEL INDUSTRY'S CAPACITY UTILISATION TO RISE BY 5% IN FY17

Capacity utilisation of domestic steel industry is expected to pick up by about 5% in the current financial year on the back of protective measures laid down for producers to shield them from cheap imports and also because of a likely rise in demand for the commodity October onwards. "Demand is expected to be a mixed bag coming from both flat as well as we long products division

and since monsoons have been good, rural consumption for steel is expected to spurt in coming months taking capacity utilisations higher than last year," said Sanak Mishra, secretary general and executive head of Indian Steel Association. In the year ended March, domestic steel industry's average capacity utilisation stood at 75%. At present, domestic steel industry which has been beleaguered with cheap imports is getting protection from anti-dumping duty on hot and colled-rolled products with minimum import price levied mainly on long products of steel. "Demand for flat steel products has already been doing since last few months, we expect demand for long products to pick up in coming months as construction activity will pick up once monsoons end," said Jayant Acharya, director commercial at JSW Steel. Long steel products are used in construction and infrastructure industry, while flat products find wide application in automobile industry.

Meanwhile, steel producers were of the view that though imports have declined since several measures the government has brought in place to help the industry, overall demand pattern in Jul-Sep is seen largely the same as it was in the corresponding period last year in the absence of any fresh consumption. "The market size of domestic steel producers has improved after the trade measures came and hence volumes have picked up but since demand overall has remained stagnant realisations have not picked up," said Acharya of JSW Steel. Essar Steel had a similar view to share. "Year-on-year there is not much change in the demand pattern. The demand growth is almost flat. This is clearly reflected in lower GDP growth. However, flat steel production is up by approximately 6% necessitating higher exports. Exports are up by 12% in Apr-July period in this year compared to last year," said Vikram Amin, executive director (strategy & business development), Essar Steel.

Domestic steel producers have raised product prices in August as well as in September but analysts are of the view that higher raw material costs will not allow companies to benefit from price increase. Rise in rail freight for coal is also expected to hurt steel companies. "The price revision in products reflects the inching up of cost curve as coking coal and iron ore prices

have moved up. Due to this, domestic steel companies may continue to see volume growth but realisations could move up only marginally on year-on-year in the Jul-Sep quarter," said Ritesh Shah, senior analyst with Investec Securities. Tata Steel, Bhushan Steel, state-owned Steel Authority of India, Jindal Steel & Power and Rashtriya Ispat Nigam are among the top integrated steel producers in the country. During April-July, crude steel production was 31.825 million tonne, up 5% over same period of last year, imports on the other hand were down 34% to 2.39 million tonne. Consumption of steel in the domestic industry was just a tad up by 0.5% at 26.18 million tonne on year-on-year basis, according to Joint Plant Committee data.

Source: Business Standard

BRIEF ON WASTE HEAT RECOVERY SYSTEM (WHRS) FOR RECOVERY OF HEAT FROM HOT STOVE WASTE GASES

A Technical Talk on "Waste Heat Recovery System (WHRS) for Recovery of Heat from Hot Stove Waste Gases" was organised at our Chapter on 24th September 2016.

A Presentation on this subject was made by Shri N K Kakkar, Hon. Joint Secretary of our Chapter.

Shri Kakkar in his presentation informed that Ms Kuttner GmbH is a world leader in supply of WHRS System for Blast Furnace. He stated that:

The system consists of heat pipe modules which is very effective for heat transfer between hot stove waste gases and cold Blast furnace gases/ Combustion air. The heat transfer takes place according to the generally known physical phenomena of evaporation and condensation. Several modules are arranged in series or side by side depending on the efficiency requirements and gas mass flow.

It was stated by Shri Kakkar in his presentation that the particular advantages of this System are:

- Simple plant geometry, compact design due to modular components (easily to assemble)
- Gas-tight, no leakage between the

fluids

- Minor pressure losses on the waste gas and combustion air-side
- Realization of client-specific concepts by adapting the system to individual operational needs
- No moving parts -> elimination of propulsion energy

The presentation was very informative. About 50 participants attended the Talk. After the presentation there was a lively question and answer sessions.

The presentation ended with lunch.

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INDIA'S TOP STEEL PRODUCER POSTS 5TH STRAIGHT LOSS AMID GLUT

Steel Authority of India Ltd., the nation's biggest producer, reported a fifth consecutive quarterly loss as a global glut of the metal continued to weigh on prices. The stock plunged the most in 11 weeks. The loss widened to 5.36 billion rupees (\$81 million) in the first quarter ended June from 2.48 billion rupees a year ago, the company said in a statement recently. The producer took a one-time charge of 542 million rupees due to voluntary retirement compensation. Sales fell 3 percent to 90.8 billion rupees. Steelmakers in India are reeling from global oversupply, sliding prices and high industry debt as China, the world's biggest producer, exports its surplus amid weak domestic demand. While India has tightened import curbs to reduce the flow of cheaper products, supplies remain ample as local output climbs. Still, SAIL is optimistic about a recovery in demand and is ramping up output. "We believe that on the back of a strong monsoon and government plans to invest massively in infrastructure such as roads, railways, highways, ports," there will be increased steel demand, Chairman P.K. Singh said in a statement. The company has spent about a quarter of its planned budget this financial year, which ends March 31, to modernize and expand capacity, he said.

Capacity Expansion

State-run Sail is spending 40 billion rupees this year on increasing capacity by 43 percent to 21.4 million metric tons by 2018, part of a longer term goal of achieving 50 million tons in the next decade, Singh said last month. Concerns remain over the steelmaker's weak margin profile as it makes the company highly sensitive to a decline in prices and uncertainty of timelines for volume expansion, Ambit Capital Pvt. Ltd. said in a report a few days back. The weakness in the steel market also hit Jindal Steel & Power Ltd., which saw its loss in the three months through June almost double from a year earlier to 10.8 billion rupees, the New Delhi-based steelmaker said in a separate statement.

Source: <http://www.bloomberg.com>

FRESH CAPACITY SET TO WORSEN SUPPLY GLUT IN STEEL MARKET

Steel makers believe construction demand will revive by the time fresh steel capacity comes on line in the next two years, dismissing fears that an oversupply will depress prices. Finished steel consumption in India advanced at a mere 1.3% to 33.74 million tonnes (mt) in the five months from April to August, according to the Joint Plant Committee (JPC), a government body which collates iron and steel data. Current industry capacity is around 115mt.

India's top three steel firms Tata Steel Ltd, Steel Authority of India Ltd (SAIL) and JSW Steel Ltd are adding fresh capacities in phases. "If demand in the sector has to catch up with supply, it has to grow at double the pace of supply in the remaining part of FY17, which looks unlikely as there's already significant capacity addition taking place and they are going to be ramped up in subsequent months," said Goutam Chakraborty, an analyst at brokerage Emkay Global. At present, exports are helping Indian producers and any disruption to that can create an oversupply situation, he pointed out. "Last year, imports seized the whole of Indian steel demand growth; this heightened the capacity overhang," said Prakash Kumar Singh, chairman, SAIL. Singh is confident demand will rebound on the back of better growth in the construction sector, helped

by smart cities, expansion of road and railway networks and indigenization of defence and heavy engineering.

"We expect that in the coming years, there will be a spurt in steel demand and there is no factor which is stopping that rebound," he said, pointing out that "India is the only bright spot, where 5% growth in demand is expected in years 2016 and 2017." JSW on 28 July reaffirmed its forecast of a 25% growth in volume to 15.75 million tonnes per annum (mtpa) of crude steel, and sales of 15 mtpa of saleable steel for fiscal 2017. It plans to have 40 mtpa of steel-making capacity by 2025. "Everybody is producing more. While the demand has grown, it hasn't grown enough to cover the capacity. But it's a matter of time. Steel capacities are always added in steps," said T.V. Narendran, Managing Director at Tata Steel Ltd on the sidelines of company's June quarter results on 12 September. Exports of finished steel rose 23.6% to 2376mt in the first six months of the current fiscal over a year ago, shows World Steel Association data.

Tata Steel's Kalinganagar plant, the largest by revenue, will be adding 3mt of fresh capacity over the next two years. Of this, a million tonne is likely to be available in fiscal 2016-17 itself. JSW Steel has commissioned a new capacity of 3.7mt, of which 80-85% will be utilized in the current fiscal itself. SAIL will add 2.5mt to its existing 12.5mt by end of this fiscal, taking it up further to 17mt the following year.

Source: Metaljunction

GLOBAL STEEL DEMAND SET TO GROW BY 0.5% IN 2017: WORLDSTEEL

Global steel demand is expected to grow by 0.5 per cent year on year to reach 1.51 billion tonnes in 2017, the World Steel Association told its conference in Dubai a few days back. This year global steel demand will grow by 0.2 per cent to 1.501 billion tonnes, it added. In its April forecast, the organisation said global steel use would fall by 0.8 per cent in 2016 to 1.488 billion tonnes. The

organisation said a better outlook for demand in China and Russia had lifted its forecasts. "The shrink in Chinese demand has now been forecast at only one percent," said TV Narendran, chairman of the worldsteel economics committee and Tata Steel managing director for India and Southeast Asia. Chinese demand had been forecast in April to fall by 4 per cent this year but the association said that Chinese demand would fall by only 1 per cent to 665.6 million tonnes and by 2 per cent in 2017 to 652.3 million tonnes. China produces and consumes about half the world's steel. It imports some two thirds of the world's seaborne iron ore.

Narendran said Russia had also performed better than expected, contributing to the revision of the forecast. The association forecast demand would fall by 1.6 per cent this year to 49.6 million tonnes in the Commonwealth of Independent States (CIS), a group of former Soviet Union countries, and would grow by 2.1 per cent to 50.7 million tonnes year on year in 2017. Faced with anger around the world over a flood of cheap Chinese steel products, Beijing pledged to cut steel capacity by 45 million tonnes this year, and had achieved 47 per cent of this target by the end of July. Despite the cuts, China's crude steel production rose for a sixth straight month in August, while its exports of the alloy are on track to beat last year's record 112 million tonnes.

Source: Metaljunction

STEEL FIRMS LIKELY TO RAISE PRICE AFTER MIP EXTENSION

The second extension of the central government-set Minimum Import Price (MIP) in steel is likely to lay the ground for more price increases by domestic producers. Recently, via a notification, the ministry of commerce had announced MIP continuation on 66 steel products till December 4. It was first imposed in February for six months and then extended till October 4, to curb the flow of cheaper imports. Producers are inclined to raise prices, as those of coking coal, a key raw material, have more than doubled from \$75 a tonne in January to \$210 a tonne now. This would

affect long-term coking coal contracts that are due for renewal. Since April, steel prices have increased by around Rs 5,000 a tonne. "If steel demand moves up in this peak consumption season and the cost of production rises due to increased raw material costs, domestic producers will surely raise prices in the coming months," Ravi Uppal, chief executive officer at Jindal Steel & Power, told this newspaper. With MIP and allied measures, import of finished steel dropped 35 per cent in April-August to three million tonnes against the corresponding period of last year. "Continuation of MIP for two months will aid in further strengthening the domestic market and reducing the distress of companies," said Sanak Mishra, secretary general, Indian Steel Association.

Jayant Acharya, director (commercial and marketing), JSW Steel, recalled the worst for the sector was in December 2015, when international prices touched a low of \$255 a tonne. It took a series of measures — safeguard duty, MIP, anti-dumping duty — from the government to restore balance, say producers. The price of hot rolled coil, a benchmark product, increased from Rs 34,000 a tonne in September 2015 to Rs 38,000 a tonne in September 2016; capacity utilisation remained 75 per cent, in spite of additional capacities. A CRISIL Ratings report for the first half of this financial year says of bank debt downgraded in 2015-16, the steel sector accounted for 40 per cent, compared to only two per cent in the first half of 2016-17. "The median debt-to-Ebitda (the latter is operating earnings) of downgraded firms is still more than twice that of upgraded firms, although the quantum of debt has significantly reduced," the report said. "Without the support, everyone, save a couple of companies, would have been Ebitda-negative," says Ankit Miglani, promoter-director of the Uttam Galva group. More so as domestic demand growth has been muted. During April-August, consumption grew 1.6 per cent, as against a production increase of 6.5-7 per cent.

Producers believe the coming months could see better demand. A recent ISA report said

domestic demand was expected to grow 5.3 per cent in FY17 to 85.8 million tonnes, with higher consumption from the construction and capital goods sectors. Brokerages, however, feel there isn't much room to raise price of flat products and any increase in long products would be limited. Flat steel is used in the automobile sector; long products in construction and infrastructure. "Prices of flat steel products are already close to MIP levels," says, a senior analyst with Motilal Oswal. Shares of steel companies reflect the divergent views.

Source: Metaljunction

DEMAND OUTLOOK FOR STEEL REMAINS WEAK, SAYS WORLD STEEL ASSOCIATION

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The industry body that claims to represent members who have a combined 85 per cent of total steel production worldwide, came out with the projections in its Short Range Outlook (SRO) for 2016 and 2017 released recently. The sector will be a hostage to rising tensions worldwide, according to an expert at the WSA. "The steel industry environment remains challenging, with escalated uncertainties driven by geopolitical situations in various parts of the world. Recently the UK referendum outcome has further raised uncertainty on the long-awaited recovery of investment in the EU," T.V. Narendran, chairman of the WSA's Economics Committee, said in the release. The WSA said weakness in investment globally continues to hold back a stronger steel demand recovery. "Investment is subdued in many regions, not only in China, which is undergoing a rebalancing away from investment driven growth. In the developed world, despite persistently low interest rates, private investment remains weak due to a pessimistic outlook on future demand and other continuing uncertainties," it said by way of explaining its projections.

India, a bright spot

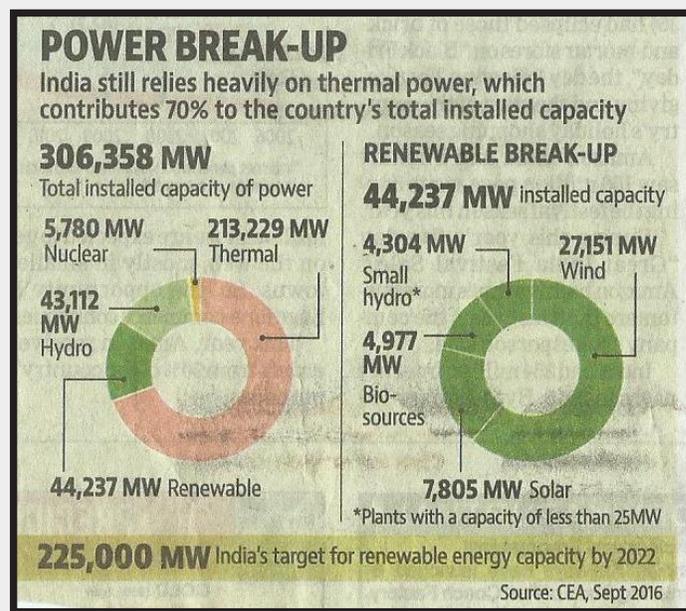
The world's fastest-growing economy is expected

to provide cushion to the industry, driven by its infra-expansion measures, though private investments are not so encouraging. "Indian steel demand is expected to report solid growth in 2016-2017 backed by consumption-boosting reforms and infrastructure investment, but its sustainability is under question as key levels of investment are being provided by the government while private investment remains weak," the WSA said. India is the third-largest producer of crude steel in the world, in addition to being the world's third-largest consumer of finished steel, according to the government of India. Some of the leading steel companies in the country include Tata Steel, JSW, Steel Authority of India, Jindal Stainless and Uttam Galva Steels.

Source: International Business Times

LENDERS TO TAKE CONTROL OF ELECTROSTEEL, SAIL TO MANAGE

State-run SAIL is set to take over the operations of Electrosteel Steels in a rare event of lenders taking charge of a debt-laden company and paving the way for similar moves at other firms where promoters are unable to repay loans. While lenders led by SBI had approached SAIL to take over the operations for a fee, the PSU has taken time in conveying its decision, sources told TOI. They said SAIL was now ready to take over the operations. Electrosteel Steel had become an embarrassment of sorts for the lenders as it was the first case of banks where they were looking to take charge of operations and change the management under strategic debt restructuring (SDR). Talks had been initiated with some foreign players, including London-based fund house First International Group but the deal did not work out as the investors wanted to take over the company at a steep discount, something that the lenders were unwilling to do. Banks have an exposure of close to Rs 9,000 crore to the company and were forced by RBI to classify it as a non-performing asset. As part of the restructuring, lenders had last year decided to convert over Rs 2,500 crore into equity through the SDR route. In addition loans of around Rs 5,800 crore had been restructured.



With no takers for Electrosteel Steel, lenders were toying with the idea of transferring the company to an asset reconstruction company. Since RBI allowed SDR last year, banks invoked the provision in case of 21 companies but have failed to find buyers in almost all cases. SAIL has been given an offer to enter into an operations and management (O&M) contract on a fee with the option of even taking over Electrosteel Steel's plant at a later date.

Source: The Times of India

JSW TO SET UP 10-MT STEEL PLANT IN ODISHA FOR RS 50,000 CRORE

The Sajjan Jindal-controlled JSW Group, with interests in steel, energy, infrastructure and cement, has committed an investment of Rs 50,000 crore in Odisha for a 10-million-tonne steel project. "JSW Steel will set up a 10-million-tonne steel plant in Odisha at an estimated investment of Rs 50,000 crore. In the first phase, the company will set up a 4-million-tonne mill. Later, the capacity will be ramped up to 10 million tonnes," JSW Group Chairman Sajjan Jindal said after his meeting with Odisha Chief Minister Naveen Patnaik at an investors' meet in Bengaluru. Jindal declined to comment on the location of the proposed steel mill, hinting it might come up near the Paradip port. Talks were on with the state government to firm up details of the project, he said.

"The state government is in talks with JSW Steel to identify a suitable location. Once they come up with a detailed proposal, the state government can give them approvals within 30 days," said Sanjiv Chopra, principal secretary (industries), Odisha. To overcome carrying iron ore by road, the company intends to lay a pipeline from the Barbil mines in Keonjhar district to Paradip to carry ore in slurry form. The cost of the 280-km pipeline is pegged at Rs 1,250-1,500 crore.

JSW Steel is also keen on participating in auctions of iron ore blocks in Odisha. The steel maker had bid unsuccessfully for the first iron ore block offered by the state. Essar Steel emerged as the preferred bidder. JSW Cement has proposed a cement grinding facility at Kalinganagar in Jajpur district at a cost of Rs 500 crore. The project has received clearance from the state government. JSW Steel is also pumping Rs 2,000 crore into two new dedicated berths for coal and iron ore at Paradip port. JSW Steel had initially expressed his intention to set up a steel plant in Odisha in July 2013. JSW Steel is the flagship company of the \$11 billion JSW Group with an installed steelmaking capacity of 18 million tonnes per annum.

Source: Business Standard

TATA STEEL PLANS TO ADD 6 MT IN CAPACITY THROUGH BROWNFIELD EXPANSION

Tata Steel plans to add 6 million tonne steel output to its existing 13 mt capacity across two facilities at Jamshedpur and Kalinganagar through brownfield expansion over the next few years. Of the proposed expansion, 1 mt would be added to the 10 mt steel mill at Jamshedpur, and the capacity of the newly commissioned Kalinganagar steel project would be ramped up by 5 mt. "It is always better to go for brownfield expansion to add capacities instead of putting up a greenfield project. We do not have any plans to go for a greenfield project at any site in the country at present," said Managing Director T V Narendran. The company faced many hassles in putting up a greenfield project at Kalinganagar, which took more than a decade to become operational after signing of an MoU due to protracted agitation by locals over land

acquisition and other bottlenecks. Tata Steel has received environment clearance for the expansion at Jamshedpur.

ACQUISITION SPREE			
India Inc asset sales peak in 2016			
BUYER INDIA ORIGIN			
Month	Seller	Buyer	Size (₹ Cr)
Feb '16	Jaypee	Ultratech	16,370
Jan '14	Videocon(Mozambique stake)	ONGC	16,200
Nov '14	Jaypee (hydro)	JSW Energy	9,700
Jun '16	Welspun	Tata Power	9,249
Aug '14	Lanco (Udupi power)	Adani	6,300
May '14	L&T (Dhamra)	Adani Ports	5,500
Feb '16	Reliance Cement	Birla Corp.	4,800
Nov '14	Avantha (Korba)	Adani Power	4,200
Sep '13	Jaypee	Ultratech	3,800
Nov '14	L&T (Kattupalli port)	Adani Ports	2,000
Oct '16	ADAG (transmission towers)	Adani	2,000
Oct '16	Jaypee	Orient Cement	1,950
Mar '14	Jaypee	Dalmia Bharat	1,200
Aug '14	Jaypee	Shree Cement	360
BUYER FOREIGN ORIGIN			
Jan '11	Essar Global (Vodafone stake)	Vodafone Plc	24,000
Oct '16	Essar Global	Rosneft, Trafigura, UCP	86,100
Oct '16	R-Com (51% in tower)	Brookfields	11,000
May '16	Rel Infra (11 road projects)	GIC, Isquared, Macquarie	8,800
Oct '16	Hiranandani (Office & retail space in Powai)	Brookfields	6,800
Aug '15	Gammon	Brookfield	6,750
Jan '14	Tata Power	Bakrie	3,100
Mar '16	GVKPIL	Fairfax	2,149
Dec '13	GMR	Malaysia Airports	1,334
Apr '16	Tata Steel (Scunthorpe, UK)	Greybull Capital	Nominal

Similarly, it is planning to set up a 5 mt module in the second phase at Kalinganagar, which is up by 2 mt from the 3 mt initially planned for phase-II at this site. Overall steelmaking capacity at Kalinganagar will go up to 8 million tonne. However, Narendran declined to comment on the exact time frame and cost of the expansion at both the sites. Though the company had commissioned the first phase of the Kalinganagar project, comprising 3 mt steel capacity and cost of Rs 25,000 crore in November last year, it had only started commercial production from the plant in May this year. "Now, our focus is to achieve full capacity of phase-I at Kalinganagar plant, which is running at 60 to 70 percent of the rated capacity. This month we would be making 1.6 lakh to 1.7 lakh tonne of steel at Kalinganagar which would go up to 2.5 lakh tonne per month by March, 2017. Overall we will be producing 1.5

mt steel from this plant in this financial year... We hope to produce at full capacity all through the next year," Narendran said.

Source: Business Standard

EU TO RELIGHT TATA STEEL FURNACE

The European Union's (EU)'s decision to impose anti-dumping duty on Chinese steel imports has come as a breather for European steel players including Tata Steel Europe. Already reeling under low steel demand owing to slowdown, European manufacturers' challenges were compounded with low-priced Chinese imports impacting realisations. The EU has now imposed anti-dumping duties of 13-23 percent on hot-rolled steel and 65-74 percent on heavy plates imported from China into the EU. This definitely comes as positive news for European steel manufacturers such as Tata Steel Europe.

Tata Steel has already been trying to streamline its European operations to cut losses. The company had reported an operating profit of Rs 856 crore in its European operations in the June 2016 quarter versus a loss of Rs 578 crore in the March 2016 quarter. However, analysts' concerns remained elevated on rising coal costs that were to impact the operating performance in subsequent quarters. In fact, the coal spot prices have almost doubled during the September 2016 quarter. Thus, imposition of anti-dumping duty will boost realisations and lead analysts to revise upwards their forward operating profit estimates for Tata Steel.

Credit Suisse estimates that 60 percent of Tata Steel's Europe output is sold in the EU and more than half of that is in hot-rolled form (the rest is value-added). Thus, duty on hot-rolled steel will definitely provide boost. Analysts estimate the duty to add about \$100 per tonne to landed prices, which is substantial looking at the fact that Tata Steel reported per-tonne operating profits of \$50 in the June quarter. Of course, not all benefits will flow to earnings before interest, taxes, depreciation and amortisation (Ebitda) as the costs are also on the rise. Nevertheless,

analysts at Credit Suisse say that even a \$10 per tonne higher Ebitda is meaningful as it adds 12 percent upside to the stock price at seven times enterprise value/Ebitda.

The depreciation in British pound is another factor as it is likely to accrue gains. An analyst at a domestic brokerage says the recent depreciation in pound after Brexit (Britain's vote to exit the EU) materially improves the UK operations profitability outlook, while Credit Suisse says a five percent fall in the pound leads to \$5-a-tonne improvement in operating profit as their earnings per share estimate rises six percent on higher European profitability assumptions. They have raised their Ebitda per tonne estimate to \$50 against \$44 earlier.

Meanwhile, more positives can accrue if the company can resolve the pension issues related to the European business. Tata Steel is believed to be in talks with the pension regulator for helping it carve out its pension liabilities from the core business. If regulators and members agree to the changes, the pension issue could get resolved, paving the way for an eventual merger of company's European operations with ThyssenKrupp, say analysts.

Meanwhile, in the domestic arena, the company has already reported strong volume numbers for the September quarter with sales growing to 2.66 million tonnes (mt) from 2.33 mt in the year-ago quarter. Analysts remain optimistic on the outlook for domestic business. The realisations remain strong and steel demand is also growing. Analysts at HSBC say their revised growth estimate still implies steel demand will continue to grow strongly at 7.5 percent (as seen in September 2016) for the second half of FY17.

Source: Business Standard

IRAN – THE NEXT BIG EXPORT MARKET FOR INDIAN FERRO ALLOYS

The lifting of sanctions has opened routes for FDI in Iran and investors are looking at Iran as a new destination. Iran plans to double its steel production by 2025 as it is now on the cusp of

economic boom and is showing plenty of promise for Indian, Chinese, Japanese and western companies. Amid severe demand crunch, Iran could provide a sizeable opportunity for the distressed Indian ferro alloy industry. The Indian Government announced through a notification that the prohibition on direct or indirect export to Iran or import from Iran is lifted. The decision came following the implementation of the Joint Comprehensive Plan of Action (JCPOA) January 16, under which most of western sanctions on the Islamic Republic were lifted.

According to the International Monetary Fund (IMF) the Iranian economy will expand 4.3% this year, with growth around 4% over the next two years. Iran's imports are set to expand 18% in 2016. The deputy minister of Iran's Ministry of Industries, Mines and Trade recently said that steel production in Iran is set to jump to 55 mnt by 2025 from 22 mnt this year. Iran has USD 29 billion of mining investments attracting interest of companies from Europe to Asia. Indigenous steelmakers in Iran are also expanding operations and India could find a potential market in Iran to export its ferro alloys for years to come.

Iran is the largest steelmaker of MENA (Middle East & Northern Africa) region. Major raw steel producers of Iran are the Mobarakeh Steel Mill, with approximately 47% of market share, followed by the Khuzestan Steel Company with about 23%, the Isfahan Foundry with about 20%, and the Iran National Steel Industries Group with some 10% of the market share.

Ferro Alloy Export from India to Iran

The total Indian ferro alloy export in H1 2016 (Jan-June) was 242,170 mt. Therein, primarily driven by exports of ferro manganese to the tune of 10,912 mt, the total Indian ferro alloy export to Iran in H1 2016 was 20, 419 mt. Ferro manganese export to Iran was followed by export of 6,992 mt to Pakistan and 6,228 mt to UAE in H1 2016. A total quantity of 43,443 mt of ferro manganese was exported during Jan-June'16. Silico manganese and ferro silicon exports to Iran during the same period stood at 9,251 mt and 256 mt respectively.

Ferro Alloy Export from India to Iran (in million tonne)				
Month	Ferro Manganese	Silico Manganese	Ferro Silicon	Total
Jan'16	2,214	916	-	3,130
Feb'16	1,063	1,383	118	2,564
Mar'16	4,735	2,556	54	7,345
April'16	999	1,958	52	3,009
May'16	594	1,807	27	2,428
June'16	1,307	631	5	1,943
Total	10,912	9,251	256	20,419

Indian ferro alloy exports to Iran in June'16 decreased by almost 20% in comparison to May'16. In June'16, ferro manganese exports to Iran increased by almost 120% in comparison to May'16. Whereas, Silico manganese exports to Iran decreased by 65% in June'16 in comparison to May'16. Similarly, ferro silicon exports to Iran decreased by 81% in June'16 compared to May'16.

During Jan-June'16 the total silico manganese export was 189,529 mt. The highest quantity with a total of 38,834 mt was exported to Japan, 24,067 mt was exported to Taiwan and 23,046 mt was exported to Italy. Ferro silicon exports between Jan-June'16 were 9,198 mt out of which the maximum quantity of 2,470 mt was exported to Bangladesh.

Source: Steel 360

ALUMINIUM – THE MOST SUSTAINABLE CHOICE FOR AUTOMOTIVE SECTOR

As per the New research from the Worcester Polytechnic Institute's (WPI) Center for Resource Recovery and Recycling confirms an overall recycling rate of 91 percent for automotive aluminium. The peer-reviewed study, funded by the Aluminium Association, examines how much aluminium used in the United States' light-duty automotive sector is recovered and recycled from vehicles at the end of life. This new study supports findings from earlier third-party government and auto industry reports to confirm aluminium is the most sustainable choice for the environment.

"We set out to detail exactly how aluminium is separated and recovered at the end of a

vehicle's service life and findings show it is highly recyclable and is recovered and reused at very high rates," said Professor Diran Apelian, founding director of WPI's Metal Processing Institute, which is home of the Center for Resource Recovery and Recycling. "With an eye toward reducing the nation's energy consumption, lowering carbon emissions and increasing fuel economy, this study confirms that as aluminium use continues to grow in the automotive sector it also enhances energy security and environmental protection."

The new study, Automotive Aluminium Recycling at End of Life. A Grave-to-Gate Analysis, details a "grave-to-gate" analysis, which spans the moment an automobile becomes obsolete to the moment the aluminium metal units are completely recycled and enter back into life as input material for new applications, including vehicles. Researchers attribute automotive aluminium's high recycling rate to the metal's economic value, citing the "concerted effort to recover this valuable lightweight commodity from end-of-life vehicles."

Aluminium sustainability in North America

Aluminium use in cars and trucks continues to rise and has seen consistent growth during the last 40 years, in part, because of its consumer and environmental benefits. Recycled aluminium helps automakers improve the sustainability of their operations and products, while also providing supply chain security. Once produced, aluminium can be recycled repeatedly without any degradation while maintaining significant economic value. As a result, automakers can tap an endlessly renewable supply of aluminium through closed-loop recycling operations.

"Aluminium continues to show its fundamental value as a sustainable solution at every stage of an automobile's life," said Tom Boney, chairman of the Aluminium Association's Aluminium Transportation Group (ATG) and vice president and general manager, Automotive Value Stream, Novelis North America. "As the United States and the rest of the world continue to strive for a more environmentally friendly future, aluminium is a big part of the solution and this new data confirms it."

The aluminium industry continues robust investments in innovations and technologies designed to reduce its overall environmental

footprint. Current data commissioned by the Aluminium Association confirms the energy needed to produce primary aluminium is down more than a quarter since 1995 with carbon emissions down nearly 40 percent due to expanded use of hydroelectric power sources for aluminium production.

In an independent life cycle assessment conducted by the US Department of Energy's Oak Ridge National Laboratory, use of aluminium in new vehicles to boost fuel economy was found to offer the smallest total carbon footprint among competing materials. A similar assessment conducted by Ford Motor Company and Magna International arrived at the same conclusion.

Source: MMR

RECYCLING NEEDS TO BE RECOGNISED AS AN INDUSTRY IN INDIA

The government of India is in the process of addressing the pressing issues like recycling and E-waste management on a priority basis to accomplish the goal of smart cities. Thus, to streamline government efforts towards comprehensive waste management particularly for E-waste Management Rules, 2016 that will bring the producers under Extended Producer Responsibility (EPR), along with targets and requirements to collect E-waste, experts feel that the time has come to take the second big step – infuse capital and recognise recycling as an industry. Technology and financial incentives would encourage entrepreneurs to enter this field. The experts were speaking at a seminar organized jointly by the World Trade Centre Mumbai and Ekonnnect Knowledge Foundation on 'Managing E-waste – Challenges and Opportunities' at the WTC complex in Mumbai.

E-waste is increasing at a rate of 30% per annum, which is a big concern and at present, more than 90 percent of E-waste is managed by the informal sector – ie kabadiwallas. "The 2016 rules are very comprehensive and it addresses some of the loopholes in the 2011 Act by introducing robust compliance, audit and monitoring mechanism. The 2016 Act also brought in Compact Fluorescent Lamp (CFL) and other electronic products under

its ambit," informed Dr. Prasad Modak, Executive President, Environmental Management Centre LLP and Director Ekonnnect Knowledge Foundation. "E-waste is rising due to changes in our lifestyle, everyone is using multiple electronic gadgets now. The target for 2020 will be to collect 70 percent of E-waste, which is a big challenge and needs push from all stakeholders," added Dr Modak. The new rules make the manufacturer responsible to collect E-waste generated during the manufacturer of any electrical and electronic equipment and channelize it for recycling or disposal and seek authorisation from State Pollution Control Boards (SPCBs). "We have been rating companies on EPR in terms of collection centres, buy back systems, awareness programmes and the results have been disappointing. Even the SPCBs do not mention E-waste rules on their website. We had no option but to move the court on this," pointed out Satish Sinha, Associate Director, Toxics Links.

Sinha lamented the fact that reputed MNCs are following EPR rules in Europe but do not want to do the same in India. "They want an escape route in India because our regulatory framework is not in place. There is no incentive to compliance. Also, unless the cost of implementation is built in the regulatory framework, the system would not work," Sinha added. Tata Consultancy Services (TCS), India's biggest IT company, is known for its first mover advantage by formulating E-waste disposal policy in 2008. "We are implementing it in several countries we work where the framework does not exist. Our procurement is largely green. We have huge size of old products like computers phased out annually, which are given to charitable organisations, which we keep track of," explained Dr. Aniruddha Agnihotri, Head, Environmental Sustainability, Health and Safety, TCS.

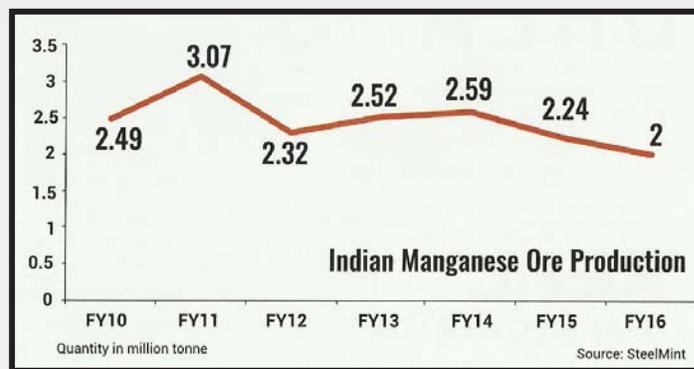
TCS' internal IT team has the mandate of EPR and also has a transparent process to identify and work with recyclers. "We have a bidding process, destruction certificates are obtained from vendors on data and are maintained at locations. We also do surprise inspections at our recyclers," added

Agnihotri. The system of advance recycling fee on new products provides the sustainable financial model in the Swiss PROs. "The result is that the Swiss have the second highest per capita collection rate in Europe (16.10 kg per individual). This robust system has demonstrated success and then led to legislative action. India must learn from this," explained Khetriwal.

Source: MMR

MOIL TO UNDERTAKE MASSIVE CAPACITY EXPANSION

Manganese Ore India Limited (MOIL) has drawn up an ambitious expansion blueprint with a plan to infuse INR 16 billion over the next five years. The company is planning to invest INR 4.3 billion in mining projects, INR 3 billion in solar and wind energy, INR 2 billion in new area development & townships respectively and INR 3 billion on procurement of machinery, among others over next five years.



MOIL is the single largest producer of manganese ore, which is the main raw material in ferro-alloys, currently operates 10 mines - six in Vidarbha (Nagpur and Bhandara districts) and four in Balaghat district of Madhya Pradesh where it has Asia's deepest mining sites. It has diversified into non-conventional energy sector and has a 20 MW wind power farm at Dewas near Indore in Madhya Pradesh, and now planning a 10.5 MW of solar power production. Already a market leader, the miniratna rated PSU aims to continue its dominance by scaling up production to 2

million tonnes per annum, almost doubling its current capacity. Besides ongoing projects where production is being ramped up, MOIL has secured mining land lease of 1,322 hectares in Vidarbha, which has rich deposits of manganese ore. In neighboring Balaghat district of Madhya Pradesh, the process to get mining licenses are progressing at a brisk pace, a top MOIL official said. This will lead to a huge asset creation for MOIL in the future, taking area of its mining land up by 80% from the existing mines in around 1,564 hectares.

The company listed six years ago under the Union Steel Ministry has 6,400 employees. The board of directors of the company gave approval for investing INR 2.65 billion to enhance capacity of Balaghat mines from 0.3 mnt to 0.6 mnt by sinking a high-speed large-diameter vertical shaft with depth of 750 meters. The board also cleared a decision to invest INR 1.95 billion for a high-speed shaft at Gumgaon mine in Nagpur district to double the output from 0.7 mnt to 1.4 mnt per annum. MOIL's long term plan envisages investment of INR 28.58 billion by 2024-25 to take up manganese production to 2.5 mnt. Despite a slowdown in the steel sector, which consumes 95% of manganese output, MOIL is confident that its capacity increase would be viable and necessary as demand in the market is growing at the rate of 10% while domestic production is growing at 2.8%.

MOIL bore the brunt last financial year when demand slowed and prices fell by over 60%. The company reported a fall of 9.3% in manganese ore production in FY16, with production at 1.032 mnt against 1.139 mnt in FY15. MOIL contributes to around 50% of total manganese ore production in India. In FY16, total manganese ore fines production by MOIL was 0.126 mnt, whereas in FY15 manganese ore fines production by MOIL was 0.162 mnt. MOIL's total manganese ore lump production in FY16 was 0.906 mnt and 0.977 mnt in FY15.

Source: Steel 360

INDUSTRY BUZZ

ArcelorMittal, Sail to Go Ahead with Steel JV

Luxembourg-based ArcelorMittal SA and state-owned Steel Authority of India Ltd. (SAIL) on Tuesday discussed the contours of setting up a \$1 billion joint venture factory for high-end automotive steel plant in India, the companies said in a joint statement after their meeting. The companies had last year reached an understanding for studying the feasibility of making auto-grade steel in India. The proposed factory for high end steel products aimed at India's rapidly growing automotive sector will get raw materials from SAIL's hot strip mill in Rourkela, Odisha. "India is forecast to become the world's third largest automobile manufacturing nation by 2026, with passenger vehicles likely to grow from approximately three million units today to over seven million units in the next 10 years," said the statement. It added that automobile producers have been establishing increased presence in India, offering a huge potential for the joint venture.

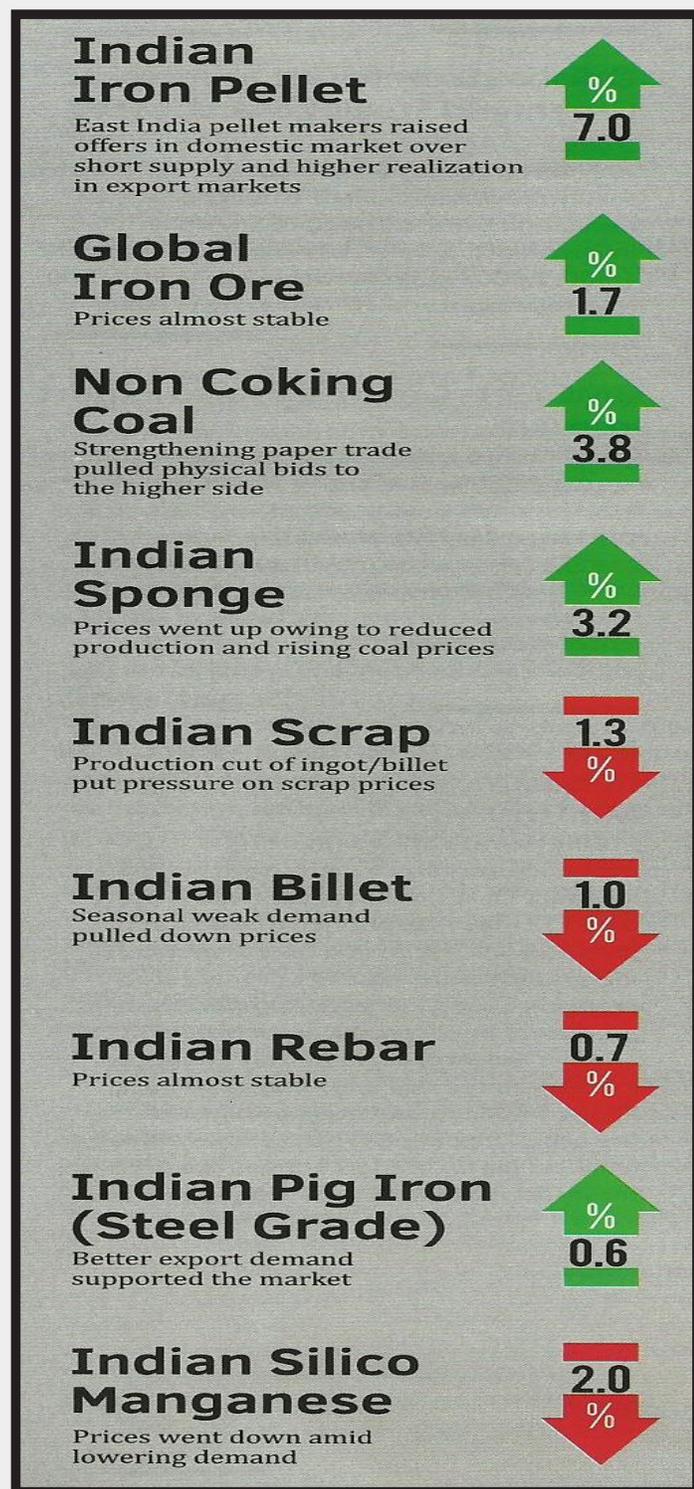
Chhattisgarh Government Reduces Power Tariff for State Based Steel companies

Chhattisgarh government on 10 Aug'16 announced a relief package of INR 3.55 crore for state based steel companies, in which the government reduced power charges by INR 1.40/unit (including VCA charges). The revised power tariff is applicable from 1 Aug'16 and will be INR 5.16/unit. Earlier, it was INR 6.19/MT for the state based steel manufacturers. In the recent notification, power tariff reduced by INR 1.03/unit and VCA charges by INR 0.37/unit applicable from 1 Aug'16 and differed till Mar'17.

CIL Plans Increasing Coking Coal Production by 33% by FY20

In a latest development, CIL revealed its plan to increase production of coking coal by around 33%, or to 71.77 mnt, by FY20, aimed at lowering

imports into the country. In FY16, production of coking coal was at 53.8 mnt in India. Due to the inadequate domestic supply of the coal variant, imports are depended upon to meet the demand. Australia is the most preferred region of import among the Indian buyers.



NMDC can Adopt Differential Pricing Policy for Iron Ore: SC

On 24 Feb '16, KISMA requested the SC to intervene into the matter for uniform pricing policy by NMDC, via letter to the PMO. The SC allowed NMDC to adopt differential pricing policy for iron ore in the hearing held on 1 Sept '16. According to reports, SC rejected the plea from KISMA seeking to fix the base price for NMDC ore to be e-auctioned in the state. This means NMDC can continue charging differential prices of iron ore in Karnataka and the rest of the country. It fixes a higher base price in Karnataka than in Chhattisgarh.

Odisha Government Recommends Centre to Remove Iron Ore Export Duty

With a view that removal of high-grade iron ore export duty will help to clear stock-piles of high-grade iron ore in states of Odisha and Jharkhand, Odisha government has recommended the mines ministry to abolish the iron ore export duty on high-grade iron ore which currently at 30%. In conversation with SteelMint, Mr. Deepak Mohanty (Director of Mines, Odisha) shared "We had approached the mines ministry to remove 30% export duty on export of high grade ore from state so as to boost exports. However we are yet to receive any further update on the same from the ministry."

Odisha Likely to Get 10 MT Greenfield Steel Project by JSW Steel

JSW Steel recently announced its intentions to set up a new steel plant at 10 mnt per annum capacity in Odisha. The company's plan involves setting up of slurry pipeline worth INR 1,500-2,000/mt, coal processing facility, a 500 MW solar plant and a thermal power plant.

OMC Gets Green Signal to Export Iron Ore

On 08 Aug '16, the State Cabinet allowed state-run miner OMC, to export iron ore in order to help the miner to clear recent stockpiles and meet its revised ore production target for the year. The state government has also asked OMC to enhance iron ore production for the year. The company has set a target of about 8.64 mnt of ore in 2016-17. By July end, the company produced around 2.45 iron ore.

Steel Demand in India to Outpace Regional Average: Moody's

Steel demand in India will outpace the regional average while profitability of domestic steel companies will outperform regional peers on account of increase in domestic demand, said Moody's. "In particular, steel demand in India will outpace the regional average as the country's GDP growth of around 7.5 percent in 2016 and 2017 based on Moody's forecast, remains among the highest in Asia," Moody's Investors Services said in a report.

Tata Begin Ferrosshots Exports

Tata Ferrosshots, Granulated Pig Iron, is a new product that was launched by Tata Steel, from its new steel plant at Kalinganagar in the month of March 2016. The first export consignment was flagged off by Mr. Rajiv Kumar, VP-O (Kalinganagar), Jajpur (Odisha) to a South East Asian Country, on 23 Aug'16. Tata Ferrosshots is granulated Pig Iron solidified by cooling in water. The end use of Tata Ferrosshots is in electric arc furnaces, induction furnaces, cupolas, basic oxygen furnaces and foundries as a replacement of pig iron, scrap or DRI.

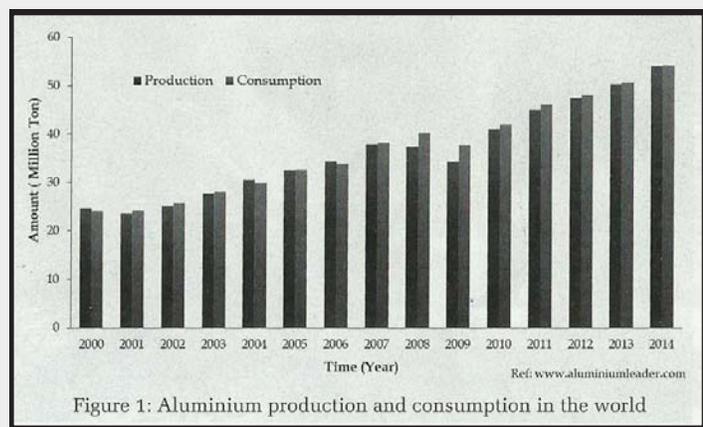


Figure 1: Aluminium production and consumption in the world

Too Much Coal, Too Few Takers: Government Revokes Coal India's 1 bnt Target

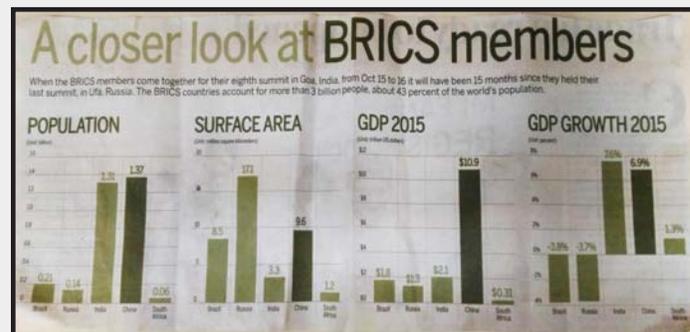
The government's plan to push Coal India to produce one billion tonnes of coal by 2020 has taken a back seat as officials now think that the Indian economy is not yet equipped to consume the quantity and huge unsold stocks are testimony to it. Now the company has been asked to produce to match demand. This is likely to mean that Coal India will have to be content with producing less than the initial targets set for each year leading to less than one billion tonnes of production by 2020. In 2015, when the one billion tonne target was set, coal was in short supply and a number of coal

fired power plants were languishing due to non-availability of the fossil fuel, prompting the scaled up target. The government jacked up production targets for each years starting 2015-16 to reach one billion tonnes by 2020.

Source: Steel 360

ENERGY CHALLENGE IN THE ALUMINIUM INDUSTRY

Aluminium is one of the most abundant metals in the earth's crust in the form of its natural ore, bauxite. The latter is refined to alumina, which is then smelted into aluminium. Approximately four kg of bauxite is refined to two kg of alumina, which in turn yields one kg of the metal. Aluminium is one of the most widely used metals in transport, construction, packaging and electrical sectors due to several desirable characteristics – light, strong, durable, flexible, impermeable, thermally and electrically conductive and non-corrosive. Its light weight helps in improving the fuel economy of cars and planes and reduces emissions. When those vehicles are eventually scrapped, 95 percent of the aluminium can be recycled. Recycling aluminium uses around 5 percent of the greenhouse gas emissions of the average primary aluminium production rate.



The future of the aluminium industry concentrates on the high energy usage associated with aluminium production. CSIRO calculate, that the embodied energy (all the energy used to make the material) for aluminium is 211 GJ per tonne, compared to 22.7 GJ per tonne for steel. This huge difference in overall energy required to produce the metal helps explain the enormous difference in the scales of the two industries: In 2015, nearly 1600 million tonne of steel were made in the world compared to nearly 58 million tonne of aluminium. India's aluminium production is about

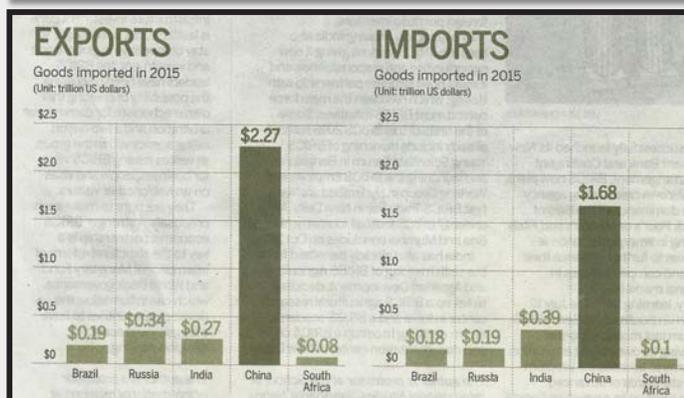
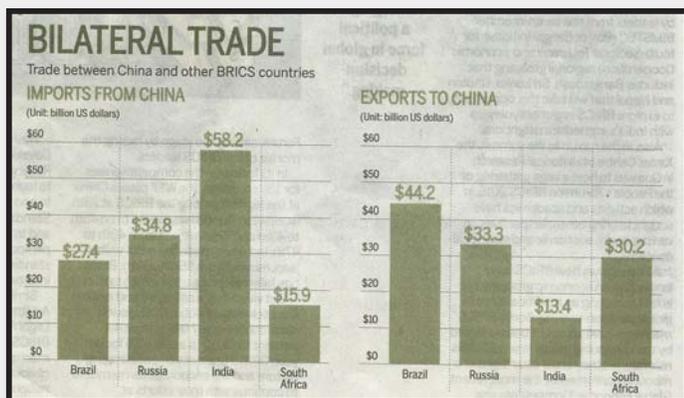
2 million tonne due to the start of new greenfield/brownfield projects. Over the years, demand for aluminium has been continuously growing and to meet the pace primary aluminium production is also growing (Figure 1) the primary aluminium production processes are energy intensive by nature, with energy cost contributing to around 30 to 40% of total cost of production. The main source of energy consumption during production is the electricity used for the electrolysis process. This poses a significant challenge for this process to remain sustainable and enforces continuous focus on energy reduction. To produce cost effective aluminium the energy efficiency has to be improved. As energy costs are a major part of overall production costs, improved energy efficiency is essential for the aluminium industry, both from an economic and environment point of view. Primary aluminium production results in indirect emissions from the production of electricity used in the electrolysis process as well as direct greenhouse gas emissions from process-related conditions in electrolysis, such as consumption of anodes (CO₂) and PFC (PerFluoroCarbon) emissions from anode effects. Steps towards improving the energy efficiency will also reduce direct as well as indirect emissions, thus reducing the carbon footprint of primary aluminium.

Energy cost and aluminium price (LME) are the key driver for future research development. The economic scenario of higher LME in the past, has led to the development of high amperage cells, however ever increasing energy prices have shifted the focus towards the development of energy efficient cells. Worldwide, the present focus of aluminium industry is to improve the profit margin by developing innovative solutions for reducing energy consumption. The best report specific energy consumption of an Indian smelters are nearly 14000 AC kWh/tonne compared to worldwide benchmark of below 13000 AC kWh/tonne.

Most of the energy reduction solutions would require innovation in cell design and materials along with operational excellence. The significant portion of voltage drop take place in the inter-electrode region of cell, which could be reduced by improving the cell operational stability through optimization of busbar configuration and by innovative cathode designs. Further voltage reduction could be realized through improvement in design and material of electrodes assemblies. For step reduction in energy consumption, some innovative concepts need to be developed such as drained cathode cell, inert anode and vertical electrode cell as well as low temperature cell operation. However, these may require significant R&D efforts as well as long term commitment from the industry.

Aluminium metal due to its light weighting and high recyclability potential has a low life cycle cost. However, energy consumption for primary aluminium manufacturing is considerably high accounting for 30-40% of production cost. While anticipating encouraging economic conditions and policy decisions from the government, industry realizes the need for a concerted effort with a long term view to address energy challenges in aluminium smelting.

In this regard, International Bauxite, Alumina & Aluminium Society (IBAAS), The Indian Institute of Metals (IIM), JNARDDC and IBAAS,



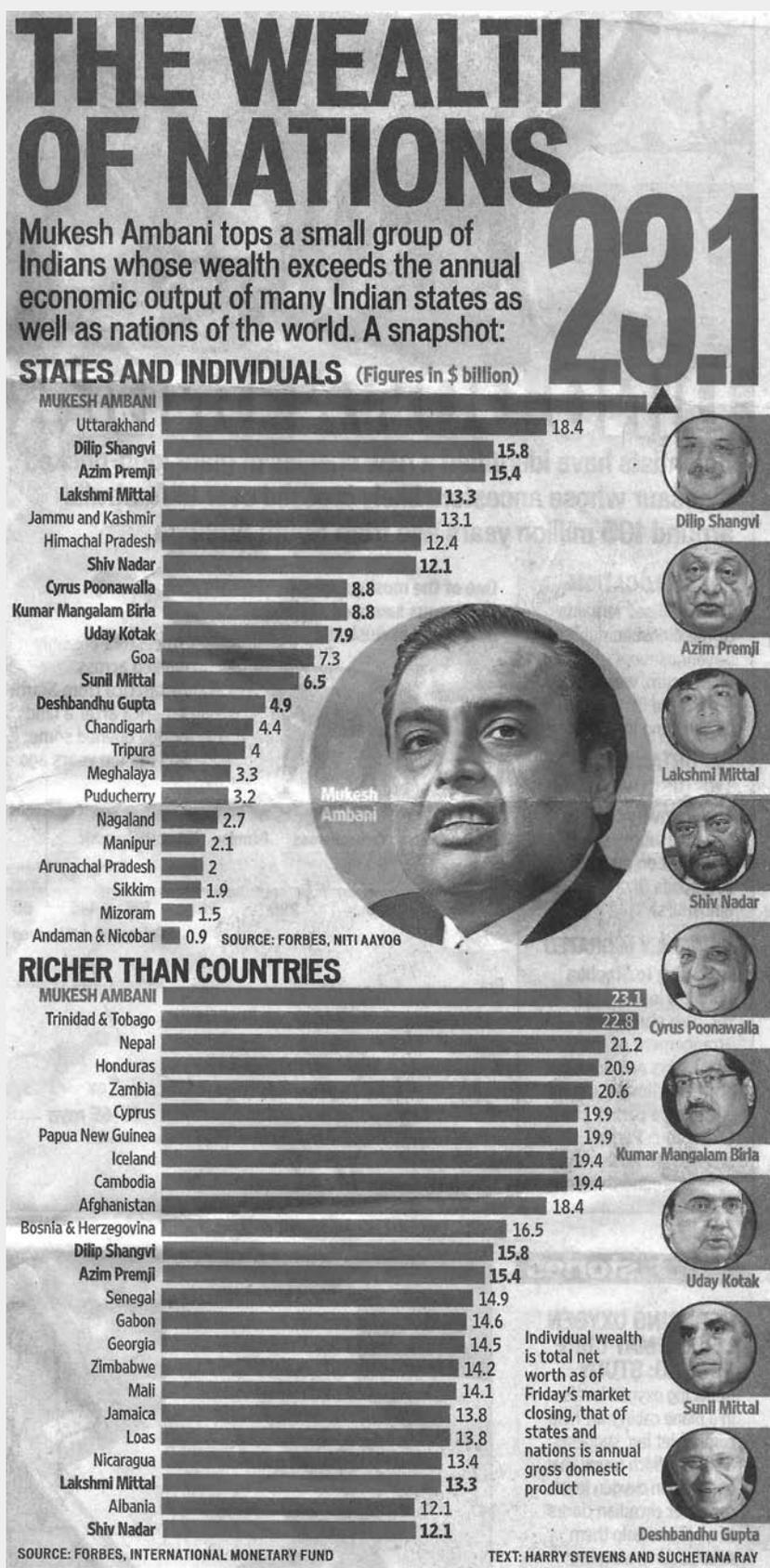
in participation with the three Indian primary aluminium manufacturers – HINDALCO, Vedanta and NALCO, is organizing a special symposium. The symposium on “Energy Reduction in Aluminium Smelting” organized in close participation of industry, academia, research laboratories and professional associations with the following key objectives:

- Share knowledge and deliberate on worldwide initiatives on reduction in specific energy consumption in Al-smelting & evaluate the path forward for Indian industries.
- Create a forum of experts from industry, academia & research laboratories from both India and overseas along with government bodies.
- Set-up collaboration framework including working groups between industry, academia & research institutions to address the industry challenges through exchange, training and R&D/Technology programs.

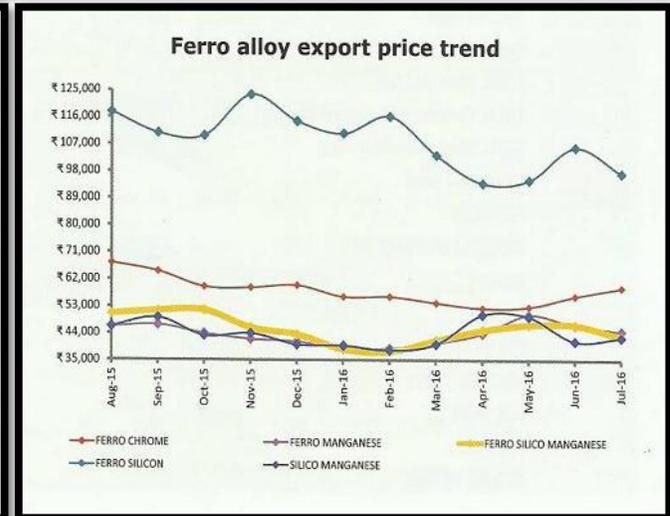
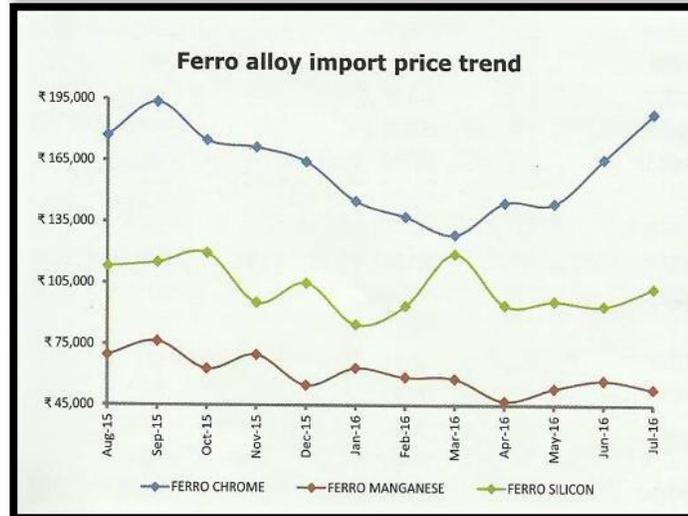
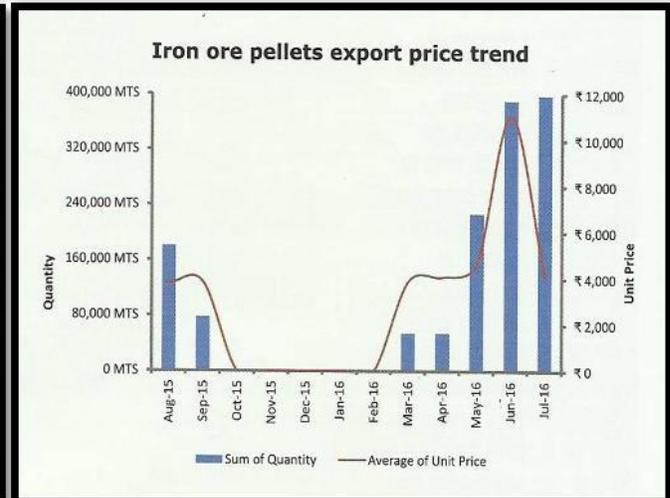
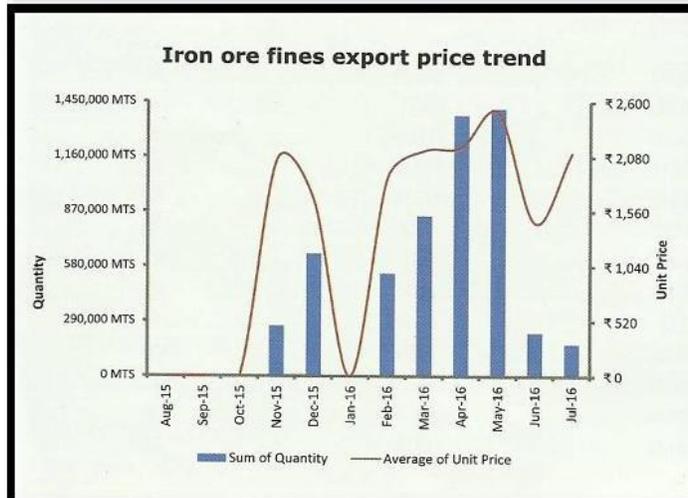
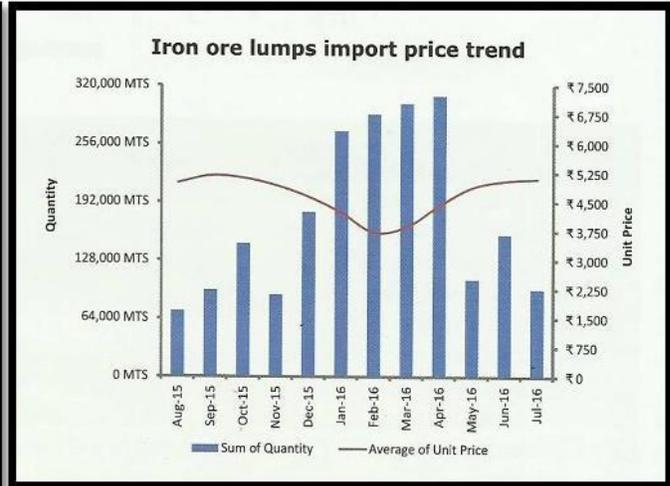
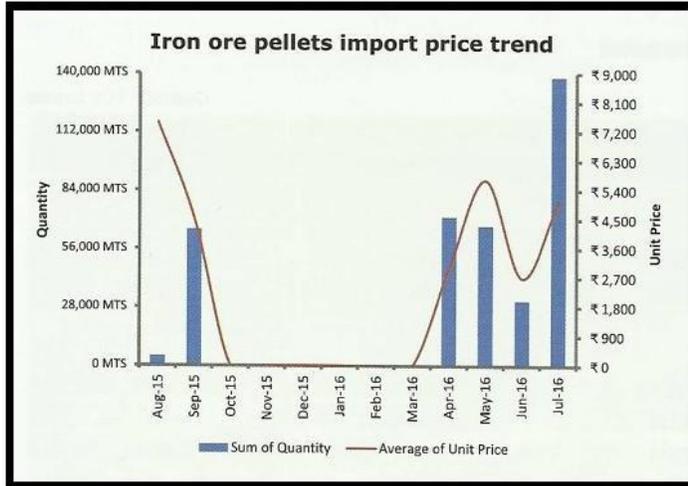
The event will be held during 26-28 September, 2016 at Hotel Radisson Blu, Goa,

Symposium will have special talks by Prof Halver Kvande, Al-smelting & carbon technology providers – Rio Tinto Alcan, GAMI, SGL Carbon, etc. and by experts from Indian Aluminium Industries – HINDALCO, Vedanta and Nalco.

Source: MMR



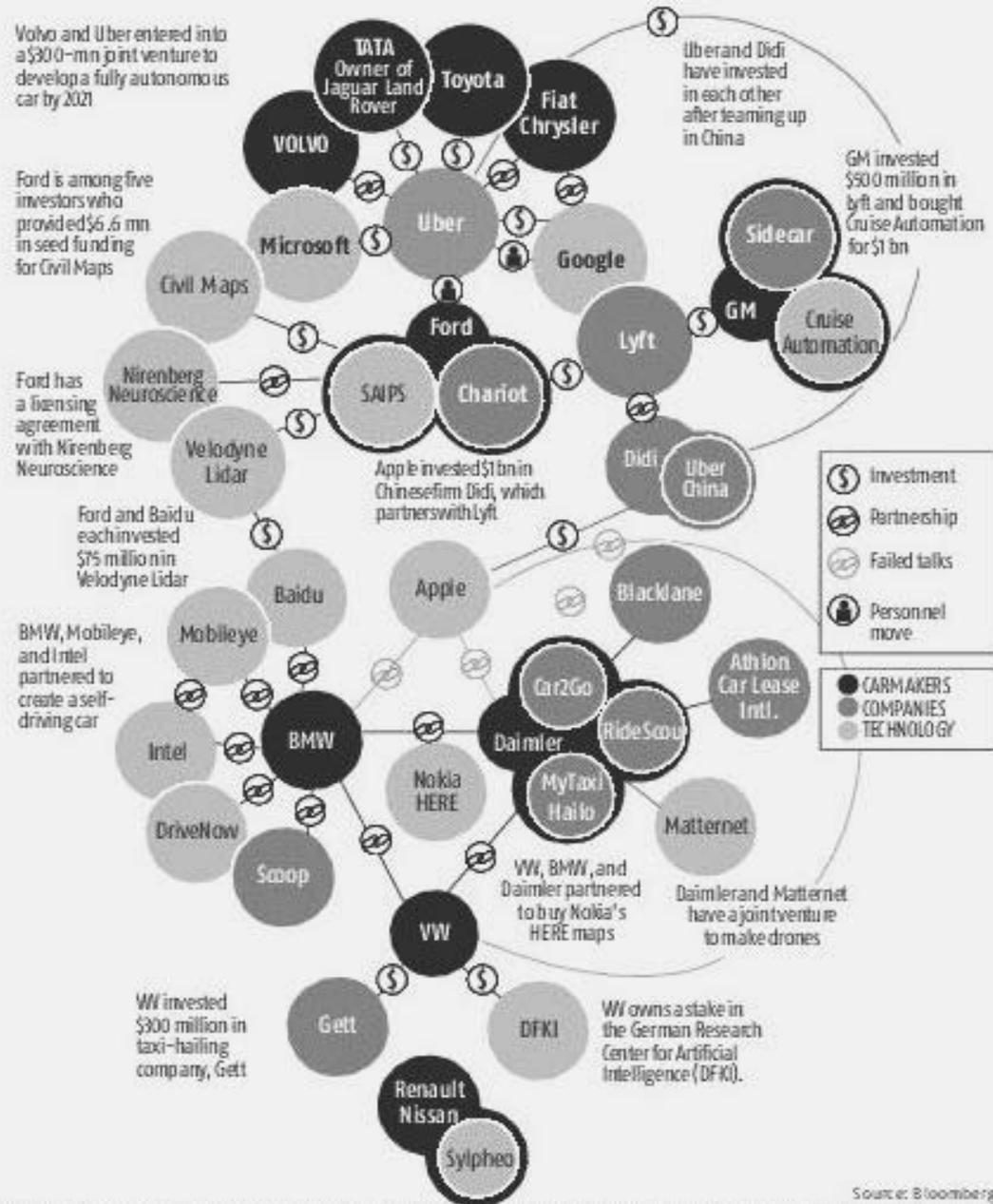
IRON ORE & FERRO ALLOY IMPORT-EXPORT TREND



Source: Steel Insights

THE MERGING WORLDS OF TECHNOLOGY AND CARS

The line between technology and automotive industries is blurring. The rise of rideshare companies such as Uber and Lyft means that transportation is being tied ever more closely to your cell phone, while autonomous driving technology is turning your car into a computer. But these developments are expensive: Carmakers' R&D budgets jumped 61 per cent to \$137 billion from 2010 to 2014. To share some of the risk and the cost the incumbent automotive giants and their would-be disruptors are teaming up in an ever-growing, ever more complex series of alliances. Here is a look at how the merging worlds of cars and technology is creating a new arena for world market:



Source: Bloomberg



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