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DELHI CHAPTER – A NEW AMBIENCE

The Delhi Chapter of IIM is among the most active Chapters of IIM. With the co-operation of the Members, the Chapter has grown from strength to strength. It is the first Chapter of IIM to have a building of its own. Over the last few years, a number of steps have been taken to upgrade the facilities and face lifting of our Chapter, namely:

- Construction of Auditorium with audio-visual facilities with excellent acoustics, with a seating capacity of 120.
- Upgradation of Library with Wi-Fi and having stock of good technical books and transactions
- Face-lifting of wash rooms in all the three floors
- Installation of CCTV cameras and LED lights
- Installation of Lift
- 10KW Solar panel plant on the roof top

The latest in the series are:

- Installation of Float glass and Aluminium Composite Panel (ACP) on the exterior of the building
- Replacement of two entry wooden doors with glass doors

The creation of these facilities has provided an aesthetic look to our Delhi Chapter building. Particular mention may be made about the installation of solar panel which has not only reduced our electricity bill but has also helped in edging towards it being a green building. The cumulative electricity generation through solar panel for 2017-18 was about 14000 units. This has reduced our electricity bills by about Rs. 1.2 lakh during the year.

I would like to place on record my sincere appreciation of Shri R N Parbat, Chairman of the Advisory Committee of Past Presidents of IIM and Life Time Achievement Award Winner who has been a guiding force to our Chapter and has been making valuable suggestions from time to time and has been an inspirational force for our Chapter to bring about improvements in infrastructure and aesthetic look of our building.

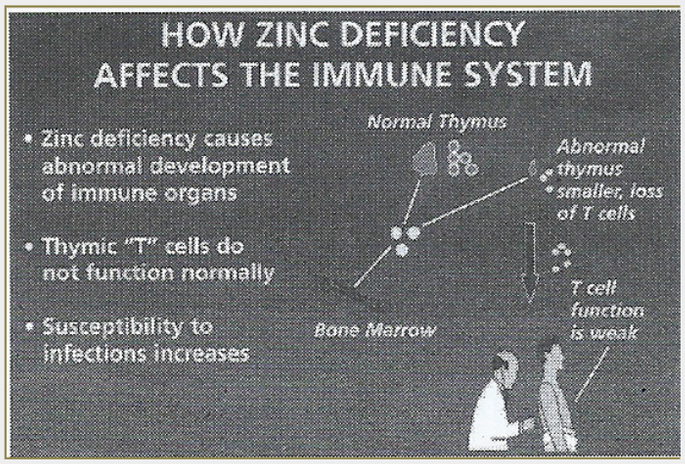
Needless to say that all this would not have been possible without the whole-hearted cooperation of the EC members who served our Chapters for the last few years. Further, I would like to place on record the contribution of Shri K K Mehrotra, Shri N K Kakkar and Shri R K Vijayavergia in accomplishment of the work relating to installation of float-glass and ACP.

Let's Go Green So As To Breathe Clean

ZINC &IT'S CRITICAL ROLE IN HUMAN HEALTH

L. Pugazhenthy
Executive Director
India Lead Zinc Development Association &
Past President, The Indian Institute of Metals

Zinc is an essential element for good health in individuals. Moreover, it is the mineral in which people are most likely to be deficient. Trace elements are found in body in minute quantities, without them none of the boy's vital chemical



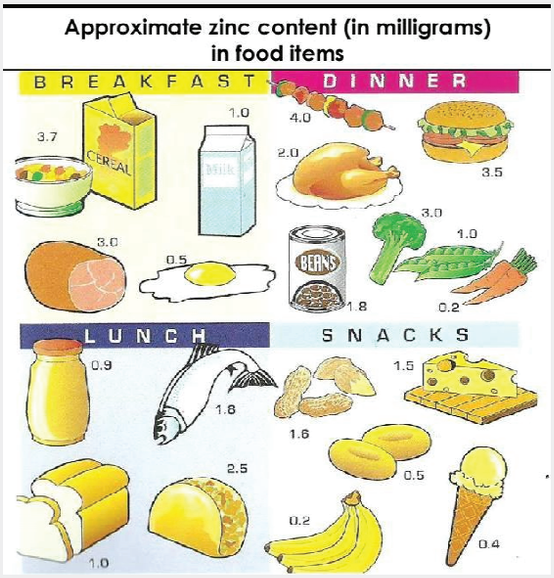
reactions could take place. The trace element zinc helps to form the enzymes that enable proteins to become the 'building blocks' of new cells. Deficiency can lead to various syndromes with immune disorders, disturbances of liver, disturbances in sexual development, disturb wound healing and cause skin diseases. Zinc is, therefore , essential for growth, sexual development and good heal and also helps to decrease susceptibility to infection and promotes wound healing. Zinc has been shown to have beneficial effects on muscle strength and endurance and in raising the threshold of fatigue.

Dermatologists in Sweden have successfully treated skin ailments with zinc supplements. In some instances, people who suffered from severe acne, and who had found that no other treatment had helped, noticed that after taking a special preparation of zinc sulphate their skin condition had improved within 4 weeks and continues to get better.

Table 1 : Zinc - Recommended Daily Intake

	(mg/day)	
Infants	(0 - 1 yr)	5
Children	(1 - 10 yrs)	10
Men	11 - 51 +)	15
Women	(11 - 51 +)	12
Pregnant		15
Lactating	(1st 6 months)	19
	(2nd 6 months)	16

Owing to the increased public concern about heavy metal such as lead and cadmium, commonly found in the atmosphere of most industrial and inter-city areas, scientists are now showing a greater interest in the trace element zinc which can help the body not to absorb these metals. Atomic absorption spectrometry is the preferred method for determining zinc and gives values with good reproducibility.



The average adult human (body weight of 70kg) contains between 1.4 and 2.30 g of zinc, as compared with 4.2-6.1 g of iron and 81-230 mg of copper. Zinc deficiency may result from a

number of factors, the most obvious one being an inadequate diet. Even in Western countries, food stuffs may often contain only small amounts of zinc. The World Health Organization has recommended a daily intake of 15 mg of zinc for the average individual person. Without this intake, the body will contain insufficient zinc. Intake is via food, water and air. Its absorption is equal when taken as oxide, carbonate, sulphate or metal, but as sulphide and as mixed Fe-Zn-Mn oxide it is excreted practically unaltered.

Low levels of zinc have been found in patients with heart disease, liver disease, some cancers, ulcer and in women who are pregnant, breast-feeding or taking oral contraceptives. Zinc appears to play an important role in regulating hormonal changes in the body that relate to many of the side effects experienced by woman on the contraceptive pill, and during premenstrual and menopausal problems, eg., depressions, brittle fingernails and thinning hair.

Table 2 : Foods rich in digestible Zinc

	(mg/100g)
Milk, Yoghurt	0.4
Cheese	2 - 4
Milk Powder	4
Eggs	1.35
Shrimps	2
Beef	4
Liver	6 - 8
Oysters	> 7

An intake of 15mg/ day of zinc in suitable form is recommended for adults, with an additional 15mg/ day during pregnancy and 19mg /day during lactation (6 months). Benefits attributed to zinc supplements have included such diverse items as reduced body odour, less acne and some relief of persons suffering from chronic prostrate inflammation.

Infertility and impotence together with a lack of sex drive have also been attributed to low levels of zinc, as have a loss of the sense of taste and smell, lack of growth, night blindness, impaired wound healing, skin disorder and diarrhea.

Modern refined food contains much less zinc than food in the old days and several nutritionists believe that a' normal diet' is not necessarily a healthy diet. For most people, a high-zinc diet would require a considerable adaption of their normal food intake and people may not wish to eat too much non-vegetarian because they are trying to cut down on animal fats. While vegetable-based diets may contain as much as zinc as those based on meat, prohibitively large amounts would need to be eaten in order to overcome the problem of absorption. The intake from water is limited even if it contains 5mg/ litre. A human being drinks approx 1.5L of liquid per day and there is a further intake of 1.5L of water content of foodstuffs, water of oxidation as a metabolic product etc., According to the recommended value, for 1.5L of fluid drunk, intake would only be around 7.5mg zinc, while coffee, tea and alcohol can inhibit the body's absorption of zinc.

A suitable alternative may be zinc supplements, although everybody should be careful to check the amount of zinc contained in these preparations. For example, most multivitamins say that they contain zinc, but usually the quantity is very small and under certain circumstances is bound with other substances that prevent much of the zinc being absorbed by the body.

Anyone who feels that he or she could be suffering from zinc deficiency or could benefit from taking zinc supplements should consult either a doctor or a local pharmacist, as formulations containing more zinc are available.

Compared with normal zinc needs, increased amounts may be needed during periods of rapid growth, such as embryonic life, pregnancy etc., Indeed, some scientists indicate that there is much more sense in giving zinc supplements to pregnant woman instead of iron. Other groups who may be short of zinc intake are old people or those on a restricted food budget, athletes (zinc is lost through excessive sweating), alcohols and families who rely on convenience foods.

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TATA STEEL EUROPE-THYSSENKRUPP JV WILL HAVE 400-600 MILLION EUROS ANNUAL SYNERGY: TATA STEEL MD & CEO TV NARENDRAN

Tata Steel's India business has achieved highest-ever annual sales of 12.13 million tonne (MT) in the financial year ending March 2018-- a growth of 11 per cent compared to the previous year. It recorded the best-ever annual sales in the automotive sector, registering a growth of 21 per cent as against an industry growth of 14 per cent in this period. Tata Steel's global CEO and Managing Director, T. V. Narendrantold Business Today's Nevin John in an email interview recently that the company will complete the Kalinganagar Phase II expansion of 5 million tonne (MT) within 48 months from the board approval date with an investment of Rs 23,500 crore.

Q: Steel prices are improving and demand too picking up and Tata Steel Group is sorting out its issues in Europe and is going for a JV with Thyssenkrupp. How these major factors will influence the performance of the company?

A: Globally, the steel industry is in a better situation than it was a couple of years back. China has taken supply side action which has reduced its exports, and the demand in both developing and developed countries is picking up which is reflected in better prices and more price stability. Tata Steel is well positioned to leverage the opportunities this creates. In Europe, through the JV, we are trying to create a stronger and more sustainable company, and in India, we are capitalising on opportunities for organic and inorganic growth.

Q: In India, the large steelmakers are creating new capacities or buying assets, expecting a supply deficit by 2021. What is your long-term view on the Indian market, capacity creation and the margins?

A: The consumption of steel in India is expected to at least mirror the GDP growth rate, if not do better than that in the medium to long term. This is because of the infrastructure deficit we have and the Government's plans to address this infrastructure deficit. Also, the increasing investments in the Indian market, the 'Make in India' initiative, the urbanisation trends and a growing middle class are also positives for steel demand. I believe that in India demand will outpace supply over the next few years and that should help the industry improve its margins which will in turn attract new investments in the industry.

Q: Now, the global giants like ArcelorMittal are vying for sick assets for an entry into the Indian market. Will it be a challenge to Tata Steel, at least on client acquisition and pricing fronts?

A: I think the Indian market has room for many strong players. It will be good for our Industry as it will help us push each other to perform better, and it is good for the customers, and it is certainly good for the economy as it will lead to more investments and jobs.

Q: What are your greenfield expansion plans and how much investment will be done to complete it?

A: The Board has recently approved the Kalinganagar Phase II expansion which will take the plant to a capacity of 8 MT from the current level of 3 MT. This will entail an expenditure of Rs 23,500 crore and we have promised to complete it in 48 months from the Board approval date.

Q: Tata Steel India is better positioned in the case of raw material security -- iron ore 100 per cent and coal 30 per cent. Will there be any change when you add capacity in Kalinganagar? If so, how will you manage it?

A: On iron ore, we will continue to invest to grow our production and feed our plants. For coal, we have limitations and will strive to stay at 30 per cent of our needs through our investments in our West Bokaro coal mines. We will also continue to participate in auctions wherever we find the blocks attractive to sustain our requirements over the long term.

Q: What are going to be the short-term and medium-term challenges for the Indian steel business?

A: In the short term, the profitability of the

industry has to improve so that we can attract more investments in the industry to cater to the long-term needs of the country. We also need good quality capital equipment manufacturing facilities in India to reduce the dependence on imports. We need to attract and retain the right talent. We also need to ensure the long-term competitiveness of the Industry. The industry players have to improve the internal efficiencies and the government needs to help us reduce our costs outside the factory gates.

Q: Who will get the management control in the European JV that you are planning with Germany's Thyssenkrupp? Will it be like Tata Steel just holding a stake in Europe business and not involving in day-to-day business?

A: As announced earlier, it will be a 50:50 JV and the management structures and operating structures are currently under discussion. Both Thyssen and us are committed to create a strong European entity with a 'one company' structure.

Q: What is your long-term view of the European business? What is your expectation on turnaround of business in Europe?

A: The European business struggled because the market for steel in Europe collapsed post 2008 and it has been the last of the major markets to recover. Even today, steel consumption is not much different from what it was 10 years back. However, we have taken a number of tough calls over the years and our colleagues in Europe have also worked hard to drive greater efficiencies and develop a richer product mix and a stronger market position. Since last year, we are also seeing a certain robustness for steel demand that we have not seen for a long time. The JV will help us create a strong number 2 player in Europe and we have identified 400 to 600 million Euros per year of synergies for the combined entity. We are confident that we are moving in the right direction and are creating a strong and sustainable European business that is well positioned to capitalise on a recovering European market.

Source: Business Today

IT WILL BE VERY HARD TO PUSH JSW STEEL TO NUMBER TWO: SAJJAN JINDAL

Sajjan Jindal, chairman of the $12-billion JSW Group, talks to PavanLall on how he sees JSW Steel's future and the possibility of his company not being the number one steelmaker and why he simply refuses to go in for acquisitions at any price in the ongoing bankruptcy proceedings.

- JSW Steel will lose its position as India's largest steel maker after the Tatas win the bid for Bhushan Steel, one of the biggest assets in the bankruptcy process. Your comment.

  We have never worked on the proposition that we want to be number one, number two or number three. For us the driving factor has been growth, maintaining the integrity of our balance sheet, meeting demand, and international exports. Steel is a global game and every facility of ours is on that scale. So, Vijaynagar is a 12 million tonne per annum (mtpa) plant, while Dolvi, which is at 5 mtpa plant, will soon go to 10 mtpa.

- So you're not bothered if JSW Steel becomes number two after the auctions are over?

  It certainly doesn't bother me if we are number two but we won't be number two because we will become number one again. It is an interesting battle that we have stayed on top of, and it's exciting because it keeps us on our toes, and that's good. Tata has the desire to grab top slot and to think that they can buy companies...that may be one way of looking at it, but there's so much more that has to also play out. Integration, execution and so on…

- Where do you draw the line when it comes to making acquisitions in pursuit of growth?

  You can't make acquisitions at any price because ultimately you have to also make the money to pay back the loans. That's why we haven't succeeded in most acquisitions, which is fine. We bid aggressively but others bid even more aggressively than us, which again is okay. So, if we can build capacity

at 'X' price then I can go bid at 2X but not at 3X. We have a prudent financially driven decision-making process and won't let our balance sheet get affected.

- Did you imagine the bidding processes around the bankruptcy auctions would play out as they have?

  I never thought the Insolvency and Bankruptcy Code (IBC) would become so complex but when there are technical legalities and lawyers are involved. They always end up becoming more complex than perhaps what they need to be. However, to be fair, these are new laws and it's early days, and things are being figured out. I feel it will all settle down.

- How bullish are you about the business environment in reference to the steel industry for your company?

  If you look at steel, we are consuming close to 95 mtpa in India. By contrast, China is consuming 700 mtpa. Then if you look at cement, we are at around 300 mpta and China is somewhere at 2.5 billion mtpa. Fine, we may not be at those levels but to get to some percentage of it is reasonable — at least 40 per cent of those levels in a few years from now. In this country, I always believe that we have to provide the supply and the demand will come, and not the other way around where you go in with market surveys and all that.

- The word is that of late you're much more vocal about competition, the economy and business views in general?

  Well that's only because I now have a Twitter handle and can communicate in a public way, which I couldn't earlier. So, for example, I had said attempts to declassify promoters as non-defaulting are making a mockery of the bidding system and are totally wrong, which I maintain.

Source: Business Standard

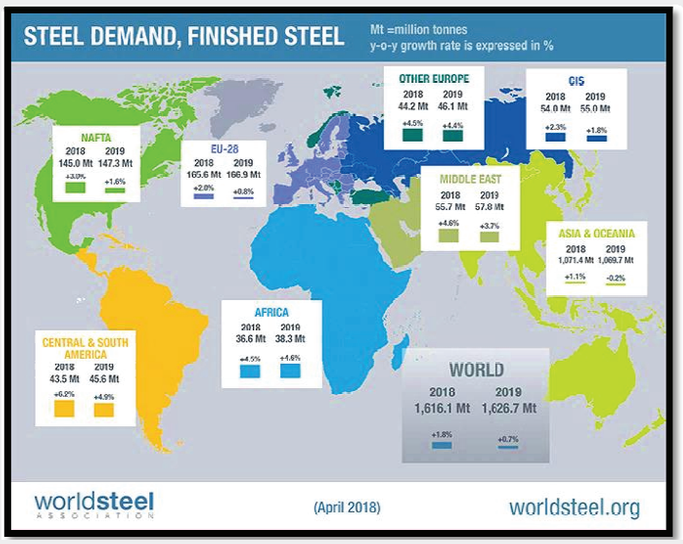
WORLDSTEEL SHORT RANGE OUTLOOK APRIL 2018

Global steel demand continues its broad recovery

The World Steel Association (worldsteel) released its April 2018 Short Range Outlook (SRO) a few days back. Worldsteel forecasts global steel demand will reach 1,616.1 Mt in 2018, an increase of 1.8% over 2017. In 2019, it is forecast that global steel demand will grow by 0.7% to reach 1,626.7 Mt.

Commenting on the outlook, Mr T.V. Narendran, Chairman of the worldsteel Economics Committee said, "In the next couple of years the global economic situation is expected to remain favourable with high confidence and strengthening recovery of investment levels in advanced economies. Benefitting from this, steel demand in both developed and developing economies is expected to show sustained growth momentum with risks relatively limited. However, possible adverse impact from rising trade tensions and the probable US and EU interest rate movements could erode this current momentum."

Steel demand benefitting from favourable global economic momentum, but facing risks from rising global trade tensions



Upside and downside risks to this forecast are mostly balanced. In 2018, high confidence, strong investment levels and a recovery in

commodity prices are generating a virtuous cycle for steel demand globally both in developed and developing economies. The slight deceleration in 2019 will be due to further deceleration in China and weakened investment momentum due to higher interest rates.

On the downside, possible escalation of trade tensions, rising inflationary pressure and tightening of US and EU monetary policies may cause financial market volatilities and trouble highly indebted emerging economies.

China will return to deceleration trend

In 2017, the mild government stimulus measures provided some boost to construction activity, but investment continued to decelerate and steel demand showed only a moderate increase despite the stimulus.In 2018 and 2019 GDP growth is expected to decelerate mildly, but as the government continues to focus on shifting the growth driver toward consumption, investment is likely to further decelerate. Steel demand in 2018 is expected to stay flat. In 2019, it is expected to contract by 2.0% with a further slowdown in construction activity. In manufacturing, the machinery sector is expected to maintain positive growth on the back of a strong global economy while automotive and home appliances are expected to decelerate.High corporate and local government debt continues to raise concern but a hard landing for the Chinese economy is unlikely in the short run.

Developed economies' outlook remains robust

Steel demand in the developed world is expected to increase by 1.8% in 2018 and decelerate to 1.1% in 2019.The outlook for steel demand in the US remains robust on the back of the strong economic fundamentals – strong consumption and investment due to high confidence, rising income and low interest rates. The manufacturing sector is being supported by a low dollar and increasing investment while rising housing prices and steady non-residential sector growth point to a healthy construction sector. Though the recent tax reform is further expected to boost steel demand through its positive impact on investment, there is some concern over a possible overheating of the economy. The announced infrastructure plan is unlikely to affect steel demand in the short term.The EU economy has developed strong momentum with broadening recovery across countries. Prompted by robust domestic and external demand, investments are expected to remain a major growth driver while low inflation, wage and real income growth will support private consumption. Steel demand will be supported by a pickup in non-residential construction and strong manufacturing activities.

The automotive sector in both the EU and the US is expected to moderate due to saturation effect and rising interest rates, while the machinery sector is expected to benefit from rising investment. An expected monetary tightening in the US and the EU is responsible for the forecasted deceleration of steel demand growth in 2019.Steel demand in Japan has been benefitting from an improving investment sentiment and government stimulus, but the scope of growth will continue to be limited by structural factors such as an aging population. Despite improved consumer sentiment, steel demand growth in South Korea will be constrained by high consumer debts, weakening construction and a depressed shipbuilding sector.

Developing economies ride the recovery momentum, yet to gain further strength

Steel demand in emerging and developing economies (excl. China) is expected to increase by 4.9% and 4.5% in 2018 and 2019 respectively. Recovery in oil and commodity prices has improved the outlook for MENA countries. Provided geopolitical stability can be achieved, steel demand outlook for the region could further improve as a result of reconstruction activities. The mild recovery in Russia and Brazil is expected to continue. Recovery in Russia will be supported by credit expansion, easing monetary policy and improving consumer and business confidence. In early 2017 Brazil started to come out of its deep recession, but uncertainty remains as to the sustainability of this recovery momentum. Furthermore, recovery of construction activities has been slow. In other Latin American countries, recovery is also underway and growth in the region could


ART GALLERY

accelerate if reforms are implemented, but the forthcoming elections lead to uncertainty.

Turkish steel demand showed strength in 2017, backed by supportive government measures. While slightly decelerating due to subsiding special economic stimulus, steel demand in Turkey is expected to show stable growth in 2018/19.The Indian economy is stabilising from the impact of currency reform and GST implementation and steel demand is expected to accelerate gradually, mainly driven by public investment. Stronger growth is held back by still weak private investment.Steel demand in ASEAN-5 countries dipped in 2017 due to slow construction activity and destocking. In 2018/19 however, steel demand is expected to regain the growth momentum backed by infrastructure investment.

Source: www.worldsteel.org

TECHNICAL TALKS ON "LIGHTWEIGHT & SMART MATERIALS TO REDUCE FUEL CONSUMPTION IN CARS, TRUCKS, RAILWAYS & 2-WHEELERS" AND "TECHNOLOGY TRANSFER IN DEFENCE SECTOR"

Two technical talks on "Lightweight & Smart materials to reduce Fuel Consumption in Cars, Trucks, Railways & 2-Wheelers"and "Technology Transfer in Defence Sector"were organised at Delhi Chapter on 10 Feb.2018.

At the outset Shri K L Mehrotra, Chairman IIM Delhi Chapter welcomed the Speakers – Prof. Pradeep K Rohatgi, Distinguished Professor & Director - Centre for Composites & Advanced Materials, University of Wisconsin, Milwaukee USA;Maj.Gen. (retd.) R C Suri formerly in Corps of Electrical & Mechanical Engineers, Indian Army and others present in the gathering. He gave brief details about the activities of Indian Institute of Metals and its Delhi Chapter.

First he introduced the speaker, Prof. Pradeep K Rohatgi and the floor was handed over to Prof. Rohatgi for his presentation.

Prof. Pradeep K Rohatgi, during his detailed presentation focussed on global trend in continuous reduction of weight of Vehicles, owing to emphasis on CO2 reduction and Fuel Efficiency. This has resulted in increased usage of high strength steels, Aluminium, Magnesium & Composites. He highlighted that the possibility of weight reduction is upto 60% by use of composites as compared to other measures (which result in weight reduction between 10 – 50%).

He introduced MMC (Metal Matrix Composites) and their applications. He compared microstructures of different Composites developed by Univ. of Wisconsin-Milwaukee, Comalco and Duracon. The different applications of MMC have been in Aerospace Industry (discontinuous & continuous composites in F-16 fighter jets; Al/Gr antenna waveguide in Hubble telescope, different components in planes, helicopters & Shuttle orbiter etc.); in Automotives (Cylinder liners in Autos & Motor Cycles, automotive brake rotors,

Intake & Exhaust valve in Toyota Alteza, brake components in Rail applications, drive shafts for trucks &automotives, etc.); brake applications in a number of cars & high speed rail trains and various applications in Toyota Cars (Disc brake rotor, electronics cooling plate, crankshaft pulley, Cylinder liners etc.).

He mentioned about Syntactic Foams (hollow sphere MMC & with gas-filled pores) having high impact energy absorption capabilities.

He introduced Nanocomposites as reducing grain size to nanoscale significantly enhances strength in most metals & alloys. In space shuttle applications, use of Nanocomposites have resulted in weight reduction upto 50% as compared to use of conventional composite materials.

Prof. Rohatgi also mentioned about work on Self-healing, self-lubricating and self-cleaning materials for prevention of drastic failures during operation. Intelligent composites were also touched upon.

The available facilities at Univ. of Wisconsin-Milwaukee Composite Centre as well as development of various composites were also discussed.

While concluding his presentation, Prof. Rohatgi emphasised that

- Metal Matrix Microcomposites can help reduce the weight while increasing the energy absorbing capability of transportation systems
- While Polymer nanoclay nanocomposites have received considerable attention, the work on Metal Matrix Nanocomposites is in its infancy
- Powder metallurgy, cryomilling, solidification processing have been successfully used to incorporate nanosize particles including carbon nanotubes in metal matrices
- Exceptionally large increases in strength, hardness and wear resistance and reduction in friction coefficient have been obtained as a result of incorporation of very small volume percentages of nanoparticles in matrices of metals
- Self-healing materials being developed at UWM can increase the survivability of Military Transportation Systems
- Self-lubrication Metal Matrix Composites can decrease energy consumption and increase the reliability of Military Transportation Systems
- Self-cleaning composites can be synthesized which can increase the performance of military vehicles

Prof.Rohatgi's presentation was supported by suitable visuals.

Mr K L Mehrotra then introduced the second speaker, Maj.Gen. (retd.) R C Suri and the floor was handed over to Maj. Gen. Suri for his presentation.

Maj. Gen. (retd.) R C Suri, during his detailed presentation highlighted significant Technology Transfer cases in Indian defence Sector.

He highlighted the dominant role played by the technology in modern warfare. He stated that the oft-repeated cliche that man behind the

weapon determines the ultimate fate of war is being reconsidered as all new discoveries of cutting edge technologies find their first application in military weapons. These cutting edge technologies act as a force multiplier and go a long way in ultimate success in the battlefield.

It was informed that after nearly seventy years of freedom, India still is one of the highest importer of arms in the world. Recently with a new found focus on ' Make in India' campaign, involvement of civil industry in defence manufacturing is giving encouraging results. Giving examples of Transfer of Technology from defence agencies to Industry, he mentioned the notable role of several industrial houses in coming to support HAL's effort to augment the production rate of Light Combat Aircraft (LCA) - Tejas. Similarly another production house is actively participating with Brahmos Aerospace in manufacture of air frame of Brahmos cruise missile. It was mentioned that more recently, two more production houses viz, Tata Power and Bharat Forge have successfully manufactured prototypes of 155mm Advances Towed Artillery Gun System with transfer of technology from DRDO. These initial steps will go a long way in developing a viable Military Industrial Complex in the country.

Notwithstanding above successes, we still have a long way to go in attaining adequate self-sufficiency in several critical technologies. In this regard he mentioned that we are totally dependent on imports for propulsion units for aircrafts, tanks or battleships. For this he suggested the need to involve academia, besides the production houses, to create the centres of excellence in such areas. As a way forward, he suggested that important gaps in design technologies need to be identified by DRDO and steps taken as national missions attaining the self-sufficiencies with active participation of all concerned.

Both the presentations evoked lively interaction amongst the speakers and audience. There were a number of queries during the Presentations

The presentation by Prof. Rohatgi and Maj Gen (Retd) R C Suri were attended by about 30 IIM DC members.

The audience found the presentations very interesting and informative.

Chairman, proposed Vote of thanks to both the Speakers.

As a token of appreciation, mementos were presented to both the Speakers by Chairman.

The programme concluded with lunch.

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CELEBRATIONS OF CHAPTER LEVEL NMD AND FOUNDATION DAY OF INDIAN INSTITUTE OF METALS

A programme was organised on 24th February 2018 at IIM Delhi Chapter to celebrate Foundation Day of Indian Institute of Metals as well as Chapter Level National Metallurgists Day. A technical talk on "A Reflection on the Financial Health of Steel Sector in India and a Perspective towards its Future..." was also organised during the celebrations.

At the outset Shri K L Mehrotra, Chairman IIM Delhi Chapter welcomed all the participants. He gave brief details about the activities of Indian Institute of Metals Delhi Chapter and background on celebrations of Chapter level NMD & IIM Foundation Day.

He introduced the Speaker - Mr Manoranjan Ram, Associate Vice President, Paul Wurth India & SMS Group. After introductory reference, the floor was handed over to Mr Manoranjan Ram presentation.

Mr. Manoranjan Ram, during his detailed presentation, gave an overview of Global & Indian Steel Industry. While discussing the Highlights of Indian Steel Industry during 2017, he highlighted the fact that currently ~ 20% of Indian Steel manufacturing capacity is under insolvency and many of the steel companies are not able to service even their interest costs.

He observed that Total Stressed Assets in Indian banks are estimated at INR 10 trillion ($155 billion) - as stated by India's Chief Economic Adviser, Mr. Arvind Subramanian in Oct 2017. 28% of Total NPAs in Indian Banks pertain to Steel sector.

The current status of steel companies referred to Insolvency Court (NCLT) is ~ 25 MTPA capacity. Five Companies (Bhushan Steel, Bhushan Power & Steel, Monnet Ispat, Essar Steel and Electrosteel) with a combined Annual capacity of 21.9 MTPA, have a total debt burden of INR 148,106 crs. (as on Dec.2017) and were referred to NCLT in June 2017. The offers of Bidders are under evaluation. In addition four Companies (Uttam Galva, AdhunikMetalliks, JayaswalNeco and Visa Steel) with a combined Annual capacity of 3.15 MTPA, have a total debt burden of INR 19,953 crores. (as on Dec.2017) and have been referred to NCLT in Jan.2018. These cases are under process. He opined that huge capital loans, without meticulous due diligence on the part of commercial banks has resulted in such sorry state of affairs. Mr. Manoranjan Ram also showed a video clip, wherein Mr.Godfrey Bloom, Member of European Parliament (2004-14), expressed similar opinion in the European Parliament at Brussles.

Mr. Manoranjan Ram made the observation that almost all Green field Steel Plants are making losses owing to

- High Depreciation and interest costs
- Cancellation of Iron Ore Mines and Coal blocks
- Underutilisation of capacity
- Unfavourable capital structure

On the issue of setting up New Greenfield Steel Plants, the speaker quoted Mr. Edwin Bassen, DG (World Steel Association) as "If we compare the

estimated demand for finished steel products in 2035 with existing installed capacity, then we can very safely say there is already today enough capacity installed globally to satisfy demand for the next 20 years; it makes sense NOT to focus on building too much new capacity"

Mr. Manoranjan Ram emphasised that the `Need of the Hour' is SMART MODERNISATION by rebuilding the existing assets with larger and modern Technology-oriented assets. He gave an example of a recent upgradation of a blast furnace at JSW, within a total shutdown period of 110 days only. The parameters achieved were Improvement in productivity by ~ 6% (2.50 t0 2.64) and increase in Production by 94% (0.9 to 1.88 MTPA). This was possible by increasing the working volume (1107 to 2000m3), Hearth Dia. (8.0 to 10.4m) and blast temp. (1050 to 12500C).

Mr. Manoranjan Ram concluded his presentation by emphasising that

- There should be a concerted effort to utilize nearly 95% of installed steel production capacities in India, with best possible techno economic parameters
- Focus on increasing the export turnover
- Creditors (Lenders) should build an independent ecosystem which will facilitate collaboration of technology suppliers, steel plant operators and turnaround specialists
- Instead of putting Greenfield Steel Plants in a new location, rebuilding and upgradation of existing steel facilities will unlock the values of Indian steel companies without putting much burden on exchequer

The presentation which was supported by suitable visuals, evoked lively interaction amongst the audience. There were a number of queries during the Presentation.

As a token of appreciation, a memento was presented to Mr Manoranjan Ram by Chairman. After the Technical Talk, the following members of IIM Delhi Chapter were honored for making significant contributions to the cause of Metallurgical profession and activities of Delhi Chapter:

- Mr. P K Bajaj
- Mr. R K Vijayavergia
- Mr. N K Kakkar
- Mr. P N Shali
- Mr. Deepak Jain

ShriK L Mehrotra,ChairmanIIMDC,spokeabout the institution of Chapter level award in 2011 and organizing the event every year. Thereafter Shri S C Suri, Past Chairman, Delhi Chapter narrated the contributions made by Mr. R K Vijayavergia, Mr N K Kakkar, Mr P N Shali and Mr Deepak Jain in the metallurgical profession and in promoting the technical activities of Delhi Chapter.

Subsequently these awardees were honoured with Mementoes on the occasion.

After receipt of Award, each recipient thanked IIM Delhi Chapter and narrated his experiences relatingtoIIM and metallurgical industry.

Owing to the physical absence of Mr P K Bajaj, he could not be honoured. It was decided to present him with the Memento later.

The Programme was attended by ~ 30 IIM DC members.

As a token of appreciation, a Gift was presented to ShriUmakant Pandey for his exemplary services in the Chapter's day-to-day operations.

Mr G I S Chauhan, proposed a vote of thanks to Mr. Manoranjan Ram, all the recipients of Awards, Chairman Delhi Chapter, Mr S C Suri and all the participants.

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Crude Steel production 2017-18

Month	Production ('000 tonnes)	
	India	Global[1]
Jan.2017	8,810	138,524
Feb.2017	8,154	127,339
Mar.2017	8,764	142,681
Apr.2017	8,228	142,212
May 2017	8,199	143,064
June 2017	8,136	141,800
July 2017	8,330	144,335
Aug.2017	8,473	144,253
Sept.2017	8,401	141,950
Oct.2017	8,650	144,491
Nov.2017	8,429	136,267
Dec.2017	8,796	137,415
Gross (2017)	***101,371[2]***	***1672,885[2]***
Jan.2018	9,028	144,479
Feb.2018	8,434	132,386
Mar.2018	9,227	148,330

[1] Data for 64 countries (approximately 99% of total world crude steel production)

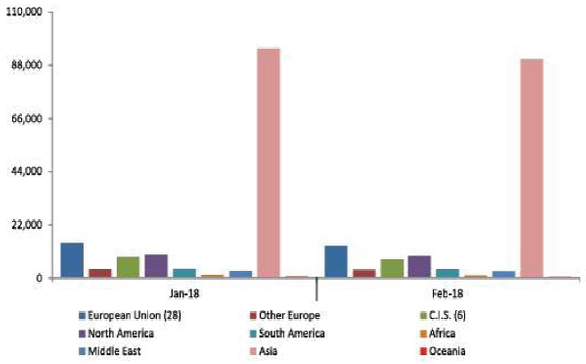
[2] Global Steel production increased by 5.3% (as compared to 2016).
Top 5 Steel producing countries in 2017 are China (831.7 MT▲ 5.7%), Japan (104.7 MT▼ 0.1%), India (101.4
MT▲ 6.2%), USA (81.6 MT▲ 4.0%) and Russia (71.3 MT ▲ 1.3%)

Source – Statistics compiled by
World Steel Association (data updated till 25April2018)

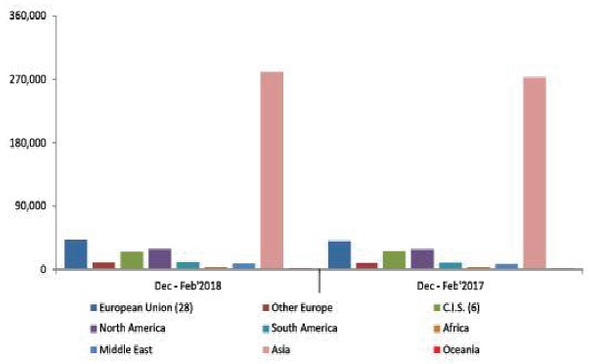
World & Indian steel production data

Steel Insights Bureau

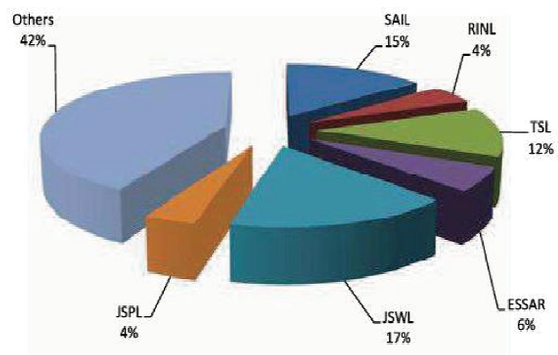
World crude steel production per region January 2018 vs February 2018



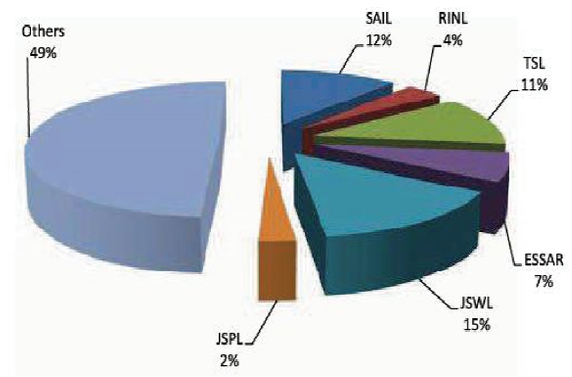
World crude steel production per region cumulative 2018 vs 2017



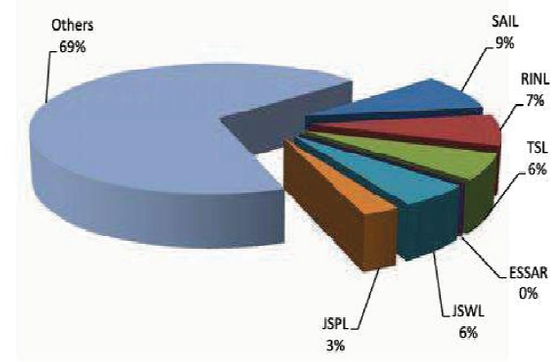
Crude steel production



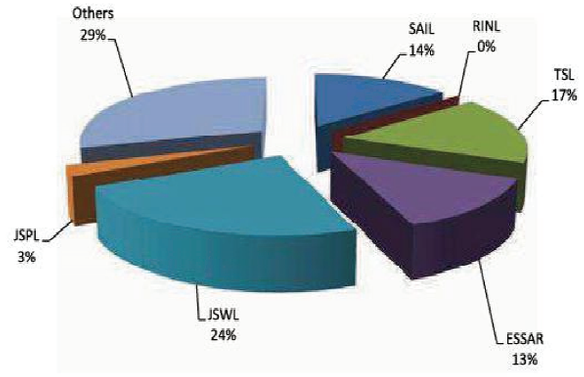
Finished steel for sale (non-alloy & alloy)



Non-flat production for sale (non-alloy & alloy)



Flat production for sale (non-alloy & alloy)

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