THE INDIAN INSTITUTE OF METALS - DELHI CHAPTER





ISSUE NO. 102-103/2016 VOL. . CII-CIII "MONTHLY" JULY-AUGUST 2016

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

IN THE ISSUE

- A brief on Minerals, Metals, Metallurgy & Materials Event (MMMM 2016)
- Data on Mineralwise Reserves/ Resources in India (Provisional)
- Steel Minister asks Cos to take steps to promote use of steel
- Nanosteel delivers advanced automotive steel to General Motors
- Mineral Blocks may go under hammer by March 2017
- India's top 5 Iron Ore Producers in FY 16
- Competitiveness of India Steel Industry
- Steel Ministry want review of policies affecting producers
- Many national & international news items





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Published By

The Indian Institute of Metals – Delhi Chapter Jawahar Dhatu Bhawan, 39, Tughlakabad Institutional Area M B Road, Near Batra Hospital, New Delhi-110062 Tel: 011-29956738, Telefax: 011-29955084 E-mail:iim.delhi@gmail.com; Website: iim-delhi.com

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FOREWARD



The Newsletter is only as good as the people who work for it. I know this with conviction and force as it does to any publication or technical paper or so to say arranging and conducting International Seminar and Conferences.

There is no secret recipe or technology which can replace, the creative brain power required to produce a Newsletter. There is no formula. Each issue has to be different and fresh with relevant topics.

This special issue in your hand is 103rd Issue without any break. This is an excellent accomplishment. The dedicated team has had the good fortune of having a luminary and most knowledgeable and techno-savvy person like Shri S C Suri Editor-in-Chief working tirelessly for its publication. Shri Suri has brought his brand of flair, versatility, understanding and lightness with word on to edit the Newsletter. He enjoys the passions to bring out this Newsletter regularly with zeal and commitment.

This issue is a Tribute to that Talent.

I, on my behalf, and on behalf of the Executive Committee, wish Happy Durga Puja / Diwali Greetings to all my esteemed members.

K L Mehrotra

Chairman

MINERALS, METALS, METALLURGY AND MATERIALS 2016 (MMMM 2016)

The Delhi Chapter of the Indian Institute of Metals (IIM) along with International Trade and Exhibitions India Pvt. Ltd (ITEI) has been organizing once every two years Minerals, Metals, Metallurgy and Materials (MMMM) event consisting of Exhibition and concurrent Conference in the area of MMMM. The 11th edition of this event was held at Pragati Maidan, New Delhi from 10-12 August 2016. The Theme of the Conference was Minerals and Metals & their Contribution to Make in India. This event was co-sponsored by Ministry of Steel, Ministry of Mines, Ministry of Earth Sciences, Ministry of External Affairs, Ministry of Commerce and Industry, Ministry of Heavy Industry and Public Enterprises and Ministry of Micro, Small and Medium Enterprises besides Council of Scientific & Industrial Research (CSIR).





The event was inaugurated by Hon'ble Minister of Steel Shri Birender Singh on 10th August 2016. Secretary Ministry of Steel, Dr. Aruna Sharma, also participated in the Inaugural Function as Guest of Honour.



Speaking on the occasion, Hon'ble Minister of Steel Shri Birender Singh said that use of steel in unconventional sectors needs to be explored to increase the domestic consumption. He also spoke about focus on research and development in the Steel Sector. In this connection he stated that Govt. of India has set-up Steel Research and Technology Mission of India (SRTMI) so that India like developed countries can produce futuristic products as well. Commenting of Minimum Import Price (MIP) of steel, the Minister stated that it has been extended for two months for 66 products and Govt. of India shall review the situation thereafter.

The Minister urged for augmentation of consumption of steel. He stated that the industry must explore use of steel in sectors such as road, bridges and other industrial applications etc. so that the consumption can be increased. Dr. Aruna Sharma, Secretary, Ministry of Steel, delivered a Keynote Address in the Conference.



In her address, Dr. Aruna Sharma stated that if we recycle 90 MT of steel from auto shredding

we can save to the tune of Rs. 1.00 lakh crores worth of raw materials and this shall reduce the imports also. She also spoke about dumping of steel in the steel sector. She mentioned that MIP is a short term measure but if any country resorts to dumping of steel India will do whatever is possible to protect its interest. The only way, she stated is to mitigate the impact of low international prices by achieving operational efficiency and optimal usage of our resources. She also emphasized on the need for improving the quality of steel being produced by us. It was stated by her that Govt. of India will expect recommendations from the deliberations of this Conference.



After the Inaugural Address, the Hon'ble Minister and Secretary Ministry of Steel went around the various exhibition stalls.



About 35 countries participated in the Exhibition. Around 300 Exhibitors have put their stalls in the Exhibition and more than 15000 trade visitors visited in the three days Exhibition.







In the three days event, foreign exhibitors and consumers from around world were impressed with the growth of steel industry in India and were eager to explore the market.

Apart from the Inaugural Session, the Conference consisted of Eight Technical Sessions and a Valedictory Session. The Sessions covered in the Conference are as under:

Session – I	Metal Industry Business Forum
Session – II	Role of Financial Institutions in Shaping Future of Metal Sector
Session – III	Existing Mineral Resources in India and its Future Prospecting
Session – IV	Present and Future of Non- Ferrous in India
Session – V	Technology & Competitiveness of Indian Steel Sector w.r.t. Global Scenario
Session – VI	Effective Utilization of Low Grade Mineral Resources
Session – VII	Role of Infrastructure Sector to meet the Challenges of Metal Sector
Session – VIII	Energy Environment of Metal Sector / Super Alloy Industry in India
Session – IX	Valedictory Session

Session-wise salient points of the Conference are given below:



The first session was "Metal Industry Business Forum". In this forum CEOs of public and private sectorsteel plants, CEOs of Design and Engineering Companies expressed their candid opinion on the various issues relating to steel business in India.

After the Metal Business Forum, seven technical sessions were held on the Ferrous and Non-Ferrous Metal and Mining Sector in which 37 papers were presented by various authors from India, Luxembourg, China, Egypt, Russia and each session was chaired by the eminent personalities from Metals and Minerals field. Some of the salient points of the papers presented by various authors in last three days are given below:



The second session of Conference started with a burning topic, i.e. The Role of Financial Institutions in shaping future of Metal Sector. Papers were presented by senior management members of CARE, Ernst & Young and Resurgent India. Future funding requirements for additional steel capacity expansion projects and how the Financial Institutions can help in tackling the present stressed assets were discussed. In fact,

as we all know, significant over leverage is now visible in many steel companies. It was proposed that setting up of central lending agency for metals sector in line with Rural Electrification Corporation/ Power Finance Corporation may help the steel sector to come out of the present crisis.

In the Session No. 3, Presentations were made by authors from Minerals Industry on Mining Exploration scenario and challenges and opportunities in Mining Industry. It was observed that the current legislative framework and implementation of the mineral policies of Govt. of India are helping the mining sector to enter into a virtuous cycle. However, it was observed that generation and dissemination of baseline data is of paramount importance for effective exploration of mineral resources. In fact, GSI has already completed Geological Mapping for more than 98% of the entire country. The national Geo chemical mapping and National Geo-physical mapping are being executed by GSI.

In the Session No. 4, deliberations were held on Present and Future of Non-Ferrous Sector in India. The authors presented various developments and challenges in non-ferrous industry. Presentations on end-use applications of Copper in automobiles, power sector, construction, Electrical Machinery, railways and defence and latest technological developments in reducing the emissions by using Jumbo Coke Oven Battery were made in this session.

In the Session No. 5, Competitiveness of Indian Steel Companies with respect to Global Scenario was analysed in detail. Cost of Production and techno-economic parameters of Indian steel plants were compared with steel companies in China and Japan. The Indian Steel Industry is consuming 50% more energy compared to the world average. Steps required to improve cost competitiveness in Indian steel plants were discussed. In this context, focus on "Industry 4.0" was also discussed.

In the Session No. 6, Pros and cons of available technology for effective utilisation of low grade iron ore were analysed in detail. The challenges in beneficiation of low grade iron ore fines were discussed and solutions elaborated.

Session No. 7 was devoted to interesting deliberations on Role of Infrastructure Sector to meet the challenges of Metal Sector. The eminent personalities from Dedicated Freight Corridor Corporation and NITI Ayog explained the future plans of Govt of India in the area of infrastructure improvements.

ISSUE NO. 102-103/2016 VOL. CII-CIII "MONTHLY" JULY-AUGUST 2016

Session 8 of the Conference was on Energy Environment of Metal Sector / Super Alloy Industry in India. Latest technological innovations and their applications in Blast Furnace, Pulverised Coal Injection and High Strength Steel for Naval Applications were deliberated in this session.

The Valedictory Session of the Conference was presided over by Shri Vishnu Deo Sai, Hon'ble Minister of State for Steel on 12th August 2016. Shri Balvinder Kumar, Secretary Ministry of Mines delivered Guest of Honour Address.

Secretary Ministry of Mines spoke about the turnaround taking place in the mining sector. He stated that metallic minerals output has grown from 14.24 crore metric tonnes to 17.05 crore metric tonnes between April 2015 and February 2016. Iron ore output has risen significantly as many of the mines that were shut in recent years have started operating again in states like Goa and Odisha. He further stated that Govt. expects mineral output to rise further in 2016-17. He also spoke about the progress in the area of auction of mines. He also touched upon the thrust being given by Government in the area of exploration.

The Hon'ble Minister in his Valedictory Address spoke about the need for augmentation of consumption of steel. It was stated by him that research and development and innovation in the steel sector needs a strong push. In this connection it was informed by him that Govt. of India has setup Steel Research & Technology Mission of India (SRTMI) to promote the R&D initiatives in the steel sector.

The Hon'ble Minister gave away the awards to the distinguished exhibitors in the Exhibition. The awards were also given by the Minister to the Delhi Chapter functionaries who made significant contribution in organizing the Conference.

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MINERALWISE RESERVES/RESOURCES IN INDIA (PROVISIONAL)

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Ore 000' tonnes 394,372 1,164,086 1,558,458 Metal 000' tonnes 4,768,33 7,518,34 12,286,67 17 Corundum Tonnes 597 740,194 740,792 18 Diamond Carats 1,045,318 30,876,432 31,921,750 19 Diaspore Tonnes 2,859,674 3,125,144 5,984,818 20 Diatomite 000' tonnes - 2,885 2,885 21 Dolomite 000' tonnes 738,185 6,992,372 7,730,557 22 Dunite 000' tonnes 17,137 168,232 185,369 23 Emerald - N.E. N.E. N.E. 24 Feldspar Tonnes 30,104 683,415 713,519 25 Fire clay 000' tonnes 30,104 683,415 713,519 26 Fluorite Tonnes 4,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes <	16	Copper				
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17 Corundum Tonnes 597 740,194 740,792 18 Diamond Carats 1,045,318 30,876,432 31,921,750 19 Diaspore Tonnes 2,859,674 3,125,144 5,984,818 20 Diatomite 000' tonnes - 2,885 2,885 21 Dolomite 000' tonnes 738,185 6,992,372 7,730,557 22 Dunite 000' tonnes 17,137 168,232 185,369 23 Emerald - N.E. N.E. N.E. 24 Feldspar Tonnes 44,503,240 87,832,212 132,335,452 25 Fire clay 000' tonnes 30,104 683,415 713,519 26 Fluorite Tonnes 44,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes 58,200 256,593,879 256,6562,079 28 Garnet Tonnes 19,324,793 37,638,032 56,6962,824 29		Metal	- 000' fonnes	4,768.33	7,518.34	12,286.67
18 Diamond Carats 1,045,318 30,876,432 31,921,750 19 Diaspore Tonnes 2,859,674 3,125,144 5,984,818 20 Diatomite 000' tonnes - 2,885 2,885 21 Dolomite 000' tonnes 738,185 6,992,372 7,730,557 22 Dunite 000' tonnes 17,137 168,232 185,369 23 Emerald - N.E. N.E. N.E. N.E. 24 Feldspar Tonnes 44,503,240 87,832,212 132,335,452 25 Fire clay 000' tonnes 30,104 683,415 713,519 26 Fluorite Tonnes 4,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes 19,324,793 37,638,032 56,652,079 28 Garnet Tonnes 19,324,793 37,638,032 56,96,682,474 29 Gold Tonnes 19,324,793 37,638,032 56,96,62,824 <	17	Corundum	Tonnes	597	740,194	740,792
19 Diaspore Tonnes 2,859,674 3,125,144 5,984,818 20 Diatomite 000' tonnes - 2,885 2,885 21 Dolomite 000' tonnes 738,185 6,992,372 7,730,557 22 Dunite 000' tonnes 17,137 168,232 185,369 23 Emerald - N.E. N.E. N.E. 24 Feldspar Tonnes 44,503,240 87,832,212 132,335,452 25 Fire clay 000' tonnes 30,104 683,415 713,519 26 Fluorite Tonnes 4,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes 58,200 256,553,879 256,652,079 28 Garnet Tonnes 19,324,793 37,638,032 56,962,824 29 Gold Tonnes 19,324,793 37,638,032 56,962,824 29 Gold Tonnes 19,324,793 37,638,032 56,962,824 20 <td>18</td> <td>Diamond</td> <td>Carats</td> <td>1,045,318</td> <td>30,876,432</td> <td>31,921,750</td>	18	Diamond	Carats	1,045,318	30,876,432	31,921,750
20 Diatomite 000' tonnes - 2,885 2,885 21 Dolomite 000' tonnes 738,185 6,992,372 7,730,557 22 Dunite 000' tonnes 17,137 168,232 185,369 23 Emerald - N.E. N.E. N.E. 24 Feldspar Tonnes 44,503,240 87,832,212 132,335,452 25 Fire clay 000' tonnes 30,104 683,415 713,519 26 Fluorite Tonnes 4,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes 58,200 256,593,879 256,652,079 28 Garnet Tonnes 19,324,793 37,638,032 56,962,824 29 Gold Tonnes 19,324,793 37,638,032 56,962,824 29 Gold Tonnes 110,54 549,570,375 493,694,912 20 re (Piracry) Inones 10,54 5.86 5.86 30 <	19	Diaspore	Tonnes	2,859,674	3,125,144	5,984,818
21 Dolomite 000' tonnes 738,185 6,992,372 7,730,557 22 Dunite 000' tonnes 117,137 168,232 185,369 23 Emerald - N.E. N.E. N.E. N.E. 24 Feldspar Tonnes 44,503,240 87,832,212 132,335,452 25 Fire clay 000' tonnes 30,104 683,415 713,519 26 Fluorite Tonnes 4,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes 58,200 256,593,879 256,652,079 28 Garnet Tonnes 19,324,793 37,638,032 56,962,824 29 Gold Tonnes 110,54 549,570,375 493,694,912 24,124,537 469,570,375 493,694,912 659,84 659,84 20 Gre (Pinary) Immes 110,54 54,920 26,121,000 25,121,000 Adel (Pinary) Immes 110,54 54,966,608 46,230,300	20	Diatomite	000' tonnes	-	2,885	2,885
22 Dunite 000' tonnes 17,137 168,232 185,369 23 Emerald - N.E. N.E. N.E. 24 Feldspar Tonnes 44,503,240 87,832,212 132,335,452 25 Fire clay 000' tonnes 30,104 683,415 713,519 26 Fluorite Tonnes 4,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes 4,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes 58,200 256,593,879 256,652,079 28 Garnet Tonnes 19,324,793 37,638,032 56,962,824 29 Gold Tonnes 110,54 549.30 659,84 29 Gold Tonnes 110,54 549.30 659,84 20 referimary Immedia Feriodia 5.86 5.86 30 Granite (Dimension Stone) 000' cum 263,692 45,966,608 46,230,300 31 </td <td>21</td> <td>Dolomite</td> <td>000' tonnes</td> <td>738,185</td> <td>6,992,372</td> <td>7,730,557</td>	21	Dolomite	000' tonnes	738,185	6,992,372	7,730,557
23 Emerald - N.E. N.E. N.E. 24 Feldspar Tonnes 44,503,240 87,832,212 132,335,452 25 Fire clay 000' tonnes 30,104 683,415 713,519 26 Fluorite Tonnes 4,712,316 13,501,588 18,213,904 27 Fullers Earth Tonnes 58,200 256,593,879 256,652,079 28 Garnet Tonnes 19,324,793 37,638,032 56,962,824 29 Gold Tonnes 110,54 549,303 659,844 29 Gold Tonnes 110,54 549,30 659,844 20 Ore (Primary) Intension 110,54 549,30 659,84 30 Granite (Dimension Stone) 000' cum 263,692 459,66,608 46,230,300 31 Graphite Tonnes 8,031,864 166,817,781 174,849,645 32 Gypsum 000' tonnes 39,096 1,247,402 1,286,498	22	Dunite	000' tonnes	17,137	168,232	185,369
24FeldsparTonnes44,503,24087,832,212132,335,45225Fire clay000' tonnes30,104683,415713,51926FluoriteTonnes4,712,31613,501,58818,213,90427Fullers EarthTonnes58,200256,593,879256,652,07928GarnetTonnes19,324,79337,638,03256,962,82429GoldTonnes19,324,79337,638,03256,962,82429GoldOre (Primary)100nes24,124,537469,570,375493,694,9124Metal (Primary)100nes110.54549.30659.8400re (Placer)200' cum263,69245,966,60846,230,30030Granite (Dimension Stone)000' cum263,69245,966,60846,230,30031GraphiteTonnes8,031,864166,817,781174,849,64532Gypsum000' tonnes39,0961,247,4021,286,49833Iron Ore Magnetite000' tonnes21,75510,622,30510,644,06034Iron Ore Haematite000' tonnes8,093,5469,788,55117,882,097	23	Emerald	-	N. E.	N. E.	N. E.
25Fire clay000' tonnes30,104683,415713,51926FluoriteTonnes4,712,31613,501,58818,213,90427Fullers EarthTonnes58,200256,593,879256,652,07928GarnetTonnes19,324,79337,638,03256,962,82429GoldTonnes19,324,79337,638,03256,962,82429GoldTonnes19,324,79337,638,03256,962,82429GoldTonnes19,324,793469,570,375493,694,91220Ore (Primary)P24,124,537469,570,375493,694,91220Metal (Primary)Into.54549,30659,8420Ore (Placer)Into.54549,30659,8430Granite (Dimension Stone)000' cum263,69245,966,60846,230,30031GraphiteTonnes8,031,864166,817,781174,849,64532Gypsum000' tonnes39,0961,247,4021,286,49833Iron Ore Magnetite000' tonnes8,093,5469,788,55110,644,060	24	Feldspar	Tonnes	44,503,240	87,832,212	132,335,452
26FluoriteTonnes4,712,31613,501,58818,213,90427Fullers EarthTonnes58,200256,593,879256,652,07928GarnetTonnes19,324,79337,638,03256,962,82429GoldTonnes19,324,79337,638,03256,962,82429GoldTonnes24,124,537469,570,375493,694,91220Ore (Primary)Image: Constant State St	25	Fire clay	000' tonnes	30,104	683,415	713,519
27Fullers EarthTonnes58,200256,593,879256,652,07928GarnetTonnes19,324,79337,638,03256,962,82429GoldTonnes24,124,537469,570,375493,694,9120re (Primary)Ore (Primary)110,54549.30659.840re (Placer)Ore (Placer)26,121,00026,121,00000' cum263,69245,966,60846,230,30030Granite (Dimension Stone)000' cum263,69245,966,60846,230,30031GraphiteTonnes8,031,864166,817,781174,849,64532Gypsum000' tonnes21,75510,622,30510,644,06034Iron Ore Haematite000' tonnes8,093,5469,788,55117,882,097	26	Fluorite	Tonnes	4,712,316	13,501,588	18,213,904
28 Garnet Tonnes 19,324,793 37,638,032 56,962,824 29 Gold Tonnes Image: Connes	27	Fullers Earth	Tonnes	58,200	256,593,879	256,652,079
29GoldTonnesInformationInformationInformationMetal (Primary)Metal (Primary)InformationInformationInformationInformationMetal (Primary)InformationInformationInformationInformationInformationMetal (Placer)InformationInformationInformationInformationInformation30Granite (Dimension Stone)000' cumInformationInformationInformation31GraphiteTonnesInformationInformationInformation32Gypsum000' tonnesInformationInformationInformation34Iron Ore Haematite000' tonnesInformationInformationInformation	28	Garnet	Tonnes	19,324,793	37,638,032	56,962,824
Ore (Primary) Tonnes 24,124,537 469,570,375 493,694,912 Metal (Primary) 110.54 549.30 659.84 Ore (Placer) - 26,121,000 26,121,000 Metal (Placer) - 5.86 5.86 30 Granite (Dimension Stone) 000' cum 263,692 45,966,608 46,230,300 31 Graphite Tonnes 8.031,864 166,817,781 174,849,645 32 Gypsum 000' tonnes 39,096 1,247,402 1,286,498 33 Iron Ore Magnetite 000' tonnes 8,093,546 9,788,551 10,644,060	29	Gold	Terres			
Metal (Primary) Image: Metal (Primary)	-	Ore (Primary)	Tonnes	24,124,537	469,570,375	493,694,912
Ore (Placer) Image: Metal (Placer) Imag		Metal (Primary)		110.54	549.30	659.84
Metal (Placer)Image: Metal (Placer)Metal (Placer) <th< td=""><td></td><td>Ore (Placer)</td><td></td><td>-</td><td>26,121,000</td><td>26,121,000</td></th<>		Ore (Placer)		-	26,121,000	26,121,000
30 Granite (Dimension Stone) 000' cum 263,692 45,966,608 46,230,300 31 Graphite Tonnes 8,031,864 166,817,781 174,849,645 32 Gypsum 000' tonnes 39,096 1,247,402 1,286,498 33 Iron Ore Magnetite 000' tonnes 21,755 10,622,305 10,644,060 34 Iron Ore Haematite 000' tonnes 8,093,546 9,788,551 17,882,097		Metal (Placer)		-	5.86	5.86
31GraphiteTonnes8,031,864166,817,781174,849,64532Gypsum000' tonnes39,0961,247,4021,286,49833Iron Ore Magnetite000' tonnes21,75510,622,30510,644,06034Iron Ore Haematite000' tonnes8,093,5469,788,55117,882,097	30	Granite (Dimension Stone)	000' cum	263,692	45,966,608	46,230,300
32 Gypsum 000' tonnes 39,096 1,247,402 1,286,498 33 Iron Ore Magnetite 000' tonnes 21,755 10,622,305 10,644,060 34 Iron Ore Haematite 000' tonnes 8,093,546 9,788,551 17,882,097	31	Graphite	Tonnes	8,031,864	166,817,781	174,849,645
33 Iron Ore Magnetite 000' tonnes 21,755 10,622,305 10,644,060 34 Iron Ore Haematite 000' tonnes 8,093,546 9,788,551 17,882,097	32	Gypsum	000' tonnes	39,096	1,247,402	1,286,498
34 Iron Ore Haematite 000' tonnes 8,093,546 9,788,551 17,882,097	33	Iron Ore Magnetite	000' tonnes	21,755	10,622,305	10,644,060
	34	Iron Ore Haematite	000' tonnes	8,093,546	9,788,551	17,882,097
35 Kyanite Tonnes 1,574,853 101,670,767 103,245,620	35	Kyanite	Tonnes	1,574,853	101,670,767	103,245,620
36 Laterite 000' tonnes 24,714 446,119 470,833	36	Laterite	000' tonnes	24,714	446,119	470,833

NEWS LETTER ISSUE NO. 102-103/2016 VOL. CII-CIII "MONTHLY" JULY-AUGUST 2016

37	Lead and zinc							
	Ore		108,980	576,615	685,595			
	Metal Lead	0001 +	2,245.01	9,304.38	11,549.39			
	Zinc		12,453.26	24,211.64	36,664.90			
	Lead +Zinc		0	118.45	118.45			
38	Limestone	000' tonnes	14,926,392	170,008,720	184,935,112			
39	Magnesite	000' tonnes	41,950	293,222	335,172			
40	Manganese ore	000' tonnes	141,977	288,003	429,980			
41	Marble	000' tonnes	276,495	1,654,968	1,931,463			
42	Marl	Tonnes	139,976,150	11,704,870	151,681,020			
43	Mica	Kg.	190,741,448	341,495,531	532,236,979			
44	Molybdenum							
	Ore	Tanana	-	19,286,732	19,286,732			
	Contained MOS2	Tonnes	-	12,640	12,640			
45	Nickel (Ore)	Million Tonnes	-	189	189			
46	Ochre	Tonnes	54,942,176	89,319,089	144,261,265			
47	Perlite	000'tonnes	428	1,978	2,406			
48	PGM (Metal)	tonnes of metal content	-	15.7	15.7			
49	Potash	Million Tonnes	-	21,816	21,816			
50	Pyrite	000' tonnes	-	1,674,401	1,674,401			
51	Pyrophyllite	Tonnes	23,275,451	32,807,451	56,082,902			
52	Quartz/ Silica Sand	000' tonnes	429,223	3,069,808	3,499,031			
53	Quartzite	000' tonnes	86,599	1,164,649	1,251,248			
54	Rock Phosphate	Tonnes	34,778,650	261,505,701	296,284,351			
55	Rock Salt	000' tonnes	16,026	-	16,026			
56	Ruby	Кд	236	5,112	5,348			
57	Sapphire	Kg	-	450	450			
58	Shale	000' tonnes	15,331	580	15,911			
59	Sillimanite	Tonnes	4,085,052	62,902,385	66,987,437			
60	Silver							
	Ore	Tannas	187,558,668	279,426,291	466,984,959			
	Metal	Tonnes	8,039.57	19,588.68	27,628.25			
61	Slate	000' tonnes	0	2,369	2,369			
62	Sulphur (Native)	000' tonnes	-	210	210			
63	Talc/Steatite/Soapst	000' tonnes	90,026	178,996	269,022			
64	Tin							
	Ore	Toppos	7,131	83,719,066	83,726,197			
	Metal	1011163	1,132.43	101,142.41	102,274.84			
65	Titanium minerals	Tonnes	22,030,223	371,965,694	393,995,917			
66	Tungsten							
	Ore	Tonnes	-	87,387,464	87,387,464			
	Contained WO3	TOTINES	-	142,094.35	142,094.35			
67	Vanadium							
	Ore	Tonnes	410,955	24,307,933	24,718,888			
	Contained V2O5	1011163	1,602.72	63,284.45	64,887.17			
68	Vermiculite	Tonnes	1,704,007	803,003	2,507,010			
69	Wollastonite	Tonnes	2,487,122	14,082,751	16,569,873			
70	Zircon	Tonnes	1,347,470	1,786,482	3,133,952			
	Source: www.ibm.nic.in							

STEEL MINISTER ASKS COS TO TAKE STEPS TO PROMOTE USE OF STEEL

Steel Minister Chaudhary Birender advised domestic steel producers to explore ways to enhance steel consumption and utilise the time in the highly dynamic economic scenario. "Domestic steel producers should take all steps to promote use of steel at the earliest as time is of essence in the fast changing business scenario," a statement by domestic steel giant SAIL said quoting the Minister at a customers meet in (Haryana). The customer meet, to boost steel consumption in Haryana, was organised by staterun steelmakers SAIL and RINL. SAIL and RINL should quickly stabilise their modernised facilities, maximise their performances and strengthen the domestic sector, Singh said. "Domestic steel industry should exhibit a sense of urgency in leveraging their R&D strength thus improving their cost efficiencies," he added.

Elaborating on opportunities for steel firms in Harvana, the Minister said the state is an industrially as well as agriculturally developed state which is widening its scope of development for industries and this will present good opportunity for improved steel consumption. On tapping demand in Haryana, SAIL said that the state already has a strong presence in automobiles and auto ancillaries space, which coupled with the Centre's smart cities mission can provide steel firms opportunities to enhance steel consumption. The state has major industrial zones for country's northern region with presence of several national and international manufacturing companies from sectors including automobile, heavy industries, engineering parts and equipments, paints, diary, agricultural equipments, housing materials, tube & pipes etc, it added. In tandem with the vision of central government's progressive policies, Haryana aovernment is also keen to develop many cities as smart cities and and Karnal have already found its niche in the centre's 'Smart Cities Mission', SAIL said. All these factors culminate to a strong opportunity for improved steel consumption in Haryana providing a conducive market for domestic producers, it said.

Source: The Times of India

NANOSTEEL DELIVERS Advanced Automotive Steel to General Motor

Nanosteel a leader in nanostructured steel materials, announced the delivery of its first advanced high strength steel (AHSS) to General Motors for initial testing. Designed to provide automakers with a new standard in material performance, the sheet steel is poised to accelerate vehicle light weighting initiatives focused on affordably meeting rising global fueleconomy regulations. Production of the material, targeted to the \$100 billion-plus automotive steel market, is the result of a multi-year joint development program between Nanosteel and A K Steel Corporation-an industry-leading innovator in steel product development.

NanoSteel's commercially produced automotive sheet steel overcomes the historical trade-off between strength and formability by delivering exceptional levels of both properties at the same time (approximately 1200 MPa tensile strength and 50 percent elongation). The high strength allows designers to create parts utilizing thinnergauge material (less weight) while the high elongation allows manufacturers to produce the newly designed parts without expensive processing techniques, employee retraining or additional capital costs. The unique combination of properties also allows engineers the design freedom to create novel part shapes, which further reduces weight.

"Many advanced materials with outstanding properties end up abandoned because they are too hard to use or too expensive to make," said NanoSteel CEO and President David Paratore. "NanoSteel's advanced high strength steel is designed to be both easy to produce-using conventional alloying elements with standard slab casting equipment; and easy to use-enabling the stamping and forming of parts at room temperature without additional manufacturing infrastructure or investment, such as that required for 'hot' stamped parts."

A K Steel Corporation, CEO Roger Newport commented, "We are pleased to partner with Nanosteel to bring this exciting new product to the market. As the first steel producer to manufacturer this unique product using traditional slab casting, we are proud to add this accomplishment to our

long and successful track record of innovation." Paratore added, "We are confident that the exceptional properties of NanoSteel's sheet will enable automakers to affordably meet the everchanging requirements of vehicle design and foster a new era of steel competitiveness in the battle of material choice."

About NanoSteel

NanoSteel is an advanced materials company specializing in the design and commercialization of patented steels with exceptional mechanical properties derived from their nano-scale microstructure. The Company's primary focus is proprietary alloys for use as sheet steel in automotive lightweighting applications. Founded as a spinoff of the U.S. Department of Energy's Idaho National Laboratory in 2002, NanoSteel has developed multiple generations of ferrous materials innovations including metallic coatings, additive worldwide. NanoSteel is a privately held company funded by lead shareholders EnerTech, Fairhaven Capital, and GM Ventures.

Source: Steel Group

70 MINERAL BLOCKS MAY GO UNDER HAMMER BY MARCH 2017

The government expects to bid out at least 70 mineral blocks by March 2017, including 21 mines that did not get the required response from bidders.

It has asked states to alter clauses that deterred mining firms from bidding for mines, including diamond and gold blocks, after holding consultations with the industry, Mines Secretary Balvinder Kumar has told ET.

The plan is in line with the targets set by the new mines minister Piyush Goyal to raise the contribution of the mines sector to the GDP by 1% in the next three years. The sector currently contributes 2.6% to the GDP.

"There are two ways to raise production in order to raise contribution of the mining ministry to the GDP," Kumar said. "One is to expedite auction of

State	Ongoing Auctions	Upcoming Auctions	Annulled
AP	5 limestone blocks	10 limestone, 2 gold	
Chhattisgarh	—	7 limestone, 2 bauxite	2 limestone
Jharkhand	- 41	bauxite, 1 limestone, 1 graphite	1 gold
Gujarat	_	5 limestone	5 limestone
Karnataka	14 ironore	13 ironore	1973
Maharashtra	1 limestone, 1 ironore, 2 tungsten, 3 bauxite, 1 copper, 1 manganese	1 tungsten, 1 man- ganese, 2 bauxite, 1 copper	1 limestone, 1 ironore, 1 tung- sten, 1 bauxite
Aadhya Pradesh	-	1 ironore, 5 limestone, 2 base metal	1 diamond, 3 limestone
Odisha		4 limestone, 1 manganese, 3 ironore, 1 bauxite	2 limestone
Rajasthan	4 limestone, 1 copper	2 manganese, 4 ironore	3 limestone
Tamil Nadu		3 molybednum, 2 limestone, 2 graphite	
Total	33	83	21

fresh mines and revive closed mines. The mines are closed due to various issues, some are pending for renewal by state governments. We are pursuing with states to take a final decision. We will also pursue cases stuck with the environment ministry.

Kumar said 33 mines are in the process of being auctioned by various state governments, while 83 more have been identified. So far, the states have auctioned seven mines, while bidding for 21 blocks has been annulled due to lack of adequate response.

Kumar said the ministry will increase the mineral production in the country by auctioning new mines and resolving issues of the already allocated mines. Over 420 mines allocated in eight mineral bearing states are stuck at various stages awaiting clearances from state governments and the environment ministry and approval of mine plan by the Indian Bureau of Mines (IBM).

The mines ministry has also decided to computerize the process of mine plan approvals by IBM.

Source: The Economic Times

INDIA'S TOP 5 IRON ORE PRODUCERS IN FY16

NMDC

Iron ore production by India's single largest iron ore producer, National Mineral Development Corporation (NMDC), was recorded at 28.6 mnt in FY16 against 30.4 mnt in FY15. The miner's iron ore production from Karnataka mines increased from 10.4 mnt in FY15 to 11.6 mnt in FY16. Production from its Chhattisgarh mines dropped from 20 mnt in FY15 to 17 mnt in FY16.

<u>SAIL</u>

Captive iron ore production from SAIL's Odisha mines moved up 18% from 5.5 mnt in FY15 to 6.5

mnt in FY16. SAIL has its captive mines in Odisha, Jharkhand and Chhattisgarh. Expansion of Kiriburu mines was completed last fiscal and work is ongoing on its Meghataburu mines to meet the requirement of the ongoing expansion plan. SAIL expects its iron ore production to touch 39 mnt pa post capacity expansion at existing mines and upcoming mines at Rowghat, Chiria and Taldih.

<u>Tata Steel</u>

Tata Steel's iron ore production from its captive mines increased by around 28% y-o-y. Tata Steel's iron ore production was hit badly in FY15 after mining operations at its Noamundi mines in Jharkhand were suspended over the issue renewal of lease. The company's iron ore mines are located in Odisha and Jharkhand.

Rungta Mines

Odisha's largest merchant iron ore producer, Rungta Mines, recorded an increase of 66% y-o-yin its yearly iron ore production. It produced 17.6 mnt iron ore from its Odisha mines in FY16 compared to 10.6 mnt in FY15. Increase in production was achieved post capacity enhancement at its mines namely Jajang, Oraghat and Sanindupur.

Serajuddin and Co

Serajuddin and Co, Odisha's 2nd largest merchant iron ore miner, produced 10.2 mnt iron ore from its Balda block iron ore mines in FY16 compared to 6.7 mnt in FY15. The miner's iron ore production capacity was enhanced to 15.15 mnt pa following which, its production moved up.

Source: Steel 360

NOTHING SIGNIFICANT WAS EVER ACCOMPLISHED

By A Realistic Person

You can't test your destiny cautiously. "Don't play for safety-it's the most dangerous thing in the world," said Hugh Walpole. The key is this: forfeit the safety of what we are for what we could become. Unless you do something beyond what you have already done, you will never grow. Always pick an obstacle big enough to matter when you overcome it.

"The men who build the future are those who know that greater things are yet to come, and that they themselves will help bring them about. Their minds are illumined by the blazing sun of hope. They never stop doubt. They haven't the time." When you are a "realistic" person in everything you do, your focus is only on this immediate, measurable moment. Thinking this way limits you and restricts you in considering the unlimited possibilities of the future.

You can't make a place for yourself in the sun if you only live under the family tree. Go! Launch out! Be involved in something bigger than you. Do more!

"All that is necessary to break the spell of inertia and frustration is this: act as if it were impossible to fail." An over-cautious person burns bridges of opportunity before he gets to them. Most of the people who sit around and wait for the harvest haven't planted anything. The average person doesn't want much and usually gets even less.

Until you give yourself to some great cause, you haven't really begun to fully live. "Security is mostly a superstition. It does not exist in nature, nor do the children of men as a whole experience it. Avoiding danger is no safer in the long run than outright exposure. Life is either a daring adventure, or nothing".

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

> Compiled by Shri K L Mehrotra Chairman – IIM-DC & Former, CMD – MOIL E-mail:

COMPETITIVENESS OF INDIAN Steel Industry

Define Competition

It defines the ability and performance of a firm, sub-sector or country to sell and supply goods and services in a given market in relation to the ability and performance of other firms, sub-sectors or countries in the same market.

<u>Global Competitiveness Index (World Economic</u> Forum) : 2015-16

- Competitiveness defined as the set of Institutions, policies and factors that determine the level of productivity (rate of return of investments in an economy)
- Measure as the weighted average of 12 pillars of competitiveness
 - Institutions (public and private)
 - Infrastructure
 - Macroeconomic environment
 - Health and Primary Education
 - Higher education and training
 - Goods market efficiency (healthy market competition)
 - Labour market efficiency
 - Technological readiness
 - Market size
 - Business sophistication (quality of operation)
 - Innovation
- All factors are interrelated and depend on stage of development of the country

India's Competitiveness Ranking

- India is grouped under Factor-driven economies (unskilled labour & natural resources) dependent on well-functioning Institutions, good infrastructure, stable macroeconomic environment and healthy workforce
- China, Indonesia, Thailand, South Africa and Sri Lanka grouped under Efficiency-driven

economies

 Japan, South Korea, US under Innovativedriven economies

Country	Ranking in Competitiveness
USA	3
Japan	6
South Korea	26
China	28
Thailand	31
Indonesia	37
Russia	45
South Africa	49
Philippines	52
India	55
Brazil	75

- Country's factors of competitiveness impact sectoral competitiveness
- Growth and competitiveness of Indian steel intricably linked with macroeconomic indicators (investment, consumption, expenditure, capital cost, labour productivity), good governance, trade policies
- Logistic (availability, cost), incidence of taxes and levies, raw material sourcing (price and quality) are other primary determinants for competitiveness in steel.

Major Aspects of Competitiveness in Steel

- Cost
- Quality
- Value added products
- Customer base
- Export orientation
- However, market prices in the current cutthroat competitive markets need not be based solely on cost
- This leads to WTO-compliant protective measurers AD, CVD, SD

Example of Current Cost and Price

China						
	AUG '16	Feb '16				
Export Price FOB	\$ 377.50	\$ 280				
Average Freight Cost to port of Export	\$ 16	\$ 16				
% duty payment (@8%)	\$ 30	\$ 24				
Ex-works price realization	\$ 331.50	\$ 240				
Operating Cost	\$ 375	\$ 357				
Marginal Cost	\$ 322	\$ 307				
Ex-works price realisation vs. marginal cost	(+) \$ 9.50	(-) \$ 67				
Fixed Cost	\$ 53	\$ 50				
Ex-Works domestic price	\$ 412					

Price (Export and domestic) is not derived from marginal and operating cost. It is determined by market demand and supply. The pressure of costs is more on domestic prices than on export realization. Domestic prices are higher than export prices.

Break-up (%) of Elementwise Cost : CRC

	India	Japan
Raw Materials	56	50
Labour	13	20
Other	34	30
Energy	20	12
Energy Credit	(-) 23	(-) 12
Total	100	100

Cost of Production – an analysis

Raw Materials Cost :

- a. Plants having captive mines (SAIL/Tata) : 30-35 percent RM Cost
- Plants procuring raw materials (iron ore / coal) from market / imports : 50-55 percent RM Cost

Energy Cost :

- a. Improvements in energy efficiency result in reduced production cost & improved competitiveness
- Energy efficiency development on production route, type of raw materials used, product mix and operation control technology
- c. Coal, electricity, natural and other gases

form the major energy inputs

Labour Cost :

- a. Old plants (SAIL/Tata) having more manpower (traditional compulsion) : 15-25 percent labour cost
- b. New plants (most jobs outsourced) : 3-5 percent labour cost

Other Cost

- a. Consumption of stores and spares varies with volume
- b. Freight and handling charges
- c. Repairs to machinery
- d. Conversion charges
- e. Royalty

SI.	Indicator	Unit	Indian Mills	Sophisticated Mills abroad
1	BF Productivity	T/M3 /D	1.5 - 2.5	3.0 - 3.5
2	Coke Rate	Kg / THM	400 - 550	300 - 350
3	BOF Productivity	No. of heats / converter / year	9000 - 10000	12000
4	BOF Lining Life	No. of heats	6000 - 10000	10 - 15000
5	EAF Productivity	T/Hour / MVA	0.5 - 0.7	1.0 (Min)
6	Continuous Casting	%	80 - 85	100
7	Solid Waste Utilization	%	80 - 90	98
8	Yield of Finished Steel from Liquid Steel	%	80 - 85	90 - 95
9	Specific Energy Consumption	G Cal / TCS	5.5 - 7.0	5.0
10	Carbon Dioxide Emissions	T / TCS	2.5	2.0 - BF-BOF 1.5 - DRI-EAF
п	Water Pollutant Discharge	Kg / TCS	0.075 - 0.125	Zero
12	R&D Expenditure / Turnover	96	0.2 - 0.3(0.5-0.6 in some mills)	1.0
13	Manpower Productivity	T / Person / year	200 - 500	600

Techno economic Comparison

World Class Steelmakers Ranking – Proof of Competitiveness (WSD)

Factors identified (with Weights)

- Size, Expanding Capacity
- Location in high growth markets, location close to customers
- Pricing Power in home market
- Value added product mix
- Conversion Cost, Yields, energy cost, cost cutting efforts
- Harnessing tech. resolution
- Iron Ore mines, coking coal mines, location to procure raw materials
- Labour costs skilled and productive workers, liabilities for retired workers

- Profitability, Balance Sheets
- Threat from nearby competitors, environment & safety
- Downstream business, M&A, Alliances & JVs, Country risk factor

Producer	Rank (Weighted Average) out of 37
POSCO	1
NUCOR	2
Gerdeu	4
Nippon Sumitomo	3
Severstal	5
JSW	6
SAIL	14
Tata Steel	16
JSPL	18
Vizag	30
Essar	37

World Class Steel Markets Ranking – Proof of Competitiveness (WSD) March'16

<u>Strength of Competitiveness in World Class</u> <u>Steelmakers</u>

1 – Least Favourable, 10 = Most Favourable

Strong Indicator	POSCO	NUCOR	NIPPON SUMITOMO	JSW	SAIL	TATA – INDIA/EU
	Rank -1	Rank-2	Rank-3	Rank-6	Rank-14	Rank-16
Harnessing tech. revolution	10	9	7	8	6	6
Skilled and productive workers	10	10	10	8	6	8
M&A, Alliance and JV	10	10	10	9	7	8
Country Risk Factor	10	10	10	7	7	8
Downstream Business	8	10	10	4	7	6
Expanding Capacity	9	8	6	10	10	8
Location in high growth markets	6	6	4	10	10	7

(March ' 16)

<u>Strength of Competitiveness in World Class</u> <u>Steelmakers</u>

1 – Least Favourable, 10 = Most Favourable

Strong Indicator	POSCO	NUCOR	NIPPON SUMITOMO	JSW	SAIL	TATA – INDIA/EU
	Rank -1	Rank-2	Rank-3	Rank-6	Rank-14	Rank-16
Conversion Costs; Yields	9	10	10	10	5	8
Labour Costs	7	7	4	10	8	7
Iron Ore Mines	6	4	4	6	10	9
Weighted - Average Score	7.91	7.55	7-49	7.20	6.95	6.93

(March ' 16)

Competitiveness determined not in terms of cost alone

- Technology, skilled manpower, expansion to capture growing markets, downstream product verticals, higher yield, minimum labour cost, secured raw material sources are other factors that strengthen competitiveness
- Capital costs of construction in China are lowest due to highly competitive and numerous Design and machinery-building companies, fast construction times and low interest rates on construction loans.

Cost Competitiveness of Indian Steel

- Indian Steel in cost competitive after China and CIS
- Not possible to compare Chinese costs favoured with low capital costs, waival of outstanding loans, subsidized raw material prices
- Selling prices by China not even covering marginal costs and poor financials get compensated by provincial Govt intervention
- Internal freight in India (SAIL plants to Mumbai/ Chennai @\$60-65/t) more than double than freight from EU to Mumbai.

Steps needed to Improve Cost Competitiveness

- a. Improve techno economic parameters and enhance energy efficiency, carbon efficiency and cost efficiency
 - To reduce energy costs reduce coke consumption ULCOS CCS technologies
 - To reduce consumption of raw materials
 - To reduce finance costs
- b. Production of more value added products
 - High speed and high strength rails and Metro rails
 - Creep resistant, fire resistant, fatigue resistant steel for oil & gas, defence sectors
 - API grades > 100X, HRC, Plates, Pipes
 - CRGO for transformers and high grade CRNO
 - High strength plates with Ys of 530-900 MPa

in Q&T condition, for bullet proof vehicle, security posts, penstocks, earth movers, dams and bridges

- IF, bake hardening, high strength (AHSS) & good formabilities, high carbon and Niobium steel for Auto body sheets
- To capture niche market
- Higher value realisation
- Substitute imports
- Enhance export competitiveness
- c. To enter agreement with IISSSC for conducting RPL training courses based on QP/NOS developed and approved by NSDC
 - NSQF alignment
 - To enhance manpower productivity by retraining and redeploying existing workforce to leverage their knowledge
 - To reduce fatal accidents
- b. Government support and regulatory framework to restrict cheap imports
 - AD, CVD, SD
 - Provide adequate infrastructure support land, railways, roads and ports
 - To provide capital at competitive cost
 - To boost domestic demand
 - To bring down internal freight cost DFC, Industrial corridors
 - GST introduction to bring down marketing costs.

Shri Sushim Banerjee, Director General, Institute for Steel Development & Growth (INSDAG) presented a paper on "Competitiveness of India Steel Industry" in the International Conference on "Minerals and Metals & their Contribution to Make in India" held at Pragati Maidan, New Delhi from 10-12 August 2016. The above are the extracts of the presentation made by Shri Banerjee in the Conference.

STEEL MINISTRY WANTS REVIEW OF POLICIES AFFECTING PRODUCERS

Even as the Centre has extended curbs on steel imports, the Steel Ministry is pushing for a rethink on domestic policies that are hurting producers. This includes the railways' freight policy and the clean energy cess that was doubled in this year's Budget. "While power costs in India are higher than China, Japan or Korea, our steel makers also suffer due to high railway freight," said a senior government official. "With (rates in) sea freight becoming very low, major consumers of steel near the coast, prefer to import steel as the cost of reaching finished steel by railways to those areas is higher by about Rs.1,000 per tonne," he said.

Import duty

The Steel Ministry wants the Indian Railways to change the tariff classification for steel acods and treat them on par with coal, which, it reckons, could cut the logistic costs of moving finished steel by around 14 per cent. The Ministry, which had opposed the 2.5 per cent import duty on coking coal when it was first introduced in 2014, will continue to seek its abolition, since 90 per cent of India's coking coal requirements are imported. Moreover, it has questioned the levy of clean energy cess on coking coal since it is distinct in quality from the coal used in thermal power plants. First introduced in 2010, Finance Minister Arun Jaitley renamed the levy Clean Environment Cess in this year's Budget and doubled its rate from Rs.200 per tonne to Rs.400 per tonne of coal, lignite and peat. "It makes sense to impose this cess on thermal coal to encourage other less-polluting fuel sources, but coking coal is not only cleaner with lower ash content, but also an essential requirement for steel production with no alternatives," the official said, explaining the rationale for seeking an exemption. The Parliament's Standing Committee on Coal and Steel has backed the Ministry's views on scrapping the cess and import duty on coking coal and advised it to take up these issues at the highest levels of government, he added.

Source: The Hindu

STEEL MIN SETS UP PANEL ON QUALITY CONTROL ORDER

Steel Ministry recently announced setting up of a special committee on issues related to the Stainless Steel Quality Control (QC) Order, 2016 and assured industry bodies to resolve the issue within next 10-15 days. Various metal and stainless steel industry associations today Steel Minister Chaudhary Birendra Singh requesting him to intervene and to put quality control order at abeyance, a joint statement said. The members of Metal and Stainless Steel Merchant's Association (MSSMA), All Stainless Steel Industries Association (AISSIA) and Process Plant & Machinery Association of India (PPMAI) also urged the Minister to call an open house with industry representatives for discussions, it added. Singh assured the delegation that he will not allow any kind of monopoly being created in the stainless steel flat products space, the statement said.

"The Union Minister announced setting up of a special committee to resolve this issue within next 10-15 days," it added. In the meeting, the industry bodies put forth their grievances against the BIS order and urged the Minister to suspend the same till all the parameters are not fulfilled by BIS. To check the sale of defective and sub-standard stainless steel products used for making utensils and various kitchen appliances, the Steel Ministry in June issued a Quality Control order to help filter imports of the metal. The associations have also written to the Prime Minister to intervene and keep the quality control order in abeyance as well as convene an open house with representatives of the industry for discussion before implementing it. According to the industry bodies, the QC order makes it mandatory to register with BIS and prohibits manufacturing, import, storage, sale and distribution of stainless steel products by trade and industry without such registration. The order will lead to closure of thousands of SSI units throughout the country and leave lakhs jobless, they have feared.

Source: Business Standard

CHINA FACES PRESSURE TO CUT STEEL, COAL CAPACITY

Steel Authority of India Chairman P K Singh injects a massive dose of reality as he says the continuing crisis in the world steel industry has got much to do with unmanageable surplus capacity built principally by China in the past decade and a half. As a consequence of its 300 million tonnes (mt) excess capacity in a situation of falling domestic demand, China's compulsion to export has grown. Low priced Chinese exports made possible by subsidies provided at different government levels have brought many steel mills, particularly in relatively high cost centres in the world to their knees. No other country has suffered as much as Britain where operations of Tata Steel Europe remain loss making. It also has a deficit of 700 million pound in its UK pension scheme. It reportedly invested 4 billion pound in the UK steel business in the past eight years. While nothing has come out of that, its 4.9 mt mill at Port Talbot in south Wales will need further investment of 2 billion pound to become viable. The near- to medium-term steel outlook looking difficult, it will not be easy for Tata Steel to find a party ready to grasp the nettle that Port Talbot is all about.

Tata Steel is in talks with ThyssenKrupp of Germany for a likely European steelmaking joint venture. A tie-up between two European steel majors leading to capacity consolidation in a meaningful way is what Europe will be better off with. European steelmakers association Eurofer says since 2007, the year when Tata Steel acquired Anglo-Dutch group Corus, the region's steel use is down 25 per cent. But, Tata Steel's burden of UK operations is likely to stand in the way of a JV with ThyssenKrupp. No wonder, then, concern over capacity surplus is finding growing resonance at all places, including Beijing, which is blamed for world steel crisis refusing to go away. Perhaps, no one in the past has told China as bluntly as European Commission President Jean-Claude Juncker that if the country wants to trade freely with others, it must do a decent job of eliminating surplus capacity responsible for steel dumping. "I don't want to dramatise the issue... but there is a clear link between the steel overcapacity of China and the market economy status for China."

Recalling the painful adjustment the European steel industry went through in the 1970s and

the 1980s involving permanent mill closures that caused losses of "tens of thousands of jobs", Juncker said China must start eliminating surplus capacity braving job losses and social discontent. In an obvious reference to China, the finance ministers of G20 have said "excess capacity in steel... is a global issue which requires collective responses. We also recognise that subsidies and other types of support from governments or government sponsored institutions can cause market distortions and contribute to global excess capacity and therefore, require attention."

World pressure to trim capacity and stop subsidising steel products exports is intensifying when the Chinese economic growth is slowing. Its exports of goods and services fell 4.8 per cent in June compared to a year ago amid a raft of uncertainties facing the world economy. June imports, too, declined 8.4 per cent. Admitting that growth might have slowed to 6.6 per cent in the second quarter of 2016 compared with 6.7 per cent in the first, Chinese officials say the situation is "grim and complex".

In this kind of economic stress, it is only to be expected that Beijing will deal with provincial governments firmly to ensure yearly steel and coal capacity reduction targets given to them are honoured. China's planning body National Development and Reform Commission has mandated steel capacity reduction of 150 mt by 2020, of which 45 mt must go this year. In an ambitious restructuring programme for coal over the next five years, Beijing wants to eliminate 500 mt mining capacity and "consolidate a further 500 mt capacity". Final job losses in the two sectors will be 1.8 million out of total employment of 12 million. For rehabilitation and new skill development for job losers, Beijing will be providing 100 billion yuan (\$15.10 billion) over the next two years. In an attempt to carry conviction with other steel and coal producing countries, Beijing says provincial governments that fail to fulfil capacity cut targets will be "seriously punished". The world will be watching.

Source: Business Standard

STEEL OUTPUT LIKELY TO HIT 127.1 MN TONNES BY 2020: BMI

in India, the world's third largest producer, is expected to grow annually at an average of 7.3

per cent during 2016 to 2020, and touch 127.1 million tonnes (MT), a report by Research said. The growth will be driven by state-run giant and Tata Steel, the firm part of the Fitch Group said. "India will be the global growth bright spot as demand from construction, auto and infrastructure industries continue to accelerate," it said. Besides, government has been spearheading the push towards the boost in capacity, with upgrades being made to existing mills and state-owned companies stepping in to build new plants, it added. "We forecast India's to average annual growth of 7.3 per cent during 2016-2020, higher than 5.3 per cent during 2011-2015. India's will grow from 92.7 MT in 2016 to 127.1 MT by 2020," Research said.

The country's share of global will accelerate from 5.8 per cent in 2016 to 7.8 per cent in 2020, it added. On global 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, prices will gradually edge higher as the global surplus will narrow due to Chinese supply moderation. The global 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 arowth, it said.

Source: Business Standard

GOVT SLAPS ANTI-DUMPING DUTY ON COLD-ROLLED FLAT STEEL PRODUCTS

Less than a fortnight after imposing anti-dumping duty on hot-rolled flat steel products was imposed, the Finance Ministry has extend a similar levy on another grade of steel — cold-rolled flat products. Continuing its protectionist approach towards the domestic steel industry, the government has imposed provisional anti-dumping duty on cold-rolled flat products of steel imported from China, South Korea, Japan and Ukraine, for six months. Cold-rolled flat products of steel are used in sectors such as automotive, appliances, furniture, electrical panels, general engineering,

capital goods, construction, packaging including drums and barrels, coating and plating including galvanising, colour coating, tinplates etc.

This Revenue Department move has come less than a fortnight after the Designated Authority in the Commerce Ministry recommended levy of provisional anti-dumping duty. The anti-dumping duty imposed is difference between \$ 594 per tonne and "landed value" in case of specified producers from these four countries. In case of some producers, a 'Nil' rate has also been specified by the Revenue Department.

Essar Steel India Ltd, Steel Authority of India Ltd, JSW Steel Ltd and JSW Steel Coated Products Ltd had jointly filed the petition seeking antidumping duty on cold-rolled flat products of steel from these four countries. According to steel industry officials, with the minimum import price on 66 products extended for two months in early August, the anti-dumping duty on hot-rolled flat steel products and the same on cold-rolled steel products, the entire gamut of steel imports have been covered. The government has come out with these measures so that the domestic industry remains competitive after steel imports shot up 20 per cent year-on-year at 11.208 million tonne in 2015-16.

When minimum import price was first levied in February 2016, it helped bring down imports. During April-July 2016, total steel imports have come down to 2.39 million tonnes or 34 per cent lower than the same period last year. Domestic production which grew 3.7 per cent to 35.238 million tonne during April-July 2016 has managed to substitute falling imports. But, steel consumption has largely remained stagnant at 26.18 million tonnes during the period.

Steel stocks

As the anti-dumping duty on cold-rolled flat steel products was expected, shares of domestic steelmakers did not react much to the development. "The positive impact had been factored in by the market. Therefore, there was not much action on the trading floor with the steel stocks on Thursday," a Mumbai-based analyst said. On Thursday, shares of JSW Steel shares closed 0.45 per cent higher at ₹1,779.95, Steel Authority of India Ltd closed 0.1 per cent lower at ₹48.1, Tata Steel closed 1.06 per cent lower at ₹387.20 while Jindal Steel and Power Ltd closed 4.02 per cent higher at ₹85.45. However, stocks of steelmakers have rallied over the last one year due to the policy decisions that have kept them competitive against imports. In the last one year, Tata Steel's shares rose 53 per cent, JSW Steel's share price has grown 80 per cent, Jindal Steel and Power Ltd's stock price rose 20 per cent and only SAIL's share price has slumped by 16 per cent.

Source: Business Line

TATA STEEL, JSW STEEL TO OUTPERFORM REGIONAL COMPETITORS: MOODY'S

The profitability of Indian steel companies such as Tata Steel and JSW Steel will outperform regional peers' owing to rising domestic demand and the government's protectionist measures like minimum import price and anti-dumping duty. This was the view expressed by global ratings agency Moody's Investors Service in a newly released report on the Asian steel industry, "Steel - Asia: Lower Earnings Keep Outlook Negative". In addition, the expected ramp-up of Tata Steel's Greenfield Kalinganagar operations and JSW's brownfield expansion will help raise the companies' earnings in 2016. The ratings agency said steel demand in India will outpace the regional average as the country's GDP growth of around 7.5 per cent in 2016 and 2017. India's reform and policy support for infrastructure and manufacturing, as well as increasing urbanization, will drive steel consumption. In India and Southeast Asia, Moody's said it expects year-on-year steel demand to increase by a mid- to high-single-digit percentage in 2016 and 2017. But that won't be enough to offset the aggregate effect on the region from the decline in China.

Production in other major Asian steel-producing countries will also decrease, except for India. Japan, Korea and Taiwan, which export around 40 per cent-50 per cent of their steel output, have reduced their production due to flat domestic demand, the lower demand from China, overseas price competition and trade barriers. India, which accounts for 8 per cent of Asian production, will increase steel production to meet rising domestic consumption, though not enough to offset the aggregate decline in regional production. Demand from India and Southeast Asia will increase, but will be insufficient to offset the decline in China, which accounts for about 70 per cent of Asian steel consumption. Chinese production will likely contract 3 per cent-4 per cent in the next 12 months.

Source: The Economic Times

THE PROFITABILITY OF STEEL INDUSTRY WILL IMPROVE: TV NARENDRAN, MD, TATA STEEL

In this interview with ET Now, TV Narendran, MD of Tata Steel talks about MIP extension, Kalinganagar plant, steel industry and more. Edited excerpts:

What do you think about MIP extension?

It is helpful for the industry, but the prices in India will be determined by the demand-supply situation. It certainly gives the industry some respite against cheap imports. The industry is very appreciative of this support from the government.

We are hearing now that MIP extension will not be sort beyond October. Will that come as a jolt to you or are you prepared for that?

I think the government is looking at it more comprehensively. They have multiple options. There is anti-dumping duty, safeguard duty, MIP. It does not matter what is there and what is not there as long as the problem is looked at holistically, which the government is doing, and comes out with a solution which addresses the concerns of the industry.

There is a new rule now that you can buy from OMC more iron ore. How will that bring relief for you and also what is the update on Kalinganagar expansion plans?

The current plan is to focus on commissioning the three million tonne facility in Kalinganagar. We are doing guite well. Last month we produced more than 100,000 tonnes. We are on track to produce more than a million tonnes. Our original plan was a million. We said we will move towards million and a half. I think we are heading towards that. So far the plant has been commissioned quite well and we are happy with the ramp up. As far as OMC is concerned, it gives us an option to buy from OMC which we do exercise once in a while because sometimes it is also driven by a need to manage the logistics. OMC mine is 20-30 kilometres from Kalinganagar and today the market price of iron ore is not very different from the cost of mining iron ore. So we play that option

depending on the economics of it.

Moody's report says that Indian steel makers are in a better position as far as profitability and steel demand is concerned. What is your take on that and on steel prices?

The demand in India is certainly growing and India is one of the most exciting markets from a demand growth point of view. We have always said that the cost position of the Indian steel industry is very good. Indian steel industry is very competitively positioned in a market which is growing in demand, which has some support in form of import duties or anti-dumping duties or safeguard duties. So the profitability of the industry will certainly improve.

Source: The Economic Times

STEEL COMPANIES PLAN TO INCREASE PRICES

In view of rising production costs, companies such as Essar Steel, JSW Steel, Tata and the Steel Authority of India are planning to increase prices by Rs 2,500 a tonne from September 1. The price hike is expected to push the rate of hot-rolled to Rs 39,000 a tonne and that of cold-rolled to Rs 42,000. According to industry insiders, the cost of production has risen Rs 5,000 a tonne in the past eight months and the industry has been left with no option but to increase prices. The cost of iron ore, an important ingredient in steel production, has shot up to \$61 from \$40-42 per tonne in January this year. Since January, the price of coking coal has touched \$127 from \$75 a tonne, and that of zinc, another raw material for steel, increased 50 per cent to \$2,215 a tonne. The price hike has come even as the central government has decided to protect the domestic industry from the import of cheap steel, mainly from China, through a slew of measures.

Minimum import price is a threshold below which the industry cannot import steel. It was imposed in February this year on 173 item lines, for a period of six months. This was extended for two months on August 5, but the very list of products was pruned to 66. Domestic majors JSW, Essar and Tate had pitched for extension of this barrier for a further six months to curb cheap imports. However, the Engineering Export Promotion Council opposed the move citing the difficulties being faced by user industries.

Earlier August 2016, the central government imposed anti-dumping duty for six months on import of hot-rolled products from six nations, including China and South Korea, to protect domestic manufacturers. Rating agency Icra expects the imposition of provisional antidumping duty on hot-rolled and cold-rolled coils for six months will help domestic flat players overcome the challenges posed by a weak domestic demand.

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	4.38		
	IISCO Steel Plant	1939	0.42	2.5		
	Salem Steel Plant	1993	NA	0.18		
	VISP	1936	NA	0.11		
	Alloy Steel	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			

Source: Business Standard

BLACK PEARL TO SHINE MORE

Year	World coking coal imports (in million tonne)	India's coking coal imports (in million tonne)	Share in world imports (%)	
2012	262.5	31.8	12.1	
2013	286.5	35.5	12.4	
2014	291.7	36.8	12.6	
2015	276.3	43.7	14.8	

Source : International Energy Agency and Union commerce & Industry Ministry

Coking coal imports may firm up

by Indian are pegged at 50 million tonnes (mt) in calendar 2016, a 14 per cent increase over 43.7 mnt imported in 2015. Inbound shipments are set to go up on the back of revival in the steel industry thanks to favourable factors such as minimum import price and imposition of safeguard duty. According to analysts, limited domestic availability of the steel making ingredient would fuel more imports. "Imported accounted for two-third of the total consumption by the steel sector in India. According to the commerce and industry ministry, India imported 43.5 mnt of in 2015. Considering the limited scope of increase in domestic production, India may have increased dependency on of to meet the significant proportion of the demand," said Pukhraj Sethiya, associate director (mining and metals) at PricewaterhouseCoopers (PwC). India's crude steel production capacity is estimated at 300 mnt by 2025, a three-fold increase from the present level.

According to the cited above, any increase in demand would need to be met through

Production Data of SAIL from 2006-07 to 2015-16

Units 000T

Item	2015- 2016	2014- 2015	2013- 2014	2012- 2013	2011- 2012	2010- 2011	2009- 2010	2008- 2009	2007- 2008	2006- 2007
Hot Steel	15721	15413	14447	14266	14116	14888	14505	14442	15199	14606
Crude Steel	14279	13908	13579	13417	13350	13761	13506	13411	13964	13506
Pig Iron	642	634	223	214	106	261	323	267	441	509
Saleable Steel	12381	12842	12880	12385	12400	12887	12632	12494	13044	12581
Semi Finished Steel	3054	3007	2760	2422	2527	2394	2392	2206	2243	2278
Finished Steel	9327	9835	10120	9962	9872	10493	10240	10288	10801	10303

Source Annual Report of SAIL

ISSUE NO. 102-103/2016 VOL. CII-CIII "MONTHLY" JULY-AUGUST 2016

imports. prices in the international have been declining for the past two years, making of the material cheaper and a workable option for steel companies in India. From the level of \$216.8 a tonne in 2012, Australian benchmark metallurgical contract prices have tanked to \$85.6 a tonne in 2016 according to Resources & Energy Quarterly, Office of Chief Economist, Australia. The price outlook is expected to stay subdued and is projected at \$78.3 a tonne in 2017, Sethiya added.

Manish Kharbanda, executive director and group head (mines & minerals), Jindal Steel & Power Ltd (JSPL) said, "The revival of steel demand in the country and enhanced capacity utilisation thereof is expected to push up consumption & will be fuelling too. However, a 2.5 per cent import duty on & a clean energy cess of Rs 400 per tonne is affecting the industry margins significantly especially at a time when the market is highly volatile. Indian steel industry has requested to the finance ministry to abolish the 2.5 per cent import duty on coking coal, a scarce commodity in India." To give a fillip to coking coal imports, the Government of India is understood to have initiated steps to cut import duty. Ranjan Mishra, executive director, Visa Steel, said: "As look at greater capacity utilisation, they will need to import more of coking coal. Additionally, the Government of India's proposal to lift import duty on and keeping the commodity out of clean cess will boost imports."

According to Union commerce and industry ministry and International Energy Agency data, the global seaborne trade volume was 276.3 mnt in 2015.

Source: Business Standard

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