

**IIM**Metallurgy  
Materials Engineering

# NEWSLETTER

## THE INDIAN INSTITUTE OF METALS

### (DELHI CHAPTER)

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Chairman, Delhi Chapter

**S. C. SURI**

Chairman, Technical &amp; Publication Cell

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### INTRODUCTION

This News Letter is containing a brief of the 6th meeting of the Executive Committee of IIM-DC held on 26.11.2011. The News Letter also contains the following write-ups:

1. Indian Steel Sector - Serious Challenges Ahead by Shri S C Suri, Chairman, Technical & Publication Cell & Vice Chairman, IIM-DC
2. Brief on Seminar-cum-Clinic on Computer-Aided Design and Automation in Die Casting
3. Brief on Technical Programme on Energy Efficiency of Re-heating Furnaces in Rolling Mills
4. IIM Chapters Conclave
5. The News Letter also contains National and International news relating to ferrous & non-ferrous sectors.

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## Chapter News

### E.C. Meeting

The 6th meeting of the EC was held on 26th November 2011. The following are the highlights of the meeting.

- (a) Organizing Metals Quiz for school children of Delhi in January 2012.
- (b) Conducting Training Programme on Lean Manufacturing
- (c) Institution of Chapter Level Awards at IIM-DC
- (d) Technical Talk on Role of Nickel in Stainless Steel
- (e) Seminar-cum-Clinic on Computer – Aided Design and Automation in Die-Casting held on 7.11.2011 and Technical Programme on Energy Efficiency of Re-heating Furnaces in Rolling Mills held on 21.11.2011
- (f) Constitution of Organizing Committee and Technical Committee for conducting International Conference titled “Resurgent India – Vision 2020 for Minerals and Metal Sector” in September 2012
- (g) Organizing Chapter Level NMD Celebrations on 3.12.2011

### Indian Steel Sector - Serious Challenges Ahead

S C Suri

Life Fellow IIM, Vice Chairman IIM-DC

Indian and Global Steel Industry are facing one of the worst challenges in recent times. The demand from major end users is subdued. Manufacturing and Processing Industries like automobile, machine building, consumer durables, electrical and transport equipments, ship building and others are facing the sliding demand.

Cost of steel production has gone up to a greater extent than the price of steel end products. This is responsible for sharp decline in profitability of the steel plants. Steel buyers do not want to hold inventories as there are expectations of further drop in the prices.

**Winners compare their achievements with their goals, while losers compare their achievements with those of other people.**  
**Nido Qubein**

Capacity additions in the brown-field or green-field units are held up in anticipation of lower steel demand.

The world economic performance is becoming a cause of severe concern. There is serious crisis on the economic front in the European Nations. Large steel producers like Arcelor Mittal and Thyssen have decided to cut down their steel production. This is to reduce chances of further fall in the market price. The economic projections by IMF has confirmed drop in world steel output from 4.3 to 4% in 2011 and from 4.5 to 4% in 2012.

For India GDP growth projected will also come down from 8.2 to 7.8% in 2011 and from 7.7 to 7.5% in 2012.

The prices and availability of major raw materials like coking coal and iron ore are showing a fluctuating trend. Coking coal prices from a high of \$ 315 per tonne in Q 2 in 2011 came down to \$ 285 in Q 3 and currently moving between \$ 250 to \$ 260. Iron ore prices of Indian origin are between \$ 188 to \$ 190 per tonne.

The global export prices of steel are observing a downward trend. The depressed global scenario is

having an immediate impact on the Indian Steel Industry. The receding growth rate in GDP, industrial production and particularly in manufacturing sector are showing sharp drop in apparent consumption of finished steel. Growth rate of Gross Fixed Capital Formation is on the decline. Steel consumption which grew at a rate of 10.2% in 2010-11 has clocked a growth of only 1.8% during the first half of current financial year, although the production growth is around 9.3% in the first half of current fiscal.

***Waiting is a trap. There will always be reasons to wait. The truth is, there are only two things in life, reasons and results, and reasons simply don't count.***

***Dr. Robert Anthony***

This poor economic scenario makes the task of prediction and projection of steel demand extremely difficult.

The future prospect of Indian steel industry is closely linked with the health and growth of infrastructure, building development and manufacturing sector.

The year 2012 based on all the available indications will pose severe challenges to steel industry in terms of capacity augmentation, utilization, production, prices, profitability and environment. A collaborative approach between industry and the Government can alone help to see the country through this difficult period facing the Indian Steel Sector.

### **Seminar-cum-Clinic on Computer-Aided Design and Automation in Die Casting**

The Indian Institute of Metals – Delhi Chapter organized the above Technical Programme on 7<sup>th</sup> November 2011 in the new Lecture Hall premises. Around 40 delegates participated in the technical programme. The delegates were from Academic Institutions, Die Casting Units and members of IIM Delhi Chapter

The participants were welcomed by Shri S C Suri, Vice Chairman, IIM Delhi Chapter. Shri Suri also presented a programme profile of the Seminar. Shri Anil Gupta, Chairman, IIM Delhi Chapter, presented a brief account of IIM Delhi Chapter activities.

The keynote address titled “Die Casting Markets – Global and India” was delivered by Shri L Pugazhenthly, Past President IIM and Executive Director, ILZDA.



A Special Address was delivered by Shri Rahul Khanna, CEO, M/s Mahavir Die Casting Industries, Faridabad (Haryana). In his address, Shri Khanna presented a review and current status of the Die Casting Sector. Shri Khanna also requested for institutional support of the IIM Delhi Chapter for different problems being faced by the Die Casting Units.

Shri G I S Chauhan, Jt. Hon. Secretary, Executive Committee, IIM-DC introduced the various speakers who made their respective presentations in the Seminar.



The following presentations titled below were made in the technical programme.

Automated Die- Design for Die-Casting	Shri Vijay Kumar Sharma Associate Professor Anand Intl. College of Engg, Jaipur
Automated parting line selection: Capabilities and limitation of present computer - aided systems	Er. Ranjit Singh Research Scholar Sant Longowal Institute of Engg. & Tech., Sangrur
Process Simulation of Die Casting	Shri Sunil Kumar Baghla Associate Professor (Mech. Engg) Yadavindra College of Engg., Bathinda
Computer Aided system for determination of environmental sustainability in Die casting Process	Shri Prince Pal Singh Associate Professor (Mech. Engg.) Lovely Professional University, Jalandhar
Die Casting defects and its solutions	Shri C S Chowdhry Associate Vice President ASK Automotive P Ltd

The presentations of different speakers were highly informative and evinced a lot of interest amongst the participants in the question-answer session for each presentation.

There was a Panel Session which was chaired by Shri S C Suri, Vice Chairman, IIM Delhi Chapter. During the Panel Discussions, a strong need was expressed by different participants for more effective interaction between the Academic Institutions and Die Casting units.

Commendation Certificates were distributed to the participants by Shri P K Chatterjee, Member, IIM Delhi Chapter. The Seminar activities concluded after a vote of thanks proposed by Shri S C Suri, Vice Chairman, IIM Delhi Chapter. It was followed by High Tea for all the participating members.



### Technical Programme on Energy Efficiency of Re-heating Furnaces in Rolling Mills

The Indian Institute of Metals – Delhi Chapter organized the above Technical Programme on 21<sup>st</sup> November 2011 in the new Lecture Hall premises. This Programme was jointly organized by IIM-DC in collaboration with Project Management Cell of UNDP of Ministry of Steel, Government of India. Around 20 persons participated in the technical programme.

A brief introduction of the programme was given by Shri Neeraj Gupta, EC member, IIM-DC.

The participants were welcomed by



Shri S C Suri, Vice Chairman, IIM Delhi Chapter. Shri Suri also presented a profile of the programme. Shri Anil Gupta, Chairman, IIM Delhi Chapter, presented a brief account of IIM Delhi Chapter activities.

The keynote address was delivered by Shri A C R Das, Industrial Advisor, Ministry of Steel (Govt. of India) and National Project Coordinator of UNDP Project of Ministry of Steel. Shri Das spoke about the future of steel industry in India. He expressed his concern on the decline of steel consumption in India. He laid stress on the importance of energy efficiency in rolling mills as 70% of the steel is being produced through re-rolling route. He stated that the energy consumption is high as per international standards. We have to take measures to reduce energy consumption. He also spoke about the need of quality steel in manufacturing units. He also hinted that quality policy on steel is on the anvil.



A Special Address was delivered by Shri Vinod Vashist, President All India Steel Rolling Mill Association. He also gave a thrust on the need of optimisation of energy saving in rolling mills. He also called for more such interactions with the SME Sector.

Shri G I S Chauhan, Member, Executive Committee, IIM-DC introduced the various speakers who made their respective presentations in the Programme.

The following presentations were made in the Technical Programme.

***You simply cannot spend your life in fear of losing your job, your health, your life or your wife. I decided that I had to create my own financial reality and job security. Was I afraid of failing? Yes, but I could continue being scared and broke, or I could be afraid and well paid. I chose the latter. At some point, you have to be more afraid of not trying than you are of failing.***

***—Carrie Wilkerson***

Title of the presentation	Speaker
Use of Pulverized Coal in Re-heating Furnaces of Rolling Mills	Shri V K Sharma Chief Executive Refined Structures & Heat Control Unit, Jaipur
Measures taken to improve the Energy Efficiency in Re-rolling Mills	Shri G. Mishra Manager (Projects & Contract) Project Management Cell of UNDP of Ministry of Steel
Rolls – Life Line of Rolling Mills	Shri G. Madan Manager (M&E) Project Management Cell of UNDP of Ministry of Steel
Roll Pass Design using Software Applications	Shri A. Mukherjee Jr. Manager (Rolling Mills) Project Management Cell of UNDP of Ministry of Steel

The presentations of different speakers were highly informative and evinced lot of interest amongst the participants in the question-answer session for each presentation.



A Panel Session was held after the conclusion of Technical Programme where the prospects of SME in Steel Sector were debated amongst the Panel Members. The panel discussions were chaired by Shri S C Suri, Vice Chairman, IIM-DC

Commendation Certificates were distributed to the participants by Shri S C Suri, Vice Chairman, IIM Delhi Chapter.

The Programme activities concluded after a vote of thanks proposed by Shri S C Suri, Vice Chairman, IIM Delhi Chapter. It was followed by High Tea for all the participating members.



### **IIM CHAPTERS CONCLAVE**

The IIM Chapters Conclave organized by Chapter Relations Committee at Hyderabad on 13<sup>th</sup> November 2011, on the eve of the 49<sup>th</sup> NMD – 65<sup>th</sup> ATM, was a grand success from all accounts. The IIM National Council Meeting at Kolkata on 29 July 2011 suggested organizing a chapters meet at Hyderabad during the NMD-ATM and accordingly the Chapter Relations Committee took the above initiative. Out of 50 chapters in the country, 23 chapters (Bangalore, Burnpur, Bokaro, Chandigarh, Chennai, Coimbatore, Delhi, Jamshedpur, Hyderabad, Kalpakkam, Kanpur, Kharagpur, Kolkata, Mumbai, Pune, Ranchi, Rourkela, Trichy, Trivandrum, Varanasi, Vijayanagar & Visakhapatnam) participated in the Conclave.

***The sacrifice, charity, and penance are to be performed, and not relinquished; for they are the acts of sanctity.***

***– Bhagvad Geeta***

Dr D De Sarkar, Jt. Hon. Secy & Hon Treasurer welcomed the IIM office bearers, past presidents, council members and chapter office bearers followed by Special Remarks by Mr M Narayana Rao, President, IIM. Mr L Pugazhenthay, Co-chairman, Chapter Relations Committee & Past President, IIM, highlighted the meeting objectives: to bring together chapter office bearers on a common platform, to increase inter-chapter relationships & communications, to discuss activities & services and to pick up new ideas on programmes. Mr R N Parbat, Past President, IIM also spoke and dwelt on the job prospects, placements for young metallurgical engineers. Mr R N Patra, Vice President, IIM as well as Mr J C Marwah, Secy Genl, IIM also spoke and provided valuable inputs for the deliberations. The chapters were requested to make presentations on novel/unique programmes so that other chapters can emulate them. Eleven chapters came forward and made presentations. Some brilliant ideas came through these presentations. Recently Trichy and Bangalore Chapters joined hands and organized a Foundry Meet at Coimbatore – an excellent example for inter chapter collaboration. Rourkela chapter organizes Metals Quiz separately for spouses of members also. Kolkata Chapter holds annual meets for young students, young scientists etc., to popularize metals and metallurgy.

On the whole the Conclave was mutually beneficial. Considering this, it was decided (1) to hold such Conclaves every year on the occasion of NMD-ATM (preferably on the first or second day so that there is maximum participation) and (2) to hold at least two regional workshops every year. The meeting came to a close with a vote of thanks to everyone present.

### **National & International News**

#### **Tata Steel's Loss – Making South Wales Arm To Be Shut**

Tata Steel today said it planned to cease its loss – making construction products business, an operation focused on roll – formed products and assemblies, based at the Llanwern site in Newport, South Wales.

Paul Steele, Managing Director (Distribution), U K & Ireland, said, "Our markets are highly competitive. On two occasions recently, the company had attempted to address the business's challenges by restructuring it to focus on new and developing markets.

***The success of any endeavour depends upon the five: the materials, the agent, the instruments, the methodology, and the fate.***  
***Bhagvad Geeta***

These included safety platforms for protecting people handling freight and solar array structures. Despite these efforts, most reluctantly, we have come to the conclusion that there are no prospects of generating sufficient viable new business to sustain this operation." The company said this business which saw consistent losses since 2008, employed around 70 people. A full, formal consultation process would take place over a statutory minimum period of 30 days with trade unions, employee representatives, and all employees on an individual basis.

The company would explore all opportunities to re-deploy employees wherever possible and to assist those leaving the business through a range of support services. During the consultation process, options would be evaluated to minimize the impact of the closure and to retain some vital parts of the construction products order book. This would involve negotiations with some customers, with whom the company has signed manufacturing agreements.

Source: Business Standard

### **JSPL TO INVEST \$600 MN IN BOLIVIA IN 6 MONTHS**

Jindal Steel & Power Ltd. (JSPL) is planning to invest \$600 million in part-development of the El Mutun iron ore mines in the South American nation of Bolivia over the next six months. El Mutun is the world's largest iron ore deposit at a single location. JSPL, the Delhi-based flagship company of industrialist and parliamentarian Naveen Jindal, had won rights of development for half the 40-billion tonne (bt) reserves of the mines for 40 years in 2007. Jindal Bolivia Ltd. (JBL), a subsidiary of JSPL, is executing the project. Jindal's proposed outlay in Bolivia is by far the largest announced by an Indian company in South America and would also be the highest investment by a foreign company on a single project in that nation.

"The committed investment of \$600 million would be made by April 2012. It is part of the overall \$2.1 billion project to be fully commissioned over the next eight years," Mr. Vikrant Gujral, Vice Chairman and head of global ventures, JSPL, told Business Standard. Apart from mining, the project also includes setting up a 1.7 Million tonne per annum (mt-pa) steel plant, a 6-mtpa-sponge iron plant, a 10-mtpa-pellet plant and a 450-megawatt power project. The steel plant is expected to commence production by end 2014. The Bolivian Government has committed itself to providing subsidized gas for the power and steel plants. Reacting to media reports on the Bolivian Government's alleged threats to take over JSPL's reserves owing to alleged delays in development plans in the country were intact.

A news report had quoted Bolivian President Evo Morales as saying that if JSPL's work was not accelerated, the state will begin to exploit the ore. "In fact, JSPL has been shipping some quantities of iron ore even in the on-going lean period that would end in December. The exports would pick up beginning January, when water levels in the Tamango canal go up," he said. The ore is moved through barges on the Paraguay Parana river system. JSPL had started dispatching iron ore from the El Mutun mines last month. "Already, 7,000 tonnes of ore has been exported under an overall 10,000 tonne order from Paraguay, bringing Bolivian ore in the global make for the first time," Mr. Gujral said, adding the company hoped to ramp up export volumes to a million tonnes by the end of next year.

***A person with right blend of zeal, enthusiasm and passion, sky is the limit.***  
***Peter Kline***

Global iron ore benchmark prices, which had been hovering at \$175 a tonne until recently, have come down to \$135 a tonne at present. Apart from the Bolivian project, JSPL's other expansion plans

abroad include increasing its steel production capacity in Oman from 1 mt-pa at present to 5 mtpa by 2016. It had acquired Oman's Shadeed Iron & Steel Company last July for \$500 million. JSPL registered a 40 percent jump in net profit at Rs 2,064 crore last financial year. Total income of the company rose 30 percent to Rs 9,717 crore during the financial year. The company's share price at the Bombay Stock Exchange today closed at Rs 555.3, down two percent as compared to the previous close.

Source: Business Standard 12<sup>th</sup> November 2011

### **World steel Announces WS 46 in India**

In the light of the emerging importance of India and the country being the next growth area of the steel industry, the governing body of the World steel Association representing 170 producers and accounting for 85% of world steel production, has decided to hold World steel 46 in India in October 2012 from 8<sup>th</sup> to 12<sup>th</sup> October 2012. In a glittering ceremony at the present conference being held at Paris, France from 10<sup>th</sup> – 13<sup>th</sup> October 2011, Shri C. S Verma, Chairman, SAIL on behalf of the host country committee consisting of the 6 leading producers of India extended warm invitation to all the CEOs of leading steel producers to attend the conference in 2012 in Delhi.

The Indian Steel Industry has grown multi-fold, from a production of about 2 mt of crude steel in 1950-51 to nearly 70 mt in 2010-11. Indian economy has recorded an impressive GDP growth in the last few years. This financial year also, it is expected to be around 8.0%-8.5%. A report released by World Steel Association (world steel) based on the concluded conference forecast that apparent steel use will increase by 6.5% to 1,398 Mt in 2011, following growth of 15.1% in 2010. In 2012, it is forecast that world steel demand will grow as consumption is likely to grow by 4.3% to reach 67.7 Mt due to economic growth. In 2012, the growth rate is forecast to accelerate to 7.9%. The member steel companies representing Host Country Committee in India include JSW Steel Ltd, Steel Authority of India Ltd, Rashtriya Ispat Nigam Ltd, Tata Steel Ltd, Essar Steel Ltd and JSW Ispat Steel Ltd. All these companies are top steel producers in the world.

*Focus is an important skill that can affect us metaphorically. In other words, the way we see the future has everything to do with how well we can look up and see the expanded horizon before us.*

*Peter Kline*

Source: Steel Tech 1, October, 2011

### **Essar Steel India Commissions Corex Module**

Essar Steel has successfully commissioned a Corex Module, with a capacity of 0.87 Mtpa, as part of its expansion programme of increasing steel production capacity from 4.6 Mtpa to 10 Mtpa at its Hazira complex. It has earlier commissioned blast furnace and a DRI Module. With this the iron making capacity has reached over 9.5 Mtpa. A second Corex module of 0.87 Mtpa is expected to be commissioned shortly. The overall expansion including downstream facilities at Hazira is being done at a cost Rs. 17,000 crores.

Highlights of the Essar's Corex facility can be summarized as follows

- Significant lower investment costs and operating costs vis-à-vis blast furnace
- Outstanding environment compatibility
- Highest operational flexibility, i.e., production output and diversifying energy needs
- Use of Corex exports gas for many applications within the plant

The recently installed state-of-the-art Compact Strip plant, plate mill along with steel making capability allows it to produce high quality value added products to serve both the domestic and export markets. Major facilities are expected to be commissioned by March 2012.

Source: Steel Tech 1, October, 2011



## GOLBAL STEEL SCENARIO

### Crude Steel Production in January-September, 2011

World crude steel production for the 64 countries reporting the World Steel Association (world steel) was 124 Mt in September 2011. This is 9.7% higher than September 2010.

In the first nine months of 2011, Asia produced 728.3 Mt. of crude steel, an increase of 9.5% compared to the same period of 2010. The EU produced 135.7 Mt of crude steel in the first three quarters of 2011, up by 4.3% compared to the same period of 2010. North America's crude steel production in the first nine months of 2011 was 89.3 Mt, 6.1% higher than the first nine months of 2010.

*"I've missed more than 9000 shots in my career. I've lost almost 300 games. Twenty six times, I've been trusted to take the game-winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed."*

*Michael Jordan*

China's crude steel production for September 2011 was 56.7 Mt, an increase of 16.5% compared to September 2010. Elsewhere in Asia, Japan produced 8.9 Mt of crude steel in September 2011, a decrease of 3.8% compared to the same month last year. South Korea's crude steel production for September 2011 was 5.5 Mt, 17.7% up compared to September 2010. The world crude steel capacity utilization ratio of the 64 countries in September 2011 rebounded slightly to 79.1%... Compared to September 2010, the utilization ratio in September 2011 increased by 3.5% points.

Source: Steel Tech 1, October, 2011

## STAINLESS STEEL SCENARIO

The world stainless steel production remained almost stagnant for five years from 2004 onwards. However, there has been significant pick up since 2010.

However, the growth is mainly driven by increased production in China where production has gone over from about 2 Mt in early 2000 to 11.25 Mt in 2010. This figure is more than double the production recorded in 2006. Most traditional steel making countries are still producing at well below their highest recorded levels.

Table 1: Crude steel production: Jan-September, 2011 Vis a Vis 2010

Country	Jan-Sept, 2011	Jan-Sept, 2010	Change %	Rank in Jan-Sept'11 crude steel Production
Austria	5838	5297	10.2	
Belgium	6579	6016	9.4	
Czech Republic	4288	3935	9.0	
Finland	3007	2995	0.4	
France	11913	11625	2.5	
Germany	34139	32969	3.6	7
Greece	1494	1383	8.0	
Hungary	1294	1257	2.9	
Italy	21260	19099	11.3	
Luxembourg	2087	1937	7.7	
Netherlands	5141	4896	5.0	
Poland	6579	6095	7.9	
Romania	2876	2886	-0.3	
Slovakia	3259	3475	-6.2	
Spain	12211	12566	-2.8	
Sweden	3751	3588	4.5	
United Kingdom	7322	7497	-2.3	
<b>European Union (27)</b>	<b>135687</b>	<b>130064</b>	<b>4.3</b>	
Turkey	25058	21078	18.9	10

<b>Other Europe</b>	<b>27424</b>	<b>23154</b>	<b>18.4</b>	
Russia	51870	49728	4.3	5
Ukraine	26372	24616	7.1	9
<b>C.I.S</b>	<b>84675</b>	<b>80187</b>	<b>5.6</b>	
Canada	9870	9880	-0.1	
Mexico	13646	12470	9.4	
United States	64682	60886	6.2	3
<b>North America</b>	<b>89266</b>	<b>84137</b>	<b>6.1</b>	
Argentina	4166	3810	9.4	
Brazil	26715	24885	7.4	8
Chile	1280	660	93.8	
Venezuela	2526	1433	76.2	
<b>South America</b>	<b>36779</b>	<b>32703</b>	<b>12.5</b>	
Egypt	4875	4834	0.8	
South Africa	4960	6016	-17.6	
<b>Africa</b>	<b>10471</b>	<b>12325</b>	<b>-15.0</b>	
Iran	9818	8785	11.8	
Saudi Arabia	3959	3808	4.0	
<b>Middle East</b>	<b>15280</b>	<b>14051</b>	<b>8.7</b>	
China	525735	474904	10.7	1
India	53906	51179	5.3	4
Japan	81015	81934	-1.1	2
Taiwan	17023	14555	17.0	
<b>Asia</b>	<b>728307</b>	<b>665225</b>	<b>9.5</b>	
Australia	5288	5480	-3.5	
New Zealand	629	643	-2.2	
<b>World</b>	<b>1133806</b>	<b>1047970</b>	<b>8.2</b>	

Preliminary figures released by the International Stainless Steel Forum (ISSF) show that stainless steel crude steel production increased in the first half of 2011 by 3.8% compared to the same period of 2010. Total production for the first six months of 2011 was 16.4 Mt, a new all-time high

Table 2(a): Stainless and heat-resisting crude steel production ('000t)

Region	Quarter		+/- % Q-0-Q	First half year		+/- % Y-0-Y
	1/2011	2/2011		2010	2011	
Western Europe/Africa	2,217	2,078	-6.3	4,303	4,295	-0.2
Central & Eastern Europe	85	114	33.0	163	199	22.3
The Americas	779	598	-23.2	1,399	1,377	-1.6
Asia (excluding China)	2,238	2,134	-4.7	4,513	4,373	-3.1
<b>China</b>	3,076	3,129	1.7	5,469	6,206	13.5
<b>Total</b>	<b>8,396</b>	<b>8,053</b>	<b>-4.1</b>	<b>15,847</b>	<b>16,449</b>	<b>3.8</b>

Excluding China, Asian stainless steel production decreased by 3.1% to 4.4 Mt. There was a mixed performance in individual Asian countries during the first half of the year. While Korea and India showed increased production volumes, stainless crude steel production decreased in Japan and Taiwan. China increased stainless production by 13.5% to 6.2 Mt. in the first six months of the year.

### Grade split

The production split between the main stainless grades has seen a recovery in the market share of chromium-nickel (CrNi) stainless steels. The market share of austenitic CrNi stainless has increased compared to the average of 2010 due to lower quotations for nickel. The market share of chromium-manganese steels remained basically unchanged.

Table 2 (b): Estimated market share of stainless steel categories (as a percentage of total crude stainless steel production)

Category (grade)	Full year 2010	First half 2011
Chromium-manganese-CrMn (200 series)	13.4	13.5
Chromium-nickel- CrNi (300 series)	55.9	58.5
Chromium-Cr (400 series)	29.9	28.0

Source: Steel Tech (International Stainless Steel Forum)

### **Steel Ministry hopes to see 6pct steel demand growth this FY**

The steel demand growth in India in the first seven months of the current financial year was just 2.9%, but the Steel Ministry is confident the sector would be able to post, at least, 6% growth rate. Mr S Machendranathan Additional Secretary and Financial Advisor Ministry of Steel said that it seemed difficult for the industry to grow at 10% to 12% rate that has been a norm for the past few years. Mr Suman Mukherjee Director Commercial of Steel Authority of India echoing Mr Machendranathan's view said the growth in demand would be moderated in the current year. He, however, was optimistic the growth would climb back to 10% from the next year. But an analyst with a domestic research company said that "Demand usually picks up in the third and fourth quarter, but this year it looked difficult because of the macro economic issues. Even if, hypothetically, demand does pick up from now on, closing the year even with 6% growth rate looked unlikely."

***"Our willingness to fail gives us the ability and opportunity to succeed where others may fear to tread."***

***Michael Jordan***

Source: Steel Guru

### **MoU term for steel plant of Surendra Mining extended**

BS reported that government extended the validity period of the MoU with Surendra Mining Industries (P) Ltd up to 2012. The company proposes to set up a 0.25 million tonne per year integrated steel plant at Bonai, in Sundergarh district. The validity period of MoU is extended for a further period of 2 years with effect from December 21, 2010. The company had signed the MoU with the State Government in 2006 and the term of the contract had expired last year.

***Try and fail but don't fail to try***

***– Vinod Khosla***

The extension of MoU is part of the Odisha Government's review of MoU signed steel projects, which has been taken up twice this year after many companies failed to start their projects due to delay in land acquisition and other problems. In a separate order, the Department of Steel and Mines has cleared Surendra Mining's proposal to acquire 51.3 acre of private land for its plant site. The company requires about 200 acre land to set up the steel plant. The company currently has 200 tonne per day sponge iron plant at Barhamusa village in Sundergarh district and has plans to convert it into an integrated steel plant by adding mini blast furnace, steel melting shop and rolling mills. It had proposed to build the plant with INR 221.62 crore investments in 2006.

Source: Steel Guru

### **Government update on major steel plants in India**

The India's Union Minister for Steel Mr Beni Prasad Verma said that the list of major integrated steel



plants both in public and private sector that are functioning in the various part of the country is as under:

### Crude Steel Capacity

In million tonnes

Company	Location	Capacity
Steel Authority of India Limited	IISCO, Burnpur	0.5
Steel Authority of India Limited	Bokaro	4.4
Steel Authority of India Limited	Bhilai	3.9
Steel Authority of India Limited	Rourkela	1.9
Steel Authority of India Limited	Durgapur	1.8
Rashtriya Ispat Nigam Limited	Visakhapatnam	2.9
TATA Steel Limited	Jamshedpur	6.8
Essar Steel Limited	Hazira	4.6
JSW Steel Limited	Vijaynagar	6.6
Jindal Steel & Power Limited	Raigarh	2.4
Ispat Industries Limited	Dolvi	3.0
Bhushan Power & Steel Limited	Jharsuguda	1.2
Bhushan Steel Limited	Angul-Dhenkanal	1.5

Source: Steel Guru

### India has 3647 small steel plants - Report

The India's Union Minister for Steel Mr Beni Prasad Verma in a written reply in the Rajya Sabha said that there are several medium and small steel units in the country including mini blast furnaces, sponge iron units, induction furnace units and rolling mills. As per the last survey conducted by Joint Plant Committee in 2009-10, the total number of such units is approximately 3647. Steel is a deregulated sector and Ministry of Steel maintains record of public sector steel units and private sector integrated steel units having capacity 1 million tonne or higher. He said that steel being a deregulated sector, the detailed strategy regarding physical and financial matters of the private sector projects are decided by the individual investors themselves. Ministry of Steel facilitates the implementation of the major private sector projects through coordination with concerned ministries and state governments

Source: Steel Guru

### Core may push up steel demand 10.3% in 12th plan: Planning Commission

NEW DELHI: India's steel demand is likely to grow at an average of 10.3% in the next five fiscal years on the back of infrastructure development and higher per capita consumption, a committee constituted by the Planning Commission has said in a report. The forecast for the 12th Five-Year Plan is well above the 8.1% demand over the last two decades and is based on a projected GDP growth of 9%. The report says that total domestic demand for steel will touch 113.3 million tonne in 2016-17, as against 65.61 mt during 2010-11. The working group on the steel industry, however, warns that the economic woes of the West and market volatility could bring "grim and gloomy prospects in the short term". Despite the resilience shown in the past, the steel sector, which contributes 2% to the GDP, will not be immune to global developments such as sovereign debt crisis in Europe,

**"Only those who dare fail greatly  
can achieve greatly."  
Robert F. Kennedy**

downgrading of US' sovereign credit rating, its proposed expenditure cuts, and the high volatility in currency and equity markets. A possible slowdown in the Chinese economy would affect the sector the most, the report says.

Crude steel capacity in the country, which stood at 78 mt at the end of the last fiscal, is forecast to more than double to 149 mt by 2016-17. But an additional 60 mt capacity will cost about Rs 2.5 lakh crore, and securing this at a reasonable cost will be challenging in the current environment. The group, chaired by Steel Secretary Pradeep Kumar Misra, has also made recommendations for the sector for the plan period 2012 -2017. It has said that a review of steel-related sectoral caps in the banking sector and easing of external borrowing norms will help steel manufacturers execute their expansion plans. Steel Authority of India (SAIL), Rashtria Ispat Nigam and Tata Steel, the country's main steel producers, contributed only 6% to capacity addition in the 11th Five-year Plan. Their combined share of production shrank from 33.5% to 27.7% during the period. The 12th Plan period, which begins from April 2012, will witness Tata Steel expand capacity of its Jamshedpur plant to 10 million tonne per annum and set up a 6-mt plant at Kalinganagar. While SAIL is expected to increase crude steel production to 20.75 mtpa during the period, JSW should touch 10 mtpa at Vijaynagar, Essar Steel 10 mtpa at its Hazira plant, JSPL an aggregate of 8 mtpa at Raigarh and Angul, and Bhushan Steel 5.2 mtpa. But the report, while adding up "realisable" capacity, has chosen to discount the possible 4 mtpa addition each from Tata Steel's Greenfield in Gopalpur, now to be an industrial park, and South Korean steelmaker Posco's troubled Orissa project. Production of finished steel grew at an annual rate of 5.8% from 52.53 mt in 2006-07 to 66.01 mt in 2010-11. Despite the possibility of a slump in the near term, it is not all gloom on the demand side. The government's plan to spend \$1 trillion on infrastructure over the 12th Plan should alone account for 40 mt increase in steel demand every year. There is also opportunity in hauling up India's low per capita consumption of steel. At 51.7 kg in 2010, it is a fourth of the world's average. In rural India, the figure slips to as low as 10 kg a person a year. Before the end of 2016-17, steel production is projected to outstrip demand and free-up 7mtpa for export.

Source: The Economic Times

### **Posco to Hit Stainless Steel Output Record**

Posco, the world's biggest maker of stainless steel, will report record production this year, saying it expects to maintain that pace in 2012 supported by demand from emerging markets. Output of the alloy used in cars and home appliances may reach about 3.16 million metric tons this year, up from about 2.9 million tons in 2010, Suh Young Sea, senior vice president at the Pohang, South Korea-based Company, said in an interview in Seoul. Posco, the world's third-biggest steelmaker, last month said it will continue expanding in emerging markets, including China and India. Stainless-steel makers in Europe face overcapacity, higher raw-material costs and falling prices. We are probably the only stainless-steel maker that's making profits and running at full capacity under the current situation," Suh said in the interview on Nov. 25. "We will try to maintain current output levels next year as well. Emerging markets will still likely show some growth and we are planning to increase our share in those markets." Global stainless steel output may rise 6.5 percent to 33 million tons this year, Suh said. That compares with U.K.-based industry consultant MEPS (International) Ltd. Nov. 2 forecast of 32.5 million tons. Demand in China and India, the world's two most populous nations, is rising with disposable income. Europe's debt crisis remains a "swing factor" in terms of global demand, Suh said. Posco kept domestic stainless steel prices steady for December for the third straight month.

### **Target Cut**

"It's very difficult to make any forecasts for next year because there still remain uncertainties about the global economy," Suh said. "However, we'd like to remain optimistic, pinning hopes on emerging markets such as China, India and Southeast Asia." Posco posted a 78 percent decline in third-quarter profit because of foreign-currency losses and weaker demand. The company cut its total planned spending for this year to 6 trillion won from 7.3 trillion won. Stainless steel output in China, the world's

biggest producer, rose 6 percent to 3.37 million tons in the first nine months from a year earlier, the China Iron and Steel Association said Oct. 21. China's production may climb 13 percent this year and 11 percent next year, MEPS said. In terms of raw material sourcing, Posco is looking at "multiple projects" in Indonesia, including the Sulawesi region, to secure supply of nickel, a key ingredient, Suh said, declining to elaborate. The company and its Chinese venture, Zhangjiagang Pohang Stainless Steel Co., will together seek to develop a nickel mine in Indonesia, Posco said in June.

### Outperformance

Posco shares have fallen 28 percent this year, compared with a 39 percent drop in the 76 member Bloomberg World Iron and Steel Index. Posco is the world's biggest maker of stainless steel based on 2010 output, followed by China's Taiyuan Iron & Steel Group Co., according to the Korean mill. Posco and its units have the capacity to produce more than 3 million tons of stainless steel a year and the company is building plants and marketing bases in China, Vietnam and Turkey.

Source: Steel News

### Hindalco: Tough times ahead

Weakness in LME prices of copper and aluminium to hurt company in second half. GLOBAL uncertainties have impacted the prices of aluminium and copper in the international markets. While the fall in London Metal Exchange (LME) prices has not hit India's largest aluminium producer, Hindalco, significantly in the second quarter and the second half of the financial year could be challenging. Aluminium prices on LME averaged \$2,399 per tonne in the second quarter, down eight percent from the previous quarter, the company explains. "Even as the large metal inventory has remained locked in financing deals, taking benefit of the low interest rates, LME has come under further pressure in the current quarter given the macro development," says a company statement.

It's apparent that even as the cost of production has not declined, realizations have been lower than previous quarters. According to the median estimate of 17 analysts surveyed by Bloomberg, aluminium prices will trade at \$2,000-\$2,350 in the next six months. In that case, there will be further pressure on the earnings of companies like Hindalco. Bloomberg Industries estimates that 25 percent of production loses money below \$2,350 and 50 percent under \$2,000. If aluminium is likely to come under stress, it's no different for copper.

The company has highlighted that the domestic refined copper market has also shown weakness in segments like wires and cables, automobiles and white goods. In the last quarter, growth in global refined copper slowed to lower single digits. To make matters worse, copper prices have also declined on LME, though Hindalco has not been hit by this in the quarter. However, the difficult global environment is visible in Hindalco's numbers. The

company's revenues clocked a year-on-year growth of seven percent to Rs 6,272 crore. However, net profit grew 16 percent to Rs 503 crore from Rs 434 crore in year-ago quarter. Revenues from aluminium rose 16 percent. As a result of the global macro-economic situation, analysts say, the company has lowered its adjusted Ebitda (earnings before interest, taxes, depreciation, and amortisation) guidance for FY12 to \$1.10-1.15 billion, yet maintaining capex/cash flow guidance.

Source: Business Standard

***There are innumerable temptations along the path of a craftsman to do things badly, to evade responsibility and effort and to look at life flippantly, and one succumbs to these often enough. This concept of total daily and complete devotion to work becomes for the mature craftsman not only moral law, but the deepest concern and most constant joy. This artistic and ethical pressure that permeates his or her whole life, in work and leisure, in joy and sorrow, will give his or her work the valid human quality that is the sign of the work of art and out of a technician a creative artist will have developed***

***– Marguerite Wildenhain  
– from 'The Invisible Core'***



### **Indian Forging Industry to Grow by 25pct**

Association of Indian Forging Industry predicts an impressive growth for the forging industry in India and released figures of overall production of forgings which increased to about 2.3 Mt. in the current year from 1.8 Mt in 2009-10, registering a strong growth of about 35%. The robust growth of the forging industry is owing to the market potential of the automobile sector in the recent past and has provided a strong impetus to the forging industry. The newer generation cars will require better quality forgings and the vehicle industry seems poised to maintain a remarkable growth rate of around 25%.

Mr. Deven Doshi, President of AIFI said, "Capacity utilization has been growing considerably and production is expected to reach about 4 Mt by 2015. This was a result of several industry initiatives including capacity expansion, modernization, cost rationalization, coupled with a revival in demand from the automotive sector which recorded an excellent growth. There was also a mention of a lack of skilled manpower and heavy capital investment that the industry is facing. It requires low-priced labour and huge capacities in order to survive. Though labour cost plays a dominant role for the industry's survival, labour productivity rates have remained constant over the last 20 years. Hence, this scenario offers huge employment opportunities for skilled manpower. Currently, the industry provides employment to approximately 200,000 people.

Source: Steel Tech

### **SCENARIO ON IRON AND PELLET PLANTS**

#### **Production of Iron Ore in India**

The total iron ore production during 2010 was around 1,851 Mt, an increase of about 15.4% over 2009 production of 1,603 Mt. This also a new record for global iron ore production. During 2010, India produced about 226 Mt of iron ore out of which about 117 Mt of iron ore was exported. Of the total iron ore production in 2010, the share of fines and lumps was 55% and 45% respectively. But, due to adequate availability of high grade ore lumps with more than 63% of Fe content, the domestic steel industry does not prefer fines. Miners, therefore, have no option but to export in order to continue excavations activity.

**Table 5: Iron ore production ('000t)**

	2006-07	2007-08	2008-09	2009-10
Iron ore	187.7	213.2	215.4	226
Lumps	88.3	97.9	95.6	100
Fines	98.2	114.9	119.2	125
Concentrate	1.1	0.5	0.6	1

The government has put several restrictions to curb export of iron ore fines. The Govt. has already levied 10% ad valorem royalty on iron ore mining and this is likely to be doubled. Also, the proposed changes in mining rules call for an amount equal to the royalty to be paid for the welfare of project-affected people. The government has also levied a 20% export duty. Mr. Siddharth Rungta, president of the Federation of Indian Mineral industries, has already forecast a steep decline in iron ore exports from 95 Mt last year to 70 Mt this year.

Source: Steel Tech

#### **Iron Ore Prices Falling Sharply**

Iron ore prices are coming down sharply since August. After reaching US\$190 per tonne, the price is down by 35% and it is currently at US\$ 120 per tonne for or with Fe 62% which is lowest since July, 2010 due to lower Chinese demand and economic crisis in Europe. The price for Indian iron ore fines having Fe 63% is at US\$ 136 per tonne. The Orissa Mining Corporation (OMC) has however, raised the prices of different grade iron ore lumps by as high as 10% for the October to December period. The price of high quality iron ore belonging to BF grade has been raised by 10% to INR 5,300 per tonne, from INR 4,813 in the previous quarter. Iron ore rates in Orissa now range between INR 4,203 per tonne to INR 5,300 per tonne as compared with INR 4,050 per tonne to INR 4,800 in the previous quarter.

These rates are ex mine basis, including royalty dues and excluding taxes. OMC prices are considered benchmark rates across Orissa, the largest iron ore producer in the country. OMC decides the ore prices every quarter by auctioning 10% of total supply for the three-month period.

Source: Steel Tech

### **Global Iron Ore Pellet in 2010 up by 32pct**

The global iron ore pellet output in 2010 totalled 388.1 Mt up by 32% YOY hitting an all-time peak level. In 2010, China was the world's largest iron ore pellet producing country with an output of 110.3 Mt. The UNCTAD report points to strong demand in the global iron ore pellet market. More than 5 Mt of new iron ore pellet production capacities are under construction in China. In terms of exports, in 2010 Brazil was the world's largest exporter of pellet with an export volume of 53.6 Mt while Canada ranked second with 21.2 Mt. Vale, the biggest producer of iron ore pellets is continuously increasing pellet production capacity by setting up plant near markets to cover total global demand.

Source: Steel Tech

### **Lack of Quality Iron Ore Pushes Demand for Pellets in India**

India, the third biggest exporter of iron ore, is also increasing the pellet production capacity continuously due to decline in availability of good quality iron ore lumps and also to adhere to stringent pollution norms put in place by various governments. This helps to utilize low-grade iron ore and to meet the increased demand. The cost of production in India is higher due to high energy costs, due to which Indian pellet manufactures are in a disadvantageous position. However removal of export duty on pellets by considering it as a value added product has provided some relief to pellet producers. The pellet capacity in India is expected to touch 50 Mtpa by the end of 2012. Most of the plants are coming up in Karnataka and Orissa where low grade fines are available abundantly with good water supply and logistics. The consumption of low grade iron ore fines below 63% of Fe content in India is likely to more than double in 3 year, on substantial increase in consumption by existing and proposed pellet plants. A study by a research company, Avendus, forecasts domestic consumption of fines to increase from 43.3 Mt in 2008-09 to 70 Mt by 2012 and to palletisation and sintering capacities over the next three years. To address the several restrictions on iron ore exports, steel and mining majors such as JSW Steel, Essar Steel, Ispat Industries and NMDC have decided to invest in making pellet to feed steel plants. Their combined plans total Rs 8,000 crore in the next 4years, to establish palletisation capacity of 40 Mtpa. Essar's 12-Mtpa pellet plant is being set up in two equal phases in Orissa. Commercial production is expected by October 2012. After commissioning, the company will have a total palletisation capacity of 20 Mt yearly; at present, it has an 8 Mtpa pellet plant at Vizag, Andhra.

Source: Steel Tech

### **Essar Steel Commissions the Second CSP Caster**

The second strand of the CSP plant (compact strip production) supplied by SMS Siemag, Germany, to the Essar Steel at Hazira in Gujarat, was successfully put into operation on July 15, 2011. The CSP® plant with the first strand was started up on March 31, 2011; the third strand will be installed in 2012. Essar Steel will thus have the first three-strand CSP® plant worldwide with an annual capacity of 3.5 Mtpa of hot strip.

Essar Steel can produce hot strip with widths of 950 to 1,680 mm and thicknesses of 1.0 to 25.4 mm on the CSP® plant. The product range covers strip of carbon steels as well as pipe grades, silicon and dual phase steels. The CSP® process offers the best prerequisites for the economical processing of high-quality steel grades. SMS Siemag's scope of supply included the engineering, the manufacture of the mechanical equipment, the entire electrical and automation systems, as well as the erection and commissioning supervision. The X-Pact® automation systems had been prepared with the tried and tested Plug and Work process. Plug and Work simulates the production sequence and allows the automation functions to be tested and optimized under realistic conditions prior to installation in the works.

Source: Steel Tech