



# NEWSLETTER

## THE INDIAN INSTITUTE OF METALS

### (DELHI CHAPTER)

**ANIL GUPTA**

*Chairman, Delhi Chapter*

**S. C. SURI**

*Chairman, Technical & Publication Cell*

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#### INTRODUCTION

This News Letter is containing brief on 2nd Executive Committee Meeting for the year 2011-12 held on 30.7.2011.

The News Letter contains the following:

1. A brief on Technical Talk titled "Particle Engineering for the Formation of Smart Functional Fluids" (A Technical Talk given by Dr. Kaustav Sinha, Linden Technology Centre of Infineum, USA LP)
2. Comments on: A comparative study of Thermal Behaviour of Iron & Copper Nano-Fluids by Dr. Avanish Kumar Srivastava, Member, IIM
3. My Memorable Moments in IIM by Mr. L. Pugazhenthly, Past President, IIM
4. Indian Steel Industry Scenario in 2010-11 – An Overview by Mr. S C Suri, Life Fellow IIM & Vice Chairman, IIM DC
5. 20 years of Economic Reforms (extracted from Business Standard)
6. New Steel Policy must address regulatory, infrastructure hurdles – An interview with Jt. MD. Jindal Steel
7. The News Letter also contains National and International news relating to ferrous & non-ferrous sector

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## Chapter News

### Executive Committee Meeting

The second meeting of the Executive Committee of IIM DC was held on 30.7.2011. The following three Cells along with designated Chairman were constituted for organizing the activities of IIM-DC.

- 1 Asset Management & Resource Cell : Shri K L Mehrotra
- 2 Relation & Development Cell : Shri Raj Tiwari
- 3 Technical & Publication Cell : Shri S C Suri

The Chairman of the respective Cells gave the basic details regarding:

- Names of the members constituting the cell
- Scope of work for the Cell
- Budgetary estimates for their respective cell

Discussions were also held and Chairman of the respective cells were requested to formulate action plans in their respective areas.

### Particle Engineering for the Formation of Smart Functional Fluids

The Indian Institute of Metals – Delhi Chapter organized a technical talk on the above topic at IIT Delhi on 15.7.2011.

Dr. Kaustav Sinha who delivered the talk is a technologist at Linden Technology Centre of Infineum, USA LP. There were around 40 participants in the technical deliberations. The participants were welcomed by Prof. Yogendra Nath, Head of the Applied Mechanics Department, IIT Delhi.



The talk focused on:

- (a) Overview and background on particle engineering
- (b) The optimization and refinement of scalable approaches for the development of nanoscale powders
- (c) The development of nanofluids for microfluidic applications

Lively discussions were held after the technical presentation. The technology has great relevance towards the application of Nano Sciences in the different industrial segments.

## Comments on:

### *A Comparative study of Thermal Behaviour of Iron and Copper Nanofluids*

A. K. Srivastava

National Physical Laboratory, New Delhi

**Authors:** Kaushtav Sinha

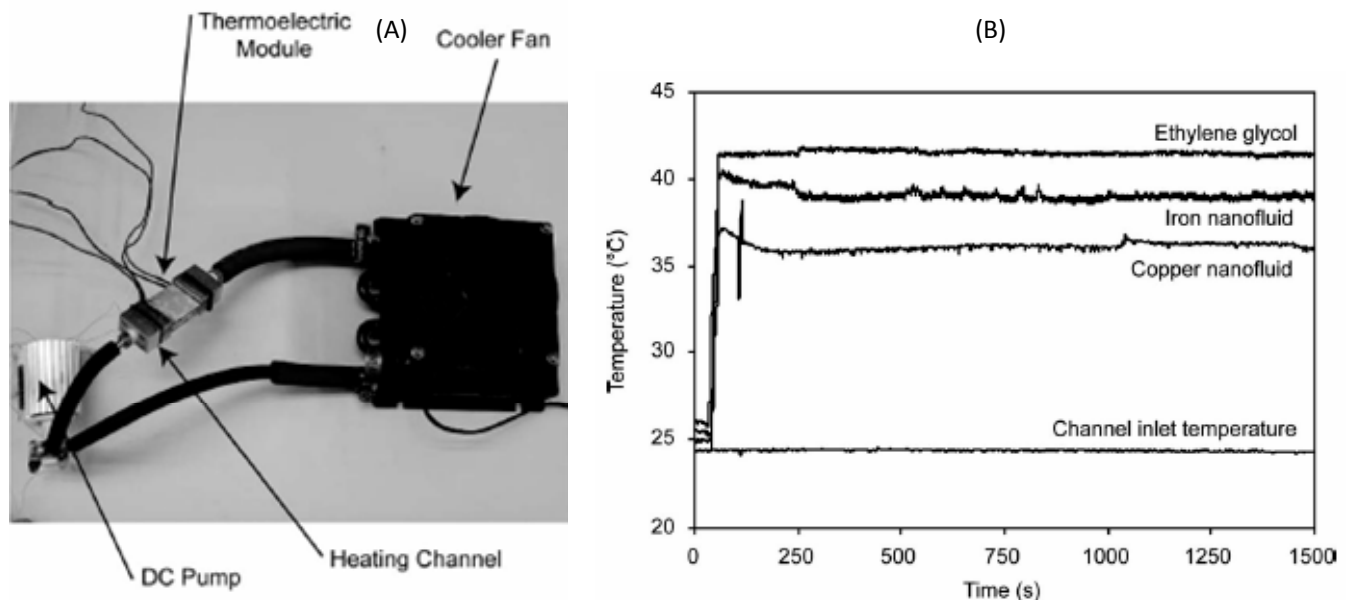
Barkan Kavlicoglu, Yanming Liu

Faramarz Gordaminejad and

Olivia A. Graeve

Journal of Applied Physics 106, 064307 (2009).

The demand for improved thermal management systems is enhancing especially in the field of automobiles and electronics. The research in this area is more critical because of in general a very low thermal conductivities of liquids compared to solid materials, leading to the highly inefficient heat transfer systems in liquid media. However if suitable solid particles are suspended in fluid, the thermal conductivity of liquid may be enhanced significantly. The present investigations are devoted in this direction, by introducing a two-step scalable controllable method for the development of copper and iron nanofluids. The nanoprecrystalline powders (particle size: 500 nm, crystallite size: 20 nm) were incorporated into ethylene glycol. It was demonstrated that the thermal conductivity of ethylene glycol can be increased by 25 to 70% by dispersing copper nanopowders of different fractions in the carrier fluid. In similar experiments, the conductivity of carrier fluid was enhanced by 11 to 33% by incorporating iron nanoparticles. The results are unique in a sense that a detailed interpretation of the particle size distribution was performed for both the copper and iron nanoparticles.



Figures: (A) Flow cell experimental setup for dynamic thermal conductivity nanofluid evaluation and (B) Dynamic thermal characterization results of copper and iron nanofluids to ethylene glycol.

## My memorable moments in IIM

L. Pugazhenty  
Past President IIM

As per the structure and conventions in IIM, before becoming a President, one is elected and installed for three years as the IIM Vice President and Chairman of the respective Division (Ferrous, Non-ferrous & Metal Sciences) to which he belongs, so that the three Vice Presidents could take up the topmost position in the institute, turn by turn, every year depending on the seniority. I became the IIM Vice President and Chairman of the Non-ferrous Division during 2005-06. Subsequently for three years, I enjoyed visiting a large no of engg colleges & IIM chapters, across the country (1) to know the chapters, officebearers and members intimately so as to develop mutually beneficial relationships and (2) to motivate the members at large as well as students in the chapters, nearby engg colleges etc., Three years of Vice Presidentship also enabled me to familiarize myself with the functioning of the Council, HQrs, and various committees and to develop confidence before the final responsibility, Thus it was an invaluable opportunity to understand the IIM, its working, conventions, rules & regulations and more importantly to build lasting relationships.

### OUR LOSS

IIM Delhi Chapter is shocked to inform about the sad demise of Prof. Balram K. Mahendra in Australia on 9.6.2011. Prof. Mahendra was the founder Secretary of IIM DC during 1953-59. The Executive Committee of IIM Delhi Chapter deeply mourns the demise of Prof. Mahendra and expresses deep condolences to the bereaved family.



**Dr Abdul Kalam with IIM Office-bearers & Past Presidents**

Turning to one of my memorable moments, it was on 8 April 2006 when the Pune Chapter of the IIM organized the first Dara P. Antia Memorial Lecture at DIAT University (of which Late Prof P. Ramachandra Rao was the Vice Chancellor) and the then President of India, His Excellency Dr. A.P.J. Abdul Kalam had consented to deliver the first Antia Memorial Lecture on "Material Science and National Development". That morning, Dr. Abdul Kalam also undertook a daring and historic flight in a MIG-21 aircraft at Pune alongwith an IAF pilot, to prove that the aircraft was safe, airworthy and to instill confidence in our defence personnel. The DIAT University had virtually become a fortress—a high security zone before the President's arrival in the afternoon.

When he arrived, the then IIM President Mr. B. Muthuraman received and he introduced the Vice Presidents, one by one. When my name was mentioned by Mr. Muthuraman, I naturally extended my hand to the President; the President- himself a great Tamil scholar- shook his head on hearing my unique and difficult Tamil name (incidentally mine was the name of a famous Tamil poet) and curiously asked me about my native place, what I do etc.,. Subsequently, he delivered the lecture eloquently, operating the laptop himself, recalling his fond memories about Dara Antia and the challenges as well as opportunities for the Indian metals and metallurgical industry. Dr. Abdul Kalam also spoke extensively about the significant contributions of Prof. Brahm Prakash, Dr. V.S. Arunachalam and Prof P. Rama Rao. Dr. Abdul Kalam also said *"There are 540 million youths below 25 years in the population of a billion people. The nation needs young leaders of material science who can command the change for transformation of India into a developed nation embedded with knowledge society. The leaders are the creators of new organizations of excellence"*. After the function, the Past Presidents and all IIM office bearers assembled for a photo session with Dr. Abdul Kalam in an adjacent room. When we all had a high tea, after the event, Dr. Abdul Kalam was lost in a sea of students as usual, grossly involved in animated discussions with them. His security had a tough time, literally extricating the President and taking him for the next appointment in time.

Some more fond, personal recollections will be featured in the next issue.

### [Indian Steel Industry Scenario in 2010-11 – An Overview](#)

S C Suri

Life Fellow IIM, Vice Chairman IIM-DC

The highlight of 2010-11 was the robust growth of the Indian economy as reflected in growth of the GDP. The latter provided a much-needed boost to market sentiments, which was necessary given the developments at the global front, where an already-uneven pace of recovery received a massive jolt with the twin natural calamities that struck Japan followed by the nuclear catastrophe. Steel played a critical role in restricting the extent of damage and is poised to play an even greater role as reconstruction activities begin.

For Indian Steel, the high rate of economic activity was reflected in the trends in finished steel consumption and production of sale where a robust growth led to a decline in imports, the later impacted further by Chinese policies. Steel prices recovered due to both demand rise and hike in input costs. Capacity expansion saw substantial progress for the brownfield projects but the greenfield ones were not as lucky. Thrust on moving ahead with reforms in general and infrastructure development in particular implied that all other things remaining same, domestic steel demand is poised for a healthy rise in the days to come.

#### Key Events:

- Devastating floods in Australia caused havoc in its coking coal supply leading to significant rise in prices.
- Twin calamities of earthquake-tsunami halted Japan's industrial progress, promising however, significant off-take in steel once reconstruction starts but the threat from nuclear radiation looms large.
- Globally, the quarterly system of iron ore pricing came into effect, replacing the age-old annual contracts.
- Iron ore situation in Karnataka led to global supply shortage of the annual mineral and a hike in prices but more, importantly, brought the issue of illegal mining in the spotlight.
- Union Budget 2011-12 raised export duty on all forms of iron ore to an uniform 20% keeping export of pellets free from any duty.
- NMDC-Severstal and JSW's Ispat buyout were landmark deals achieved during the year.



## **Global Steel Production**

- At 1,414 million tonnes (MT), global crude steel production crossed the pre-crisis level in 2010 and recorded a growth of 15 percent over 2009.
- China produced 627 Mt of crude steel in 2010, which was a growth of 9.3% over 2009 and remained the largest crude steel producer in the world.
- China accounted for 70% of Asian and 44% of world crude steel production during this period
- Besides China, the other countries that emerged in the top five bracket during 2010 were Japan (109.6 Mt), USA (80.6 Mt.), India (68.32 Mt.) and Russia (67.0 Mt)
- Crude steel production in the EU (27) countries stood at 173 Mt., a growth of 25% while that for Asia was 898 Mt, a growth of 12%.
- Production in world excluding China, stood at 786.9 Mt, a growth of 19 percent over 2009

The following is an account of the performance of Indian Steel industry during 2010-11 as compared to 2009-10, based on the provisional data released by JPC for the year. It is to be noted that except prices, all data are provisional and 'steel' refers to total finished steel, i.e. both non-alloy and alloy (including stainless steel). All comparisons are with respect to previous year. Also, Mt = million tonnes.

## **2010-11: Indian Steel Industry at a Glance:**

- Production of crude steel increased to 69.57 Mt., a growth of 5.7%
- India produced 26.7 Mt of sponge iron, a 8.9% increase
- Pig iron production for sale was 5.54 Mt, a decline of 5.8%
- Total finished steel production for steel was 66.01 Mt, a growth of 8.9%
- Export of total finished steel reached 3.46 Mt, a growth of 6.5%
- Import of total finished steel was 6.79 Mt, a decline of 7.9%
- Consumption of total finished steel was 65.61 Mt, an increase of 10.6%

## **Crude Steel**

- Crude steel production was 69.57 Mt, a growth of 5.7% and saw an utilization rate of 89%
- Main producers produced 23.85 Mt, a growth of 2.5%, while the majors produced 13.87 Mt, a growth of 4%. The rest i.e. 31.85 Mt was the contribution of the other producers, a growth of 9.2%.
- PSU plants (SAIL and RINL) produced 16.99 Mt, a growth of 1.7%, while the rest was the contribution of the private sector, a growth of 7%.
- Shares of oxygen, EAF and IF routes in total production were 45%, 25% and 30%, respectively.

## **Pig Iron**

- Production for sale stood at 5.54 Mt, a decline of 5.8% compared to last year, contributed primarily by the private sector (90% of total output).
- Exports were 0.36 Mt, a decline of 1.1% compared to last year. Imports stood at nine thousand tonnes, a decline of 18% compared to last year.
- India was a net exporter of pig iron.
- Domestic consumption was 5.15 Mt, a decline of 6.8 % compared to last year

## **Sponge Iron**

- Led by the coal-based route, production stood at 26.71 Mt, a growth of 9.8% compared to last year.
- Domestic consumption was 26.7 Mt, a growth of 9.7% compared to last year
- India continued to remain the largest sponge iron producer in the world.

## **Total Finished Steel – Production for Sale**

- Total finished steel production for sale was 66.01 Mt, a growth of 8.9%.
- Contribution of non-flat was at 33.47 Mt (Share: 51%) and that of flat was 32.54 Mt.
- Growth rates of main producers, majors and others were respectively 1.3%, 13% and 12%.

- Shares of the public and private sectors were 20% and 80%, respectively.
- Key contributors: Bars & Rods (24.37 Mt), HRC (12.36 Mt), CRC (5.76 Mt), GP/GC (5.59 Mt), structurals (5.54 Mt)

### **Total Finished Steel – Imports**

- Total finished steel import was 6.79 Mt, a decline of 7.9%.
- Import was led by non-alloy (88% share) compared to alloy steel.
- Share of non-flat was 11% while that of flat was 89%.
- Major contributors to import (by volume) included:
  - HRC (2.31 Mt; decline of 23%)
  - CRC (1.13 Mt; growth of 26%)
  - Plates (0.76 Mt; decline of 16%)
  - GP/GC (0.33 Mt; growth of 13%)
  - Electric sheets (0.31 Mt; growth of 12%)
- Top five countries (63% of total imports) from where India imported steel: China (1.83 Mt), Japan (0.85 Mt), South Korea (0.76 Mt), Russia (0.42 Mt) and Ukraine (0.39 Mt)
- India was a net importer of total finished steel during the year

### **Total Finished Steel – Exports**

- Total finished steel export was 3.46 Mt, a growth of 6.5%
- Export was led by non-alloy steel (88% share) compared to alloy steel
- Share of non-flat was 13% while that of flat was 87%
- Major contributors to export (by volume) included GP/GC (1.25 Mt), pipes (0.61 Mt), HRC (0.52 Mt), CRC (0.28 Mt) and bars and rods (0.14 Mt)
- Top five countries where India exported steel included: USA (0.43 Mt), UAE (0.26 Mt), Belgium (0.22 Mt), Italy (0.177 Mt) and Iran (0.151 Mt)

### **Total Finished Steel – Consumption**

- Total real finished steel consumption was 65.61 Mt, a growth of 10.6%.
- Growth was led by non-alloy (95% share) compared to alloy steel.
- Share of non-flat was 51% and that of flat was 49%.
- Major contributors to growth (by volume) were: Bars & Rods (24.44 Mt), HRC (13.97 Mt), CRC (6.64 Mt), Plates (4.76 Mt), and GP/GC (4.74 Mt)
- Per capita consumption of total finished steel was 55 Kg.

### **Prices**

- Considering trends in March 2011 with the start of the year, i.e. April 2010, prices in general have recorded an increase, be it pig iron (10%), long products (wire rods, 6.0%) or flat products (HRC, 0.4%).
- Considering trends in March 2010 with March 2009, much steeper rises are observed be it pig iron (25%), long products (wire rods, 29%) or flat products (HRC, 25%). Since March 2009 was a period when prices, in tune with overall economic conditions (domestic, global), were yet to recover.
- Demand recovery, firming up of international prices and rise in raw material costs are the key factors that impacted prices. Natural calamities that struck Australia and Japan were the two major events that impacted movement of prices of raw material and from thereon of steel prices at a global level.

### **Outlook**

- Outlook for 2011-12 is overall positive, given the projections as also current levels of economic growth, growth trends in the leading steel end-use segments, the extent of infrastructure development planned, the direction of reforms and upbeat market sentiments, with India emerging as a key investment destination for global MNCs.
- However, hike in raw material costs would be a major challenge to deal with during the year with prices of most items already moving north.

- Key brownfield projects are expected to be commissioned during the year and hopes are also high on further progress of the greenfield projects.
- WSA has projected a 13% rise in India steel consumption in 2011 as compared to a global consumption growth of 5.9% and Chinese growth of 5%.

## **20 Years of Economic Reforms**

Twenty years ago on 24<sup>th</sup> July 1991, India's finance minister Dr. Manmohan Singh wound up his historic Union budget speech with the famous word: "No power on earth can stop an idea whose time has come. I suggest to this august house that the emergence of India as a major economic power in the world happens to be one such idea". While those stirring words were met with all-around applause in parliament, the import of the intellectual construction underlining that last sentence of the budget speech only became clear to India and the world much later. Indeed, it took the Pokhran-II nuclear tests of 1998 for the world to wake up to a new India. An India made confident by the success of its economic reforms programme of 1991-95. In 1991 India went begging around the world for help. It mortgaged gold to get some succor. By 1998 India was confident enough to stand up to the threat of economic sanctions imposed by the world's two strongest economic powers, the United States and Japan. When finance Minister Dr. Manmohan Singh crafted his budgetary and economic strategy in the summer of 1991 it was obviously clear to him that the reason India had failed to secure support till it went down on its knees was because the major powers had neither any stake in India nor saw India as an important player in world affairs. India was dependent on the world, but the world was not dependent on India. This had to be changed. That was the strategic project of the 1991 reforms. By opening up the Indian economy to external capital and trade flows, the reforms of 1991 created a stake in India for the rest of the world. By making the Indian economy more globally competitive the reforms aimed to help India deal with the world with greater confidence. The kind of confidence that India showed barely eight years later when it declared itself a nuclear weapons power.

This was also the singular lesson of the collapse of the Soviet Union and the rise of China. Even though it was armed to its teeth with nuclear weapons, that more than matched US nuclear capability, the Soviet Union collapsed under the weight of its own internal contradictions and economic weakness. China, on the other hand, was rising because it had chosen to focus on building its comprehensive national power. Hence, believed Dr. Manmohan Singh and his political mentor Prime Minister Mr. P V Narasimha Rao, the real challenge before India was to ensure its emergence as a major economic power in the world. Power, in the modern world, was solidly based on the foundation of economic performance and prowess. Military power meant little if it was not backed by economic performance. National power is a sum of the military, economic, knowledge, cultural and social power capabilities of a nation. It is, therefore, a welcome initiative that the Union Finance Ministry has taken two decades after that historic budget speech to quantify India's geopolitical and geo-economic power through a new index. The Index of National Economic Power, as the Ministry's Economic Survey of 2010 termed it, is an attempt to capture the multi-dimensional nature of national power, the core being a nation's economic capabilities and a fitting tribute to the architect of that idea.

(Extracted from Business Standard)

## **National & International News**

### **ArcelorMittal's steel project and Posco Project in Karnataka on track**

The Rs 32,000-crore ArcelorMittal integrated steel project being set up in Karnataka seems to be on track with the State Government acquiring about half of the 4,000 acres of land for the 6-million-tonnes plant without any hitch. The Government has also decided to go ahead with the Rs 32,000-crore Posco integrated steel project. The government said that it will protect the interest of farmers who agree to give away the land for the 6-million-tonnes plant and may even increase the compensation amount, if required. The State Industries Minister, Mr Murgesh R. Nirani, told *Business Line* that ArcelorMittal had already deposited with the government about Rs 700 crore towards acquisition of land in Bellary district in north Karnataka where it is setting up the plant. The



compensation was divided into three slabs for the farmers who gave away land. Those farmers whose land was in the interior got about Rs 8 lakh an acre, and those whose land was closer to the highway received about Rs 12 lakh and those whose land was adjoining the highway received about Rs 16 lakh. The Minister claimed that there was no hitch in acquiring the land for the project. A total of 1,600 farmers were identified for acquisition of land.

The mining lease issue for both the steel projects has also been resolved with the government taking a decision to give only 50 per cent of the installed capacity of each of the steel plants while for the rest, they will have to source it from the private sector.

#### Posco plant

Mr Nirani said even for the South Korea-based Posco which is setting up the plant in Gadag district, preliminary hearing for acquisition of 3,382 acres of land will take place within six months. "Most of the farmers whose land has been identified for acquisition are keen (to give away land) because of the benefits they will receive," Mr Nirani said. He said nearly 75 per cent of the total land for the project is dry land. Hence, he claimed, farmers are not opposed to offer their land.

"Farmers are going to get jobs apart from huge compensation for offering their land," he pointed out. Posco has already deposited Rs 60 crore towards acquisition of the land.

#### Water from Almatti dam

The State has also decided to give water from the Krishna Basin near the Almatti dam for the ArcelorMittal project. It has agreed to give about 40 MLD for the project but most of it would be from the overflow of water from the basin.

Source: The Hindu - Business Line

### **Coal imports could account for 29% of demand in coming years**

In five years, India could be forced to import almost 30 per cent of the coal required to meet its electricity needs.

This would mean that consumers across the country could find electricity prices shooting up. Or else, distribution utilities would be pushed closer to bankruptcy on account of the increased strain on their finances from costly coal imports.

Back of the envelope calculations show that against a projected requirement of 742 million tonnes of thermal coal for fuelling coal-fired stations by the end of the Twelfth Plan, only 527 million tonnes of domestic coal is likely to be available even in the best case scenario.

This translates into a shortfall of 215 million tonnes or 29 per cent of the country's total requirement projected by 2017.

Source: The Hindu - Business Line

### **MMTC to Supply Iron Ores to Japan Mills, Posco for 3 more years**

The government on Thursday gave the nod for state-owned MMTC to extend its long-term agreements for supply of iron ore to Japanese Steel Mills (JSMs), South Korean steel giant Posco and Chinese steel mills for three years till 2014. The proposal to permit MMTC to renew the long-term agreements for supply of iron ore was approved by the Union Cabinet, Information and Broadcasting Minister Ambika Soni told reporters here after the Cabinet meeting. The long-term agreements (LTAs) for supply of iron ore for five years (2006-11) expired on March 31, 2011, and the Japanese steel mills had formally requested MMTC to renew the agreements with effect from April 1, 2011. Under the agreement, MMTC is supplying iron ore (lumps and fines) of grade (plus) 64 Fe, or high grade content, to Japanese, Korean and Chinese steel mills. Earlier this year, strong differences had emerged between MMTC and the largest domestic iron ore miner, National Mineral Development Corporation (NMDC), over the LTAs, as the latter was

#### **WORDS OF WISDOM**

**"We are responsible for what we are,  
and whatever we wish ourselves to be,  
we have the power to make ourselves.  
If what we are now has been  
the result of our own past actions,  
it certainly follows that whatever  
we wish to be in future  
can be produced by our present actions;  
so we have to know how to act"**  
**Swami Vivekananda**

opposed to the idea of allowing MMTC to be the canalising agency, saying it is getting a raw deal. NMDC had contended that by allowing exports through MMTC, the money from the sale proceeds from JSM/Posco get shared among various government agencies like the ports, railways, customs and state governments, besides MMTC, and it does not get its proper share. It had also written to the Steel Ministry expressing its unwillingness to renew the LTAs with the Japanese steel mills and Posco and had sought the government's permission to export them directly. However, the Commerce Ministry overruled the objections of the state-owned iron ore miner in a Cabinet Note, saying that a limited quantity of iron ore exports are allowed under the Long-Term Agreements and only one agency, in this case, MMTC, should be allowed to negotiate such agreements. The ministry said that as a state trading company, under the canalisation regime, MMTC has been doing proper due diligence on a year-to-year basis while ensuring that evacuation of high grade iron ore from NMDC's Bailadila mines does not exceed the ceiling.

Source: The Economic Times, 8<sup>th</sup> July 2011

### **SAIL to set up Rs. 780 Cr. Pellet Plant in Jharkhand**

Steel Authority of India Ltd (SAIL) has decided to set up a 4-million-tonne-per-annum (mtpa) pellet plant at Gua in Jharkhand to utilize accumulated fines at a cost of Rs. 780 crore. The turnkey contract for installing the plant is slated to be awarded shortly. SAIL has received two bids for the contract. The plant is likely to be operational in 2013. Currently, Gua mines have 35 million tonnes, largest among all SAIL mines, of accumulated fines and generate fines of around 7 Mt a year. According to sources, for more than a year SAIL was seized of the idea of a pellet plant. Research and Development Centre for Iron and Steel (RDCIS), the R&D unit of SAIL, and Mecon as the consultant had studied relevant issues, such as location of the plant and whether split or single location, in relation to the environment, technology and logistics of carrying fines. Finally, SAIL opted for locating the plant at Gua and not at the nearest steel plant site at Bokaro, the other close option. The oldest mechanized mine in the country, Gua now extracts nearly a third in hematite grade lumps and the balance in fines. Gua's current lump production capacity is placed at 2.4 mtpa. Under the gradual expansion plan, undertaken by SAIL, Gua mines capacity is to go up to 3.15 mtpa by this fiscal-end. By 2014-15, the capacity is slated to move up to 8 mtpa including pellets which are substitutes of lumps. Gua, now fourth in the pecking order of capacity among the seven mines SAIL's raw material division controls, is planned to catapult to the second slot by 2014-15, and in the post-expansion period to share the top slot with Bolani. SAIL's raw material division estimates the total capacity of the seven mining areas under its belt at 34.6 mtpa by 2014-15. According to the long-term plan, two-Kalta (Orissa) and Chiria (Jharkhand) of the seven, now operated manually, are also to be mechanized.

Source: Steelguru

### **SAIL to Speed up Coal Acquisition Plan Abroad**

A steep hike in the coal import bill over the past few months, coupled with a planned capacity hike to 19.5 million tonnes this year, has made the Steel Authority of India Ltd. speed up its plans to acquire coking coal assets abroad. The PSU major, which sources 70% of its coal through imports, hopes to finalize at least one deal to secure overseas coal supplies during financial year 2012. The SAIL is currently in talks for acquiring stakes in potential coal properties in Indonesia, South Africa, Magnolia, Mozambique and Australia through International Coal Ventures Limited (ICVL). The ICVL has been promoted by a consortium of five top public sector companies, including SAIL and Rashtriya Ispat Nigam, power major NTPC and mining majors Coal India and NMDC, to invest in coal mines abroad. We get 30% of our coal domestic sources, while depending on imports for the rest. For every one dollar, increase in coal prices, our coal bill goes up by Rs. 45 crore. We are trying our best to secure coal supplies abroad and should hopefully be able to finalize at least one deal this year, said SAIL Chairman, Mr. C S Verma. The SAIL has been scouting for coal assets abroad for more than a year through the ICVL. However, its plans gathered pace due to the high coal import bill which dented the company's profitability during the year. While the average price of coking coal was \$128 per tonne in 2009-10, it went up to \$330 per tonne in the April – June quarter. During the year, SAIL had to face a higher input cost burden of Rs. 3,015 crore on account of higher coking coal prices alone. The company also took a Rs. 350 crore hit in the

fourth quarter due to a hike in domestic coal prices. The SAIL is poised to add a significant 5.4 million tonne to its production capacity this year and, with this, the company's coal bill is set to increase substantially in FY' 12. We will commission two new blast furnaces of 4,060 cubic metre capacity per day at IISCO Steel Plant at Burnpur and at Rourkela Steel Plant. This will take our hot metal capacity to 19.5 million tonnes in 2011-12. At present our hot metal capacity is 14.1 Mt, Mr. Verma added. Every tonne of steel requires close to a million tonne of coal. Incidentally, SAIL currently imports around 9 to 10 Mt of coking coal every year.

Source: Steelguru

### **World coal market re-centers on India**

China's coal industry, the largest in the world, may be almost six times that of India's, but its impact on world coal trade is smaller. Chinese domestic production has managed-just about to keep pace with demand. In India, that is not the case. Despite having some 8% of the world's proven black coal reserves, India's state-dominated coal sector is struggling to raise production in line with the rapid construction of new coal-fired power plants. Buying from China, India and Indonesia is expected to account for 90% of coal demand growth through to 2035, according to the International Energy Agencies World Energy Outlook 2010. OECD demand, by contrast, is expected to fall. But this is not about future demand, it is about today. Thermal coal consumption rose to 29.6% of the global energy mix in 2010, its highest level since 1970, according to the BP 2011 Statistical Review of World Energy released in June, and it is Asia that is driving that change. China may be the great producer and consumer, but out of all Asia, it is India that has emerged as the key player. Expectations a few years ago that China would soon turn into an increasingly large net importer of coal are being realized very slowly. Indonesia's time as a coal importer remains way distant. Other Asian courtiers expected to add significantly to coal demand, such as current exporter Vietnam, remain a few years off dependence on the global market.

That, for the moment, leaves India as Asia's most dynamic growth market, driven by urbanization, rural electrification, population growth and rising standards of living. India has returned to 8% plus annual GDP growth following the financial crisis, and some forecasts suggest 10% can be achieved in the next few years. It is the world's fifth largest energy market, but has one of the lowest per capita levels of energy consumption. That is a recipe for long term growth. However, India's options for power are limited. It has nuclear and relatively newly-discovered gas resources, some of which have recently been brought on-stream. It has also built significant LNG importing capacity. But it has been unsuccessful in its plans to facilitate international gas import pipelines. Moreover, compared to other countries, its shale gas reserves, as outlined by US Energy Information Administration report World Shale Gas Resources: An Initial Assessment of 14 regions outside of the US, are relatively unimpressive. India's technically recoverable shale gas resource was estimated at 63 Tcf, compared to China's 1,275 Tcf or Argentina's 774 Tcf. That leaves coal, which means power, and power means development. India has huge proved reserves and even more that is harder technically to recover. For a country at India's stage of development, and with its limited slate of natural resources, coal use begets coal use. Whatever the environmental implications, historical legacy of carbon emissions is not India's, and it is a foolhardy politician that puts relatively abstract concept of emissions and future climate change above everyday reality of the struggle to develop.

Source: MMR July 2011

### **New Mining Bill will open new ventures**

A licence guaranteeing the holder to produce 100 per cent of any kind; will be issued by a new draft mining bill. As India gears up for inviting foreign technology and money, this bill will facilitate its underperformed mining sector. The bill will also create an independent regulator for the sector and should be approved by end-2012. India's mineral potential matched resource rich Western Australia and southern Africa but exploration had not been done fully so far. The Large Area Prospecting Licence (LAPL) proposes areas up to 5000 square kilometres (sq km) for hunting resources and will be allocated for a six year period. Around 570,000 sq km of the 3 million sq km country has high potential of resources. Companies would have to hand data from the area to

the government. India's mining sector has opened up to private investors in recent years. The state-run companies lack funds and expertise to probe deeper than 50 metres where reserves are found. Global mining giants BHP Billiton and Rio Tinto have small ventures so far in the country. Rio Tinto has been negotiating since 1995 with the Orissa government to develop iron ore deposits in a joint venture. The mining bill should go to the government for approval after possibly a final meeting of a group of ministers and could be presented in parliament in August. The bill could take a year or so to make its way through parliament. The draft mining law proposes foreign firms to share some of their mining profits with local communities as the government wants to reassure the rural population that the resources are not being carted away by outsiders.

Source: Metal World, July 2011

### **SAIL Rejig Aims at Operational Autonomy**

India's largest steelmaker is going in for a structural makeover. State owned Steel Authority of India Limited (SAIL), which is grappling with a large workforce, has replaced managing directors at its five plants and appointed chief executive officers instead, to increase operational autonomy and prune the board strength. While the revamp will vest each CEO with the powers of a managing director, there will be no board position for these senior executives. "They will be permanent invitees to the board. The board strength will now be more manageable and will allow faster decision-making," said Chairman Mr. C S Verma. The CEOs will report to Mr. Verma. The change will reduce SAIL's board strength to 18 from 24. SAIL, last week, appointed chief executives to head the Bhilai Steel Plant and IISCO Plant at Burnpur, completing the first lot of CEOs that have assumed charge at the company's five plants. The new CEOs — Mr. Pankaj Gautam at Bhilai and Mr. N K Jha at IISCO — will join Mr. PK Bajaj at Durgapur, Mr. S S Mohanty at Bokaro and Mr. S N Singh at Rourkela. The appointments are significant as they signal a change in the Union steel ministry, which is the nodal authority for SAIL, and also shows the willingness of the large government company which is trying to compete with nimble private mills such as JSW Steel with less than a sixth of SAIL's workforce. Steel Minister Mr. Beni Prasad Verma, who was elevated to the Cabinet rank in the latest ministerial reshuffle, had publicly criticised SAIL for being slow in implementing its modernisation programme.

The move to restructure SAIL's board came from the steel ministry itself. "It was felt that a manageable board with reasonable delegation of powers to the CEOs, would be appropriate," said a ministry official familiar with the appointments. Prior to the revamp, SAIL had twelve executive directors on its board, including ministry nominees, since managing directors were automatically elevated to board levels. To maintain the ratio of non-executive to executive directors -- corporate governance norms stipulate that independent directors need to be one-third of the total board strength -- SAIL had to strive to appoint independent directors. "It was difficult to find the right candidate in terms of profile. Often, discussion of critical issues would drag on for days, as they took time to grasp the topic. This often led to delays in decision making," said a former SAIL official. Compared to the earlier lengthy process of four to five months, the two CEO appointments were completed within a day, with the SAIL chairman, two steel ministry officials and independent directors wrapping up the process. Earlier it often took almost 4-5 months to fill up a vacancy whenever an incumbent managing director retired. Apart from the chairman, other board members will include functional directors handling personnel, commercial, finance, technical, raw material and logistics and projects, in addition to two nominees of the steel ministry. The appointment also allows the board to adopt a hands-off approach. According to a senior industry executive, in state-owned units, operating decisions were cleared by the board for decision making. But this makes the board go into managing the company rather than guiding and directing it.

Source: Economic Times, July 18, 2011

### **New Steel Policy must address regulatory, infrastructure hurdles – An interview with Jt. MD, Jindal Steel**

*Even as the steel industry is facing slowing demand growth, it is expected to pick up in due course, with increased spending on infrastructure, automobiles and consumer durables, says Mr.*

Seshagiri Rao, Joint Managing Director and Group Chief Financial Officer of JSW Steel. In an interview with Nayanima Basu, he talks to expansion plans at home and abroad:

**What are your views and expectations from the National Steel Policy? Do you think this would help mitigate the problems the industry is facing?**

The policy announced in 2005 envisaged production capacity of 110 million tonnes by 2020, at a compounded annual growth rate of 7.3 per cent, while yearly consumption growth was expected to be 6.9 per cent. The main objective was global competitiveness for our sector. The new projects announced then are yet to take off, due to several delays in land acquisition, raw material linkages and environmental clearances. There is dire need to fine-tune our policy, considering the current challenges the industry is facing in creating new capacities and in accelerating steel consumption. The recent announcement by the government on a new steel policy by December should take into account the regulatory hurdles and infrastructure bottlenecks.

**Do you see steel prices going up sharply, given that prices of raw material would only harden this year?**

The prices for key inputs such as coking coal and iron ore are up beyond the pre-crisis level. The price setting for these inputs has also been changed from yearly to quarterly or monthly. Since a significant portion of seaborne trade for coal and iron ore is from Australia, a slight disruption in supply is causing unusual spikes in prices. As there won't be any major change in the near future, this cost-push will keep steel prices high. The range of prices for steel products internationally is very wide and varies from region to region, due to freight and trade restrictions. For instance, the prices in Asia for base-grade, hot-rolled products are around \$720 per tonne. In Europe, they are higher by \$100 per tonne and in North America, further higher.

**Since you said steel prices would remain high, when are you planning the next hike and by how much?**

Steel is a tradable commodity and has very nominal import duty in India. Hence, prices in the domestic market have to be aligned with international ones. JSW continues to watch the price trends internationally and accordingly fixes the prices for various products here.

**Do you plan to pass it on to the consumer and how do you see your operating margins, going ahead?**

JSW has taken several steps to improve operational efficiency to preserve its margin, in spite of disproportionate increase in raw material costs relative to increase in the steel product prices. We are also focusing on enhancing our backward integration, in addition to improving product mix and growing volumes.

**Do you see any moderation in demand?**

Structurally, the demand for steel in India is expected to be robust. The trend remains positive, barring a temporary slowing being experienced due to high interest rates and inflation. Though we are seeing a temporary slowdown in the investment cycle, it is expected to pickup momentum in the next few quarters, that will drive the demand for steel products. We have seen demand growth of around 10 per cent in the last financial year and we expect further accelerated growth in the years to come, emanating from infrastructure spending, automobiles, consumer durables and piping sectors, requiring new capacities to be set up to meet this growing demand.

**What are your plans for acquiring assets abroad?**

We are acquiring iron ore mining concessions in Chile, and coal mining concessions in USA and Mozambique. We continue our strategy of enhancing backward integration and look for appropriate opportunities in this direction.



### ***What are your plans for this financial year? How much of capacity expansion?***

We are expanding capacities from 7.8 to 11 Mt yearly. This expansion will get commissioned in this month. We've already said we'll expand this capacity by another 2 mtpa to 13 mtpa by June 2013. We have further plans of implementing two more projects of 10 mtpa each, in phases, in West Bengal and Jharkhand. This capacity is in addition to the 3.3 mtpa of recently acquired Ispat Industries Ltd, renamed JSW Ispat Steel Ltd.

### ***What are your plans for Ispat?***

We have a three-pronged strategy in JSW Ispat Steel. We are working to bring in the synergies identified at the time of acquisition, some of which have already materialized, as reflected in the improved performance following our acquisition. We are further looking at setting up facilities to integrate operations to reduce the cost and also to increase the capacity further, to 5 mtpa.

### ***What is the status of your overseas operation? Are you planning any expansion there?***

We already commenced iron ore mining operations in Chile and started exporting iron ore from this April. We are planning to produce and sell around a million tonnes of iron ore in this financial year. Similarly, we expect to ship our first consignment from US coal mines to India in this quarter. The plate and pipe mill operations are gradually turning around and we are ramping up capacity utilization in this year.

### ***How is your export market?***

We have increased our retail reach in the Indian market through JSW Shoppe. Our retail sales through JSW Shoppe are around 23 per cent of domestic sales. The proportion of exports significantly came down to 14 per cent of total sales in the last financial year. While we continue to have presence in over 100 countries in the export market, our focus remains the domestic market.

Source: Business Standard

## **Indian Steel Plants Spread Wings**

### **JSPL to Build Gas-based Midex DRI Plant in Bolivia**

Jindal Steel & Power Limited announced that it will build a 2.52 million tonne per year natural gas based MIDREX® Direct Reduction Plant in Puerto Suarez, Bolivia, South America. The new MIDREX® Plant will be the largest single module to date of any direct reduction technology. The project will feature the latest MIDREX® Shaft Furnace innovations and will have the flexibility to produce both quality Hot DRI and Hot Briquetted Iron for use in a new proposed Greenfield meltshop. Ore will be supplied from Jindal's El Mutun iron ore reserves in Bolivia. This project marks JSPL's third selection of the MIDREX® Direct Reduction Process technology for commercial DR production. In 2009, Midrex began engineering for JSPL on a 1.8 million tonne per year coal gasification based MXCOL® Direct Reduction Plant in Angul, Orissa, India. The MXCOL plant pairs a 7.15 meter MIDREX® Shaft Furnace with available gasification technology from Lurgi GmbH of Germany, to produce direct reduced iron (DRI) for use in meltshop applications. In 2010, JSPL purchased the former Shadeed MIDREX® HOTLINK® plant in Oman. Renamed Jindal Shadeed, the plant was commissioned and began producing HBI in 2010.

Source: Steel Tech, April 2011

### **Mr Navin Jindal on Bolivia visit to push JSPL plans**

With development rights for 20 billion tonne of El Mutun Iron Ore Reserves in Bolivia, Jindal Steel & Power plans to invest more in the country. Mr Navin Jindal recently visited Bolivia to give a push to his plans of investing USD 2.1 billion in the next few years in mining and setting up an integrated 1.7 million tonne per annum steel plant, 6 million tonne per annum sponge iron plant, a 10 million tonne per annum iron ore pellet plant and 450 MW power plant in the South American nation. An

Indian diplomat said that Indian engineers here are passionate about making steel and are determined to overcome technical and logistical challenges and are also training the local people and interacting with them in Spanish with lot of enthusiasm. Company officials said that this will be the largest investment by an Indian company in South America and also the largest investment by a foreign company in a single project in Bolivia. The project is expected to generate employment for thousands of people while also catalyzing economic growth for the Republic of Bolivia. The company has already secured land to start the project and expects to start exporting iron ore shortly. With the commercial dispatch of iron ore likely to commence soon in Bolivia, the company will start construction soon on the DRI, pelletization and steel projects. These are expected to become operational in the next 3 to 4 years. The direct reduction plant will be the largest single module facility in the world and the Ultra Mega Mod DRI will

produce both hot direct reduction iron and hot briquetted iron for a newly proposed Greenfield meltshop. Jindal Steel will provide its own iron ore and iron pellets from its El Mutun iron ore reserves. This is Jindal's third DRI plant built in the last two years. The company built a 1.8 million tonne coal gasification plant in Orissa and 1.5 million tonne gas based HBI plant at Sohar Industrial Port area of Sohar, Oman. JSPL is reaching out to the global market with a range of investment strategies. The company continues to capitalize on opportunities in high growth markets expanding its core areas and diversifying into new businesses.

Source: Steel Tech, April 2011

### [ZISCO to Proper Essar Steel into 20 Mt Club](#)

Essar Steel, after buying a majority 60 per cent stake in Zimbabwean steel company (Zisco) six months back is now keen to build on Zisco's foundation and ramp up the existing infrastructure. Mr. Maalay Mukherjee, CEO of Essar Steel said "The visibility of steel is now based on raw materials. Zisco is going to be an integrated steel company with iron ore, coal, steel and distribution, all at one place." And it is only in Africa that you will get everything together.

The Zimbabwean steelmaker has only a one mt steel plant, which Essar plans to revive and then expand. Last month, the employees of Zisco were paid their first wages in two years. Mr.

### [All the good things in life are Free](#)

*"The sun shines and warms and lights us and we have no curiosity to know why this is so; but we ask the reason of all evil; of pain, and hunger, and mosquitoes and silly people."* This is a quote from Ralph Waldo Emerson, the famous American thinker.

What does Emerson mean?

Well, we never ask: "Why there is happiness, goodness, peace and joy in this world" We take these good things in life for granted. We never wonder "Why am I healthy? Why do I have a nice family" etc. But we often ask: "Why is there sorrow, evil, unrest and misery in this world?" We consider these negative things as proof that the world is evil per se, that there is no good God! We never think that there are also so many nice things in this world.

And Henry David Thoreau, Emerson's friend, said "All good things are wild and free" Indeed, the nicest things in life are all for free! The air we breathe, the water we drink, the sunlight we bask in, the cool breeze carrying the scent of many a flower, the laughter of a child, the beauty of sunrise and sunsets, the glorious sight of the stars... these are all more or less free for all of us. We do not have to pay for these great luxuries that life and nature offer us. But we rarely appreciate these gifts consciously. We have become insensitive as a breed of men. We complain of every small inconvenience. We complain when the food served with love is a bit less tasty than usual, when it rains for the third day unabated, when the postman delivers a letter to you a day late, when an unexpected traffic jam causes delay in your reaching office, and so on, for all the silly things in the world.

Indeed, as William Wordsworth sang, "The world is too much with us".

We have lost the innocence which enables us to see 'a world in a grain of sand and a heaven in a wild flower', as lamented by another poet, William Blake. We have to learn to appreciate the good things in life.

**Prof. C G K Nair**  
**Past President, IIM**

Mukherjee said, "If you look at the investments, then Zisco will be a priority because in India, we have already finished our investment cycle and it will be time to get results." So, Zisco will eventually overshadow Algoma. Essar is currently at 14 Mtpa, and has drawn up plans to be a 25 Mtpa steelmaker. Mr. Mukherjee said, "The 25-mt vision came after we got Zisco. However, even for Essar, home is where the money is. In the next three years, it will be a key source of revenue for Essar Steel with its flagship steel plant at Hazira, Gujarat, becoming 10 Mtpa at the end of 2012. Algoma, Essar's 4 Mtpa Canadian subsidiary is also getting fully integrated with Minnesota iron ore mines and Trinity Coal coming on full stream. After that, Algoma will be second most important revenue earner. Indonesia where the company has a small steel mill operation will follow and finally, there will be ZISCO. By 2016, the pattern will change.

Source: Steel Tech, July 2011

### **Essar Steel Makes Dubai a Hub to provide Customized Steel Products in Middle East**

Endeavouring to expand its global footprint, Essar Steel Processing and Distribution (ESPD), part of Essar Steel, announces, today, the commissioning of service center facility that will cater to the needs of customers in the Middle East and neighboring regions. This is the third facility after the one in the UK for the European region and the one in Indonesia that caters to the East Asian market. With this, ESPD has ramped up its international service centre capacity to one million tons per annum. Commenting on this facility, Mr Vikram Amin, Executive Director (Sales & Marketing), said, "The Middle East is a natural market for us since we are located on the west coast of India. The facility at Dubai is part of our distribution strategy to enhance our reach to customers and improve our customer centricity and reliability of delivery, and thus supports us in becoming the steelmaker of choice for large and small customers. "Set up as the most modern steel service center facility at Dubai, UAE, the ESPDF has a processing capacity of 250,000 tons per annum. Located in Jebel Ali Free Zone South, Dubai, UAE, the facility comprises three state-of-the-art hot rolled cut-to-length, HR slitter & CR & GI combination (slitting & cut-to-length) lines.

This facility will supply world-class, mill guaranteed, quality products to customers in the region. Processed material will be shipped to countries like Saudi Arabia, Oman, Qatar, Kuwait and Bahrain by road. For local customers of UAE who are presently entirely dependent on imports, ESPD Dubai will supply just-in-time deliveries. With the advantage of port facilities, Essar Steel will make shipments from the largest single single-location 10-MTPA plant at Hazira in Gujarat to the ESPDF at Dubai for providing custom made steel products to valuable clients. SPD, the flat steel processing arm of steel major Essar Steel, is targeting to become 5-million-ton-per-annum capacity servicing chain. ESPD presently operates 3.3mtpa capacity in India with seven service centres, besides a 1-mtpa capacity internationally with three service centres. With such a network and plans to expand further, it is the dominant steel service centre in India and is among the top 10 service centres globally. ESPD operates various equipment to process CR/HR/galvanized/pre-painted coil and plate mill plates. Its product range covers quarter of a millimeter to 200 millimeters in thickness and includes slit coils, blanks, welded beams, profile burnt plates and surface treatment.

Source: Steel Tech, July 2011

### **JSW Commences US Coking Coal Mine**

The US coking mine operations of JSW Steel is expected to commence next month with the company having obtained permits for three out of the seven mines. The coking coal grade is semi hard and JSW is targeting 1 Mt volume in FY 12 and would likely ramp it up to 1.5 Mt in the next 15-18 months. Coal from US mines is expected to service the steel operations at Vijaynagar. The Chile iron ore operations, 70% owned by JSW, are also progressing as per schedule and management expects 1 Mt volume in FY 12 and FY 13. The grade post beneficiation is 63% Fe.

Source: Steel Tech, July 2011