



IIM
Metallurgy
Materials Engineering

NEWSLETTER

THE INDIAN INSTITUTE OF METALS

(DELHI CHAPTER)

RAJ TIWARI

Chairman, Delhi Chapter

S. C. SURI

Chairman, Technical & Publication Committee

Issue No. 37/2010

Vol. XXXVII "Monthly"

Date: 29.09.2010

Publication Committee

*S. C. Suri- Chairman
G. I. S. Chauhan
Dr. (Mrs.) Malti Goel
R. K. Vijayvargia
Dr. D. K. Likhi
Dr. A. K. Srivastava
Neeraj Gupta
Manoranjan Ram*

Executive Committee

Chairman

Raj Tiwari

Vice Chairmen

*S. C. Suri
K. L. Mehrotra*

Hon. Secretary

V. C. Singhal

Jt. Hon. Secretaries

*G. Mishra
V. N. Grover
P. Kanthasamy*

Hon. Treasurer

Manoranjan Ram

Jt. Hon. Treasurer

G I S Chauhan

Members

*P. K. Chatterjee
R. K. Gupta
B. R. Thukral
B. D. Jethra
Anil Gupta
Dr. G. N. Mohanty
P. R. Chandna
Sunil Garg
V. K. Tyagi
M. Saravanan*

INTRODUCTION

This News Letter is containing briefs on fourth & fifth Executive Committee Meetings for the year 2010-11 held on 28.8.2010 and 4.9.2010 respectively. This also covers a brief on the Technical Talk delivered by Prof. S. Ranganathan, former President IIM and Distinguished Professor of IISc. Bangalore.

The News Letter contains the following Technical Write-ups:

1. "Technology Implementation Strategy in Steel Industry" by Shri S C Suri, Life Fellow, IIM & Chairman, Technical & Publication Committee, IIM-DC.
2. "Indian Auto Component Industry" by Shri Neeraj Gupta, Member, Technical & Publication Committee, IIM DC.
3. "Sustainable Energy" by Dr. (Mrs.) Malti Goel, Member, Technical & Publication Committee, IIM DC.
4. It contains Status of Growth of Non-Ferrous Metal industry in India and it's impact on Environment: Courtesy IIM Metal News.
5. It also contains text of interview with Minister of Steel on Growth and Future Development Plans of Steel Industry in India.

The News Letter also contains National and International news relating to Ferrous & Non-Ferrous Sectors.

Published By

G D Renwal, Executive Officer

on behalf of

"The Indian Institute of Metals – Delhi Chapter"

Jawahar Dhatu Bhawan, 39 Tughlakabad Institutional Area, M B Road

Near Batra Hospital, New Delhi-110 062

Tel: 011-29956738, Telefax: 011-29955084; E-mail: iim.delhi@gmail.com

Chapter News

Executive Committee Meetings

The fourth & fifth EC meetings were held on 28th August and 4th September 2010 respectively. Discussions were held for the auditorium renovation work. It was also decided to discuss the matter with M/s Tafcon and ITEE regarding the MMMM 2011 event. In the fifth meeting, it was decided to explore the possibilities of organizing the MMMM 2011 seminar. Finally it has been decided to organise the international exhibition and technical conference in Delhi during 11th – 14th February 2011. The theme of the International Conference is "Indian Metals Industry - Shaping the Next Decade".

Technical Talk

Prof. S. Ranganathan former President IIM and Distinguished Professor of IISc. Bangalore delivered a talk titled "Crucible Steel from India - A major metallurgical accomplishment of antiquity". This talk was held on 24.9.2010. The talk emphasized development of Crucible metals of making molten steel and the processing of the brittle ultra high carbon steels into ductile materials.

During his technical presentation, Prof. Ranganathan gave a brief review of the several well-known metallurgical accomplishments of India in antiquity which included - lost wax casting of bronzes in Harappa, the extraction of Zinc, the rust-less pillar at Delhi and the wootz steel. Prof. Ranganathan gave a brief review of the UKIERI project, a collaborative enterprise between Exeter University and National Institute of Advanced Studies (NIAS). The talk was largely attended and there were lively discussions after the technical presentation of Prof. Ranganathan.

Technology Implementation Strategy in Steel Industry

S C Suri

Life Fellow, IIM & Chairman

Technical & Publication Committee

1.0 Introduction

Technology has played a vital role in the economic growth of steel industry and its implementation strategy needs a closer review.

2.0 Major Technological changes I Steel Sector

The major technological changes responsible for the improvement brought about in the integrated steel plants world-wide are:

Development of large size of the production units namely the following:

- (a) Coke oven batteries as high as 7 M and as voluminous as 78M³
- (b) Sinter machines of size as large as 600 M² grate area
- (c) Blast furnaces of useful volume as high as 5000M³
- (d) BOF converter of capacity as high as 350 Tonnes
- (e) Hot strip mill of 4.5 MT per annum rolling capacity
- (f) High capacity continuous castes and thin slab casters
- (g) Centralized de-dusting system
- (h) Reduced specific water consumption
- (i) Smokeless charging and dry quenching of coke in the coke ovens
- (j) BF cast house slag granulation plant

These developments have allowed reduction in specific capital cost of installing the steel plants and also helped to reduce cost of production.

3.0 Productivity Improvement

The following benefits on productivity front have been achieved.

Increase in the productivity of the operating units and reduction in specific consumption of raw materials.

The major directions of these technological developments are:

- (a) Improvement of physio-chemical properties of raw materials in Iron-making through improved techniques of beneficiation sizing, agglomeration and process control
- (b) Improvement in blast furnace productivity and reduction in coke rate requirement through increased use of agglomerates in the burden, control of burden distribution, auxiliary fuel injection and improved design of blast furnace and stoves to increase the top pressure and blast temperature
- (c) Introduction of technologies of pretreatment of hot metal to reduce the metallurgical load in the steel melting units
- (d) Reduction in heat duration in steel making units
- (e) Reduction of energy needs and improvement of yield in steel making and casting
- (f) Introduction of continuous casting technology
- (g) Reduction of energy requirement and improvement of yield in rolling processes and improvement of quality of steel products
- (h) Introduction of automation and computerization on a large scale covering the areas of iron and steel production

4.0 Benefits obtained on Techno-economic Front

As a result of these technological developments, there has been radical improvement in the techno-economic parameters.

Some of the important techno-economic parameters achieved are:

- ❖ B F productivity : 2-2.5 T/M³/Day
- ❖ Coke Rate: 450 Kg/THM
- ❖ Si content in Hot Metal: 0.2 – 0.3
- ❖ Tap to tap lime on BOF : 25 Mts
- ❖ Lining life of BOF converts: 1500 heats

Simultaneously with progress in iron and steel industry development efforts have continued in various parts of the world to develop an alternative technology to the conventional BF-BOF route of steel making. These efforts have led to the development of DR-EAF route for steel making. This technological route provides opportunities to set-up small economically viable units based in the use of non-coking coals or natural gas as the main fuel.

5.0 Methodology for Technology Implementation

Technology implementation is multi disciplinary approach. It involves selection, scrutiny unpacking, addition and assimilation of the identified technology. Experts in design, engineering, construction, system, operation, maintenance, research and development would be needed for technology transfer and its implementation.

The Indian automobile components industry today is one of fastest growing sectors of the country and a globally competitive one. Still India contributes US\$ 15 billion only towards global auto components. As per Auto Component Manufacturers' Association (ACMA) Indian sales will swell to US\$ 40 billion by 2016 (Global market estimates US\$ 1.9 trillion) with exports of US\$ 20 billion. Estimates for the Indian auto components industry are pegged at US\$ 113 billion for the year 2020. The major importers are US (36%) and Europe (26%) (AQL). India's component industry now manufactures the entire range of auto-components: parts of engine, transmission, suspension, braking, electrical, chassis, etc.



India is expected to become one of the top five auto component economies by 2025. The industry has been experiencing a high growth rate of 20 per cent for some years and this is likely to grow further. The exports growth rate has been consistently higher and is expected to touch 34%. Big brands like GM and Ford are happily using Indian made components in their vehicles including critical ones. Over 35 OEMs have set up their International Purchase Offices (IPOs) in India to procure the needed components in an efficient manner. These include firms like General Motors, Ford, Cummins, Bosch, Volkswagen, BMW, MAN and JCB amongst others. Auto components exports are Engine parts (31%), Drive transmission and steering parts (19%), Body and chassis (12%), Suspension and braking parts (12%), Equipment (10%), Electrical parts (9%) and others (7%). MICO, Bharat Forge, Sundaram Fasteners, Wheels India, Amtek Auto, Rico Auto etc. find place amongst top companies of India. Some of these companies have already acquired assets abroad for future expansion plans. The exports composition in terms of the proportion of OEM and aftermarket underwent a sea change in last twenty years: OEM 35 % in the 1990s to 75% in 2009. While exports have been booming, there has been a sharp rise in imports of auto components as well, which speaks of a healthy two way economy, homogenization and mutual trust.

India enjoys a cost advantage with regard to castings and forgings. The manufacturing costs in India are 25 to 30 percent lower than its western counterparts. India's competitive advantage does not come from costs alone, but from its full service supply capability as well. Besides, the quality consciousness of the industry matches global standards now. This is corroborated by the fact that nine Indian companies in the automotive sector have received the coveted **Deming Prize**, which is the largest number outside Japan. The Investment Commission (GOI) has set a target of attracting foreign investment worth US\$ 5 billion in the next five years to facilitate India's share in the global auto components market from the present 0.4 per cent to 3-4 per cent. Bosch, Hitachi, Toyota, Continental AG are planning major investments in India.

The Government of India allows automatic approval for foreign equity investment up to 100 per cent for the manufacture of auto components. Manufacturing and imports in this sector

is free from licensing and approvals. There is no local content regulation in the auto industry. The engineering export promotion council under the aegis of Ministry of Commerce and Industry, Government of India, over the years has been engaged in promoting exports of engineering goods including auto parts. The initiatives that have been taken are:

- ❖ Setting up of the National Automotive Testing and R&D Infrastructure Project (NATRIP) to enable the industry usher in global standards of vehicular safety, emission and performance.
- ❖ Finalization of the Automotive Mission Plan (AMP) 2006-2016 for making India a preferred destination for design and manufacture of automobile and automotive components.
- ❖ The reduction in customs duty on key metallic raw materials and inputs for the auto-component industry.
- ❖ Reduced excise duty on small cars to 16 per cent, a step expected to propel India as a global manufacturing hub for small cars and enable the auto-component supplier industry attain volumes
- ❖ Reduction of peak rates of duty from 15 to 12.5 per cent.

Challenging, Exciting and enormously profitable times lie ahead for the Indian automotive component industry. Besides the rapidly increasing demand from global auto majors, there is also the domestic car industry, which is growing at a rate of over 20%, driven by a rising consumer base- both urban and rural- and affordable loans. The passenger car production in the country is expected to jump four times in next ten years to 9 million vehicles per annum generating enough employment for 10 Lakhs people in the next decade. This will also require training a very large number of people in the required skill fields. The automotive skill development council under the National skill Development council is expected to be set up soon.

Sustainable Energy

Dr (Mrs) Malti Goel
Member, Technical & Publication Committee IIM
& Emeritus Professor, JNU, New Delhi

Global warming is greatest environmental challenge across the world in the current century. In the electricity generation, fossil fuels are predominant and accounted for more than 80% of the global electricity supply. There are concerns for increasing CO₂ emissions and impending climate change. In the future growth profile of India, accelerated growth in energy demand is on the anvil. It is therefore, imperative to develop and promote alternate technology options that can lead to sustainability of the energy- environment system.

The energy resource base any where can be classified into two categories: namely (i) renewable and (ii) non-renewable. Quantum of **renewable energy** resources at a place is determined by the amount of sun-light received. The Indian subcontinent being in the tropical belt is endowed with a reasonably high amount of renewable energy resource. Their contribution to energy generation is however quite low. The major constraint has been high initial cost and low energy density.

In addition to this Nuclear energy holds a unique position. It is non-renewable resource, however does not add to CO₂ pollution and is classified as clean energy technology.

In the **non-renewable**, India is having about one eighth share in global resources base of coal. The oil resources are comparatively meager and these as well as gas reserves are still under exploration. The fossil fuels accounted for 69% of India's energy supply. Accumulation of CO₂ in the atmosphere from fossil fuel use is having major contribution to global warming resulting in impending climate change. The management of CO₂ has become an important goal for Sustainable Energy.

The Carbon Capture and Storage (CCS) technologies are emerging for CO₂ mitigation in the atmosphere. The CCS is characterized by three main technologies.

CO₂ Capture

Capture technology where CO₂ is separated from the flue (waste) gas of a large power plant or a heavy industry.

CO₂ Fixation

Fixation of CO₂ in terrestrial environment using biological methods. It can also be converted into useful products.

CO₂ Transportation & Storage

Safe transportation of captured CO₂ to a place of its disposal and its injections in suitable geo-environment for its removal from the atmosphere. CO₂ underground storage technology requires injection into depleted oil and gas reservoirs, underground rocks, which slowly react to mineralization, deep saline formations below the ground or under the sea bed. In addition to these, CO₂ can be a source of fuel recovery from depleted oil reservoirs for enhanced oil recovery and enhanced coal bed methane recovery from abandoned coal mines or un-mineable coal seams.

Research on carbon capture materials has been started in a number of R&D laboratories and academic institutions in India. The CCS enabling technologies are however, not an important issue for India yet, because of their high cost, permanency and safety risks. CCS technologies are not proven yet. Nonetheless, keeping in view the dominance of coal in India's energy in the foreseeable future, it is also desirable that we look beyond carbon capture. Research on various fixation and geological storage aspects for understanding the behavior of supercritical CO₂ in the subsurface be it a coal mine or a reservoir of oil or a mineral rock; is a scientific necessity to develop the knowledge base about the disposal of captured CO₂. International projects like IEA Weyburn project aim to demonstrate that CO₂-enhanced oil recovery is economically viable, environmentally and socially acceptable.

Sustainable energy growth is vital for the India's future economy. In order to meet the basic energy needs of people, there is an urgent need to bridge the energy gap and develop technology strategies which can introduce competitive techno-economic feasibility of various sources of energy. A new thrust to renewable energy development comes from the Jawaharlal Nehru Solar Mission under National Action Plan on Climate Change. It is targeted to achieve 20,000 MW generations from Solar Energy by 2022. At the same time, understanding CO₂ capture and geological storage would become important for maintaining fossil fuel energy options. India with its leading role in finding scientific solutions for many challenges including those in computational and geological sciences is in a position to develop such a network programme.

Growth of Non-Ferrous Metal industry in India and it's impact on Environment

R.N. Parbat
Ex-President, IIM
Director & CCO of INDAL

Introduction

Outlook for growth of Non-Ferrous Metal Industry in India between 2009 & 2020 is shown below:

| Metal | Production in 2009 Million Tonnes (MT) | Outlook for 2020 Million Tonnes (MT) |
|-----------|---|---|
| Aluminium | 1.25 | 3.0 |
| Copper | 0.8 | 2.0 |
| Zinc | 0.58 | 2.0 |
| Lead | .06 | 0.12 |
| Uranium | 0.00012 | 0.0003 |

There are other Non-Ferrous Metals like Mg, Ti, Mn, Cr, etc. but their production level is not of significant volume. Production of major metals will more than double in the next 10 years or so. This will mean higher rate of Mining, higher rate of Mineral processing, higher rate of Concentration of minerals, higher rate of Smelting with a consequent higher rate of Pollution and Emission of CO₂.

Let us now look at different Non-Ferrous metals individually.

Aluminium

Growth of Aluminium Industry is highest amongst Non-Ferrous metals.

Let us look at the activities by sectors.

| Activity | Capacity in 2009 (MT) | Outlook for 2020 (MT) |
|------------------|-----------------------|-----------------------|
| Bauxite Mining | 7 | 18 |
| Alumina Refining | 3 | 7.5 |
| Smelting | 1.25 | 3.0 |
| Sheet Rolling | 0.36 | 0.5 |
| Foil Rolling | 0.036 | 0.045 |
| Extrusions | 0.20 | 0.40 |
| Wire Drawing | 0.30 | 0.40 |
| Casting | 0.25 | 0.50 |

Production of 11 of Al creates 2t of Red Mud, 10t of Fly Ash and 21t of CO₂. While 40% of Fly Ash has found industrial applications, the balance quantity is still a major Pollution concern. We are yet to find a suitable application for Red Mud in substantial quantity. Besides, reuse of discarded Pot lining continues to be a concern. Pre-baked Carbon Anode creates 3t of CO₂ (1.5 t for Carbon consumption and another 1.5 t for Anode effect) per tonne of Al production which can be reduced to zero should we find an Inert Anode as replacement for Carbon Anode. Another 18t of CO₂ are generation during production of Coal, Gas or Oil based electric power, needed for production of 1t of Al. Countries like Canada, Norway, Denmark, France where Hydro electric or Nuclear power is used for electrolysis, the above 18t of CO₂ is avoided. In a smelting pot, gaseous fluorides are produced in the form of hydrogen fluoride as a result of reaction between aluminium fluoride and cryolite with hydrogen. The entire quantity of hydrogen fluoride is absorbed by inflow of Al₂O₃, counter

current to the flow of fluoride. Fluoride absorbed alumina is then charged directly into the pots, thereby recovering all the pollutant fluorides. This process of dry scrubbing is cost neutral.

Aluminium recycling is a low energy, low investment, cost effective and less polluting activity. Recycling is highly popular with over 90% collection of Used Beverage Cans and Auto/Electric Castings. Technologies and process parameters are also different for those two types of recycling. Recycling prevents habitat destruction, loss of biodiversity, soil-erosion and conserves mineral resources for future generations.

Copper

The traditional Copper extraction process is based on roasting and smelting of Copper Sulphide ore with production of Copper matte (Cu-Fe Sulphide), conversion of matte to Blister Copper and finally electro-refining to pure Copper cathodes. The process consumes energy to the tune of 30 MWh as against 75 MWh for Aluminium and 8MWh for steel. Flash smelting consumes half the energy as it utilizes the energy released by oxidation of sulphur. 20t of SO₂ are released per tonne of Cu production. SO₂ is fully recovered as Sulphur and/or H₂SO₄. Secondary production of Copper is highly economical as it consumes only 10 MWh energy per tonne of Cu and less polluting as it reduces CO₂ emission substantially. 3t of solid wastes are generated per tonne of Cu production. It is used for land filling. Presence of Copper in ecosystem is beneficial as Cu works as antifungal and antitoxic to the unwanted germs present in the soil, water body and plants.

Zinc

Zinc is also associated with Sulphide mineral and hence in the pyro-metallurgical process SO₂ is produced as gaseous product which is fully recovered as Sulphur and H₂SO₄. Zn, as such, is not polluting.

In India, 70% of Zinc is used for galvanizing steels and the balance 30% is used for Dry Cells, Die castings, alloys and Chemicals. Growth of Zinc is, therefore, closely linked to the growth steels. While Steel production will grow from 60 mt in 2009 to 200 mt in 2020, Zinc production is also envisaged to grow from 0.580 mt to 2 mt over the same period. There is, therefore, a need for extensive mineral exploration activity in India.

Zinc is a life-friendly metal. It is an essential micronutrient for human metabolism, agriculture and animals. Waste from Zn industry collected as Zinc dust/ash, skimmings, etc. are essential raw materials for recovery of Zinc as industrial and agricultural chemicals.

Lead

Industrial demand for Pb is currently 0.35 mt/year as against domestic production of only 0.06 mt. High demand is met through Import and Recycling. World over 50% of Lead demand is met through recycling of used Lead Acid batteries. Current Ausmelt technology for Pb smelting is eco-friendly. Like Zinc, Lead is also associated with Sulphide mineral and hence gives rise to SO₂ which is fully recovered as H₂SO₄. Lead is hazardous to human health. In the reduction process Lead vapour is condensed in liquid Zinc and then gravity separated. Currently 274 Lead Recycling units are registered with Pollution Control Board. The exact figure of recycled Pb is unknown. While the organized Recycling units operate on Eco-friendly technology, there is a large number of Recycling units in unorganized sector which are highly polluting. Efforts are being made to bring all the Recycling units under organized sector.

75% of Lead is used for manufacture of Lead Acid batteries, 20% is used for Alloys and Chemicals and the balance 5% is used for Cable sheathing and Nuclear Power Plant. Growth in Lead Industry is, therefore, related to the growth in Battery industry. Lead acid batteries are used in Automobiles as well as in Power Inverters, UPS for Computers, etc. Production of Automobiles in India, as a single item, is currently at around 11/12 millions/year. In the next 10 years or so, this number is likely to reach millions a year. Lead production in India is also planned to reach 0.12 mt by 2020.

Uranium

Known Uranium reserve in India is limited. 1000 MWe Nuclear Power Plant consumes 30t of Uranium/year. Current Nuclear power generating capacity in India is 4000 MWe. With known reserve of Uranium, India has a potential to produce 10,000 MWe nuclear power annually. With imported Uranium and use of Plutonium 239, a fissile isotope being produced inside a Nuclear Reactor by absorption of a Neutron by Uranium 238 which is a fertile isotope, may enhance the nuclear power generating capacity to 200,000 MWe by 2052, this will account for 60% of the total energy mix, produced by then, once Thorium, (abundantly available in India) technology for nuclear power is stabilized, U235 and Pu239 (both fissile isotopes) and thorium 232 (fertile isotope) will ensure energy security in India for centuries.

Management of radioactive wastes is complex and hazardous. Radioactive wastes are generated at various stage of the nuclear fuel cycle. These are:

1. Mining and milling of Uranium ore
2. Fuel fabrication
3. Reactor operation
4. Spent fuel reprocessing

In volume terms, radioactive nuclear waste is insignificant. In a 1000 MWe power plant, only 30t of nuclear wastes are produced annually while in a similar capacity Coal based Power Plant, over 500,000t of wastes in the form of ash and Green House Gases are produced. It is worth mentioning that nuclear power plant emits no CO₂. Spent fuel is a resource material for recovery and recycling of fissile materials. By 2010, worldwide cumulative amount of spent fuel will be 340,000t of which 110,000t will be reprocessed leaving a balance of 230,000t in storage.

Three options exist for management of nuclear wastes, i.e.

1. Concentration and contain
2. Dilute and discharge
3. Delay and decay

The steps, followed in wastes treatment are:

1. Collection
2. Segregation
3. Treatment
4. Conditioning
5. Interim storage
6. Disposal

Gaseous and liquid wastes with low levels of radioactivity are let off through tall chimney or discharge in large water bodies. Similar quality solid wastes are conditioned in suitable matrices and capped in near surface Concrete Tanks.

Courtesy: IIM Metal News, Vol. 13, June 2010 Issue

Text of Interview with Minister of Steel

Reproduced below is the text of an interview which Honorable Minister of Steel gave to a Journalist of Mail Today.

Q: Steel is one of the major requirements for the development of infrastructure. Growth in this sector is directly proportional to economic growth. What is your personal view on that?

A: The Indian steel industry comprises the producers of finished steel, semi-finished steel, stainless steel and pig iron, which has participation from both public and private sector enterprises. India is one of the fastest growing markets of steel and is also increasingly looking towards exports to drive the growth of the industry. I sincerely feel that conservation of iron ore is critical, keeping in view the projected growth of the steel industry. I have no doubts that by 2012, the country's steel making capacity by way of greenfield projects and expansion of existing plans, would reach 120 million tonnes.

Q: Experts often say that India is jeopardizing its future by exporting iron ore to countries like China. What do you feel about that?

A: Yes, it's an area of concern as other wiser countries have a policy to conserve their iron ore. The steel ministry's considered view is a ban on iron ore exports rather than selling it at throwaway prices. We should conserve the precious minerals and export value-added products. I have called for a complete ban on export of iron ore and sought an immediate hike in the prevailing duty of 20 percent as an interim relief to the domestic industry. For that, we have written to the finance ministry seeking duty hike on iron ore exports, besides raising the issue with the prime Minister to contain rising prices and ease input cost of steel makers. Iron ore prices are currently hovering at round \$120 a tonne, up more than 50 percent over the past year.

Q: India is a major producer of steel. Yet its full potential is not tapped. What are the future plans and new initiatives to improve the current scenario?

A: India has continuously posted phenomenal growth in steel production. Both primary and secondary producers contributed their share to this development. Our emphasis is more in finished goods. Conserving iron ore is an agenda as we need to focus on manufacturing value-added products. The steel industry in India has been moving from strength to strength. India has emerged as the fifth-largest producer of steel in the world and it's likely to become the second-largest producer of crude steel by 2015-16. This means more than doubling its capacity to 124 million tonnes (MT) as part of the push being given to assist overall infrastructure development. Special initiatives are being taken to enter the new stage wherein production and efficiency match global standards.

A joint venture between Steel Authority of India Ltd (SAIL) and Posco is in an advanced stage. The plan is to build a three-million tonne plant at Bokaro. Along with that we expect a similar venture with Japan's Kobe Steel for building a 0.5 Million Tonne plant at Alloy Steels Plant, Durgapur. It will use the Japanese major's latest 'ITmk3 technology', which uses iron ore nuggets in an innovative process. Our main idea behind these joint venture is to bring in the latest technology which has been patented by steel majors.

Q: Your tenure is at a crucial juncture as India is making rapid strides in steel production. Where would you focus now?

A: While India will emerge as the world's second largest steel maker, we also need to establish ourselves as a technology leader capable of producing different and higher grades of steel. Our focus is on increasing our presence in the overseas markets and also to increase production of value added products. For this, the sector needs access to high-value technology. So, our focus would be on acquiring and developing efficient technology.

Q: How has it been different to handle a ministry compared to your earlier stint as Himachal Pradesh's Chief Minister?

A: The role has been challenging and interesting. The scope is wider in state as you have to look after different developmental works and portfolios. In the ministry, it's much more focused and domain centric. I would also like to emphasize that our commitment is not restricted to the public sector and we are also inclined to provide assistance to private players in steel production, as the synergy between all participants will usher in overall development of the Steel Industry.

National News

TATA Steel seeks Ultra Mega steel Plant Policy (UMPP) like boost for steel

TATA Steel is seeking a greater role of the government in promoting Indian industry has called for an ultra mega steel plant policy (UMPP) on the lines of the similarly named policy to promote the power sector. Mr H M Nerurkar MD of TATA Steel told journalists in New Delhi that "There is a gas policy; there is a policy for power plants. The steel sector, too, requires a policy like ultra mega steel plants. We need a standard set of policy for iron ore, etc. The steel plants to be covered under the policy should have a capacity of at least 6 to 7 million tonnes a year." Mr H M Nerurkar said that "The government offers ultra mega power plants for rate based bidding. Companies quoting the lowest bag the project. The projects are allotted to companies with various clearances, including those relating to land and environment. Coal blocks for pithead based UMPPs are allocated with the projects."

Source: Steelguru

Indian steel industry against iron ore export - Mr J. Mehra

According to Mr J Mehra director of Essar Group, iron ore is an exhaustible resource and it is in the nation's own interest that the government reconsiders its decision to export it. Mr Mehra said that "When it comes to an exhaustible resource, governments world over be it in the USA or China are supplementing their own reserves. For all the mineral wealth which China has it still is going out and procuring more from Africa. Similarly, America is exploring oil in West Asia despite owning huge reserves in Gulf of Mexico. It is surprising that the Indian government is depleting its own resource and making no effort to replenish it." Mr Mehra said that steel manufacturers all over India have opposed center's decision to export iron ore. The centre in turn has countered that 87% of the iron ore export, constitutes a variety which is not used by the manufacturers. The government also maintains that in case the iron ore is not exported, the continuous accumulation of ore could pose a big environment hazard.

Source: Steelguru

China may loose 5 million tonne steel outputs in September 2010

It is reported that steel mills production suspension due to power cut ordered by governments to reach energy conservation targets will heavily impact domestic steel supply in a short term. Local government in Hebei province resort to power cut to rein in 18 steel mills' energy consumption in Wu'an from September 4th. Over 100 rolling mills in Fengrun district of Tangshan region have started one week production suspension since September 6th. Besides, some coking plants and mining enterprises have also been asked to limit production. It is known that steel mills do not really cut production before the power cut. In 2009, Wuan boasted total steel capacity of some 20 million tonnes. Therefore, the region will see its steel outputs down by 2 million tons. Plus with the decreases in steel outputs in Shanxi Province, Zhejiang Province and Jiangsu Province, the nation will see its steel production down by over 10% of some 5 million tonnes.

According to statistics, the crude steel started falling from May after hitting the ceiling in April. Though steel outputs rebounded in August the decreases in September outputs will prevent volume of steel products available in domestic market from going too high. At the same time, steel mills, under rising raw material costs will certainly lift up steel prices to avoid possible losses. Besides, large scale steel mills will benefit from the energy conservation indirectly. Long steel producers are expected with a better outlook than flat steel producers as long steel products will see outputs down by 70% but flat steel products will see outputs down by 30%. For longs, the demand in Q4 will be better than flats

because of the following reasons: continuous motive power of basic demand for construction still exist; the negative influences from seasons is fading gradually and reconstruction of previous disasters will bring a momentum to longs demand.

Source: Steelguru

[Macro-economic indicators - Global slowdown not yet over - Mr Pranab Mukherjee](#)

Mr Pranab Mukherjee finance minister of India said that India will have to remain cautious, as the global economic slowdown is not yet over. Mr Mukherjee at an event in the Hooghly district of West Bengal said that "We will have to stay alert as India is not alienated from the global situation." Referring to the recent global forecast of the International Monetary Fund, he said the evaluation made by the inter-governmental organization was not so rosy. According to the IMF, the European recovery will be delayed and the same is true for Canada and North America. He added that "Since we are not alienated, we will have to stay alert." Mr Mukherjee earlier said that India was the second largest growing economy after China, pointing out that India's GDP growth would be in the region of 8.5% to 8.75% in 2010.

Source: Steelguru

[Extensive report on iron ore sector in India](#)

The global iron ore market is hot. Everything good or bad about economic activities is visible here. On the one hand, there is strong recovery of demand with the global economic prospects back on track, statistically so till date, concerns nevertheless remain. On the other, speculators are back with panic driven Chinese steel industry rushing to build stock before they set the table for talks with the iron ore mining industry for the year's contract. The future of the global iron ore industry depends on China. Many believe the steel industry's growth in China will slow down. At this stage, such a statement will be termed speculative only. The Chinese mills, however, may not yield much ground. They will dig more into their own resources, import more from the spot market and thereby reduce their dependence on contracted volumes, if the prices are not favorable. They have also invested heavily overseas on iron ore assets and will bring in substantial quantities from there to meet some critical needs. The iron ore industry knows that pushing the Chinese mills to a tightrope will boomerang in the long term. More the Chinese mills are stressed, more assets will they acquire, which ultimately will reduce the dependence on the global iron ore cartel. China cannot be ignored by the iron ore miners after all they produce nearly half of world's steel.

A question has always been in the forefront : should the global coal or iron ore contracts be floating types indexed to steel prices, or a market based free float, or of a short duration, say, a month or a quarter? So far, the global majors, tied to annual contracts, have not been able to capitalize on the higher spot prices running through the year on the average. It is not necessary that this will happen every year. Yet, an optimistic mining industry globally is pushing for this. This will effectively bring an end to the annual contracts. The rise in global ocean freight has a very significant impact on the iron ore prices. A higher freight will effectively reduce the contract levels set on fob basis. Any attempt to push the burden of rising ocean freight on to the buyer will be resisted. And if iron ore shipping volumes drop, the dry bulk rates will also crash! One does not really know who will bear the brunt of this. It depends on the strength of the market: who is weak and who is not on the negotiating table.

India has taken a protectionist stance. The government needs revenue to support the routine development expenditure and also the stimulus measures. This also sends a signal to the local industry that rampant exports cannot be permitted forever when the local industry faces shortage. In addition, it has sent a strong signal that illegal mining has to stop. Many mines are currently under investigation with their mines lying closed. The local mining industry is lobbying hard to get out of the multiple crises.

"India's Iron Ore: Following the Global Meltdown" report discusses the current iron ore business in India, prospects for the future and unfolds the opportunities to provide strategic guidance to investors and all others related to iron ore business in India.

Some of the areas covered in the report are:

- ❖ Introduction
- ❖ The supply dynamics of the iron ore market in India
- ❖ The market dynamics of demand and price
- ❖ Structure of the iron ore market by size and pattern of lease holding
- ❖ Iron ore reserves and resources
- ❖ Magnetite resources
- ❖ Iron ore production
- ❖ Private sector growth
- ❖ Indian iron ore trend for various grades of lumps and fines
- ❖ Major freehold iron ore mines
- ❖ Growth prospects in palletizing Industry
- ❖ Overcapacity in pig DRI
- ❖ Consumption of iron ore in India and structure
- ❖ Fore cast of demand for iron ore in India
- ❖ Future of exports
- ❖ Costs of mining
- ❖ Strategic growth opportunities and options

Source: Steelguru

[RTI ACT 2005 – A best thing that has ever happened to – We Indians:](#)

By P R Chandna, Member IIM DC



Let us not be frivolous or mischievous in our deeds to damage it irreversibly forever. I recently had the first hand and my first ever experience how it had punctured the imperious, macho and Machiavellians attitudes of one of the Navratna PSU company's PIO & a supporting staff – in fact being fervently supported by the complete 'Board of Directors'. One of the incidences, during these proceedings, which touched me the most, was a 'Muslim Judge' using Hindu sentiments to make the message through to these authoritative and impervious authorities who questioned my legitimate need for the information "... He [Appellant] [I] will tear it and throw it in the '**Ganges**'..." – a most sacred river to us Hindus. Every Hindu desires (including me – I hope my kith and kin and off spring are also reading this – my last wish), that his/her ashes after the cremations are submerged in the "Ganges" river to attain emancipation/ salvation - "**Moksha**".

I wish and hope that the PSU companies, government – state and central, bureaucrats and Public Authorities would get encouraged from this and shun their negative behavior. It is also desirous that the same (Act) is being protected from being "tinkered" by the vested interests. In the recent past in the country, there had been a vociferous campaign of "Tinkering and diluting" the Act by these interests, which was very timely put to a stop by Hon'ble Chairperson of UPA Madam Sonia Gandhi, who wrote back to Dr. Man Mohan Singh the Hon'ble PM of India on 10th November 2009:

"The RTI Act... as one of the most effective pieces of legislation, as instrument that has empowered people and made government more responsive... Much has been achieved in these initial years and while there are still problems of implementations, RTI has begun to change the lives of our people and the ways of governance in the country. It will of course take time before the momentum generated by the Acts makes for greater transparency and accountability in the structure of the government... It is important, therefore, that we adhere to its original aims and refrain from accepting or introducing changes in the legislations on the way it is implemented that would dilute its purpose"

It is imperative that the short comings like lack of public awareness about the RTI Act; harassment, intimidation, threatening and killing of RTI activists be addressed immediately by our law makers whole heartedly.

SOME FUNNY ONE LINERS FOR EXTRA READINGS

Collected by Raj Tiwari, Chairman, IIM DC

This is collection from previously published articles. They are not mine. However, I have done some changes in few one liners to make it suitable to Indian context.

- ❖ On Money: Money is not everything in life but is something you have got to earn in case you are alive.
- ❖ On offering personal loan to somebody: It is advisable to give that much amount and forget than giving as loan as it costs the same in both cases.
- ❖ Living within owns means: The person who lives within own means always lacks imagination.
- ❖ Working for money: People who work for MONEY are primitive as they do not know how to generate money without working for it.
- ❖ Willing People: The world is filled with willing people. Some are willing to work, rest are willing to let them work.
- ❖ Women on men: Give a man a free hand and he will run it all over woman.
- ❖ Civil officials in bureaucracy: The missile called civil servant exists in bureaucracy – it does not work and it cannot be fired.
- ❖ Current Australians: The high standard of Australians are due to the fact that their ancestors were all handpicked by the best British Judges.
- ❖ MPs in LOK SHABHA: Most politicians look like people who have become human by correspondence course.
- ❖ Future of political parties: Any political party dies at last from swallowing its own lies.
- ❖ To keep Democracy live: We must understand that politicians are like nappies and they should be changed regularly and for the same reason (of changing nappy).
- ❖ Time as critic: Time is best critic without ambition.
- ❖ George Bernard Shaw has said, "My reputation grows with every failure".
- ❖ On Birth Control: Learn from your parents' mistake, use birth control.
- ❖ Open Mind: Sometimes mind is so open that wind whistles through it.
- ❖ On self made man: Self made man is one who cannot own his lack of success to anybody.
- ❖ Hard work pays off in future, but laziness pays now.
- ❖ Success: If at first attempt you don't succeed, call it version1.0
- ❖ Knowledge: Knowledge is power. But power corrupts. So study hard and be evil?
- ❖ Absolute power corrupts absolutely, that does not leave even God.
- ❖ Love & Marriage: They say love is blind but then marriage is real eye opener.
- ❖ Old age comes at a bad time.
- ❖ Dates on calendar are closer than they appear.
- ❖ A woman who wants to be equal to men folk lacks ambitions.
- ❖ An atheist is loyal opposition to God.