

INTERNATIONAL CONVENTION ON CLEAN, GREEN & SUSTAINABLE TECHNOLOGIES IN IRON & STEEL MAKING



Convention Venue: Hotel Swosti Plaza, Bhubaneswar
Exhibition Venue: Janta Maidan, Bhubaneswar (Near Hotel Swosti Plaza)
15 - 17 July 2009



Global warming has taken the centre stage today and every conscious technocrat, scientist and literates are worrying how to save the earth from devastation. World over the think tanks are working out to innovate green technology in different elements / factors leading to economic development. Steel being a area / or elements in economic development has become a key element.

Thus steel is a key element of any domestic emissions reduction scenario, because in the steel industry (including iron production) is among the largest energy consumers in the manufacturing sector. The manufacture of steel involves many energy intensive processes that consume raw or recycled materials, such as iron ore and scrap metal, from around the world. Raw materials with intrinsic carbon contents (e.g., iron carbide, carbon electrodes, charge carbon, or limestone), the primary resources for steel production, can have material significance in the calculation of climate impacts. Virtually all of the greenhouse gas emissions associated with steel production, however, consist of the carbon dioxide emissions related to energy consumption; the primary focus of climate related impacts in the steel industry are those associated with carbon-related energy sources (e.g. Energy consumption in steel production represents about 2.5% of domestic energy use and about 7% of all U.S. manufacturing energy use). About half of the steel industry's energy is derived from coal and a large portion of this is consumed during the reduction of iron ore to pig iron.

Material use, energy use, and carbon emissions by the steel industry depend on production rates tend not only to increase input requirements and emissions but are accompanied by higher capacity and profits and the potential for capital investments in new technologies and shifts in the mix of technology, for instance from basic oxygen furnaces (BOF) to electric arc furnaces (EAF). In terms of environmental sustainability, scrap steel is one of the most recyclable and recycled materials in North America, with an overall recycling rate of about 68%.

The steel industry is a major consumer of electricity, used to power its substantial production processes. Although there are no direct emissions of carbon dioxide associated with the consumption of electricity, coal and gas fired energy sources are standard factors in the reporting protocols for greenhouse gases and represent a significant component of steel-industry energy usage. All mature industries, including steel producers, can be expected to measure direct and indirect climate-related impacts through the use of recognized, reliable, consistent, and transparent calculation and reporting of greenhouse gases for internal consumption use and for reporting to the public, as well as to specific audiences such as governments and special interest groups.

Essential to industrial development, the steel industry will play a vital role in the expansion of alternative technologies including wind, solar and the production of fuel efficient vehicles. For an industry that currently emits 4% of the world's total greenhouse gas emissions, implementation of a carbon cap and trade system would come as a big blow. Although improvements in efficiency have dramatically decreased the industry's greenhouse gas emissions, they remain a staggering 1.7 tons of carbon dioxide released per ton of steel produced. Global steel output is about 1.3 billion tons per year. Scientific advancements in carbon removal and conversion techniques are therefore paramount.

CLEANER TECHNOLOGY OPTIONS

Considering the conventional steel making processes, a search for some less polluting technology options are discussed below. We believe that the coke making, DRI production, steelmaking and hot rolling areas hold the greatest potential for economic pollution minimization leading to a clean & green environment. Coke oven by-product plants with complete gas tight emissions collector headers in the by-product recovery plant leads to a higher eco-friendly plant. Another eco-friendly options in this area is to develop new coking processes that reduce emissions at the source. Other sealed coke manufacturing processes nearly eliminates all coke oven emissions, approaching a true zero pollution process.

The COREX iron-making technology could be truly a zero waste approach if the excess fuel gas generated can be usefully harnessed. A DRI technology that uses iron ore fines is a zero pollution complement to the two DRI technologies widely used. One option which produces a true zero pollution process is a combination COREX and DRI plant.. Opportunities for pollution minimization include the reduction of slag volume through better control of lime input to the furnace and improved control of silicon and sulphur in blast furnace hot metal.

Zero pollution approach in BOF for this area has two elements; minimization of the amount of dust discharged in the off-gas and recycling the dust back into upstream processes. Scrap management, the use of alternative sources of iron units or black scrap ensures that the zinc oxide content of dust and sludge remains low. New EAF dust treatment processes seek to recover both zinc and iron, and are designed to produce minimal by-products, making them virtually zero pollution.

Economical and ecological benefits of optimized mining and beneficiation systems should have a new approach for the iron ore industry. This scenario is changing dramatically and demands new approaches. Fines, disregarded as pollution, are becoming a valuable product considering the upcoming sintering and Pelletisation capacities. Modern beneficiation processes allow for effective and low cost upgrading of lump, fines and ultra fines. In-depth research in various areas is essential to making steel sustainable by the next millennium. Research interests are being done in the following areas of Clean ferrous products like ultra-high purity products, ultra-high clean products, fine tuning of chemistry & uniformity of chemistry and structure. Similarly for Super-functional ferrous products like refinement of structure, reinforcement of properties, new alloy designs, surface treatment & evaluation.

FOCUS

Steel companies have many opportunities to improve their management practices and respond effectively to the challenges of climate change. Many leaders in the steel industry, as well as in other sectors, are beginning to adapt their practices to reduce greenhouse gas emissions and minimize overall climate impact. They have, for example,

launched voluntary emission reduction programs and participate in emissions trading markets. With the onset of the Kyoto Protocol the industry will be expected to calculate and manage actual reductions in greenhouse gas emissions, as opposed to improvements in emissions intensity levels that occur normally over time. Purchasing and producing renewable energy, investing in low-carbon technologies, working to improve energy efficiency, and offering new products and services aimed at reducing emissions are all meaningful strategies for the steel industry to undertake.



AREAS OF CONCERN

Mining and Raw Materials for Steel Making

- Best Practices in Clean & Green Mining Technologies
- Best Practices in Clean and Green Technologies for Mineral Beneficiation

Clean & Green Technologies for Iron Making

- Green route to Coke making
- Energy optimization in the conventional process of Iron making.
- DRI and other alternate routes to Iron making -A greener option.

Clean & Green Technologies for Steel Making

- Emerging green technologies in steel making.

Waste Management in Steel Industry- Key to sustainable operation.

- Water a critical input- sources and economy in its use.
- Use of waste products as a process of solid and liquid waste management in Steel Industry.

Energy Efficiency and Conservation Technologies in Steel Industry

Regulatory Mechanism for protection of Environment, with specific reference to Steel Industry

Carbon Trading and the Steel Industry

SPEAKER'S PROFILE The Convention will be addressed by eminent speakers of International and National repute with a successful track record in the areas of "Clean and Green Technologies on Iron and Steel Making". They are also expected to share their reach experience and expertise in Iron and Steel Making, focusing on emerging challenges on application of newer, Green and Clean Technology in every gamut of Iron and Steel Making.

EXHIBITION PROFILE An exhibition of equipment, technologies and methods relating to the latest development on the fields listed above will be organized at the convention site. National and International level steel makers, Equipment manufacturer and other concerned will be invited to exhibit their product.

TARGET AUDIENCE Chief Executive / Factory Managers / Mines Manager / Head of R & D Division/ Sr. Functionaries of Production Unit / Heads of Safety, Health and Environment Division / Project Heads / Site In-charge / Sr. Executives connected with R & D activities / H. R. Professionals and Regulatory bodies.

SPONSORSHIP

PLATINUM

Rs.10.00 (ten) lakhs

- 10 (ten) free delegates.
- Printing of one full coloured page advertisement free of cost.
- One brochure with promotional activities of the company to be inserted in the kit bag that will be distributed to the participants.
- Logo of the sponsoror will be prominently displayed.
- Option to participate with a 15 minute presentation.
- One stall in exhibit space for display of company products.

DIAMOND

Rs.06.00 (six) lakhs

- 6 (six) free delegates.
- Printing of one full coloured page advertisement free of cost.
- One brochure with promotional activities of the company to be inserted in the kit bag that will be distributed to the participants.
- Logo of the sponsoror will be prominently displayed.
- Option to participate with a 15 minute presentation.
- One stall in exhibit space for display of company products.

GOLD

Rs.04.00 (four) lakhs

- 4 (four) free delegates.
- Printing of one full coloured page advertisement free of cost.
- One brochure with promotional activities of the company to be inserted in the kit bag that will be distributed to the participants.
- Logo of the sponsoror will be prominently displayed.
- Option to participate with a 15 minute presentation.
- One stall in exhibit space for display of company products.

PATRON

Rs.3.00 (three) lakhs

- a) 3 (three) free delegates.
- b) Printing of one full coloured page advertisement free of cost.
- c) One brochure with promotional activities of the company to be inserted in the kit bag that will be distributed to the participants.
- d) Logo of the sponsoror will be prominently displayed.
- e) Option to participate with a 15 minute presentation.
- f) One stall in exhibit space for display of company products.

ASSOCIATE PATRON

Rs.2.00 (two) lakhs

- a) 2 (two) free delegates.
- b) Printing of one full coloured page advertisement free of cost.
- c) One brochure with promotional activities of the company to be inserted in the kit bag that will be distributed to the participants.
- d) Logo of the sponsoror will be prominently displayed.
- e) Option to participate with a 15 minute presentation.
- f) One stall in exhibit space for display of company products.

COLLABORATOR

Rs.1.00 (one) lakh

- a) 1 (one) free delegate.
- b) Printing of one full coloured page advertisement free of cost.
- c) One brochure with promotional activities of the company to be inserted in the kit bag that will be distributed to the participants.
- d) Logo of the sponsoror will be prominently displayed.
- e) Option to participate with a 15 minute presentation.

DELEGATE KIT SPONSOR

Rs.04.00 (four) lakhs

For supplying high quality bags to delegates with sponsoror logo on the bag

ADVERTISEMENT**FOR PUBLICATION****IN THE SOUVENIR**

Back Page -	Rs.1.00 (one) lakh
Front & back Inner Page -	Rs.1.00 (one) lakh
Front Page -	Rs.2.00 (two) lakhs
Full Page (Multi colour) -	Rs.50, 000.00

DELEGATE REGISTRATION**The convention is non-residential.**

Delegate Fees

- a) Single -Rs. 10,000/-(ten thousand)
- b) Double -Rs.17,000/-(seventeen thousand)
- c) Triple& above -Rs.5, 000/- (five thousand) each.

(The delegate fees will take care of participation in the convention, Lunch, Tea/Coffee, Course Materials, sight seeing etc.)

The delegates have to make their own arrangement for their accommodation at Bhubaneswar. However, on prior request the Convention Secretariat will help in arranging/reserving accommodation on payment by the delegates.

For overseas participants: Delegate fee : US \$1,000 each

(This includes free single accommodation, participation in the convention, Lunch, Tea/Coffee, Course Material, Sight Seeing etc.)

LIST OF INVITEES

Nippon Steel Corporation Japan

POSCO Korea

Bao Steel China

Corns Netherlands

Mittal Steel

CVRD Brazil

BHP Australia

Indian Steel Companies- SAIL, TATA Steel, Jindal Steel and Power, ESSAR Steel, RINL, NINL, VISA Steel, Bhusan Steel Ltd. & others

Indian Mining & Mineral Sector

Indian Refractory Companies – ACC, OCL, TRL,IFGL, Visuvius India Bharat Refractory Ltd. and others

Equipment Manufacturers – Paulworth ,POSCO Engineering and Technologies, NSC Engineering and Technologies, Siemens VAI SEMEN'S INDIA SMS DEMAG, BMEL, HEC, BHEL, L & T , SIMPLEX, VEECO & Others

Indian R & D Institutions

Indian Technical Institutions, i.e. NTs, NITs

Ministry of Steel, Govt, of India

Ministry of Environment & Forest, Govt, of India

Ministry of Mines, Govt, of India

Ministry of Coal, Govt, of India

Ministry of Labour and Employment, Govt, of India

BHUBANESWAR CITY



Bhubaneswar, a 2000 year old city and witness to Ashoka's turn of heart from cruel to compassionate, gets the sweet smell of freshly wet earth in June with the break of the South West monsoon. July used to receive the maximum rainfall of the monsoon season, but nowadays it is slightly erratic. The average rainfall in July is over 220 mm, more or less evenly spaced. July has an average Maximum Temperature at 32° C and average Minimum Temperature at 25°C

An umbrella is a useful tool if you visit places of interest in and around Bhubaneswar. A night's shower may lower the temperature to pleasant level. Casuals are the dress of choice. There are many interesting Places to see nearby. Check out Excursions.

Udayagiri and Khandagiri caves of Jain monks, 6 km from city centre has some inscriptions on the exploits of Kalinga emperor Kharavel.

Hirapur, 15 km, has a shrine dedicated to 64 manifestations of the goddess Shakti called Yoginis in a Buddhist style stupa structure, with 'Ekapada Shiva', in the centre, and an outer wall with nine 'Katyayani' depicting feminine charm at its best. Pipli - 15 km, home of applique work, beautiful for drawing room and outdoor decorations.

Nandankanan, 20 Km away, a combination of a sprawling zoo with natural habitat and a heartwarming botanical garden within a dense forest, a breeding centre of various endangered species, safaris and white tigers. Atri, 42 km, is a hot spring with sulphur bubbles at constant temperature of 55°C with bathing facilities, a prescription for skin afflictions."

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To attend as a delegate/ sponsor/ exhibitor, please see and fill up the required form(s) and mail as instructed or contact in the e-mail / mobile numbers mentioned in the respective forms