



MSTS 201 Class



# ISA: Raigarh, India

## The International Steel Academy Review



The third [AIST International Steel Academy \(ISA\)](#) was held on 9–13 December 2013 at the newly built Corporate Center at Jindal Steel & Power Ltd. (JSPL) in Raigarh, India. Attended by 185 people, this conference featured two concurrent courses: The Making, Shaping and Treating of Steel® (MSTS) 201, which focuses on steelmaking, and MSTS 202, which focuses on the shaping and treating of steel.

“During the course, I encourage all the participants to discuss not only your positive achievements, but also your challenges so that we may all learn.... When you’re teaching others, your own knowledge is enhanced.”

Mr. Naveen Jindal  
chairman, Jindal Steel & Power Ltd.

Mr. Naveen Jindal, chairman of JSPL, had invited AIST to his facility at Raigarh to provide fundamental training for steel industry employees from this region of east-central India. As Indian steel manufacturing is expected to grow by 50% in the next 20 years, Mr. Jindal recognizes that an educated workforce at JSPL and other Indian steel producers will be vital to the economic future of the nation.

The event began on 9 December with an opening ceremony at the Jindal Steel Technical Center auditorium, emceed by Mr. Anand Shukla, executive vice president — HR and employee services, JSPL. The course participants, along with invited guests and the executive committee of the AIST India Member Chapter, gathered for a tribute to O.P. Jindal, the patriarch



AIST India Member Chapter secretary, Mr. BN Mukhopadhyay, along with MSTs course instructors Dr. Jürgen Cappel and Dr. Bruno De Cooman, are greeted by Mr. Naveen Jindal (pictured left to right).

“The International Steel Academy 2013 at Raigarh covered A to Z of steel manufacturing, from both the shop floor point of view and the fundamental theoretical concepts, in a span of four days. It was an excellent blend of both aspects and therefore suitable to both experienced and young steel professionals. The breadth and depth of knowledge demonstrated at the ISA is unparalleled — thanks to the instructors and AIST. It was also an excellent platform of interaction between the steel industry and academia, making it conducive to working together in solving problems of the industry. An excellent networking platform.”

Rajiv Kumar Bhatnagar  
director — Hazira Complex, Essar Steel Ltd.

of JSPL, and to hear welcoming statements by Mr. Naveen Jindal and other dignitaries.

Mr. V.R. Sharma, JSPL deputy managing director and CEO — steel business, and AIST India Member Chapter (AIST IMC) vice chair, explained the purpose of the AIST IMC and described its role in creating both local and international forums in cooperation with the Indian steel industry. The ISA is the first step in the development of such forums.

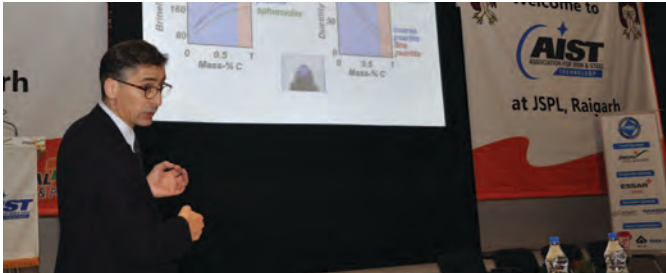
Mr. Ravi Uppal, JSPL managing director and CEO, then spoke about the expected future growth of the Indian steel industry. As the industry grows, long-term, sustainable employment in a technologically advanced industry will be made available to the Indian population. With new steel products and applications come new steel production technologies, and AIST plays an instrumental role in the

dissemination of knowledge to all those interested in learning about steel, no matter the location.

Ron Ashburn, AIST executive director, thanked Mr. Naveen Jindal and JSPL for opening their facility to the 2013 AIST ISA at Raigarh. He also thanked the AIST IMC for their efforts in expanding the technical development, production, processing and application of iron and steel throughout India. He noted that the future for steel production in India is promising, and AIST will partner with the local steel industry and academic institutes to ensure a sustainable growth takes place. Programs like the ISA will be critical to educating industry professionals in the steel manufacturing process and the advanced technology required to produce quality products in a safe, environmentally conscious manner. Mr. Ashburn congratulated Mr. Naveen Jindal for his vision in

MSTs 202 Class





“This is an excellent workshop. I have never been to a technical workshop where metallurgical topics were covered in such a practical manner. I’m amazed that practical issues which arise in the plant can be covered with such clarity and in a very simple manner. The solutions offered here will assist in minimizing issues at the plant. Thanks to AIST.”

Ms. Preeti Dewangan  
assistant manager in technical services (metallurgist),  
Jindal Steel & Power Ltd.



bringing the ISA to Raigarh and presented him with a plaque commemorating the event.

Mr. Jindal thanked the audience for coming to JSPL and Raigarh, and thanked AIST in particular for its contributions to advancing knowledge in the global steel industry. He remarked that JSPL would greatly benefit from the world-class education provided by the ISA. He expressed the need to constantly learn new things, and that everyone present would benefit from the many experts who had come together in one location. He asked the attendees to learn from one another, knowing that others may have dealt with the same problems and have found solutions.

“Thanks to AIST for giving me such a worthwhile opportunity to extend my understanding about steel and its related processes. Prof. Dr. Ir. B.C. De Cooman was very humble during all sessions. His knowledge about fundamental principles of the iron and steel industry is commendable. He not only provides theoretical technology situations, but applies them to practical scenarios.”

Aditya Kumar Mishra  
student, National Institute of Technology

Mr. Jindal’s father, O.P. Jindal, never finished school, but he taught many engineers. He was an innovator himself, spending many hours trying to make hot metal from iron ore and coal fines. The DRI production at Raigarh was inspired by his spirit of innovation. Through innovations like this, JSPL employees remain inspired to try new technologies, such as wide-flange beam blanks, a 5-m-wide plate mill and coal gasification for production of DRI. Mr. Jindal concluded his speech with a request that the attendees enjoy their visit in Raigarh, and he wished them a very educational experience. He encouraged the attendees to reach out and develop friendships with others, so that together they could find solutions to any challenges.

Mr. Nirmalendu Purohit, JSPL Raigarh president, concluded the opening ceremony by thanking Mr. Naveen Jindal for his presence and his support of the ISA.

MSTS 201: Steelmaking was delivered by Dr. Jürgen Cappel. While many courses focus on steel as a material, the MSTS 201 curriculum broadens the scope to include the ancillary, supporting technologies critical to steelmaking, such as environmental aspects, equipment technology, production scheduling and control systems. The course begins with the history of iron- and steelmaking from the earliest smelters of wrought iron to the modern, technological wonders in steelmaking. Today’s steel technology has advanced due to a focus on sustainability and environmental awareness. Dr. Cappel described the acquisition and beneficiation of the necessary raw materials for iron- and steelmaking, and gave detailed descriptions of iron production, with a focus on



“The content of both the courses has been designed in such a way that it covers the in-depth knowledge in the field of iron and steelmaking and steel shaping, coupled with practical knowledge. It is beneficial to the practicing technocrats in the steel industry, giving them an opportunity to refresh the basics along with an overview on the recent technological developments in the field. Technocrats of the Indian steel industry are thankful to Honorable Chairman Naveen Jindal for opening the JSPL facilities to conduct the program at Raigarh and to the AIST team for conducting such an event.”

B. Lakshminarasinh  
vice president — technical services and R&D,  
Jindal Steel & Power Ltd.



the utilization of lower-Fe-containing iron ore and steel production. He also described the latest technology used in continuous casting.

MSTS 202: Steel Shaping and Treating was delivered by Dr. Bruno De Cooman. This course, first and foremost, is an introduction to the processing of steel products for industry professionals. The course brings together decades of internationally recognized efforts acquired in the industry and at academic institutions, and reflects the vitality and global nature of steel product and processing innovation. MSTS 202 merges advanced steel metallurgy concepts and principles of state-of-the-art steel processing technologies, focusing on topics that play an essential role in current steel processing and product development. With the strong attendance and support from JSPL, Dr. De Cooman added extra emphasis on the production of quality long products, such as rail and structurals, and the different types of automation and statistical process control used in the industry.

Throughout the two courses, held concurrently over four days, the delegates had many opportunities to ask questions of the instructors, to network and meet new colleagues from India as well as Middle Eastern, Asian and European countries.

AIST sincerely thanks each ISA sponsor. This event would not have been possible without their generous support. ♦

A note from Mr. S.S. Mohanty, director (technical) and additional charge director (commercial), Steel Authority of India Ltd. (SAIL), and AIST India Member Chapter chair, to Mr. V.R. Sharma of JSPL:

“The feedback received regarding the event is really excellent with regard to arrangement of well-equipped lecture halls, adequate infrastructure support and finally the Gala dinner with music unleashed. Hearty thanks and congratulations to you and your team in JSPL on a successful conclusion of ISA 2013 at Raigarh as Event Sponsor.”

**The next International Steel Academy in India will be hosted by SAIL at its Bhilai, Chhattisgarh facility in January 2015.**

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