

AIST Promotes the Steel Industry to Students at AISTech 2009

The AIST Foundation, with support from six industry companies, held special student-specific programs at AISTech 2009 in St. Louis, Mo., May 4-7. The corporate sponsors were ArcelorMittal, CMC Americas, Steel Dynamics, Inc., Midrex, The Timken Company and United States Steel Corporation.



MIDREX



ArcelorMittal

TIMKEN



Engineering students from all related disciplines were encouraged to attend, being offered complimentary registration, travel grants and paid session monitor positions. A total of 62 students from 14 universities registered for the conference. In addition, AIST held an Attendance Challenge. The university with the highest number of students in attendance received \$500. The winner of this challenge was the Missouri University of Science & Technology.

Student activities began with an un-plant tour on Sunday, May 3, where the six sponsoring companies presented information about their companies to the students.

The students then attended a Student Orientation, which included information about AIST from Ron Ashburn, AIST Executive Director, followed by industry experience, accomplishments, and goals from three different perspectives. The first was from Benjamin Irwin who just recently started working at ArcelorMittal. Next Clay Spangler from Steel Dynamics Inc. gave his perspective as someone who has been in the industry for five to ten years. Last was Andy Harshaw who presented his background and goals from the executive level. Those attending enjoyed dinner and networking with the corporate sponsor representatives.



The students were given instructions on the Steel Scavenger Hunt which began at the orientation. The students were given 2 ½ days to complete the scavenger hunt to enter the prize drawing for a Nintendo Wii, donated by CMC Americas. Many exhibiting companies participated in the scavenger hunt providing the students with information about their companies and their products. Marisa De Nicolo from the Illinois Institute of Technology won the Nintendo Wii. Congratulations Marisa!

The AIST Student Project Presentation Contest was held on Monday, May 4. During this contest, 13 students presented seven projects before a panel of judges. The judges were Kelly Dallas from ArcelorMittal, Kevin Bury from The Timken Company, Greg Meszaros from United States Steel Corporation, and Clay Spangler from Steel Dynamics Inc.



Participants were judged on technical content, topic coverage and presentation skills. The contestants included Joe Evans, Wesley Everhart and Patrick Lueckenhoff from Missouri University of Science & Technology; Marisa De Nicolo from the Illinois Institute of Technology; Laura Diers, Randall Chen and Andrew Kent from Lehigh University; Carolina Guimaraes from the Universidade Federal de Ouro Preto, Brazil; Tim Kibler, Joshua Noll and Eric Neuman from Missouri University of Science & Technology; Eric Hamonn from the Illinois Institute of Technology; and Elizabeth Savage from Missouri University of Science & Technology.



The Winners of the Student Project Presentation Contest and their presentations are as follows:



First Place (\$1,500): **Joe Evans, Wesley Everhart** and **Patrick Lueckenhoff** from Missouri University of Science & Technology for their presentation entitled “*Modeling Internal Temperature of Structural I-Beam,*” about thermal modeling of a structural I-beam done in Visual Basic to explain what happens to the internal temperature during cooling.



Second Place (\$1,000): **Elizabeth Savage** from Missouri University of Science & Technology for her presentation entitled “*Optimization of Cooling of Hot Rolled Rails,*” about research and determination of a cooling rate following hot rolling that will result in the hardest, fully pearlitic microstructure possible at the Steel Dynamics Inc. (SDI) plant in Columbia City, Ind. which produces hot rolled steel rails for railroads.



Third Place (\$500): **Carolina deas Graças Graciano Guimarães** from the Universidade Federal de Ouro Preto for her presentation entitled “*Evaluation of the Use of Mixtures of Charcoal and Rice Rind for its Injection in the Tuyeres of Blast Furnaces,*” about trends in the steelmaking industry indicating a need to substitute the use of charcoal in the production of the pig-iron for new energy sources in current blast furnace processes. The presentation studies ICP (injection of powder charcoal) with the incorporation of the rice rind to the fine of charcoal used in the pig-iron production. Simulation equipment was used to consider the peculiarities of these reactors. Within this context, the effects of the mixture of charcoal and rice rind are correlated with the combustion rate and the injection rate. In conclusion, the injection rates have values

that are close to the combustion rates. Therefore, the product is available even if the injection rate is high.

Following the contest, tickets were drawn for door prizes donated by Vollmer America, Midrex Technologies, United States Steel Corporation, ArcelorMittal, Magneco/Metrel, SMS Siemag, and Voith Turbo. AIST would like to express a special thanks to the contest chair, **Kevin Bort**, Steel Dynamics Inc., along with all contest judges and companies who donated the door prizes.

That evening the students attended a baseball game at Busch Stadium, compliments of the sponsoring companies, where the St. Louis Cardinals played the Philadelphia Phillies.

