



PRESS RELEASE

HWI technical sessions at AISTech 2024 focus on refractory solutions to assist steelmakers with energy transition needs

HWI, a member of Caldeyrys, a global leader in refractory solutions, is set to make a significant impact at AISTech 2024 in Columbus, Ohio, May 6-9, 2024. HWI will engage with industry professionals through active participation in multiple technology conference sessions and exhibit in Booth 2629 to showcase innovations, such as robotic gunning techniques. With a focus on assisting customers with their energy transition needs, HWI will demonstrate how its refractory products, services, and expertise drive critical advancements in the industry and foster sustainability and efficiency in steel production.

Pittsburgh, PA, USA - May 6, 2024 – At AISTech 2024, HWI, a member of Caldeyrys, will reinforce its commitment to assist customers with their energy transition needs through active participation in the event's technology conference. HWI involvement includes experts from teams in Brazil and the United States.

Their technical program activities underscore a commitment to pioneering the future of steelmaking operations through refractory industry solutions that enhance safety, create efficiencies, and reduce energy consumption.

May 6, 2024

Refractory Systems: Digitalization & Sensors

Room: A220 - 9:30 AM to 12:00 PM

Refractory Systems Session Chairs:

- Ruth Engel, Refractory Consulting Services
- **Korey Skala**, HWI, a member of Caldeyrys
- **Daniel Silva**, HWI, a member of Caldeyrys

May 7, 2024

Decarbonization of Mold Flux: Contributing to Carbon Footprint Reduction

Room: A212 - 03:30 PM - 04:00 PM

Author(s):

- **José Augusto Cardoso Ferreira**, HWI, A member of *Calderys*
- Jeferson Klug, Federal University of Ceará

The presentation explores innovative mold flux decarbonization initiatives - from production to application in steel casting - to reduce carbon emissions and fossil fuel consumption. Traditionally, mold flux contributes to high carbon output. Reduction of this content can also result in better quality, less product deviation, and increased yields in operation. These advancements enable steelmakers to align with global sustainability goals and support a transition to more eco-friendly practices without sacrificing performance. The scalable solutions presented suggest the potential for even more significant reductions in carbon emissions.

May 8, 2024

Reduction of Corrosion of Tundish Stopper Rod Caused by Covering Powder

Room: A212 - 09:00 AM - 09:30 AM

Author(s):

- **José Augusto Cardoso Ferreira**, HWI, a member of *Calderys*
- **Edson Maranhão**, HWI, a member of *Calderys*
- Thaísa F. Silva, Ternium Brasil
- Giovani Apolinário, Ternium Brasil
- Wagner Bielefeldt, Federal University of Rio Grande do Sul
- Jeferson Klug, Federal University of Ceará

The team will present innovative solutions utilizing Ca-aluminate tundish covering powders that extend refractory durability and improve steel product quality while promoting operational energy efficiencies and safety. The research applied computational thermodynamics to devise a covering powder composition that significantly mitigates stopper rod corrosion. This advancement extends the operational lifespan of the tundish from five to 12 heats, reducing steelmakers' refractory consumption, energy demands, and carbon footprint. Optimized slag basicity also improves steel purity by minimizing non-metallic inclusions, thus lowering the risk of breakout accidents. The easy-to-implement solution can help redefine industry benchmarks and further support environmental sustainability.

In addition to HWI's technical session participation at the conference, **Mary Lucarino**, Application Specialist III, Integrated - Steel at HWI, a member of *Calderys*, will be featured in a chapter of the new book, *More Women of Steel, Women in Steel Volume II*, which will be released at AISTech 2024.

As the industry looks to more automated solutions to ensure efficiency, energy savings, and safety, HWI and *Calderys* Group continue to lead the way with innovative approaches and technologies.

About HWI, a member of Calderys

HWI is the largest supplier of refractory products and services in the United States, with a history that spans more than 150 years. It is part of Calderys and is the brand for the Americas region of the Group. HWI counts 25 manufacturing sites and 20 distribution centers in the Americas, as well as the largest refractory industry research facility in North America. Serving virtually every major industry that requires refractory solutions to enhance production and protect assets, HWI is consistently recognized for its talented experts, industry firsts, and intensely driven excellence. For more information, visit <http://thinkhwi.com> and <https://calderys.com>

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