BREAKTHROUGH TECHNOLOGY CONFERENCE 2023 AGENDA OVERVIEW

featuring
Session 1: Carbon recycling and reduction
Chaired by Dr. Fernando ACTIS, Vice-President, Global Research & Development, Ternium

The strive for efficiency in our processes and maximising the use of scrap are important elements to enable industrial and societal transformation. In this session, steelmakers highlight the latest technological initiatives for reducing and reusing resources.

13.50 Use of alternative carbon sources in blast furnace
Basavaraj BOMMAN, Deputy General Manager, JSW Steel Limited

14.10 Decarbonising through LanzaTech technology at scale
Sanjeev MANOCHA, Global Director – Business Development, LanzaTech

14.35 Combining carbon recycling technology
Dr. Yusuke KASHIHARA, Senior Researcher, Ironmaking Research Department, JFE Steel Corporation

15.00 Coffee break

15.30 Investigating carbon neutralisation in the DRI process
Koki TERUI, Senior Researcher, JFE Steel Corporation

15.55 A new approach for efficient hydrogen generation
Dr. Hany HAMED, Manager - Research & Development, Emirates Steel Arkan

16.20 Panel discussion 1: Strategic pathways for the transition technologies
Moderator: Dr. Rizwan JANJUA, Head, Technology, World Steel Association (worldsteel)
Panelists:
- Dr. Alexander FLEISCHANDERL, Senior Vice President, Global Head of Green Steel, Primetals Technologies
- Dr. Fernando ACTIS, Vice-President Global Research & Development, Ternium
- Dr. Myoung Gyun SHIN, Senior Vice President, Low-carbon Iron and Steelmaking R&D Center, POSCO

17.00 End of day one
**Session 2: Hydrogen**

Chaired by Dr. Kurt SATZINGER, Lead of Strategic Projects, voestalpine Steel Division.

Hydrogen technologies offer potential options for ironmaking at an industrial scale without the release of CO₂. This session will explore key hydrogen initiatives in the steel industry.

- **09.00** Hydrogen injection through tuyeres at E blast furnace  
  Dr. Samik NAG, Head Ironmaking Research Group, Tata Steel Limited
- **09.25** Update on POSCO’s hydrogen-based ironmaking process, HyREX  
  Dr. Myoung Gyun SHIN, Senior Vice President, Low-carbon Iron and Steelmaking R&D Center, POSCO
- **09.50** Transformation to fossil-free steel with the HYBRIT technology  
  Dr. Martin PEI, Executive Vice President & CTO, SSAB
- **10.15** MIDREX Flex™: Minimising technology risks in the transition  
  Dr. Vincent CHEVRIER, General Manager - Technical Sales and Marketing, Midrex
- **10.40** Coffee break
- **11.10** Mission possible: technological pathways to decarbonise the industry  
  Dr.-Ing Thomas HANSMANN, Chief Technology Officer, SMS
- **11.35** Technology development for ore-based metallics in steelmaking  
  Thomas BUERGLER, Senior Expert Iron and Steelmaking, voestalpine Steel Division
- **12.00** HBIS Group’s hydrogen metallurgy demonstration project (HYMEXTM)  
  Dr. Menglong Li, Chief Researcher, HBIS Group Sustainable Development Research Center
- **12.25** Lunch
- **13.25** Process modelling study on decarbonisation of steelmaking  
  Dr. Romuald COUPAN, Technology Project Manager - Heat Recovery, SLB
- **13.50** Digital twin to develop low-carbon bridge technology  
  Dr. Dongjo LEE, Ironmaking Research Group, Low-carbon Iron and Steelmaking R&D Center, POSCO
- **14.15** The Helios Cycle - A novel method to reduce iron ores  
  Yonathan GEIFMAN, CEO, Helios  
  Dr. Ronen WEINGARTEN, R&D Lead, Helios
- **14.40** Coffee break

**Session 3: Electrification**

Chaired by Andrew PURVIS, Director, Sustainable Manufacturing, World Steel Association (worldsteel)

This session highlights production of premium grade steels using scrap and alternative fuels through the EAF process.

- **15.15** EAF charge carbon from coal to 100% biomass  
  Edward HEATH-WHYTE, Head of Environment and Sustainability, Liberty Steel
- **15.40** Breakthrough for formable high-strength sheet steel  
  Amar DE, Director, Product Development and Quality, Big River Steel, a US Steel company
- **16.05** Increasing scrap use to focus on reducing CO₂ emissions  
  Narottam BEHERA, Steelmaking Plant Expert-C.I., Emirates Steel Arkan
- **16.30** Production of safety-critical speciality steels from scrap  
  Scott JACKSON, Works Manager, Aldwarke Cast Products (ACP), Liberty Steel
- **16.55** Panel discussion 2: Optimisation of the iron and steel value chain towards a low-carbon industry  
  Moderator: Dr. Wim VAN DER STRICHT, Technology Strategy, CO₂ and Circular Economy, ArcelorMittal  
  Panelists:  
  - José NOLDIN, CEO, GravitHy  
  - Dr. Leandro DIJON, Global Technical Manager - Direct Reduction, Vale  
  - Paul ALTSCHWAGER, Chief Capital Officer, Liberty Steel  
  - Andrew GADD, Lead Principal Marketing Sustainability Strategy, BHP
- **17.25** End of conference