

BREAKTHROUGH TECHNOLOGY CONFERENCE 2023 AGENDA OVERVIEW



Climate Action
BREAKTHROUGH TECHNOLOGY
CONFERENCE

worldsteel
ASSOCIATION

2023

featuring

**HYDROGEN
IRON & STEEL**



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TECHNOLOGIES

Bronze

tenova  **MIDREX**

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09.30 - Tuesday, 05 December 2023

Opening session

09.30 Welcome address

Dr. Rizwan JANJUA, Head, Technology, World Steel Association (worldsteel)

09.45 Opening address

Dr. Edwin BASSON, Director General, World Steel Association (worldsteel)

10.00 Vice Chair's address

Jeong-Woo CHOI, CEO, POSCO Holdings

10.15 Welcome address

Eng. Medhat HASHEM, Chief Operating Officer, Emirates Steel, an Emirates Steel Arkan Company

10.30 Coffee break

Keynote speeches

Introduced by Dr. Rizwan JANJUA, Head, Technology, World Steel Association (worldsteel)

In this session, steel industry leaders set out their plans and initiatives for the adoption of low-carbon steelmaking technologies to reduce emissions and meet climate goals.

11.00 POSCO's carbon neutral strategy

Dr. Sedon CHOO, Senior Executive Vice President, POSCO

11.20 Green steel in motion - Iron feedstock meets renewable energy

Dr. Alexander FLEISCHANDERL, Senior Vice President, Global Head of Green Steel, Primetals Technologies

11.40 Catalysing decarbonisation - Ternium's strategic roadmap

Dr. Fernando ACTIS, Vice-President Global Research & Development, Ternium

12.00 Tenova's technology - Shaping the industry sustainability

Paolo ARGENTA, Executive Vice President, Upstream Business Unit, Tenova

12.20 Carbon neutrality initiatives in Japan

Dr. Hideki MURAKAMI, Executive Advisor, Nippon Steel Corporation

12.40 Lunch

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

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09.00 - Wednesday, 06 December 2023

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 FlexTM: 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