

# BREAKTHROUGH TECHNOLOGY CONFERENCE 2025 AGENDA OVERVIEW



## TUESDAY, 02 DECEMBER 2025

### 09.00 - Opening session

#### Opening, safety briefing, and antitrust guidelines

Dr. Rizwan JANJUA, Head, Technology, worldsteel

#### Opening Address

Dr. Edwin BASSON, Director General, worldsteel

#### Overview of the ASEAN Steel Industry

Mr. Wee Jin YEOH, Secretary General, SEAISI

#### Opening Remarks

Dr. Kisoo KIM, Group CTO, POSCO Holdings

#### Opening Remarks

Mr. Jochen BURG, CEO, SMS Group

### 09.45 - Keynote Speeches

#### The Grand Quest for Green Steel – Technology as Survival Strategy

Dr. Alexander FLEISCHANDERL, CTO Primetals Technologies Group & Global Head of Green Steel, Primetals Technologies Austria GmbH

#### Industrial Clustering for Steel Manufacturing – Mechanism to Enable Technology Deployment and Scaling Up

Mrs. Olga RUDKOVSKAYA, Head of Department, Sustainability and ESG ADNOC

#### Transforming Steel Production: The Role of Innovation, Collaboration, and Standards

Dr. Klaus PETERS, Secretary General, ESTEP

### Coffee break

### 11.15 - Session 1: Future of (green) energy demand and supply

*Chaired by Dr. Baris ÇİFTÇİ, Director, Industry Analysis, worldsteel*

This session delves into the critical topic of future energy demand and supply, with a particular focus on low-carbon energy sources.

#### Evolution of energy demand and supply balance and possible impact on decarbonisation in the steel industry

Dr. Baris ÇİFTÇİ, Director, Industry Analysis, worldsteel

#### Reimagining Decarbonization: Unveiling Global Innovations and Regional Dynamics

Dr. Thomas HANSMANN, Chief Technology Officer, SMS Group

#### Ironmaking Modelling and Applications: Progress and Challenges

Professor Yansong SHEN, New South Wales University

### Lunch

### 13.15 - Session 2: Fuels & Reductants

*Chaired by Andrew PURVIS, Director, Sustainable Manufacturing, worldsteel*

The transition towards lean iron and steelmaking has several possibilities through innovative carbon recycling and reduction practices as well as use of low-carbon energy sources such as hydrogen and bio-fuels etc. This session explores the pathways for the transition/bridge technologies.

#### Successful Full-Scale Implementation of Hydrogen as a Fuel

Dr. Joachim VON SCHÉELE, Global Director, Commercialization, Linde GmbH

#### Innovation practice in coupling application of new advanced technologies of Hydrogen-Oxygen-Intelligent combustion

Mr. Leo LUO, Chief Researcher of Low-carbon, CITIC Pacific  
**Sustainable Decarbonization of Iron ore Sintering by partial replacement of Coke Breeze with Bamboo Biochar**  
Mr. Indranil MAJUMDER, Chief General Manager, Sinter Plant, SAIL

#### Development and Rollout of Carbon Capture and Storage (CCS) Technologies in the Global Steel Sector

Dr. David T. KEARNS, Country Manager, Australia and New Zealand, Global CCS Institute

#### Development of Carbon Recycling Direct Reduction Process using methanation process

Mr. Yasumitsu SHIMURA, Researcher, JFE Steel Corporation  
**HYDRA Project Update**

Mr. Filippo CIRILLI, Decarb & energy Transition, RINA CONSULTING CENTRO SVILUPPO MATERIALI

### Coffee break

#### Progress of Low Carbon Blast Furnace Initiatives at CSC

Dr. Huang TSUNG-YEN, Leader, Blast Furnace Group, China Steel Corporation

#### Commissioning of Baotou Steel Carbon Capture Utilization and Storage Demonstration Project

Mrs. Ban HUA, Deputy Director; Senior Political Affairs Officer, Baotou Iron & Steel

### 17.00 - Panel discussion 1: Rethinking reduction – process, energy, raw materials

### 17.40 END OF DAY ONE

### GALA DINNER

19.00 - 23.00

Singapore Marriot Tang Plaza Hotel

# BREAKTHROUGH TECHNOLOGY CONFERENCE 2025 AGENDA OVERVIEW



## WEDNESDAY 03 DECEMBER 2025

### 09.00 - Session 3: Novel & Breakthrough Technologies

*Chaired by Dr. Rizwan JANJUA, Head, Technology, worldsteel*

The breakthrough technologies are progressing at various paces while new technologies are being investigated. This session will contain updates on these and the scale up timelines.

#### **HBIS Group's DRI-EAF (HyMEX®) process of low-carbon emission automotive steel production**

Dr. Menglong LI, Chief Researcher, Sustainable Development Research Center, HBIS Group

#### **Metallurgy and Technology for the Production of New Generation Single Phase High Formable High Strength Steels towards Low Carbon Steel Production**

Dr. Amar DE, Director, Quality and Product Development, Big River Steel

#### **Fast-track in development of new hydrogen based smelting reduction technologies**

Mr. Thomas BUERGLER, Managing Director/Metallurgical Competence Center, K1-MET

#### **Research and Pilot Plant building of Hydrogen-based Iron Ore Direct Reduction with Fluidized Bed in Ansteel, China**

Mr. Guangyu MA, Director of Environment and Resource Technology Research Institute, Ansteel Group Corporation Limited

#### **Project NeoSmelt – collaborating to accelerate steel value chain decarbonisation**

Mr. Christopher PAGE, General Manager NeoSmelt, BlueScope Steel Limited

### Coffee break

#### **Update on the development of POSCO's hydrogen-based Ironmaking process, HyREX®**

Dr. Myoung Gyun SHIN, Senior Vice President, Low-carbon Iron and Steelmaking R&D Center, POSCO Holdings

#### **The Transition to Carbon Neutral Iron**

Dr. Vincent CHEVRIER, General Manager – Technical Sales and Marketing, Midrex

#### **The Helios Cycle: A Decarbonized Iron Ore Reduction Process Through Sodium Looping**

Dr. Hani FARRAN, VP R&D, Helios

### 12.50 Lunch

### 13.50 - Session 4: Feedstock (ore, scrap, pre-reduced material)

*Chaired by Dr. Baris ÇİFTÇİ, Director, Industry Analysis, worldsteel*

In conjunction with energy, feedstock is another vital component influencing the process and technology. This session will contain presentations on innovations in scrap use, electrification, iron ore and metallics.

#### **Optimization of EAF Fe Feedstock as Related to Steelmaking and Decarburization**

Mr. Jeremy JONES, President, CIX Inc.

#### **The contribution of digital technologies in scrap treatment processes**

Mr. Marco OMETTO, Executive Vice President R&D, DANIELI Automation

#### **Processing Western Australian Iron Ore in Electric Smelting Furnaces**

Dr. Sa GE, Process Metallurgy Specialist, Hatch

#### **Integrating Machine Learning and Metallurgical Insights for Sustainable Electric Arc Furnace Performance**

Mr. Narottam BEHERA, Lead Research – Iron & Steel Making | Research & Development, EMSTEEL

#### **BHP'S Partnerships in Steel Decarbonisation**

Dr. Nigel TAME, Head of Steel Decarbonisation, Sales and Marketing Sustainability, BHP

#### **Ecoshipping - Decarbonization of the Steel Value Chain through Innovations in Shipping**

Mr. Alexandre ANDRADE, Innovation Portfolio Manager, Vale and Ms. Michelle GONZALEZ, Head of Chartering, Long Term Contracts & Ops, Vale

### Coffee break

### 16.50 - Panel discussion 2: Visualising raw materials on the spectrum of carbon intensity

### END OF CONFERENCE

Generously sponsored by

