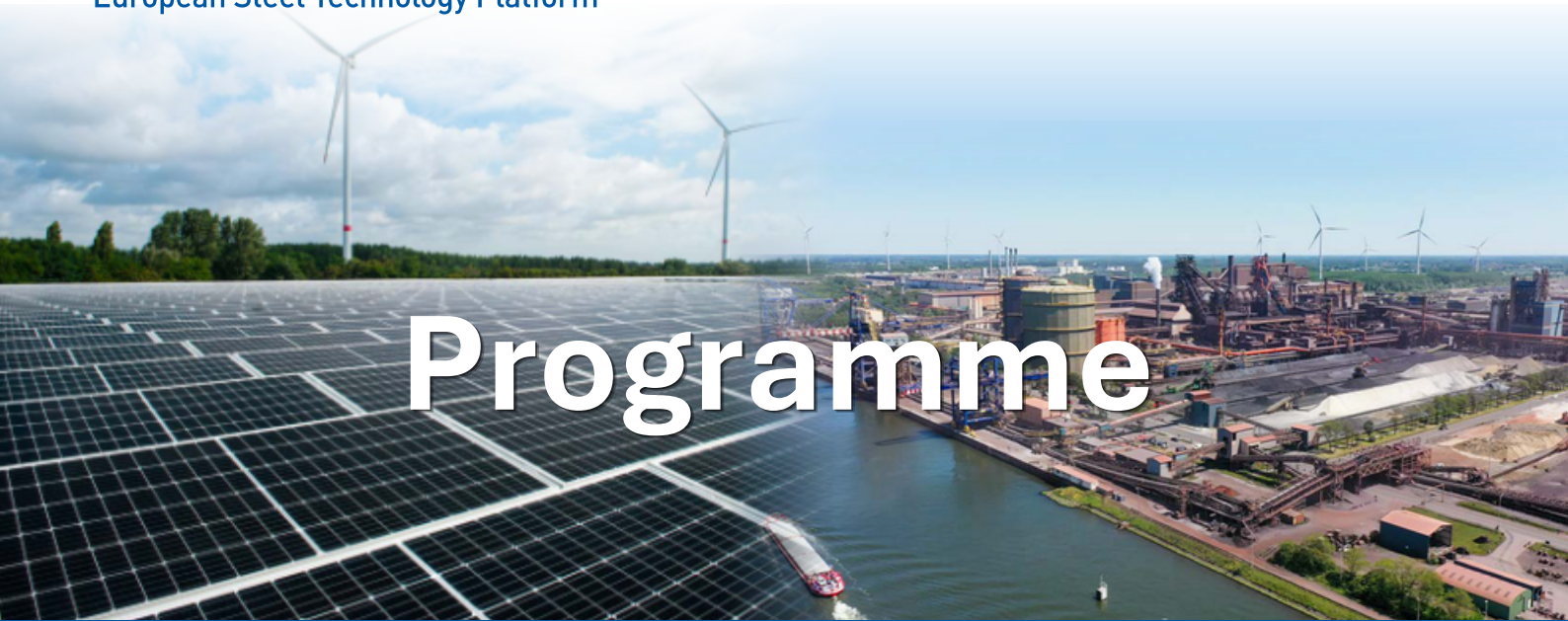




Programme

Paving the Future of EU Steel

Clean Technologies, Smart Steel Products and Applications



Ghent | Belgium



Conference Venue: RodeBol Events

CommunicationCampus (building 485), Sint-Denijslaan 485, B-9000 Ghent



Day 1

Tuesday 20 October 2026

ArcelorMittal Ghent and RodeBol Events

08:30 – 09:00

Registration for the plant visit

ArcelorMittal Ghent

09:00 – 12:45

Plant visit ArcelorMittal Ghent - optional

Guided visit of the steel plant

13:00 – 13:15

Frederik Van De Velde - CEO ArcelorMittal Belgium

Welcome address

12:45 – 14:00

Lunch – ArcelorMittal Ghent

14:00 – 14:30

Transfer to RodeBol Events

CommunicationCampus, Sint-Denijslaan 485, 9000 Ghent

14:30 – 15:00

Registration – RodeBol Events

Opening session · Welcome and high-level addresses

15:00 – 15:10

Opening and welcome day 1

Conference Chairs

Inge Bellemans – Ghent University & Nuria Sanchez – ArcelorMittal

Wim Van der Stricht – ESTEP

15:10 – 15:35

Sven Vandeputte – Managing Director, OCAS

Welcome address

15:35 – 16:00

Karen Hemelsoet – Ghent University

Title to be confirmed

16:00 – 16:25

From research priorities to European collaboration: the role of ESTEP

Wim Van der Stricht – Secretary General, ESTEP

16:25 – 16:50

DG Research and Innovation, European Commission

To be confirmed

16:50 – 17:15

European Research Executive Agency (REA), European Commission

To be confirmed

17:15 – 17:20

Closing of day 1

Conference Chairs

Inge Bellemans – Ghent University & Nuria Sanchez – ArcelorMittal

17:20 – 18:30

Poster session

18:30 – 21:30

Walking dinner – RodeBol Events

Day 2

Wednesday 21 October 2026

RodeBol Events – morning



08:30 – 09:00	Registration and coffee
09:00 – 09:10	Opening and welcome day 2 Nuria Sanchez, Conference Chair, ArcelorMittal Wim Van der Stricht, Secretary General, ESTEP
Decarbonisation and clean steel processes · Session chair: Nuria Sanchez	
09:10 – 09:40	KEYNOTE : Beyond the metal: How slag properties drive the future of clean steel production Kim Verbeken – Ghent University
09:40 – 10:00	Decarbonisation of BF-BOF steelmaking: TRL7 pilot-scale demonstration of STEPWISE technology for H₂ production and CO₂ capture using steel gases Eric Van Dijk – TNO
10:00 – 10:20	From a self-sufficient site to a flexible electrified producer: energy integration across the BF-BOF to DRI-EAF transition at Tata Steel IJmuiden Seyed Jamali – Tata Steel
10:20 – 10:40	TRANSinter – Sintering process role in the (partial) transition to the direct reduction route Hubert Fouarge – CRM Group
10:40 – 11:00	Pressure swing adsorption as a key enabler for steelmaking decarbonisation Martin Raventos – Air Liquide & Jean-Luc Reboul – ArcelorMittal
11:00 – 11:20	Coffee break
Decarbonisation and clean steel processes · Session chair: Ismael Matino	
11:20 – 11:40	Reduction kinetics and metallurgical performance of cold-agglomerated magnetite-based pellets for hydrogen direct reduction Matthew Bennett – Binding Solutions
11:40 – 12:00	Hydrogen-based steel reheating in a pilot-scale walking beam furnace: decarbonisation potential and environmental trade-offs Xiangqiang Song – Swerim
12:00 – 12:20	Experimental validation of coke breeze oxy-combustion for H₂-rich syngas production in integrated steelmaking Eros Faraci – RINA CSM
12:20 – 12:40	EASyMelt deployment in Europe: a solution to decarbonize blast furnaces while preserving industrial competitiveness Jihong Li – SMS Group
12:40 – 13:00	Pulsed hydrogen shaft injection for the blast furnace: first results from the H2II test rig trials Hauke Bartusch – BFI
13:00 – 14:15	Lunch

Day 2

Wednesday 21 October 2026

RodeBol Events – afternoon



Smart Steel Products and Applications · Session chair: Nuria Sanchez

- 14:15 – 14:45** **KEYNOTE : Experimental and numerical approaches to hydrogen compatibility testing of steel products and applications**
Frank Schweizer – Fraunhofer IWM
- 14:45 – 15:05** **Group Metallurgical consequences of zero-carbon steelmaking: impact of residual elements on the processing and properties of IF, DP, HSLA and high-carbon steels – first results of the MetConZero project**
Robrecht Jennen – CRM
- 15:05 – 15:25** **Creep performance of a high-chromium ferritic-martensitic steel with novel composition and thermal treatment**
Lorena Callejo – Tecnalia
- 15:25 – 15:45** **European project FEATHER: steel solution for next-generation H₂ cylinders**
Simon Catteau – Acciaierie Bertoli Safau
- 15:45 – 16:05** **SafeH2Pipe – Behaviour of vintage and modern pipelines with external damage for H₂-NG pipeline transport: project overview and assessment through small-scale and full-scale testing**
Dennis Vanhoecke – ArcelorMittal

16:05 – 16:25 **Coffee break**

Decarbonisation and clean steel processes · Session chair: Ismael Matino

- 16:25 – 16:45** **Hy4Smelt – current research topics**
Michael Schafelner – voestalpine & Gernot Polke – Primetals Technologies
- 16:45 – 17:05** **Green process gas heating: decarbonising auxiliary and heating processes in steel production with the Ultra-High Temperature Thermo Jet technology**
Stefan Sieberer – Primetals Technologies
- 17:05 – 17:25** **Fuel rate reduction and CO₂ emission optimisation in an integrated blast furnace: waste heat recovery, burden management and future fines recycling – operating experience from Jayaswal Neco Industries**
Rajkumar Yadu – Jayaswal Neco Industries
- 17:25 – 17:45** **Waste-derived reductants for blast furnace decarbonisation: a techno-economic and environmental assessment of SRF and torrefied waste wood utilisation**
Mario Avila – Ghent University
- 17:45 – 17:55** **Conclusions of day 2**
Nuria Sanchez, Conference Chair, ArcelorMittal
Wim Van der Stricht, Secretary General, ESTEP
- 20:00** **Conference dinner – Ghent Marriott Hotel**
Address : Drabstraat 37, 9000 Gent

Day 3

Thursday 22 October 2026

RodeBol Events – morning

08:30 – 08:45

Registration and coffee

08:45 – 08:50

Opening and welcome day 3

Inge Bellemans, Conference Chair, Ghent University

Wim Van der Stricht, Secretary General, ESTEP

Predictive modelling and digital metallurgy · Session chair: Inge Bellemans

08:50 – 09:20

KEYNOTE : Long-Horizon Forecasting of Microstructure Evolution in Multi-component Alloys: Phase-Field Simulations, Deep Learning, and Tensor Decomposition

Nele Moelans – KU Leuven

09:20 – 09:40

A coupled decarburisation-dephosphorisation-denitrogenation model of the BOF emulsion zone: implications for low-carbon hot metal from H-DRI

Gaurav Verma – TU Delft / TNO

09:40 – 10:00

PHASES Agent: an AI agent for physics-based digital metallurgy

Daniel Berglund – Aerobase

10:00 – 10:20

A system approach to integrated resource control in the EAF: managing alternative carbon materials, hydrogen and heat recovery

Ismael Matino – Scuola Superiore Sant'Anna

10:20 – 10:40

A hybrid physics-informed framework for near real-time quality prediction of direct reduced iron

Tristan Kristan – Pro2Future

10:40 – 11:00

Coffee break

Circular economy, circularity by design and recovery-ready steel products · Chair: Enrico Malfa

11:00 – 11:20

Mapping and prioritising waste heat recovery opportunities across electric and integrated steelmaking routes: the E-ECO Downstream project at Feralpi and Acciaierie d'Italia

Valentina Colla – Scuola Superiore Sant'Anna

11:20 – 11:40

Self-reducing briquettes – the use of various carbon sources for reduction

Hans Hage – Tata Steel

11:40 – 12:00

Hydraulic properties and alkali activation of artificial electric smelting furnace slag

Irmtraud Marschall – K1-MET

12:00 – 12:20

Characterisation of high-quality steel scrap and use in integrated steelmaking plants – results of the REDERS project

Marten Lichte – BFI

12:20 – 12:40

Steelanol: three years of industrial carbon recycling – where do we stand? Achievements, challenges and the path forward

Kristof Verbeeck – ArcelorMittal

12:40 – 13:00

Steel industry zinc-containing residues valorisation – the ZincVal approach

Hans Hage – Tata Steel

13:00 – 14:15

Lunch

Day 3

Thursday 22 October 2026

RodeBol Events – afternoon



Predictive modelling and digital metallurgy · Session chair: Inge Bellemans

14:15 – 14:35	Influence of crucible material on the microstructure and electrical conductivity of CaO-SiO₂-MgO-FeOx slags Carl Debrouwere – Ghent University
14:35 – 14:55	Model studies of liquid steel mixing in a steelmaking ladle Mariola Saturnus – Silesian University of Technology
14:55 – 15:15	Towards networked digital twins for a green steel value chain: an integration concept from the DiGreeS project Klemens Winkler – K1-MET
15:15 – 15:35	Microstructure analysis in the age of foundation models Michael Sluydts – Epotentia
15:35 – 15:45	Conclusions of day 3 & closing Inge Bellemans, Conference Chair, Ghent University Wim Van der Stricht, Secretary General, ESTEP
15:45	End of ESTEP Annual Event 2026



Poster session

Fifteen posters are presented during the poster session on Day 1 and remain on display throughout the event.

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|----------|--|-----------|---|
| 1 | Industrial validation of low-emission automotive steel sheets through mitigation of inevitable impurity effects
Sunhwan Kwon – Hyundai Steel | 9 | Evaluation of slag foaming behaviour in an electric arc furnace using numerical modelling
Hadi Barati – K1-MET |
| 2 | Environmental benefit of radiation curing systems – an industrial pre-painted steel case
Neda Hashemi – CRM Group | 10 | Status of the Horizon Europe project “Maximise H₂ enrichment in direct reduction shaft furnaces”
Thorsten Hauck – BFI |
| 3 | Low-temperature CO₂ electrolysis to mitigate hard-to-abate emissions in the steel industry in a closed carbon loop
Nina Plankensteiner – K1-MET | 11 | Advanced steels for cost-effective high-pressure hydrogen storage and transport
Tuhin Das – ArcelorMittal |
| 4 | A system-level steel plant assessment tool (PAT) to support the green steel transition
Maryam Baniasadi – SMS group | 12 | Expert-in-the-loop Bayesian optimisation across alloy discovery and process optimisation in steels
Bernd Schuscha – Materials Center Leoben |
| 5 | HEPHAESTUS: an integrated process for high-purity recycling of EAF and AOD dust
Liuba Lukina – KU Leuven | 13 | Conclusions of the CAESAR Horizon Europe project – circularity enhancements by low-quality scrap analysis and refinement
Frédéric Van Loo – CRM Group |
| 6 | Consolidating a steelmaking process modelling asset for sustainable scenario simulations and future outlooks
Gabriele Franciosi – Scuola Superiore Sant’Anna | 14 | Safe H-DRI projects – intermediate findings: from hydrogen reduction to reoxidation and the importance of reliable material characterisation
Wolfgang Reiter – K1-MET |
| 7 | Absorption, adsorption or cryogenics? Operation of CO₂ capture technologies in heavy-industry conditions
Victor Deveen – CRM Group | 15 | Advancing industrial symbiosis in the steel industry: guidelines and roadmap for by-product valorisation from the RFCS Symbio-Steel project
Agnieszka Morillon – FEhS |
| 8 | Thermochemical analysis of the Midrex direct reduction product cooler: normal vs emergency operating conditions
Hafez Amani – ETM Consulting Engineers | | |