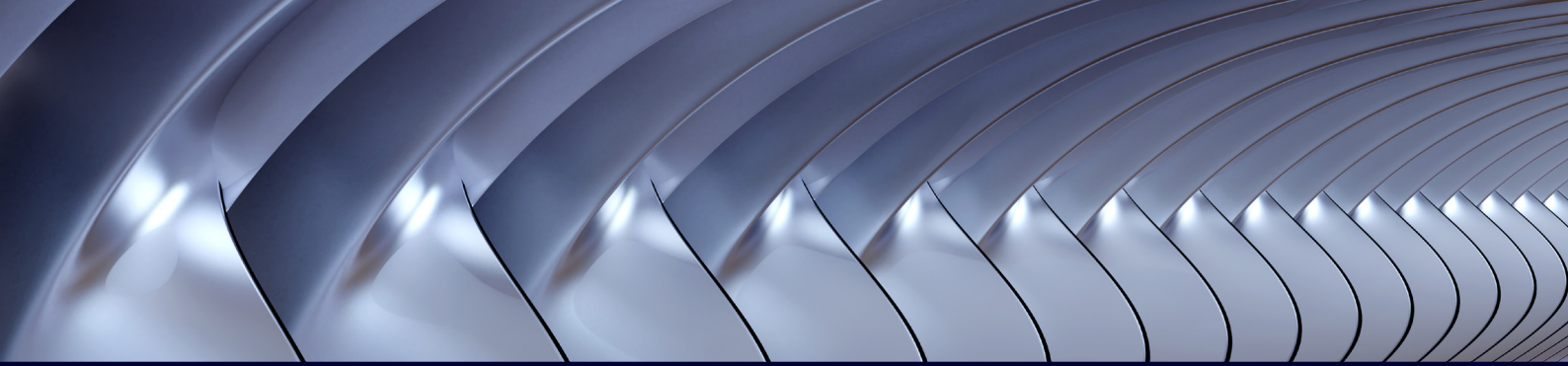


EUROSTEELMASTER2022

RINA

XIII Edition - Online course

European Advanced Training Course for the Worldwide Steel Sector

16 - 20 May 2022

With the support of

EUROFER THE EUROPEAN STEEL ASSOCIATION

industriAll EUROPEAN TRADE UNION

ESTEP

Federacciai

European Commission

AIMS

The steel industry is experiencing a rapid worldwide evolution in terms of management structures, technology and business. In this context, technological innovation and digitalization play a fundamental role.
These developments have deep implications for the steel market as well as for the production cycle.
Anyhow starting especially from last year onward, business conditions in the steel-using sectors are supportive to growth.
Consequently, steel demand is expected to continue its gradual grow.
In order to successfully manage these developments, operatives need to possess analytical and managerial skills, supported by a deep knowledge of the steel industry.
This is essential to allow the management to be actively involved in the implementation of company policies and to shape and contribute positively to on-going developments.

TARGET GROUP

The Eurosteelmaster is aimed at managers, researchers, students, trade unionists and other professionals operating in the entire value chain of the steel sector. Participants should possess a university degree or equivalent experience.

ORGANIZERS/SUPPORTERS

The course is organized by RINA with the support of EUROFER, IndustriAll, ESTEP - European Steel Technology Platform, Federacciai, European Commission. Cooperation with EU and worldwide interested parties, on the basis of enrollment of participants from the main steel and related companies, is highly welcomed.

CENTRO SVILUPPO MATERIALI INTO RINA

RINA's competence centre for sustainable materials, technologies and innovation.
RINA, since 2014, has a highly specialized competence centre for sustainable materials, technologies and innovation: RINA Consulting - Centro Sviluppo Materiali.
Formerly CSM, it was founded in 1963 by Italy's major steel manufacturers and end-users with the mission of developing steel technologies and applications. Over time RINA Consulting - Centro Sviluppo Materiali widened the range of its technological interests and skills to cover new capabilities, in order to become a reference point for steel and high tech industry worldwide.
Thanks to the very highly skilled engineers and scientists, RINA can well reply anywhere there is a demand for advanced materials knowledge, especially in steel and metal alloys processes and products.

CONTACT US

Pietro Gimondo (RINA) +39 348 4156294
Andrea Tropeoli (RINA) +39 348 7022168
Roberta Valle (RINA) +39 344 0152897

eurosteelmaster@rina.org

COURSE MANAGER

Pietro Gimondo (RINA)

COURSE DIRECTOR

Enrico Gibellieri, Delegate of the of European Economic and Social Committee

SCIENTIFIC COMMITTEE

The Scientific Committee contributes to improve the skill needs of the steel sector dealing with very demanding challenges to improve the quality of products and, in the same time, implementing the progressive de-carbonization of the production processes toward the carbon neutrality of the entire sector.

Pietro Gimondo	RINA
Luigi De Filippis	Politecnico di Bari
Veit Echterhoff	thyssenkrupp, chairman of ESTEP FG People
Dimitri Zurstrassen	University of Louvain and Sorbonne
Mikka Nieminen	Eurofer, Public Affairs
Gabriele Morgante	European Commission DG Grow
Federico Mazzolari	Acciaierie Arvedi

REGISTRATION FEE

FULL FEE
650,00 Euro (+VAT)

STUDENT FEE
250,00 Euro (+VAT)

REGISTRATION

Registration can be made online on the RINA.org website or through the registration form which can be downloaded from the website.
To register send the Application form to: **eurosteelmaster@rina.org**

SEMINAR

The participation to the seminar is free of charge.

REGISTRATION

Registration can be made online on the Rina.org website or through the registration form which can be downloaded from the website.
To register send the Application form to: **eurosteelmaster@rina.org**

EUROSTEELMASTER2022

XIII Edition

Seminar **ECOSLAG**

Eco-friendly steelmaking slag solidification with energy recovery to produce a high quality slag product for a sustainable recycling

Seminar **ControlInSteel**

Dissemination and valorisation of RFCS-results in the field of "Advanced Automation and Control Solutions in Downstream Steel Processes" and development of a strategic vision for future research

Seminar ECOSLAG

Eco-friendly steelmaking slag solidification with energy recovery to produce a high quality slag product for a sustainable recycling

Currently the energy in ferrous slag (about 1-2 GJ/tslag at tapping temperature) is wasted when slag is cooled on contact with the atmosphere or by water during the solidification process. Two European pilot plants for dry slag granulation with heat recovery are the most promising technologies for BF slag, while for steelmaking slags (BOF/EAF/LF) no commercial device for operational practice exists. The project aims at examining operational technical solutions (new resource efficient process) for waste heat recovery from steel making slag while producing high quality EAF/BOF slag that can be used as valuable product and minimize the ecological footprint.

ECO SLAG

INSTITUT FÜR BAUSTOFF FORSCHUNG FEHS

MAU Max Aicher Umwelt

sidenor

tenova

CIC energiGUNE MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

RINA

SWERIM

sftec

TenarisDalmine

16 May

Seminar ECOSLAG

09.00 - 09.10	**Welcome and introduction** Pietro Gimondo, *RINA*
	Chairman **Agnieszka Morillon, *FehS***
09.10 - 09.20	**General presentation of the ECOSLAG project (partners, structure, main objectives)** David Algermissen, *FEhS*
09.20 - 09.40	**Advanced solidification system for LF slag from secondary metallurgy** David Algermissen, *FEhS* Dirk Mudersbach, *MAU*
09.40 - 10.00	**Slag granulation process and concepts for heat recovery** Loredana Di Sante, *RINA* Marta Guzzon, *TENOVA*
10.00 - 10.20	**Slag heat recovery technology combined with an innovative drying technology to use the recovered heat** Janne Anttila, *SFTec and SWERIM*
10.20 - 10.40	**Heat utilization concepts for the recovered heat from steelworks slags** Iñigo Ortega, *CICe*
10.40 - 11.00	**Questions**

Seminar ControlInSteel

Dissemination and valorisation of RFCS-results in the field of "Advanced Automation and Control Solutions in Downstream Steel Processes" and development of a strategic vision for future research

Automation plays a key role for the production processes in steel industry. With a complex and especially interdependent chain of transformation, heating, cooling and refinement stages, each process features a diversity of individual challenges with respect to automation. Especially the Industry 4.0 efforts and the groundbreaking changes induced by digitalisation had already a strong impact on our understanding about what automation can do. Cyber-physical systems, often realised through digital twins, allowed novel ways of cross-process optimisation and the holistic treatment of the overall production chain.

ControlInSteel aims at analysing all those achievements of EU funded research projects in the steel industry conducted over the last decades, that focus on advanced automation and control. It questions, how such projects can be evaluated and how their outcomes can be effectively rolled-out in much bigger scale. Knowledge assessment, controlled vocabulary, taxonomy and ontological methods are applied by the project to systematically examine research work and its impact in real production facilities. Ecology, economics, social aspects and safety are considered the primary impact dimensions. These are interrelated with the technical solutions and the encountered problems. Technical barriers are described, together with useful attempts to overcome these problems. Objective of the project is to identify the most successful technologies and to find a projection, that helps to focus future activities and fields for research.

BFI Excellence in Applied Research

Sant'Anna Scuola Universitaria Superiore Pisa

RINA

POLITÉCNICA UNIVERSIDAD POLITÉCNICA DE MADRID

16 May

Seminar ControlInSteel

Chairman **Marcus J. Neuer**

11.00 - 11.20	**ControlInSteel - Rigorous semantic analysis of steels most influential automation projects of the last decades** Marcus J. Neuer, *BFI*
11.20 - 11.40	**Big Data Technologies in Downstream Steel Processing** Raffaella Grieco, *RINA*
11.40 - 12.00	**Optimal off-gas management in integrated steelworks** Stefano Dettori, *SSSA*
12.00 - 12.20	**Strategic Usage of Digitalization in Flat Steel Production: Trends for the Coming Future** Joaquín Ordieres, *UPM*
12.20 - 12.40	**Questions**

EUROSTEELMASTER2022

XIII Edition

European Advanced Training Course for the Worldwide Steel Sector

16 MAY

16 May

Opening session EUROSTEELMASTER 2022

15.30 - 16.00

Introduction to the Course & Participants self-presentation
Guido Chiappa, *RINA*
Pietro Gimondo, *RINA*
Enrico Gibellieri, *Director of Eurosteelmaster*

16.15 - 18.00

Historical background: highlights on the European steel industry after 1945
Enrico Gibellieri, *Director of Eurosteelmaster*
Dimitri Zurstrassen, *University of Louvain-la-Neuve, Sorbonne University*

17 MAY

17 May

Politics, Market and Trade

09.00 - 10.30

Main Market and Policy Trends in the International Steel Industry
Anthony De Carvalho, *OECD Steel Committee*

11.00 - 12.30

The EU Steel sector amid challenging COVID-19 and market conditions
Alessandro Sciamarelli, *Director Market Analysis and Economic Studies EUROFER*

Technology

14.00 - 15.15

Blast Furnace: the transition to a de-carbonized steel production
Eros Faraci, *RINA*

15.15 - 16.15

Introduction to the Direct Reduction technology and its perspective for the future
Stefano Maggiolino, *Tenova*

16.45 - 18.00

Electric Arc Furnace and its new important role for a sustainable steel production
Andrea Grasselli, *Tenova*

18 MAY

18 May

Sustainability 1

09.00 - 10.30

Future Challenges on HR in the EU Steel Industry
Antonius Johannes Schröder, *Chairman ESTEP FG5 People*

11.00 - 12.30

Circular Economy, Industrial Symbiosis and Climate Change
Filippo Cirilli, *RINA*

EU & MSs Industrial policy for the Steel Sector

14.00 - 15.00

The Commission initiatives for the Steel Sector
Gabriele Morgante, *EC DG Grow*

15.00 - 16.00

The EU Research and Innovation policy for the Steel Sector
Andrea Gentili, *EC DG Research & Innovation*

16.00 - 17.00

The Italian Steel National Plan, an example of new industrial policy for the steel sector
TBC

19 MAY

19 May

Research & Innovation

09.00 - 10.30

R&I: RFCS, Horizon Europe
Andrea Tropeoli, *RINA*

11.00 - 12.30

R&I: International Cooperation
Pietro Gimondo, *RINA*

Sustainability 2 & Steel Industry 4.0

14.00 - 15.15

The Clean Steel Partnership and the Carbon Neutral Steelmaking
Klaus Peters, *ESTEP General Secretary*

15.15 - 16.30

Hydrogen for a sustainable green steel production
Gianluca Mannucci, *RINA*

16.45 - 18.00

Industry 4.0 & Digitalisation in the Europen Steel Industry
Luca Piedimonte, *RINA*

20 MAY

20 May

Social Partners and the EU Green Deal

09.00 - 10.30

Green Deal and Just Transition in the Steel Sector
Elspeth Hathaway, *Senior Policy Advisor industriAll Europe*

11.00 - 12.30

The Green Deal and the EU Steel Sector
Axel Eggert, *General Director of EUROFER*

12.45 - 13.00

Q&A

Sustainability 3

14.30 - 16.00

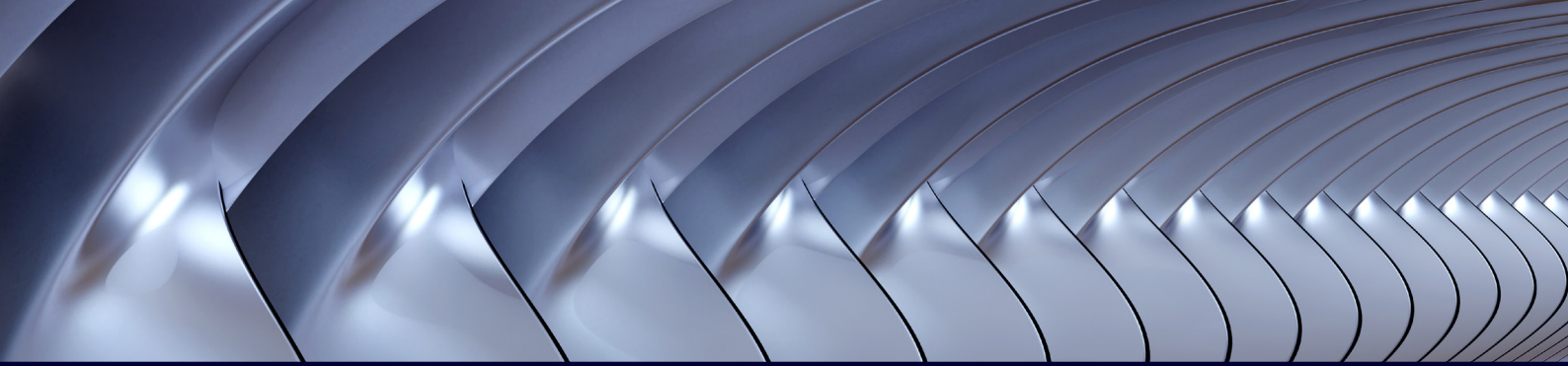
The Commission's "Green Deal" and the Steel Sector (ETS – CBAM)
Adolfo Aiello, *Deputy Director General Climate & Energy*

16.30 - 17.30

Raw Materials in the future of the European Steel Industry
Mattia Pellegrini, *Head of Unit DG ENV*

17.30 - 18.00

Conclusion
Pietro Gimondo, *Responsible of Eurosteelmaster, RINA*
Enrico Gibellieri, *Director of Eurosteelmaster*



eurosteelmaster@rina.org
rina.org