



ESSE

& DUPLX

11th European Stainless Steel Conference - Science & Market &
7th European Duplex Stainless Steel Conference & Exhibition

2022

FINAL PROGRAMME

Bardolino · Verona · Italy, 15-17 June 2022

Organized by



**ASSOCIAZIONE
ITALIANA DI
METALLURGIA**

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SCOPE

AIM is glad to announce the 11th European Stainless Steel Conference Science & Market and the 7th European Duplex Stainless Steel Conference & Exhibition, that will be jointly organized, as a single event in Bardolino (Verona) on 15th-17th June 2022.

The Conference will focus on all the aspects of development, production technology (hot and cold rolling, heat treatment, etc.), welding, corrosion and applications of stainless steels and duplex stainless steels and it addresses delegates with both academic and industrial backgrounds.

The results shall contribute to the advancement of existing and potential applications and will help to guide future development.

The event will bring together developers, designers, manufacturers and users of stainless steel from industry and academia and will compare the present and future needs to satisfy these demands now or in the future.

Short and medium term perspectives of European stainless steel flat, long products, forgings and castings will be widely discussed during the Stainless Steel Market Outlook session.

It is expected the presence of speakers representing the most important European stainless steel associations and reports coming from the big stainless steel companies.

We are looking forward to welcoming you in Italy!

PREVIOUS CONFERENCES

European STAINLESS STEEL Conference – Science & Market

- 1st - Florence, Italy (1993)
- 2nd - Düsseldorf, Germany (1996)
- 3rd - Chia Laguna, Sardinia, Italy (1999)
- 4th - Paris, France (2002)
- 5th - Sevilla, Spain (2005)
- 6th - Helsinki, Finland (2008)
- 7th - Como, Italy (2011)
- 8th - Graz, Austria (2015)
- 9th - Bergamo, Italy (2017)
- 10th - Schönbrunn - Wien, Austria (2019)

European DUPLEX STAINLESS STEEL Conference & Exhibition

- 1st - Venice, Italy (2000)
- 2nd - Grado, Italy (2007)
- 3rd - Beaune, France (2010)
- 4th - Graz, Austria (2015)
- 5th - Bergamo, Italy (2017)
- 6th - Schönbrunn - Wien, Austria (2019)

COMMITTEES

CHAIRMAN OF THE CONFERENCE

Dr. Marco Ugolotti - Acciai Speciali Terni, Italy

SCIENTIFIC & STEERING COMMITTEE

J.F. Almagro Bello - Acerinox Europa, Spain

F. Bolzoni - Politecnico di Milano, Italy

A. Caironi - Fias Casting, Italy

I. Calliari - Università di Padova, Italy

A. Ciuffini - Acciai Speciali Terni, Italy

G. Disarò - ABS, Italy

G. Gabetta - Italy

G. Gigli - Marcegaglia Specialties, Italy

Y. Kang - Donga University, Korea

P. Karjalainen - University of Oulu, Finland

S.-J. Kim - Pohang University of Science and Technology, Korea

N. Kinsman - International Molybdenum Association, United Kingdom

S. Lee - POSCO, Korea

E. Longaretti - FGS, Italy

M. Moll - Steel & Metals Market Research, Austria

L. Rioja Monllor - Sandvik Materials Technology, Sweden

M. Sacco - Arinox, Italy

C. Sommitsch - Graz University of Technology, Austria

M. Vergna - Ilta Inox, Italy

C. Veronesi - Italfond, Italy

ORGANISING COMMITTEE

Chairman of the Organising Committee: S. Fraccia - AIM, Italy

F. Bassani - AIM, Italy

G. Caironi - Fias Casting, Italy

F. Capelli - Centro Inox, Italy

M. Cusolito - Italy

S. De Donato - AIM, Italy

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C. Mapelli - AIM, Italy

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F. Mazzolari - AIM, Italy

A. Morini - Fondinox, Italy

R. Nemfardi - Eure Inox, Italy

G. Stringhini - Ilta Inox, Italy

TUESDAY, 14 JUNE 2022

16:00-18:00 REGISTRATION OF ATTENDEES

WEDNESDAY, 15 JUNE 2022

8:30 REGISTRATION OF ATTENDEES AND WELCOME COFFEE

GARDENIA ROOM

OPENING SESSION

CHAIRPERSON: CARLO MAPELLI

9:15 **Welcome address**

9:40 **{ESSC_034} Welding metallurgy of stainless stainless**

J.-O. Nilsson - JON Materials Consulting, Sweden
P. Ferro - Università di Padova, Vicenza, Italy

10:10 **{ESSC_037} Outlook for the Global Duplex Stainless Steel Markets – Supply and Demand**

M. Moll - Steel & Metals Market Research, Austria

10:40 coffee break

ESSC & DUPLEx

WEDNESDAY, 15 JUNE 2022

APPLICATIONS OF NEW STAINLESS STEEL GRADES

CHAIRPERSON: SANDRO FRACCIA

- 11:00** {ESSC_036} **Development of a new ultra high-strength martensitic stainless steel for aerospace applications**
C. Herrera, A. Bauch, M. Seifert - Deutsche Edelstahlwerke Specialty Steel GmbH & Co. KG, Germany
G. Vartanov - Advanced Materials Development Corp.
- 11:20** {ESSC_039} **SANDVIK SANICRO 35® A high alloyed grade for demanding wet corrosive environments**
B. Siza Vieira - Sandvik Materials Technology, Portugal
J. Höwing - Sandvik Materials Technology, Sweden
- 11:40** {ESSC_044} **Novel fine grain austenitic stainless steel strip for demanding applications**
N. Rostedt, J. Leinonen - NextInox, Helsinki, Finland
B. Erkartal, C. Kuwer, A. Wallberg - BWS Philipp Boecker + Wender Stahl GmbH & Co. KG, Iserlohn, Germany
- 12:00** {ESSC_014} **Development of a duplex stainless steel to substitute Type 316L**
DIGITAL Y. Oikawa, S. Tsuge, F. Gohnome - Nippon Steel Stainless Steel Corporation, Japan
- 12:20** {ESSC_042} **High temperature solution nitriding and heat treatment of martensitic stainless steels for bearing applications**
M. Villa, M.A.J. Somers, T.L. Christiansen - Technical University of Denmark, Lyngby, Denmark
- 12:40** **lunch**

ESSESS & DUPLEx

WEDNESDAY, 15 JUNE 2022

CORROSION

CHAIRPERSON: FABIO BOLZONI

14:00 {ESSC_022} **Field experience - Localized corrosion behavior of lean duplex stainless steel DX2202 in urban wastewater treatment plants**

A. Allion - Aperam Research Center, France
C. David - Aperam Stainless Europe, France
B. Emo - Veolia Water, France
N. Larché - French Corrosion Institute, France

14:20 {ESSC_004} **Effect of manganese sulfides and nitriding on the corrosion resistance of laser marked medical martensitic stainless steel**

N.G. Henriksen - Elos Medtech, Denmark
T.L. Christiansen, M.S. Jellesen, M.A.J. Somers - Technical University of Denmark, Denmark

14:40 {ESSC_005} **Effect of multi-pass cold rolling on the corrosion properties of 2101 duplex stainless steel**

L. Pezzato, C. Gennari, A.G. Settimi, I. Calliari - Università di Padova, Italy
A. Kemény - Budapest University of Technology and Economics, Hungary and MTA-BME Lendület Composite Metal Foams Research Group, Budapest, Hungary
I. Mészáros - Budapest University of Technology and Economics, Hungary

15:00 {ESSC_023} **Effect of macro- and microstructural features on the corrosion behavior of additively manufactured Alloy 625**

M. Cabrini, F. Carugo, A. Carrozza, S. Lorenzi, T. Pastore - Università di Bergamo, Italy
G. Barbieri, F. Cognini, M. Moncada - ENEA, Italy

15:20 {ESSC_021} **Effect of lack of fusion pores on stress corrosion cracking and electrochemical behaviour of selective laser melted 316L under the combined effect of energy input variation and machining induced surface residual stresses**

A. Yazdanpanah, M. Franceschi, M. Dabalà - Università di Padova, Italy

15:40 {ESSC_051} **Effect of surface finishing on corrosion of ferritic and austenitic stainless steels**

S. Beretta, F. Bolzoni, A. Brenna, M.V. Diamanti, M. Pedferri, M. Ormellese - Politecnico di Milano, Italy

16:00 coffee break

ESSE&DUPLEx

WEDNESDAY, 15 JUNE 2022

DUPLEX STAINLESS STEELS

CHAIRPERSON: CHIARA VERONESI

16:30 {ESSC_017} Toughness recovery of F55 grade steel after 475°C embrittlement

B. Rivolta, R. Gerosa, D. Panzeri - Politecnico di Milano, Italy
E. Mariani - SMT, Italy
F. Tavasci - Italy

16:50 {ESSC_043} Low-temperature gaseous nitriding of 2205 duplex stainless steel: effect of temperature and nitriding potential

B. Wang, T.L. Christiansen, M.A.J. Somers - Technical University of Denmark, Lyngby Denmark

17:10 {ESSC_024} Addition of cobalt in duplex steel fusion zone welded with pulsed Nd:YAG laser

B.B. Seloto, V.A. Ventrella - UNESP São Paulo State University, Brazil
E.J.C. Junior - Federal Institute of Education, Science and Technology of Sao Paulo, Brazil
A.G. Settimi, C. Gennari, A. Zambon, I. Calliari - Università di Padova, Italy

17:30 {ESSC_032} Heat input influence on 2205 duplex stainless steel joints using robotic GMAW welding process

B.R. Rodriguez Vargas - Corporación Mexicana de Investigación en Materiales S.A. de C.V., México
A.F. Miranda Pérez - Universidad Popular Autónoma del Estado de Puebla, Mexico
I. Calliari, L. Pezzato, C. Gennari - Università di Padova, Italy

17:50 {ESSC_006} Hot Isostatic Pressing with integrated rapid cooling to influence the mechanical properties and corrosion resistance of 2205 Duplex stainless steel

A. Hörtnagl - Swiss Safety Center AG, Switzerland
P. Gümpel - Konstanz University of Applied Sciences Konstanz, Germany
L. Boskovic - Konstanz University of Applied Sciences Konstanz, Germany and Institute for Materials System Technology Thurgau, Switzerland
M. Sorg - Institute for Materials System Technology Thurgau, Switzerland
M. Hamentgen - Saar Pulvermetall GmbH, Germany

18:10 End of the first day

THURSDAY, 16 JUNE 2022

MICROSTRUCTURE AND CHARACTERIZATION I

CHAIRPERSON: JAN-OLOF NILSSON

- 9:00** {ESSC_001} **Selective laser melting manufacturing of stainless steels: heat treatment effect on microstructure and hardness in maraging steels**
G. Stornelli - Università di Roma Tor Vergata, Italy
D. Gaggia - Green Tales, Terni, Italy
M. Gaggiotti, M. Rallini, A. Di Schino - Università degli Studi di Perugia, Italy
- 9:20** {ESSC_009} **Sampling crystallographic orientations for predicting the anisotropy of cold-rolled and annealed austenitic stainless steel**
T. Manninen, S. Kodukula, V-V. Visuri - Outokumpu Stainless Oy, Finland
- 9:40** {ESSC_015} **Cold rolling effect on lightweight austenitic stainless-steel**
G. Villa, C. Mapelli, L. Mereghetti, D. Mombelli, S. Barella, A. Gruttadauria - Politecnico di Milano, Italy
- 10:00** {ESSC_028} **EBSD: A fast and accurate reference method for ferrite measurement of duplex stainless steels**
J.Y. Jonsson - Outokumpu Stainless AB, Sweden
- 10:20** {ESSC_040} **In-situ real time observation of microstructure evolution in duplex stainless steels**
W. Mu, N. Holländer Pettersson - KTH Royal Institute of Technology, Stockholm, Sweden
S. Sukenaga, H. Shibata - IMRAM, Tohoku University, Japan
- 10:40** {ESSC_026} **Calculation of Lankford coefficients of austenitic and ferritic stainless steels using mean grain orientations**
S. Kodukula, T. Manninen - Outokumpu Stainless Oy, Finland
D. Porter - University of Oulu, Oulu, Finland
- 11:00** **coffee break**

ESSESS & DUPLEx

THURSDAY, 16 JUNE 2022

MICROSTRUCTURE AND CHARACTERIZATION II

CHAIRPERSON: ANDREA DI SCHINO

11:30 {ESSC_041} **Microstructure optimization in additively manufactured stainless steel; new routes and opportunities**

T.L. Christiansen, E.H. Valente, V.K. Nadimpalli, M.A.J. Somers - Technical University of Denmark, Lyngby, Denmark

11:50 {ESSC_011} **Austempering of Martensitic Stainless Steels - a possible heat treatment to improve material properties?**

M. Sorg, P. Gümpel - Institute of Materials System Technology Thurgau, Tägerwilen, Switzerland

J. Strittmatter, L. Bošković - Institute of Materials System Technology Thurgau, Tägerwilen, Switzerland and Konstanz University of Applied Sciences, Konstanz, Germany

12:10 {ESSC_008} **Improving the tribological properties of stainless steels by low-temperature surface hardening**

A. Bauer - Bodycote, Germany

P. Gümpel - HTWG Constance, Germany

12:30 {ESSC_050} **Microstructural evolution and recrystallization annealing evaluation of EN 1.4105 ferritic stainless steels**

S. Bazri, C. Mapelli, S. Barella, A. Gruttadauria, D. Mombelli - Politecnico di Milano, Italy
R. Nemfardi, G. Zucchelli - Eure Inox, Italy

12:50 **lunch**



THURSDAY, 16 JUNE 2022

ENVIRONMENTAL SUSTAINABILITY

CHAIRPERSON: LAURA RIOJA MONLLOR

- 14:00** {ESSC_030} **RHIMagnesita a greener and cleaner continuously cast product for the future**
M. Freiler, [A. Dick](#) - RHI Magnesita, Wien, Austria
- 14:20** {ESSC_003} **Laser OES - How an efficient melt shop monitoring tool tackles increasing energy and raw material costs**
[A. Schlemminger](#) - QuantoLux Innovation GmbH, Germany
- 14:40** {ESSC_013} **Technologies paving the way to carbon neutral stainless steel production**
[J. von Schéele](#) - Linde Technology, Linde plc, Germany
H. Alshawarghi - Linde Technology, Linde plc, USA
D. Razzari - Linde Gas Italia, Italy
- 15:00** {ESSC_029} **Sustainability in the refractory business – RHI Magnesita as a strategic partner for the Stainless steel industry**
[R. McVinnie](#), J. Wucher, C. Ebner, R. Magrofuoco - RHI Magnesita, Wien, Austria
- 15:20** {ESSC_031} **Disposal is not the solution. How to turn 'old' into 'like new'. Sustainability and cost saving in electrode management**
[U. Paris](#) – Kirchner-STD GmbH, Germany
- 15:40** {ESSC_053} **Scrap and metallic by products - Key elements for greener steel**
[F. Costa](#) - Cronimet Envirotec GmbH, Germany
- 16:00** **coffee break**



THURSDAY, 16 JUNE 2022

FABRICATION, FORMING AND WELDING

CHAIRPERSON: PAOLO FERRO

- 16:30** {ESSC_048} **Simulation of electrically assisted forming processes**
P. Lasne, J. Alves, S. Marie, N. El Kosseifi - Transvalor S.A., Sophia Antipolis, France
- 16:50** {ESSC_007} **Mathematical modelling of the cold rolling curves and the cold work hardening rate of stainless steel**
J. Contreras - Acerinox Europa, S.A.U., Los Barrios, Spain and Innanomat Group, Universidad de Cádiz, Algeciras, Spain
R. Sánchez, J.F. Almagro - Acerinox Europa, S.A.U., Los Barrios, Spain
D.L. Sales - Innanomat Group, Universidad de Cádiz, Algeciras, Spain
- 17:10** {ESSC_046} **Effect of local deformation during TIG welding of austenitic stainless steel on the microstructure and hardness**
B. Szalowski, P. Wang, R. Vallant, C. Poletti, N. Enzinger - IMAT - Graz University of Technology, Austria
- 17:30** {ESSC_047} **Thermodynamic property of hydrogen in molten stainless steel**
J.Y. Kim, H.R. Lee, I.H. Kwon, Y. Kang - Dong-A University, Korea
- 17:50** {ESSC_012} **Pulse modulated TIG welding to influence corrosion resistance on UNS S32205**
J. Wichmann, S. Ulrich - Günter-Köhler-Institut für Fügetechnik und Werkstoffprüfung, Jena, Germany
- 18:10** {ESSC_025} **Improving the properties of martensitic PM steels for knife applications through different PM strategies and adapted heat treatments**
J. Strittmatter, L. Bošković, P. Gumpel - Konstanz University of Applied Sciences (HTWG), Konstanz, Germany and Institute for Materials System Technology Thurgau (WITg), Tägerwilen, Switzerland
M. Sorg - Institute for Materials System Technology Thurgau (WITg), Tägerwilen, Switzerland
M. Perthold, D. Koch - Konstanz University of Applied Sciences (HTWG), Konstanz, Germany
- 19:30** **Social event**

FRIDAY, 17 JUNE 2022

AUSTENITIC AND FERRITIC STAINLESS STEELS I

CHAIRPERSON: LUCA PEZZATO

- 9:00** {ESSC_033} **The Effect of air carbon arc gouging on the mechanical and electrochemical properties of AISI 316L submerged arc welds**
G.R. Campesan, A.P. de Bribean Guerra, G. Yuuki Koga, C. Bolfarini - Federal University of São Carlos, Brazil
- 9:20** {ESSC_035} **Hydrogen embrittlement of austenitic stainless steels**
C. Herrera, P. Niederhofer, M. Seifert - Deutsche Edelstahlwerke Specialty Steel GmbH & Co. KG, Germany
- 9:40** {ESSC_045} **Enhancement of ductility of work hardened strips in AISI 301 austenitic stainless steel**
D. Montepagano, I. Citi - Arinox, Italy
R. Guerra, P.E. Di Nunzio, F. Ruffini - Rina Consulting Centro Sviluppo Materiali, Italy
- 10:00** {ESSC_010} **Improved algorithm for steel grade classification: a statistical approach based on PCA clustering**
P. Brunier, S. Rollet - Cogne Acciai Speciali, Aosta, Italy
- 10:20** {ESSC_038} **Influence of tundish fluxes on the cleanliness of Si-killed austenitic stainless steels for high-end products**
T. Kim, J. Cho, J. Park - Hanyang University, Ansan, Korea
S. Lee - POSCO, Pohang, Korea
- 10:40** **coffee break**

ESSESS & DUPLEx

FRIDAY, 17 JUNE 2022

AUSTENITIC AND FERRITIC STAINLESS STEELS II

CHAIRPERSON: ANDREA MAZZOCCHI

- 11:00** {ESSC_020} **The effect of hot rolling and coiling temperature on microstructure and texture of ferritic stainless steel**
A. Kisko, A. Kaijalainen - University of Oulu, Finland
L. Kurtti, S. Kodukula, T. Ylimäinen - Outokumpu Stainless Oy, Finland
- 11:20** {ESSC_018} **Complex transformations of ferrite during thermal aging of stainless steels for power generation applications**
O. Smith, S. Spindler, M. Spindler, J. Knight, S. Hogg, R. Higginson - Loughborough University and EDF Energy, United Kingdom
- 11:40** **STAINLESS STEEL MARKET OUTLOOK BY SIDERWEB**
Stefano Ferrari
- 13:00** **Closing remarks and end of the Conference**

GENERAL INFORMATION

CONFERENCE VENUE

The Conference will be held at the Hotel Caesius Thermae & SPA Resort in Bardolino (Verona), via Peschiera 3 (<https://www.hotelcaesiussterme.com>)

LANGUAGE

The official language of the Conference will be English.

PUBBLICATON OF PROCEEDINGS

The full text of the accepted papers will be published in the electronic proceedings and issued to attendees on arrival at the Conference. Certain papers may be considered for publication in the AIM journal La Metallurgia Italiana – International Journal of the Italian Association for Metallurgy, which is covered in the Science Citation indexed by Clarivate Analytics (formerly Thomson Reuters), and in Scopus by Elsevier B.V

REGISTRATION INFORMATION

REGISTRATION FEES

ALL ABOVE REGISTRATION FEES ARE REVENUE STAMP INCLUDED

REGISTRATION FEES	AIM MEMBER	NON MEMBER
AFTER MAY 9, 2022		
DELEGATE (NON-PRESENTER)	€ 800,00	€ 910,00
SPEAKER (PRESENTER) (by April 28, 2022)	€ 560,00	€ 670,00
SESSION CHAIRPERSON; COMMITTEE MEMBER	€ 560,00	€ 670,00
EXHIBITOR / SPONSOR	€ 700,00	€ 810,00

STUDENT REGISTRATION FEE	€ 450,00* (VAT INCLUDED)	Students will have to provide valid proof of student status
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* EITHER DELEGATE OR SPEAKER - Registration for speaker is due **by April 28, 2022**

Additional ticket for Social event for accompanying persons: € 110 (22% VAT included)
(includes only the social event on June 16)

CONFERENCE REGISTRATION FEES INCLUDE

- Admittance to technical sessions and to the exhibition
- Conference electronic proceedings
- Social event on June 16
- Coffee breaks and Lunches

For non-members (students excluded) the fee includes AIM Membership for the second half of 2022 and for the year 2023.

PAYMENT AND REMITTANCE

- by bank transfer, to the order of Associazione Italiana di Metallurgia - AIM at "CREDITO EMILIANO SpA", Branch no. 052 Milano Sede – Via Andegari, 14 - 20121 Milano - Italy, account no. 010000480455 cod. ABI 03032– CAB 01600 - cin M
IBAN: IT33M0303201600010000480455, swift code BACRIT22MIL
The transfer order must specify the name of the participant and the reference "ESSC&DUPLEX".
A copy of the transfer order must be sent to AIM, together with the Registration Form.
- by credit card online (<https://www.aimnet.it/essc.htm>).

SPEAKERS CANCELLATION AND REFUND POLICY

A refund, less 20% deduction for administrative costs, will be issued for written cancellations received **before April 28, 2022**. For speakers who notify their cancellation **after April 28, 2022** or will not attend the Conference, a charge of 100% of the Conference fee will be withheld. Their papers will be published anyway in the proceedings and a copy of the proceedings will be sent after the event.

REGISTRATION

If you plan to attend, please register online on the Conference website (<https://www.aimnet.it/essc.htm>) or fill in the enclosed Registration Form and send it to the Organising Secretariat (aim@aimnet.it).
Please use a separate form for each participant.

CANCELLATION AND REFUND POLICY

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COVID-19 Health and Safety Information

AIM and Siderweb are working closely with the venue to ensure a safe and successful Conference. Closer to the event, we will provide registered attendees with the health and safety guidelines that must be strictly observed.

INSURANCE

The Organising Secretariat cannot assume any responsibility for personal accident, loss or damage to the private property of participants and accompanying persons, which may either occur during or arise from the Conference. Participants should therefore take whatever steps they consider necessary as regards insurance.

VISA APPLICATION FORM

If you need an official invitation please send your request to the Organising Secretariat best before May 13, 2022 complete with: • Family and First name • Mr/Mrs • birth date • passport number • arrival and departure dates • nationality • fax number of the Italian Embassy for your Country.

SOCIAL PROGRAMME

In order to give delegates the opportunity to meet informally and enjoy Garda Lake's atmosphere, AIM organized a Social event in the evening of June 16, 2022 at La Loggia e la Barchessa Rambaldi, in Piazza Principe Amedeo 7, Bardolino.

A welcome aperitif with the starters will be served from 19.30 on the ground floor in Barchessa Rambaldi, followed by a two courses seated dinner on the first floor in Principe Amedeo room.

Since the restaurant is in Bardolino, no transfer service will be provided.

Lake Garda and Bardolino

Along the shores of Lake Garda the landscape is soft, cadenced by charming villages that maintained their typical characteristics and personality, and dominated by vines and olive groves. Bardolino land and the adjacent areas offer lots of attractions that vary from historical to cultural to natural attractions, all to be visited, while the beaches and the theme parks of Gardaland, Movieland and all others promise pure fun. You'll have the chance to golfing, biking and mountain biking, walking, trekking, windsurfing, sailing, horseback riding, hang gliding, and playing tennis. Lake Garda influences also the local cuisine and the wine and food traditions. The most typical and characteristic element is the extra-virgin olive oil, famous for its light and delicate taste which combines perfectly with lake fish and with meats and polenta from the farming traditions. Excellent combination for every dish is the high quality wine produced by Garda wine-growers: Bardolino red and Lugana white. There are different itineraries that run across the wine producing areas, leading visitors in a journey at the discovery of the flavours and fragrances of the land. The vicinity with Verona, which can be reached in less than 30 minutes, will allow you to be immersed in an atmosphere where art and history merge in a continuous and fascinating relationship: the Arena, Piazza delle Erbe, Castelvecchio and the Basilica of San Zeno. Other historical cities near Lake Garda with world unique monuments are Mantua, Vicenza, Padua and Venice.

MOBILE/CELL PHONE

Mobiles must be kept turned off or in silent mode in all Conference rooms.

CONTACT INFORMATION



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<http://www.aimnet.it/essc.htm>

You can contact the organisers directly:

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Please complete and return this form by **June 9, 2022** to:



ASSOCIAZIONE ITALIANA DI METALLURGIA • via F. Turati 8 - 20121 Milano • Italy
phone: +39 0276021132 or +39 0276397770 • e-mail: aim@aimnet.it - website: www.aimnet.it

CONFERENCE REGISTRATION FEES INCLUDE: • ADMITTANCE TO TECHNICAL SESSIONS AND TO THE EXHIBITION • SOCIAL EVENT ON JUNE 16 •
CONFERENCE ELECTRONIC PROCEEDINGS • COFFEE BREAKS • LUNCHES

REGISTRATION FEES

ALL ABOVE REGISTRATION FEES ARE REVENUE STAMP INCLUDED

EARLY REGISTRATION FEES	AIM MEMBER	NON MEMBER
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Additional ticket for Social event for accompanying persons: € 110 (22% VAT included) (includes only the social event on June 16)

TO REGISTER PLEASE FILL-IN THE FOLLOWING REGISTRATION FORM IN ALL ITS PARTS.

(IT IS ALSO POSSIBLE TO REGISTER ONLINE - <https://www.aimnet.it/essc.htm>)

PERSONAL DATA

Please use **BLOCK** letters throughout form (photocopies can be used)

FAMILY NAME _____

FIRST NAME(S) _____

E-MAIL FOR CORRESPONDENCE _____

TEL. _____

INVOICING DATA

COMPANY NAME _____

COMPANY FISCAL ADDRESS _____

ZIP CODE _____ TOWN _____ COUNTRY _____

E-MAIL FOR INVOICING AND BILLING INFORMATION _____

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ONLY FOR ITALIAN SOCIETIES

Indirizzo posta elettronica certificate (PEC) _____

Codice destinatario _____

I WILL ATTEND:

AS: DELEGATE (NON-PRESENTER) • SESSION CHAIRPERSON • EXHIBITOR/SPONSOR • COMMITTEE MEMBER • STUDENT
 SPEAKER (PRESENTER) PAPER NR. ESSC _____ AND ESSC _____ (EACH REGISTRATION COVERS A MAXIMUM OF TWO PAPERS)

AIM MEMBER **NON MEMBER** € _____

n. ADDITIONAL TICKET(S) FOR SOCIALE EVENT (JUNE 16) FOR ACCOMPANYING PERSON € _____

TOTAL AMOUNT BEING PAID: € _____

PAYMENT AND REMITTANCE

- by bank transfer, to the order of Associazione Italiana di Metallurgia - AIM at "CREDITO EMILIANO SpA", Branch no. 052 Milano Sede - Via Andegari, 14 - 20121 Milano - Italy, account no. 010000480455- cod. ABI 03032- CAB 01600 - cin M IBAN: IT33M0303201600010000480455, swift code BACRIT22MIL. The transfer order must specify the name of the participant and the reference "**ESSC&DUPLEX**". A copy of the transfer order must be sent to AIM, together with the Registration Form.
- by credit card online (<http://www.aimnet.it/essc.htm>)
- against invoice

PRIVACY

I, the undersigned, have read the Privacy notice at the following page and I accept that AIM processes my personal data in accordance with articles 13-14 of EU Regulation no. 679/2016 (GDPR). Furthermore, I authorize AIM:

- to send any invitations to events of interest from other worldwide metallurgical associations: yes no
- to insert my name in the list of event participants: yes no

Date _____

Signature _____



AIM, Italian Association of Metallurgy (VAT number 00825780158), in person of the legal representative Eng. Federico Mazzolari (hereinafter the “Data Controller”), current in Milan, via F. Turati n. 8, informs you that, pursuant to art. 13 of the EU Regulation n. 2016/679 (hereinafter “GDPR”), your data will be processed in the manner and for the following purposes.

1. Personal Data.

The Data Controller processes personal identifying data (i.e.: name, surname, company name, address, telephone number, e-mail address, username, bank and payment details, hereinafter referred to as “Personal Data”) that you have communicated on the occasion of the paper registration or through the website www.metallurgia-italiana.net.

2. Purpose of the treatment.

Your data will be processed by the Data Controller for the following possible purposes:

- transmission of periodic communications by e-mail;
- invitation to activities and/or events promoted by the Data Controller;
- in case of registration on the website www.metallurgia-italiana.net, registration on the site and creation of a user (username and password);
- in case of registration for events, inclusion in the list of participants at the event, receipt of invitations for relevant events from other worldwide metallurgical associations and invoicing of the fee for the participation at the event, if due;
- in case of association with AIM, sending of the membership card;
- in case of purchase of books or other material, delivery of the same and invoicing.

3. Processing methods.

The processing of your personal data is carried out by means of the operations indicated in art. 4 n. 2) GDPR and more precisely: collection, registration, organization, storage, consultation, processing, modification, selection, extraction, comparison, use, interconnection, blocking, communication, cancellation and destruction of data.

Your personal data are subjected to both paper and electronic processing. The Data Controller will process personal data for the time necessary to fulfill the aforementioned purposes and in any case for no more than 10 years from the termination of the relationship.

4. Access to the Data.

Your data may be made accessible, for the purposes referred to in art. 2, to the employees and collaborators of the Data Controller, in their capacity as persons in charge and/or internal managers of the processing and/or system administrators.

5. Data communication and data transfer abroad.

The Data Controller may communicate your name, nationality and e-mail address to foreign associations, exclusively in the case of participation in itinerant congress editions.

The aforementioned associations, operating in countries located in or outside the EU, may not provide adequate data protection safeguards (a complete list of countries providing adequate data protection safeguards is available on the EU Guarantor’s website for the Protection of Personal Data). In such cases, the transfer of your data will be carried out in compliance with the applicable international rules and agreements, as well as with the adoption of appropriate measures (e.g. standard contractual clauses).

Personal data are stored on servers located in Milan (IT), within the European Union. In any case, it is understood that the Data Controller, if necessary, will have the right to move the servers even outside the EU. In this case, the Data Controller hereby ensures that the transfer of non-EU data will take place in accordance with the applicable legal provisions, subject to the stipulation of the standard contractual clauses provided by the European Commission.

6. Rights of the Data Subject.

In your capacity as a Data Subject, you have the rights set forth in art. 15 GDPR and, precisely, the rights of:

- i. to obtain confirmation of the existence or not of personal data concerning you, even if not yet registered, and their communication in an intelligible form;
- ii. to obtain the indication: a) of the origin of personal data; b) of the purposes and methods of the processing; c) of the logic applied in case of treatment carried out with the aid of electronic instruments; d) of the identification details of the Data Controller, the data processors and the designated representative pursuant to art. 3, paragraph 1, GDPR; e) the subjects or categories of subjects to whom the personal data may be communicated or who may become aware of it in their capacity as designated representative in the territory of the State, managers or agents;
- iii. to obtain: a) updating, rectification or, when interested, integration of data; b) the cancellation, transformation into anonymous form or blocking of data processed unlawfully, including data whose retention is unnecessary for the purposes for which the data were collected or subsequently processed; c) the attestation that the operations referred to in letters a) and b) have been brought to the attention, also as regards their content, of those to whom the data have been communicated or disseminated, except in the case where such fulfillment is it proves impossible or involves a use of means manifestly disproportionate to the protected right;
- iv. to object, in whole or in part, for legitimate reasons to the processing of personal data concerning you, even if pertinent to the purpose of the collection.

Where applicable, it also has the rights referred to in articles 16-21 GDPR (right of rectification, right to be forgotten, right of limitation of treatment, right to data portability, right of opposition), as well as the right of complaint to the Guarantor Authority.

7. How to exercise rights.

You can exercise your rights at any time by sending: a registered letter to AIM, Italian Association for Metallurgy, via Turati n. 8, Milan or an e-mail to info@aimnet.it.

8. Data Controller and person in charge.

The Data Controller is AIM, Italian Association of Metallurgy, via F. Turati n. 8, Milan. The person in charge of data processing is Ms. Federica Bassani, via F. Turati n. 8, Milan - e-mail info@aimnet.it.

The updated list of data processors is kept at the Data Controller’s headquarters.



TIMETABLE

WEDNESDAY, 15 JUNE 2022

8:30 REGISTRATION ATTENDEES AND WELCOME COFFEE

GARDENIA ROOM

9.15-10.40

OPENING SESSION

Welcome address

✚ **Welding metallurgy of stainless stainless**

J.-O. Nilsson - JON Materials Consulting, Arvika, Sweden

✚ **Outlook for the Global Duplex Stainless Steel Markets – Supply and Demand**

M. Moll - Steel & Metals Market Research, Austria

10:40 coffee break

11.00-12.40

APPLICATIONS OF NEW STAINLESS STEEL GRADES

12:40 lunch

14.00-16.00

CORROSION

16:00 coffee break

16.30-18.10

DUPLEX STAINLESS STEELS

18:10 end of the first day

THURSDAY, 16 JUNE 2022

9.00-11.00

MICROSTRUCTURE AND CHARACTERIZATION I

11:00 coffee break

11.30-12.50

MICROSTRUCTURE AND CHARACTERIZATION II

12:50 lunch

14.00-16.00

ENVIRONMENTAL SUSTAINABILITY

16:00 coffee break

16.30-18.30

FABRICATION, FORMING AND WELDING

18:30 end of the first day

19:30

SOCIAL EVENT

FRIDAY, 17 JUNE 2022

9.00-10.40

AUSTENITIC AND FERRITIC STAINLESS STEELS I

10:40 coffee break

11.00-11.40

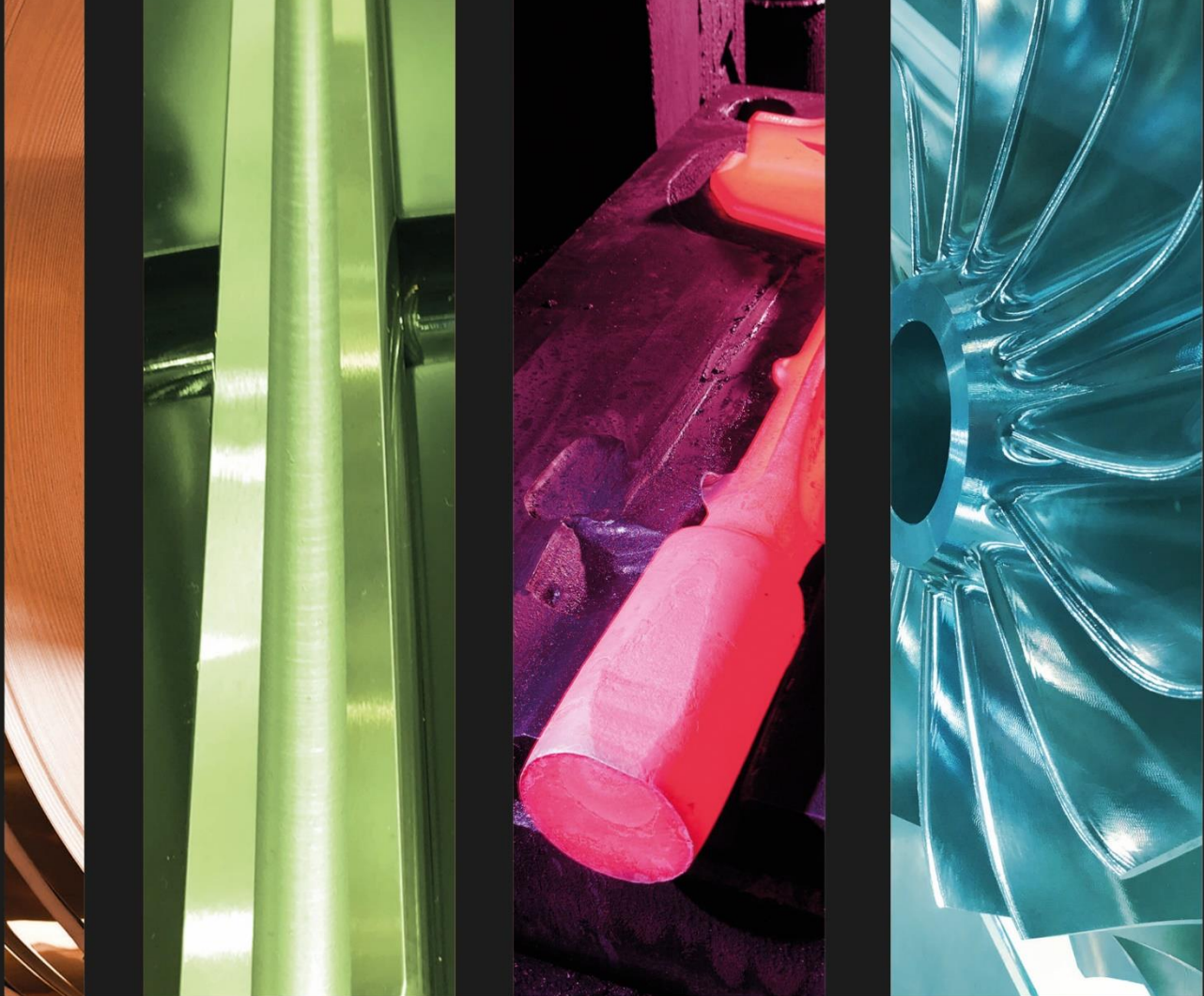
AUSTENITIC AND FERRITIC STAINLESS STEELS II

11.40-13.00

STAINLESS STEEL MARKET OUTLOOK BY SIDERWEB

13:00 Closing remarks and end of the Conference

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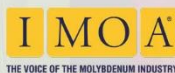
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