More about ESTAD

Following the success of the METEC InSteelCon 2007 and 2011, Düsseldorf will again be the location in 2015 of the successor event ESTAD 2015 as accompanying conference of METEC 2015. ESTAD takes place for the second time after Paris 2014.

Düsseldorf, the capital of North Rhine-Westphalia, is also home of the Steel Institute VDEh. Düsseldorf has strong connections to the coke, iron and steel industries thanks to the adjacent Ruhr region, the traditional home to coke, iron and steel making facilities. Taking all of this into account, METEC and ESTAD 2015 is guaranteed to be an impressive gathering of experts.

Sponsors:
We would be pleased to offer you a sponsorship package tailored to suit your own needs. This would enable you to promote your products and to ideally position yourselves as a solution provider for your branch. You can sponsor, for example, the conference packs, the conference proceedings CD, lunch, coffee breaks and much more. As part of the sponsorship package, we are pleased to offer you advice on your promotional presence at ESTAD 2015. Please contact TEMA Technologie Marketing AG for further details.

More information is available at www.metec-estad2015.com

Summarized Preliminary Timetable

June 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tr>
<td>Monday</td>
<td>Early Congress registration</td>
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<tr>
<td>Tuesday</td>
<td>Opening/plenary session</td>
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<tr>
<td>Wednesday</td>
<td>Technical sessions</td>
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<tr>
<td>Thursday</td>
<td>Technical sessions</td>
</tr>
<tr>
<td>Friday</td>
<td>Plant visits</td>
</tr>
</tbody>
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www.metec-estad2015.com
The 9th International Metallurgy Trade Fair (METEC) will take place from 15 to 19 June 2015 in Düsseldorf, Germany. The accompanying conference ESTAD will start with a get-together on 15 June 2015 and end with plant visits on 19 June 2015.

With the four trade fairs
- METEC 15. 9th International Metallurgical Technology Trade Fair with Congresses
- GIFA 15. 13th International Foundry Trade Fair with WFO Technical Forum
- THERMPROCESS 15. 11th International Trade Fair and Symposium for Thermo Process Technology
- NEWCAST 15. 4th International Castings Trade Fair with NEWCAST FORUM

Düsseldorf has established itself as the meeting place for metallurgy. Taking place every four years, more than 70,000 visitors from over 80 countries attended this leading fair for steelmaking metallurgy, foundries, casting and thermal processing technology in 2011.

**Facts and figures:**

METEC visitors are interested in equipment and components for steelworks and mills, iron and non-ferrous metal production, measuring, operating and control technology and in data communication. METEC visitors work in the areas of iron, steel and non-ferrous metal production as well as in services, trade and mechanical engineering. 97% of attendees were very positive about their visit to METEC 2011.

**Chairman of 2nd ESTAD 2015**

Dr.-Ing. Herbert Eichelkraut  
Member of the Executive Board, ThyssenKrupp Steel Europe AG, Duisburg, Germany

A Scientific Program Committee of international experts in all fields of iron and steelmaking processes, steel materials and steel application will review the proposed papers. The list of the experts is available on the homepage.

Only those who continue to develop their businesses remain competitive. The prerequisite for this development means being constantly informed about the latest and most sophisticated technological advances, exchanging ideas and initiating and expanding networks with clients, partners and suppliers. The 2nd European Steel Technology and Application Days (ESTAD) 2015 run in parallel with the METEC Trade Fair. The Steel Institute VDEh and its partners offer visitors the perfect opportunity to reach their objectives. At this event you will acquire the latest information on new ideas and developments as well as on the state-of-the-art in metallurgical process technologies for iron and steel production, steel materials and steel application:

**IRONMAKING**
- Raw materials including beneficiation
- Cokemaking
- Sintering and pelletising
- Blast furnace ironmaking
- Direct reduction and smelting reduction

**STEELMAKING**
- Oxygen steelmaking
- Electric steelmaking
- Continuous casting, near-net shape casting and ingot casting

**ROLLING AND FORGING**
- Rolling of long and flat products
- Forging

**STEEL MATERIALS AND THEIR APPLICATION**

**SURFACE TECHNOLOGIES**
- Steel materials and their application
- Surface technologies

**ENVIRONMENTAL AND ENERGY ASPECTS**
- Environmental and energy aspects in iron and steelmaking
- Efficiency increase and CO₂ mitigation in iron and steelmaking

Please find more details concerning the topics on the following pages

**METEC ESTAD 2015 - Detailed Topics**

**RAW MATERIALS INCLUDING BENEFICIATION**
- Iron ore mining
- Iron ore beneficiation
- Iron ore transportation
- Coal mining
- Coal beneficiation and washing
- Coal transportation
- Steel recycling and scrap management
- Refractory raw materials
- Refractories recycling
- Additives raw materials (limestone, bunt lime, dolomite, bauxite etc.
- Raw materials quality management

**COKEMAKING**
- Fundamentals in cokemaking
- Coal blending practice
- Latest developments in slot oven plant technology and design
- Latest developments in heat recovery oven plant technology and design
- New cokemaking technologies
- Coke oven repair techniques and life prolongation
- Measures for improving coke quality
- Measurement of wall displacement and pressure of coke oven chamber
- Coke plant operation, instrumentation and automation
- Improving productivity and safety
- Stamp charging technology
- Coke oven gas cleaning and utilization of by-products
- Graphite formation at coke ovens
- Coke quenching technologies
- Coke oven refractories

**SINTERING AND PELLETISING**
- Fundamentals in sintering
- Sinter plant construction and layout
- Sinter process optimization
- Sinter plant operation and automation
- Use of concentrates in sinter mix
- Sinter quality
- Sinter cooling
**BLAST FURNACE IRONMAKING**
- Fundamentals in blast furnace ironmaking
- Blast furnace construction and design
- Blast furnace process optimization and automation
- Modern process control techniques
- Blast furnace relining
- Blast furnace campaign life extension
- Blast furnace refractories and cooling
- Blast furnace charging
- Blast furnace productivity
- Blast furnace hearth management
- Coke quality requirements and reduced coke rates
- Injection of auxiliary reductants (coal, oil, gas, plastics) and oxygen
- Hot blast stoves
- New blast furnaces
- Blast furnace liquid management and casting practice
- Gas cleaning devices
- Top gas expansion and recovery turbines
- Oxygen and top gas recycling blast furnace

**DIRECT REDUCTION AND SMELTING REDUCTION**
- Fundamentals in direct reduction and smelting reduction
- Production and use of DRI and HBI
- Gas-based DRI processes and new developments
- Coal-based DRI processes and new developments
- Transport and charge of hot DRI to electric arc furnaces
- Shipment of DRI and HBI
- Current status of Corex and Finex processes
- Status of HIsarna process
- Other smelting reduction processes

**OXYGEN STEELMAKING**
- Hot metal pretreatment
- Current status and new developments in converter technology
- Fundamentals of oxygen steelmaking process
- Converter charge materials and their preparation
- Ladle metallurgy
- Converter refractory linings and durability
- Plant operation experiences
- Automation and on-line process analyses
- By products, recycling and environment
- Modelling and simulation

**ELECTRIC STEELMAKING**
- Equipment
- Current status and new developments in EAF technology
- Fundamentals in electric steelmaking
- Process control, automation and modelling
- Metallurgy of electric steelmaking
- Ladle metallurgy
- Electrodes
- Injection of coal
- Refractories and durability
- Use of DRI and HBI in electric furnaces
- Energy efficiency and energy recovery
- Waste gas treatment

**CONTINUOUS CASTING, NEAR-NET SHAPE CASTING AND INGOT CASTING**
- Formation of non-metallic compounds in the solidification process
- Metallurgy and flow control in the tundish
- Refractory materials and tundish lining
- Heats scheduling and management
- Continuous casting technology
- Mould performance and initial solidification
- Mould lubrication
- Flow control in the tundish, mold and strand
- Metallurgy of ingots for forging processes
- Control of solidification structures and management of defects
- Special technologies for high performance steels
- Steel yield and productivity improvements
- Application and control of electromagnetic fields
- Metallurgical and operational results
- Quality control and detection of defects
- Solidification, segregation and high temperature behavior

**ROLLING OF LONG AND FLAT PRODUCTS**
- Hot sheet rolling
- Cold sheet rolling & annealing
- Plate rolling
- Rod, bar and tube rolling
- New processes
- New products, processing of new steels
- Reheating furnace – Oxidation and descaling
- Thermo mechanical treatment
- Lubrication and roll wear
- Design and management of mill assets
- Roll technology
- Automation, control and measurements
- Modelling and simulation
- Energy efficiency
- Levelling, dividing, slitting and marking

**FORGING**
- Latest developments in forging plants
- Optimization of the forging process
- Process simulation
- Technical measurement of forgings
- Measures for ensuring quality
- Descaling
- Furnace technology
- Burner technology
- Heat treatment process
- Energy Management
- Cold rolling, forming
STEEL MATERIALS AND THEIR APPLICATION

- High strength steels for flat products for the automotive industry
- Hot formed steel parts for the automotive industry
- High strength steels for bars and wire rods for automotive and engineering industry
- High temperature steels for energy technology
- High strength fine grain steels for construction applications
- Advanced high strength steels in truck construction
- Advanced high strength steels in mobile crane construction
- Tool steels for forming high strength materials
- Modern joining technologies in multi-material applications
- The use of stainless steel in the food industry
- Light weight construction concepts for agriculture devices

SURFACE TECHNOLOGIES

- Quality control and management of defects
- Galvanizing and electro-galvanizing
- Surface post-treatments
- Automated surface inspection
- Defect prevention and detection
- Data mining systems and predictive analytics
- Environmental challenges

ENVIRONMENTAL AND ENERGY ASPECTS IN IRON AND STEELMAKING

- Energy savings and energy efficiency optimization
- Alternative fuels and reductants in iron and steelmaking
- Injection of waste plastics into the blast furnace
- Emission avoidance from iron and steelmaking
- Recycling of iron and steelmaking dust and sludge
- By-product management in iron and steel production
- Improvement and treatment of iron and steelmaking slags
- Use of waste gas and waste heat
- Water cascades and recirculation
- Examination and remediation of contaminated sites
- Challenge of renewable gases in iron and steelmaking
- New and alternative technologies
- Alternative fuels in iron- and steelmaking

EFFICIENCY INCREASE AND CO₂ MITIGATION IN IRON AND STEELMAKING

- Strategies for efficiency increase
- Lowering fuel costs
- CO₂ capture in steelmaking process
- CO₂ storage and use from iron and steelmaking
- Energy management systems
- Use of CO₂ from process gases for new products

PARTICIPATE ESTAD 2015 AND VISIT THE TRADE FAIRS

As a participant of the ESTAD 2015 you will receive a ticket for free entrance to the METEC, GIFA, THERMPROCESS and NEWCAST.

SUBMISSION OF PAPERS

All paper proposals must be submitted online. Please visit www.metec-estad2015.com and go to the Call for Papers section. There you will find an easy to use online submission form. Your abstract can be a maximum of 300 words. Please note that papers will only be accepted online. All papers must be submitted in English and focus on best practices.

LANGUAGE

The conference language is English.

DEADLINE

Please submit your abstracts by 31 August 2014 at the very latest. All abstracts will be refereed by the scientific program committee. In the case of too many submissions, abstracts of equal quality will be accepted on a first come, first serve basis.

IMPORTANT DATES

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<tr>
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<tbody>
<tr>
<td>31 August 2014</td>
<td>Abstract submission deadline.</td>
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<tr>
<td>September 2014</td>
<td>Scientific Program Committee will evaluate submitted abstracts.</td>
</tr>
<tr>
<td>30 November 2014</td>
<td>Paper proposers will be informed about decision of the Scientific Program Committee. Delivery of authors guidelines.</td>
</tr>
<tr>
<td>25 February 2015</td>
<td>Full paper submission deadline.</td>
</tr>
<tr>
<td>30 May 2015</td>
<td>PowerPoint presentation slides deadline.</td>
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<tr>
<td>15 – 19 June 2015</td>
<td>METEC &amp; 2ND ESTAD 2015</td>
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