

## 4<sup>th</sup> International Seminar

# Cokemaking

including Coking Plant Tour

7 - 10 December 2020  
Cologne, Germany



Photo: thyssenkrupp Steel Europe

## TECHNICAL CHAIRMEN

Peter Liszio / Viktor Stiskala

## COOPERATION PARTNER

VDKF – Association of German Cokemaking Experts

## TARGET GROUP

- Maintenance and operating staff
- Supervisors responsible for decisions on metallurgy, energy, purchasing and environmental protection
- Raw material and energy trading and purchasing staff

The seminar places the emphasis on quality of raw materials and on modern processes and methods of coke making. Lectures on iron and steel making, environmental aspects, refractories and by-products round off the programme. *Note: Both during lectures and discussions, as well as in the breaks of the seminar, our guidelines on adherence to cartel-law regulations shall be followed.*

## REGISTRATION FEE

EUR 990,00\* registration fee VAT-free plus  
EUR 278,00 conference package (total EUR 1.268,00\*)

EUR 1.190,00 registration fee VAT-free plus  
EUR 278,00 conference package (total EUR 1.468,00)

\* for employees of member companies and individual members of the Steel Institute VDEh and for scientific staff of universities.

The conference package includes food and beverages during the seminar (incl. 19 % VAT).

A free withdrawal from the seminar is possible until two weeks prior to the start. Then, 25% of the seminar fee must be paid. The total registration amount will be charged for no show or cancellation from the first day of the event. The participant resp. his company also has to bear the cancellation costs of the seminar hotel.

## CONTENT

- Production of Iron and Steel
- Requirements on Coke for the Blast Furnace Process
- Coal Formation, Mining and Beneficiation
- Coal Quality
- Coal Blending
- Coal to Coke Transformation
- Coke Quality
- Coke Oven Machine Management
- Battery Heating
- Coke Quenching
- Coke Oven Life Prolongation
- Refractory Technology – Coke Oven Lining
- Shut Down Principles  
=> Team Work: Shut down your Coking Plant!
- By Product Plant Operation
- Outlook – Future Aspects of Coke Making
- Coking Plant Tour at KBS Schwelgern, Duisburg

## ORGANISATION

Steel Academy  
Steel Institute VDEh  
Peter Schmieding  
Sohnstraße 65, 40237 Düsseldorf, Germany  
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## VENUE / SEMINAR HOTEL

art'otel Cologne  
Holzmarkt 4  
50676 Cologne, Germany  
www.artotels.com

The Steel Academy will automatically make a room booking for the participants at the art'otel Cologne from the 7<sup>th</sup> to 10<sup>th</sup> of December 2020 for a special rate of EUR 110,00 per night incl. breakfast. The hotel room bill will be settled by you upon departure. Please advise at registration, if you do not need a room or whether you would like to stay longer in the hotel.

## PROGRAMME

### Monday, December 7, 2020

- 14:30 **Introduction to the Course**  
Peter Schmieding  
introduction to programme, participants and the venue Duisburg
- 15:00 **Production of Iron and Steel**  
Hans Bodo Lungen  
worldwide demand / resources of raw materials / routes of iron and steel making / interlinked use of coke oven gas
- 15:45 **Requirements on Coke for the Blast Furnace Process**  
Peter Schmöle  
use of reducing agents / chemical reactions / physical requirements / flow phenomena / demands on coke quality
- 16:45 coffee break
- 17:15 **Coal Formation**  
Viktor Stiskala  
coal geology / coal formation / coal basin / mineral content  
⇒ till 18:15, afterwards: dinner

### Tuesday, December 8, 2020

- 08:30 **Coal Mining and Beneficiation**  
Peter Liszio  
underground mining / open-cut mining / coal beneficiation
- 09:30 **Coal Quality, Part I**  
Viktor Stiskala  
coal type / coal analysis / coal selection
- 10:30 coffee break
- 11:00 **Coal Quality, Part II**  
Viktor Stiskala
- 12:00 **Coal Blending**  
Viktor Stiskala  
blend design to reflect process requirements / blend preparation / blending methods
- 13:00 lunch
- 14:15 **Coal to Coke Transformation**  
Daniel Isler  
heat transfer / melting and re-solidification / coking pressure / shrinkage / fissuring / coke quality
- 16:00 coffee break
- 16:30 **Coke Quality**  
Viktor Stiskala  
specifications / control / process variables / prediction  
⇒ till 18:30, afterwards : dinner

### Wednesday, December 9, 2020

- 08:30 **Battery Heating**  
Ingomar Köhler  
combustion principles / heating wall design / heating flue design / stack / emissions / production adjustments / pushing schedule / maintenance
- 10:15 coffee break
- 10:45 **Coke Oven Machine Management**  
Peter Liszio  
coal charging / pushing / optimization principles / maintenance
- 11:45 **Coke Quenching**  
Peter Liszio  
thermodynamic / wet quenching / CSQ / CDQ / environmental aspects / maintenance
- 12:15 **By Product Plant Operation**  
Hans-Jürgen Hasse  
tar removal / primary cooler / NH<sub>3</sub>-H<sub>2</sub>S-absorption and desorption / claus plant
- 13:30 lunch
- 14:30 Bus Departure to the  
**Ironmaking and Coking Plant Tour, KBS Schwelgern, thyssenkrupp Steel Europe, Duisburg**
- 19:00 dinner in a brew house, Old Town Cologne

### Thursday, December 10, 2020

- 08:30 **Coke Oven Life Prolongation**  
Jean-Paul Gaillet  
operation consistency / battery age quantification / inspection techniques / pro-active maintenance
- 10:00 coffee break
- 10:30 **Refractory Technology – Coke Oven Lining**  
Werner Hippe  
refractory materials / applications / repair
- 11:30 **Automation, Control and Shut Down Principles**  
Peter Liszio  
crisis management / critical maintenance skills
- 12:30 lunch
- 13:30 **Team Work: Shut down your coking plant!**
- 15:00 **Outlook – Future Aspects of Cokemaking**  
Peter Liszio
- 15:30 end of seminar

**SPEAKERS** Jean-Paul Gaillet, Centre de Pyrolyse de Marienau, Forbach ■ Dipl.-Ing. Hans-Jürgen Hasse, Essen ■ Werner Hippe, Gladbeck ■ Daniel Isler, Centre de Pyrolyse de Marienau, Forbach ■ Ingomar Köhler, procomco technical consulting, Mülheim ■ Dipl.-Ing. Peter Liszio, thyssenkrupp Steel Europe, Duisburg ■ Dr.-Ing. Hans Bodo Lungen, Steel Institute VDEh, Duesseldorf ■ Peter Schmieding, Steel Academy, Steel Institute VDEh, Duesseldorf (Organization) ■ Prof. Dr.-Ing. Peter Schmöle, Dortmund ■ Dipl.-Ing. Viktor Stiskala, thyssenkrupp Steel Europe AG, Duisburg