



location

online webinar
video conference

Registration

You like to participate at our workshop?

Please register by e-mail or at our website:

E-Mail: workshop@asenso.de

web: <https://www.asenso.de/workshop>

In Kooperation mit:

ASenSo GmbH Advanced Sensor Solutions for Process Industries

ASenSo

ASenSo offers customized solutions for the transfer of innovative sensors and measurement technology into demanding high-temperature processes, especially in steel industry. ASenSo sees itself as a specialist in the implementation of optical, fiber optic and other new measuring methods in operational practice.



Minkon GmbH

Minkon manufactures and sells industrial measuring and sampling technology for molten metal. The family-owned company has extensive experience in the field of measurement technology in iron and steel melts and in the manufacture of melt-resistant probes and samplers.

FOM. Die Hochschule. Für Berufstätige.

- Mit über **50.000 Studierenden** auf **Platz 5** der bundesweit **420 Fachhochschulen** und **Universitäten** sowie **größte private Hochschule Deutschlands**
- Eine Initiative der gemeinnützigen **Stiftung BildungsCentrum der Wirtschaft**
- Hochschulzentren **in 29 Städten** Deutschlands
- **Studienerfolgsquote** von über **80%**
- Über **2.000 Professorinnen, Professoren** und **Lehrbeauftragte**
- Über **1.000 Mitarbeiter** aus 27 Nationen in Beratung und Verwaltung

- Seit 1993 **staatlich anerkannt**
- Über **35 akkreditierte Studiengänge**
- **Akkreditiert durch den Wissenschaftsrat**
- Systemakkreditiert: das Qualitätsmanagement der FOM entspricht dem **höchsten internationalen Standard** (seit 2012 Gütesiegel der FIBAA, einer der bedeutendsten Agenturen zur Bewertung von Hochschulen)

- Eine der **forschungsstärksten privaten Fachhochschulen Deutschlands** (mit 10 Instituten, 13 KompetenzCentren und über 500 Publikationen im Jahr)
- **Best-Practice-Hochschule** der deutschen **UNESCO-Kommission** in der UN-Dekade »Bildung für nachhaltige Entwicklung« an Hochschulen
- Als einzige private Hochschule Mitglied im **Qualitätsnetzwerk »Duales Studium«** des Stifterverbandes für die Deutsche Wissenschaft

- **37 Kooperationshochschulen** weltweit
- Trägerin des **größten europäischen Studienprojekts in China**
- **Über 800 Unternehmenskooperationen** in Deutschland, darunter Siemens, Allianz, Ford, Bertelsmann, Telekom, BP, IBM, thyssenkrupp, Peek & Cloppenburg Düsseldorf, AOK, Landeshauptstadt München, Stadt Düsseldorf

Unsere Studienberatung steht Ihnen gerne zur Verfügung:

☎ free phone: 0800 1 95 95 95

f /fom

✉ studienberatung@fom.de

🐦 /FOMHochschule

🌐 fom.de



Aachen | Augsburg | Berlin | Bochum | Bonn | Bremen | Dortmund | Duisburg | Düsseldorf | Essen | Frankfurt a. M. | Gütersloh | Hagen | Hamburg | Hannover | Karlsruhe | Kassel | Köln | Leipzig | Mannheim | Marl | München | Münster | Neuss | Nürnberg | Siegen | Stuttgart | Wesel | Wuppertal

FOM
Hochschule

Invitation to workshop

»Primary Steelmaking«

Tuesday | 12. Oktober 2021 | 10:00 – 16:00 | online

free
participation



In Kooperation mit:

ASenSo





Steelmaking operators have to react flexible to individual process conditions and increased quality requirements. At the same time, the increasing digitalization across all process levels for seamless tracking of the melt from the raw materials to the further processed cast product requires professional measurement and documentation. The status and use of measurement and sampling technology for steelmaking is very different in the individual plants.

The event is therefore aimed at operations managers and engineers of primary steelmaking plants and is intended to provide an overview, insight and outlook on energy and resource efficient primary steelmaking by optimizing process control via innovative direct sampling, measurement and control during steelmaking.

Your participation in the event is free of charge.



Parts of the work presented have received funding from the European Union's Research Fund for Coal and Steel (RFCS) research program under grant agreement n° 754064, which is gratefully acknowledged.

Programme

- 10:00 Welcome**
Herbert Köchner | Professor FOM Düsseldorf and
Torsten Lamp | Head of Research & Development
Minkon GmbH, Erkrath
- 10:15 Direct process control in primary steelmaking**
*Starting with the basics of process control the
technical and economic benefits of direct process
control will be addressed.*
Herbert Köchner | Professor FOM Düsseldorf
- 11:00 Coupling of CFD and Thermodynamic calculations
for EAF Reaction Zone Modelling**
*Results from modelling the chemical reaction zone
while oxygen injection via bottom blowing nozzle in the
EAF will be presented.*
Björn Glaser | Associate Professor KTH Stockholm
- 11:45 Direct temperature measurements using
DynTemp® in the chemical reaction zone**
*Results from DynTemp® measurements in the
OxyMon project on optimisation of the oxygen use in
EAF steelmaking by direct process monitoring of the
chemical melt reactions will be given*
Mark Potter | CEO Minkon Sp. z o.o., Tarnowskie Góry
- 12:30 Discussion**
- 13:00 Lunch Break**
- 14:00 Direct steel analysis via express lab**
*Innovative combination of adaptive sampling with
enhanced sample analysis decreasing the waiting time
for analysis to a minimum*
Harald Fischer | Technical Director Minkon GmbH,
Erkrath and
Horst Faust | Sales Manager Herzog Maschinenfabrik
GmbH & Co. KG, Osnabrück
- 14:45 Smart glasses for steelmaking as a tool to support
operators** *A new Optical Vision Assistance System will
be presented* Herbert Köchner | CEO ASenSo GmbH,
Pulheim
- 15:30 Discussion**

The Speakers

Prof. Dr.-Ing. Herbert Köchner researches and teaches on measurement technology and sensor technology as well as metallurgical process measurement technology at the School of Engineering of the FOM University of Economics & Management in Düsseldorf and at the Royal Institute of Technology of the KTH Kungliga Tekniska Högskolan in Stockholm. He has many years of know-how in the development of continuous measurement methods for molten steel. Prof. Dr.-Ing. Herbert Köchner is the founder and managing director of ASenSo GmbH Advanced Sensor Solutions for Process Industries.

Dr. rer. nat. Torsten Lamp has in-depth industry experience in the field of process measurement technology and sampling, especially in casting and solidification. He is a specialist in the application of metallurgical measuring processes in continuous casting, author of various technical articles and speaker at conferences and in technical committees. Since 2015 he is head of research and development at MINKON GmbH in Erkrath.

Prof. Dr. Björn Glaser researches and teaches in the "Processes" unit in the Department of Materials Science and Engineering at the KTH School of Industrial Engineering and Management (ITM) in Stockholm. He conducts research and has in-depth knowledge in the field of scientific investigations of metallurgical processes and phenomena in the high-temperature laboratory. In close contact with industry, problems and phenomena are analyzed, examined and proposed solutions discussed.

Mark Potter is CEO of Minkon Sp. z o. o. is a Qualified Metallurgist and Chemist with a focus on production engineering and business systems. He began his love for the steel industry in 1977 as a shift chemist in a mini-mill and but for a brief 2 year period in academia, has been directly associated with steelmaking throughout his career. He gained full membership of the Institute of Quality Assurance in 1987, and an MBA in 1992. He has experience of over ten years technical and management experience in steel production and more than 20 years in electrochemical sensor manufacturing.

Dipl.-Ing. Harald Fischer is the Technical Director of Minkon GmbH for more than 20 years. He has extensive knowledge and experience in the entire field of measurement and sampling technology for molten metals. In his earlier professional life, he worked in various areas of mechanical engineering, e.g. in the new development of laboratory equipment for mechanical process engineering.

Dipl.-Ing. Horst Faust is Sales Manager at Herzog Maschinenfabrik GmbH & Co. KG since 2015. He gained his degree in Mechanical Engineering and Air- and Space Technology from RWTH Aachen.