MEFORM 2017

New developments in wire production and processing

March 15th and 16th 2017
Institut of Metal Forming
Freiberg
Wire’s all around!

There is hardly another product which is so diverse and offers such a broad scope of applications. But you can find it in various forms, made of very different materials and in a great range of dimensions in almost every field of daily business – in products of everyday use as well as in high performance applications.

From this wide range of products and applications using wires in many varieties, arouses the great difference of requirement profiles reflecting the individual demands and corresponding to them, respectively. For the local wire industry this results in a shift of trend: production of high-end wires from specialized materials and in very high qualities, also in smaller amounts, instead of mass production of standard materials. In order to remain competitive in the long term on the globalized market a high level of flexibility, knowhow and also a strong quality consciousness are required. By combining newly developed process simulation, control and monitoring methods with a high rate of technological profession the sustainability of German and European wire industry can be guaranteed for the future. Therefore, continuous R&D efforts based on years of experience will be the key to success.

For that reason, it is our pleasure to host the 25th MEFORM conference on March, 15th and 16th 2017 dealing with the topic ‘wire’. Entitled “New developments in wire production and processing” the metal-forming conference addresses to representatives of R&D institutions and of the wire industry, providing them new insights and information about new developments concerning this topic in technical lectures, a poster session and in an industrial exhibition, as well. The traditionally casual atmosphere offers optimal conditions for the exchange of experience with colleagues and to make new contacts, furthermore acting as an impulse for future innovations and developments in the field wire production and processing.

Therefore, we would like to kindly invite you to our ‘MEFORM 2017’ conference and are looking forward to welcome you in Freiberg in March 2017.

Prof. Rudolf Kawalla
Conference Chairman
Conference program

Tuesday, March 14th 2017
7.00 pm Welcome reception at the Institute of Metal Forming

Wednesday, March 15th 2017
from 8.00 am Arrival and registration
9.15 am Opening with the welcome speech by the conference director
10.00 am – 12.05 pm Morning session with lectures
12.05 pm – 1.30 pm Break with buffet lunch
1.30 pm – 5.45 pm Afternoon session with lectures (incl. coffee break)
from 7.00 pm Evening event in the “Brauhof Freiberg” with conference dinner

Thursday, March 16th 2017
9.00 am – 12.20 pm Morning session with lectures (incl. coffee break)
12.20 pm – 1.20 pm Break with lunchtime snack
1.25 pm – 3.30 pm Afternoon session with lectures
3:30 pm Closing remarks by the conference director and farewell

Evening events
The traditional welcome reception takes place on Tuesday, March 14th 2017 at 7.00 pm with beer and hot / cold buffet in the experimental area of the Institute of Metal Forming. Within the scope of a guided tour our pilot plants and testing facilities can be visited.

Venue:
Technical centre of the Institute of Metal Forming
Bernhard-von-Cotta-Straße 4
(behind „Haus Formgebung“)

The evening event on Wednesday, March 15th 2017 in the former brewery ‘Brauhof Freiberg’ will start at 7.00 pm. During a dinner in relaxed atmosphere with beer, wine and a social program the participants will have the possibility of extensive communication.

Venue:
Brauhof Freiberg
Körnerstraße 2, 09599 Freiberg
Industrial Exhibition

Within the context of the conference our partners from industry and research institutions make use of the possibility of promoting their products and services in the industrial exhibition. It will be opened during the whole conference and takes place in the premises and in conjunction with the poster session. Especially during the coffee and lunch breaks there will be extensive opportunities for getting in contact and professional discussions. Competent contacts will be on the stands to face the questions of the conference visitors.

Poster session

During the coffee and lunch breaks our guests will find further comprehensive sources of information to selected topics within the scope of the conference topics in the poster exhibition. Besides the current fields of research at our own institute, also the projects and fields of activity of our partners from research and industry will be presented and informed about.

Are you interested, too? If you also want to represent your company or institution in the industrial exhibition or place a poster showing your R&D activities and technical innovations, please visit the conference website or contact us directly via meform2017@imf.tu-freiberg.de.
The conference fee includes the participation in the lectures, the conference materials, the catering during the lecture breaks and also participation in the conference dinner in the evening of March 15th 2017. The participation in the welcome reception on March 14th 2017 is possible and free of additional charge (Registration requested).

**Registration**

For your registration please use the online form available on the conference website. Alternatively, it is possible to download the PDF registration form there and send it back to us, filled in and signed.

Please note the conditions for payment and cancellation, which can be found either on the registration form or on our website:

Conference Venue
TU Bergakademie Freiberg
Institute of Metal Forming
Bernhard-von-Cotta-Straße 4 (Haus Formgebung)
D - 09599 Freiberg

Conference office and contact
Institut für Metallformung, TU Bergakademie Freiberg
Bernhard-von-Cotta-Straße 4, 09599 Freiberg
E-Mail: meform2017@imf.tu-freiberg.de
Web: www.tu-freiberg.de/fakult5/imf/veranstaltungen/meform-2017

For further information please contact:
Mrs. Rosita Schmidtchen Tel.: +49 (0)3731 39-4182
Mrs. Anja Oswald Tel.: +49 (0)3731 39-4098
Mr. Frank Hoffmann Tel.: +49 (0)3731 39-4384

Conference language
German (Englisch)
Wednesday, March 15th 2017

9.15 am  Welcome speech of the Conference Director  
Prof. R. Kawalla

9.30 am  Die Möglichkeiten der Wirtschaftsförderung  
im Freistaat Sachsen  
P. Nothnagel  
Wirtschaftsförderung Sachsen GmbH

Plenary lecture

10.00 am  Aus Draht wird ein Produkt — Überblick zu den Möglichkei-
ten von Industrie 4.0 bei der Herstellung und Verarbeitung  
U. Beyer, M. Putz  
Fraunhofer IWU, Chemnitz

Plants and technologies for wire rod production

10.25 am  Herstellung von thermomechanisch gewalztem Draht mittels  
moderner Walzstraße-Konzepte  
M. Jurkovic, M. Köberich  
SMS group GmbH, Mönchengladbach

10.50 am  Herausforderungen und Innovation bei der Stahldraht-
herstellung  
L. Chabbi, S. Hasler, H. Roelofs, H. Haupt-Peter  
Swiss Steel AG, Emmenbrücke (CH)

11:15 am  Anlagen für die Forschung und Entwicklung von  
Drahtwalztechnologien am Institut für Metallformung  
M. Oswald, R. Kawalla  
Institute of Metal Forming, TU Bergakademie Freiberg

11:40 am  Band-, Draht- und Profilwalzen — Die heute erzielbaren  
Genauigkeiten  
B. Müller¹, E. Roller², J. Scheller³, F. Flitsch⁴  
¹ HMP Heinrich Müller Maschinenfabrik GmbH, Pforzheim  
² Friedrich Vollmer Feinmessgerätebau GmbH, Hagen

12:05 am  Lunch break
**Modelling of wire production processes**

1:30 pm  
Adaptation of the finite element method to simulation of rolling and cooling of steel rods  
K. Perzynski¹, A. Nam², Ł. Rauch³, R. Kawalla³, Ł. Madej¹  
¹ AGH University of Science and Technology, Kraków (PL)  
² Institute of Metal Forming, TU Bergakademie Freiberg

1:55 pm  
Through process modelling of rolling and controlled cooling of TRIP assisted bainitic steel rods and prediction of the retained austenite in products  
M. Pietrzyk¹, R. Kuziak², Z. Kanisz³, V. Pidvysots’kyy², M. Pernach², H. Roelofs³  
¹ AGH University of Science and Technology, Kraków (PL)  
² Institute for Ferrous Metallurgy, Gliwice (PL)  
³ Swiss Steel AG, Emmenbrücke (CH)

2:20 pm  
The behaviour of austenite during bar rolling  
E. Leunis, N. Sanchez Mourino  
OCAS NV, Zelzate (B)

2:45 pm  
Kaliberwalzen im Bereich der Warm- und Kaltumformung – Experimentelle Untersuchungen und Simulation  
M. Schmidtchen, P. Adamyanets, R. Kawalla  
Institute of Metal Forming, TU Bergakademie Freiberg

3:10 pm  
Coffee break

3:40 pm  
Effective flow curves of ferrite/pearlite microstructures for wire drawing applications  
U. Prahl¹, G. Laschot², V. Kripak³, F. Hoffmann³, J. Dierdorf⁴,  
R. Kawalla³, W. Bleck¹  
¹ Dep. of Ferrous Metallurgy, RWTH Aachen; ² ACCESS e. V., Aachen  
³ Institute of Metal Forming, TU Bergakademie Freiberg;  
⁴ Metal Forming Institute, RWTH Aachen

4:05 pm  
Microstructure and flow stress modelling during large strain deformation of metallic materials  
E. Kozeschnik, J. Kreycy  
Institute of Materials Science and Technology, Vienna University of Technology (A)

**Technologies for wire drawing**

4:30 pm  
Innovative Prozesskette für die Drahtherstellung aus schwer umformbaren, hochlegierten Werkstoffen  
T. Heymann, J. Schlegel  
BGH Edelstahl GmbH, Lugau

4:55 pm  
Anlagen zur Herstellung von Drahtprodukten für Spezialanwendungen  
J. Kieselstein, E. Kieselstein, G. Walter  
Kieselstein International GmbH, Chemnitz

5:20 pm  
Werkzeuge für das Ziehen mit höchsten Qualitätsanforderungen  
M. Biller - Balloffet GmbH, Kassel
Thursday, March 16th 2017

**Technologies for pre- and post-treatments of wires**

9:00 am  |   Wärmebehandlung von Stahldraht - Technologie und Anforderungen  
           |   R. Lux  
           |   Westfälische Drahtindustrie GmbH, Rothenburg

9:25 am  |   Wärmebehandlung von kalt geformten Federn aus ölschlussvergütetem Federstahldraht  
           |   V. Geinitz, U. Kletzin  
           |   Institute for Design and Precision Engineering, TU Ilmenau

9:50 am  |   Coffee break

**Wires for special applications**

10:15 am |   Spezielle Profile und schmale Bänder aus Draht bei Fa. Waelzholz  
           |   V. Blinov, N. Brachthäuser  
           |   C. D. Wälzholz KG, Hagen

10:40 am |   Zuverlässige Schutzkleidung mit Edelstahldraht  
           |   J. Linke  
           |   Deutsche Edelstahlwerke GmbH, Hagen

11:05 am |   Mikrolegierte AFP-Stähle für hochfeste Schrauben  
           |   F. Hoffmann¹, H. Schwich², U. Prahl², R. Kowalla¹, W. Bleck²  
           |   ¹ Institute of Metal Forming, TU Bergakademie Freiberg  
           |   ² Department of Ferrous Metallurgy, RWTH Aachen

**Materials for high-performance wire applications**

11:30 am |   Theoretische und experimentelle Untersuchungen zum Drahtziehen von Magnesiumlegierungen  
           |   E. Kieselstein, M. Kempf, G. Walter  
           |   Kieselstein International GmbH, Chemnitz

11:55 am |   Influence of cold working on mechanical properties of Al-SiC composites  
           |   S. Szczepanik, P. Nikiol, P. Bednarczyk  
           |   AGH University of Science and Technology, Kraków (PL)

12:20 pm |   Lunch break
1:25 pm  Ein neuer Weg zur Herstellung von höchstreinem Nickeldraht
R. Theile, T. Stuth, O. Krivtsova
hpulcas GmbH, Freiberg

1:50 pm  Ultrafine-grained high strength Cu-Ni-Si alloys
I. Altenberger1, H.-A. Kuhn1, M. Gholami2, M. Mhaede2,
M. Wollmann2, L. Wagner2
1 Wieland-Werke AG, Ulm
2 Institute of Materials Science and Engineering, TU Clausthal

Quality assurance in wire production processes

2:15 pm  Draht mit Null Fehlern – Utopie oder erreichbar?
J. Schlegel, U. Bialke
BGH Edelstahl GmbH, Lugau

2:40 pm  Erweiterte Möglichkeiten zur Qualitätsprüfung bei der Drahtherstellung durch schnelle Mikrostrukturanalyse
A. Oswald1, R. Schmidtchen1, D. Šimek2,3, D. Rafaja2,
R. Kawalla1, G. Lehmann1
1 Institute of Metal Forming, TU Bergakademie Freiberg
2 Institute of Materials Science, TU Bergakademie Freiberg
3 Institute of Physics, Academy of Science CR, Praha (CZ)

3:05 pm  Tieftemperaturprüfung von Draht
G. Korpala, F. Hoffmann, R. Kawalla
Institute of Metal Forming, TU Bergakademie Freiberg

3:30 pm  Closing remarks
R. Kawalla
Zimmerreservierung / Accomodations

Für Ihre Unterbringung während der Tagung können wir folgende Adressen empfehlen: (Bitte buchen Sie selbst!)

For your accommodation during the conference we can propose the following hotels: (Please book yourself!)

**Brauhof Freiberg**  
Körnerstraße 2, 09599 Freiberg  
Tel.: +49 (0)3731 3530-0, Fax: +49 (0)3731 3530-22  
E-Mail: info@freiberger-brauhof.de | Web: www.brauhof-freiberg.de

**Hotel am Obermarkt**  
Waisenhausstraße 2, 09599 Freiberg  
Tel.: +49 (0)3731 2637-0, Fax: +49 (0)3731 2637-330  
E-Mail: info@hotel-am-obermarkt.de | Web: www.hotel-am-obermarkt.de

**Hotel Kreller**  
Fischerstraße 5, 09599 Freiberg  
Tel.: +49 (0)3731 3590-0, Fax: +49 (0)3731 23219  
E-Mail: kontakt@hotel-kreller.de | Web: www.hotel-kreller.de

**Hotel Freyhof**  
Mönchsstraße 1, 09599 Freiberg  
Tel.: +49 (0)3731 7750-730, Fax: +49 (0)3731 7750-732  
E-Mail: info@hotel-freyhof.de | Web: www.hotel-freyhof.de

**Hotel Alekto**  
Am Bahnhof 3, 09599 Freiberg  
Tel.: +49 (0)3731 794-0, Fax: +49 (0)3731 79 4-100  
E-Mail: info@alekto.de | Web: www.alekto.de

**Hotel Silberhof**  
Silberhofstraße 1, 09599 Freiberg  
Tel.: 49 (0)3731 2688-0, Fax: +49 (0)3731 2688-78  
E-Mail: rezeption@hotel-silberhof.com | Web: www.hotel-silberhof.com

**Altstadt-Hotel Freiberg**  
Donatsgasse 3, 09599 Freiberg  
Tel.: +49 (0)3731 20703-0, Fax: +49 (0)3731 20703-50  
E-Mail: info@hotel-freiberg.de | Web: www.hotel-freiberg.de

**Hotel Maucksches Gut**  
Hornstraße 20, 09599 Freiberg  
Tel.: +49 (0)3731 339-78, Fax: +49 (0)3731 339-79  
E-Mail: hotel@hotel-maucksches-gut.de | Web: www.hotel-maucksches-gut.de

**Hotel Blaue Blume**  
Donatsgasse 25, 09599 Freiberg  
Tel.: +49 (0)3731 2656-0, Fax: +49 (0)3731 2656-29  
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