

ITSC Highlight
Session "Young Professionals"
with Awards Presentation
June 7, 2017 | 15:40, Hall Y



Final Program



Thermal Spray paves the Way to the Stars!

June 7 – 9, 2017 Düsseldorf / Germany

CCD Congress Center Düsseldorf

www.dvs-ev.de/itsc2017

Organizers



Supporting Partners



Media Sponsors



WE DO IT ALL



We have the capability to provide the solution for your coating needs

www.coatingsolutions.saint-gobain.com
coatingsolutions@saint-gobain.com





WELCOME TO ITSC 2017 IN DÜSSELDORF

Düsseldorf is the capital city of the German state of North Rhine-Westphalia and one of the most populous cities in Germany. The river Rhine, its “Alt Beer” and its carnival are only three reasons to come over. The city with its international business and financial centre is renowned for its fashion and trade fairs. Düsseldorf is headquarters to one Fortune Global 500 and two DAX companies. Messe Düsseldorf (Düsseldorf Trade Fairs) organizes nearly one fifth of premier trade shows.

Düsseldorf is known for its academy of fine arts (Joseph Beuys, Emanuel Leutze, August Macke, Gerhard Richter, Sigmar Polke and Andreas Gursky), its pioneering influence on electronic/experimental music and its Japanese community.

In this extraordinary surrounding of Düsseldorf ITSC will take place in the CCD Congress Center Düsseldorf, Stadthalle (Messe Düsseldorf).

Beside the three-day practice-oriented ITSC technical conference program further highlights, e.g. the Session “**Young Professionals**” will be offered. ITSC 2017 is again supporting young talents becoming part of the worldwide thermal spray family.

The “**Industrial Forum**” is another characteristic of ITSC. All practically interested experts will be addressed to get information in this forum.

The **Three-Day Exposition** is a permanent part of the event. If you are looking for new products and services, have questions or need answers, then ITSC 2017 is the right place for you.

ITSC exhibitors are experts who can offer attendees a wealth of problem-solving information and cost-saving opportunities. You will find information about equipment for thermal spraying, research and specialist institutes, applied research, and the latest innovations conveniently located in one big forum.

The organizers look forward to welcoming you in Düsseldorf / Germany!

Jens Jerzembeck
Head of Research and Technology
DVS – German Welding Society

Sponsoring



DVS – The German Welding Society and TSS – Thermal Spray Society, ASM International, are pleased to announce the following sponsors of ITSC 2017:



oerlikon
metco



GTV Verschleißschutz GmbH, Germany
Oerlikon Metco AG, Switzerland



H.C. Starck 



MEDICOAT 
Coating. Equipment. Powder

DURUM VERSCHLEISS-SCHUTZ GMBH, Germany
H.C. Starck GmbH, Germany
Medicoat AG, Switzerland

CONTENTS

WELCOME TO ITSC 2017 IN DÜSSELDORF

SPONSORING

CONFERENCE	ITSC 2017 Time Schedule Technical Program of Oral Presentations Conference Committees and Endorsing Sponsors	03 08 10 23
POSTER SESSION / INDUSTRIAL FORUM	Poster Presentations	25
ACTING EXPERTS	Presenting Authors, Poster Presenters and Session Chairs ITSC 2017	34
EXPOSITION	Exhibitor List	41
SOCIAL EVENTS PROGRAM / AWARDING	Opening Session "Young Professionals" with Awards Presentation ITSC Best Paper Awards, René Wasserman Prize, Oerlikon Metco Young Professionals Award Exhibitor Reception ITSC 2017 Networking Event with Awards Presentation TSS Hall of Fame, TSS President's Award, JTST Best Paper Award	43 43 43 43 43



CONFERENCE



ITSC 2017

The ITSC 2017 conference is an opportunity for the global thermal spray community to meet, exchange information and conduct business. This outstanding annual event in the world of thermal spray technology presents the latest advancements in application, research and development in the field of thermal spray.

To complement the technical program, a three-day exposition featuring an Industrial Forum as well as a Poster Session will take place.

Please mark your calendar for the special ITSC 2017 events:

Opening of ITSC 2017 with Plenary Lecture

Wednesday, June 7, 2017, 09:00, CCD Congress Center Düsseldorf, Stadthalle, Hall Y

Exposition (kick-off)

Wednesday, June 7, 2017, 12:00, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

Exhibitor Reception and Poster Session

Wednesday, June 7, 2017, 18:00, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

ITSC 2017 Networking Event

Thursday, June 8, 2017, 19:30, Barbecue in Düsseldorf's Football Arena (further information on page 43)

Organization

DVS – German Welding Society
Simone Weinreich / Brigitte Brommer
Aachener Str. 172
40223 Düsseldorf / Germany
P +49. (0)211. 1591-302/-303
F +49. (0)211. 1591-300
tagungen@dvs-hg.de

Specialist Information

DVS – German Welding Society
Jens Jerzembeck
Aachener Str. 172
40223 Düsseldorf / Germany
P +49. (0)211. 1591-173
F +49. (0)211. 1591-200
jens.jerzembeck@dvs-hg.de

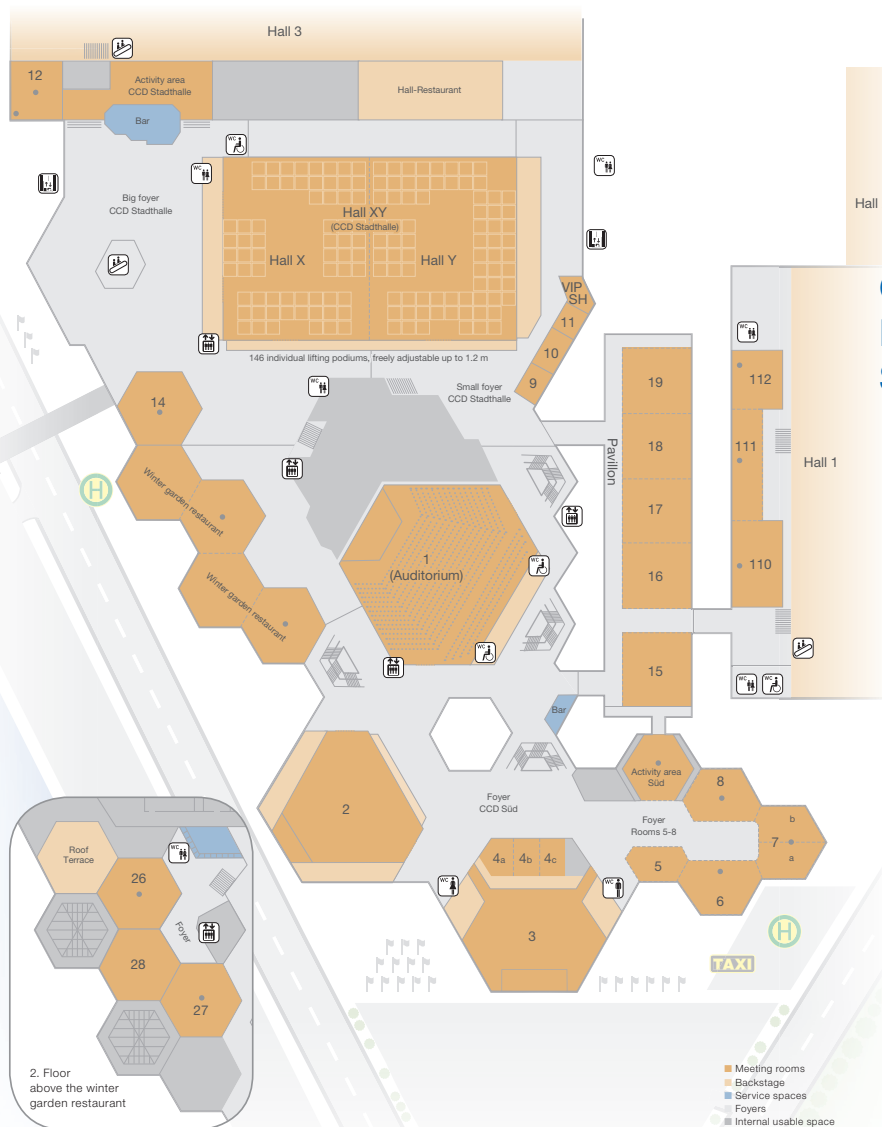
ITSC 2017 Venue

CCD Congress Center Düsseldorf, Stadthalle (Messe Düsseldorf)
Rotterdam Str.
40474 Düsseldorf / Germany
- Foyer (Entrance CCD Stadthalle)
- Hall X, Hall Y, Hall 12, Hall 14 (1st Floor)
- Hall 26, Hall 27, Hall 28 (2nd Floor)

Messe Düsseldorf Event and exhibition area in total



Scan QR-Code to download the maps on your smartphone



CCD Congress Center Düsseldorf – First Floor, Second Floor

- Meeting rooms
- Backstage
- Service spaces
- Foyers
- Internal usable space


TIME SCHEDULE ITSC 2017 CONFERENCE AND EXPOSITION (Session Overview)

12:00 – 18:00 ITSC 2017 Exposition, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

Wednesday, June 7, 2017						
Time	Hall Y	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
09:00	Opening: <ul style="list-style-type: none"> ■ Welcome ■ Plenary Lecture 					
10:30	Coffee Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers					
10:50	Plasma Spraying I	Aviation & Power Generation Industry I	Medical Industry I	Process Diagnostics, Sensors & Controls	Ceramic Coatings	Cold Gas Spraying I
12:30	Lunch Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers Poster Session, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers					
14:00	Maritim Industry & Off-Shore Technologies	Power Generation – Fuel Cell	Medical Industry II	Wear Protection I	Suspension Spraying I	Equipment / Consumables & Powders, Wires, Suspensions I
15:20	Coffee Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers					
15:40	Session “Young Professionals” with Awards Presentation					
17:00	<div style="background-color: #0056b3; color: white; padding: 2px; display: inline-block;">Awards Presentation</div> ITSC Best Paper Awards René Wasserman Prize Oerlikon Metco Young Professionals Award					
	End of ITSC 2017 Conference Program					
18:00	Exhibitor Reception, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers Poster Session, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers					

09:00 – 18:00 ITSC 2017 Exposition, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

Thursday, June 8, 2017					
Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
09:00	Automotive Industry	Industrial Forum I	Wear Protection II	Suspension Spraying II	Modeling & Simulation I
10:40	Coffee Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers				

11:00	Aviation & Power Generation Industry II	Industrial Forum II	Characterization & Testing Methods I	HVAF Spraying	Tribological Coatings
12:40	Lunch Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers Poster Session, CCD Congress Center Düsseldorf, Stadthalle, Hall X				
13:40	Aviation & Power Generation Industry III	Industrial Forum III	Laser Cladding & PTA	Pre- & Post-Treatment	Equipment / Consumables & Powders, Wires, Suspensions II
15:20	Coffee Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers				
15:40	Aviation & Power Generation Industry IV	Industrial Forum IV	Wear & Corrosion Protection	HVOF Spraying	Cold Gas Spraying II
17:20	End of ITSC 2017 Conference Program				
19:30	 ITSC 2017 Networking Event with Awards Presentation, ESPRIT ARENA (Düsseldorf's Football Arena) TSS Hall of Fame TSS President's Award JTST Best Paper Award				

09:00 – 16:00 ITSC 2017 Exposition, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

Friday, June 9, 2017					
Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
09:00	Aviation & Power Generation Industry V	Industrial Forum V	Characterization & Testing Methods II	Metal Coatings	Modeling & Simulation II
10:40	Coffee Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers				
11:00	Power Generation – Steam	Electronics & Sensoric	Corrosion Protection	Suspension Spraying III	Cold Gas Spraying III
12:40	Lunch Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers Poster Session, CCD Congress Center Düsseldorf, Stadthalle, Hall X				
13:40	Aviation & Power Generation Industry VI	Additive Manufacturing	Amorphous Coatings	Plasma Spraying II	Cold Gas Spraying IV
15:20	End of ITSC 2017 Conference Program				

The complete technical program of ITSC will be available online at the end of February 2017 – see: www.dvs-ev.de/itsc2017

TECHNICAL PROGRAM OF ORAL PRESENTATIONS

Time	Hall Y	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
09:00	<p>Opening</p> <p>Session Chair: R. Boecking DVS – German Welding Society, Germany</p> <p>Welcome</p> <p>R. Boecking DVS – German Welding Society, Germany</p> <p>C. Moreau TSS – Thermal Spray Society, USA</p> <p>W. Krömmer GTS – Association of Thermal Sprayers, Germany</p> <p>Plenary Lecture: Aircraft Industries On the way to Additive Manufacturing – Industrial Production enabled by Al & Ti - Metal-Powders</p> <p>P. Sander Airbus Operations GmbH, Hamburg, Germany</p>					
10:30	<p>Coffee Break CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p>					
	<p>Plasma Spraying I</p> <p>Session Chairs: K. Bobzin, RWTH Aachen University, Germany C. Kay, ASB Industries, Inc., USA</p>	<p>Aviation & Power Generation Industry I</p> <p>Session Chairs: W. Tillmann, University of Dortmund, Germany R. Herzog, MAN Diesel & Turbo SE, Germany</p>	<p>Medical Industry I</p> <p>Session Chairs: P. Gruner, Medicoat AG, Switzerland J. Cizek, Czech Academy of Sciences, Czech Republic</p>	<p>Process Diagnostics, Sensors & Controls</p> <p>Session Chairs: L. Pouliot, TECNAR Automation, Ltd., Canada J. Schein, University of the Federal Armed Forces Munich, Germany</p>	<p>Ceramic Coatings</p> <p>Session Chairs: T. Linke, Dillingen I Nemak Europe/Germany T. Suhonen, VTT Technical Research Centre of Finland, Finland</p>	<p>Cold Gas Spraying I</p> <p>Session Chairs: T. Coyle, University of Toronto, Canada T. Stoltenhoff, Terolab GmbH, Germany</p>
10:50	<p>PENTA: A novel high spray rate APS gun</p> <p>T. Schläfer* GTV Verschleißschutz GmbH, Germany, K. Müller-Roden, C. Schmengler, A. Wank</p>	<p>SPS-APS composite coatings for use in thermal barrier coating systems</p> <p>C. Petorak* Praxair Surface Technologies, USA</p>	<p>Sporicidal efficacy of thermal spray copper alloy coating with varying degrees of roughness</p> <p>L. Pershin* University of Toronto, Canada, R. Shafaghi, M. Ringuette, J. Mostaghimi</p>	<p>The arc movement as a source of process instability for single-cathode-anode systems a new method for direct investigation</p> <p>G. Thomas, S. Mihm* Medicoat AG, Switzerland, M. Limburg, H. Gruner</p>	<p>Fabrication of cold sprayed ceramic Y₂O₃ coatings</p> <p>L. Kong* Institute of Metal Research, P.R. China, Y. Yang</p>	<p>Deposition of environmentally friendly cermets coating by thermal spray techniques</p> <p>N. Cinca, M. Bazyanar, S. Dosta* University of Barcelona, Spain, I. Garcia Cano, J. Guillemany</p>

* Presenting Author

Time	Hall Y	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
11:10	<p>Developing a new plasma spray system with low power M. Shahien* National Institute of Advanced Industrial Science and Technology, Japan, M. Suzuki</p>	<p>Practical aspects of suspension plasma spray for thermal barrier coating on potential turbine components X. Ma* Curtiss-Wright Corporation, USA, P. Ruggiero</p>	<p>Transpiring thermally sprayed alumina layers with integrated fluid flow tubes M. Rodriguez Diaz* Leibniz University Hannover, Germany, K. Mohwald, H. Maier, N. Lofffield, M. Kastner, E. Reithmeier, S. Knigge, B. Glasmacher</p>	<p>Characterization of scattering for particle size measurement in plasma spray A. Akbarozari* Concordia University, Canada, S. Amiri, A. Dolatabadi, C. Moreau</p>	<p>High temperature oxidation resistance of thermally sprayed SiC coating F. Mubarok* Sepuluh Nopember Institute of Technology, Indonesia, N. Espallargas</p>	<p>Broken characteristics of the oxide film in high cold spray deposition Y. Xie, M. Planche, R. Raoelison, C. Verdy, P. Herve, H. Liao* University Bourgogne Franche-Comte, France</p>
11:30	<p>Novel approaches for thermal spray deposition of fully dense metal and ceramic coatings with well bonded lamellae C. Li* Xi'an Jiaotong University, P.R. China, S. Yao, J. Tian, C. Li, G. Yang, X. Luo, S. Zhang</p>	<p>Effect of spray parameters on the microstructure and porosity content of gadolinium zirconate TBCs deposited by suspension plasma spray S. Mahade* University West, Sweden, D. Zhou, R. VaBen</p>	<p>Experimental analysis of impact behavior of ultra-high molecular weight polyethylene-nano ceramics composite particles by isolated particle deposition using downstream injection cold-spray technique K. Ravi* Tohoku University, Japan, K. Ogawa, O. Lame, J. Cavalle</p>	<p>Novel online diagnostic analysis for particle in-flight properties in cold spraying H. Koivuluoto* Tampere University of Technology, Finland, V. Matikainen, J. Larjo, P. Vuoristo</p>	<p>Adsorbability and spreadability of CMAS on Al-modified 7YSZ thermal barrier coating X. Zhang* Guangzhou Institute of Non-Ferrous Metal, P.R. China, K. Zhou, M. Liu</p>	<p>Essential factors influencing the bonding strength of cold sprayed aluminum coatings on ceramic substrates R. Drehmann* Chemnitz University of Technology, Germany, T. Grund, C. Wustefeld, M. Motylenko, C. Ullrich, D. Rafaja, B. Wielage, T. Lampke</p>
11:50	<p>Porosity characterization and its effect on thermal properties of APS sprayed alumina coatings O. Khalil* University of Dortmund, Germany, W. Tillmann, M. Abdulgader</p>	<p>Mitigation of molten salt infiltration by using a Gd₂Zr₂O₇ suspension plasma sprayed coating for the next generation of thermal barrier coatings B. Bernard, A. Quet* CEA-DAM, France, E. Herve, L. Bianchi, A. Joulia, A. Malie</p>	<p>Plasma sprayed titania as a photocatalyst for formaldehyde reduction R. Bamola* Surface Modification Systems Inc., USA, F. Villamagna, R. Gansert</p>	<p>Investigation of the usefulness of particle jet monitoring in a production environment L. Leblanc* GE-Fuel Cells, USA, R. Hinckley, C. Spinicci</p>	<p>Epitaxial growth during the rapid solidification of plasma-sprayed molten TiO₂ splat C. Li* Xi'an Jiaotong University, P.R. China, S. Yao, T. Liu, G. Yang, C. Li</p>	<p>Metallization of various polymers by cold spray H. Che* McGill University, Canada, P. Vo, S. Yue</p>
12:10	<p>New investigations of the arc instabilities in a one-cathode-one-anode plasma generator via special wavelet-analysis S. Zimmermann* University of the Federal Armed Forces Munich, Germany, M. Mudra, O. Borschlegl, S. Schein, G. Haderer, J. Marques, J. Schein</p>	<p>On spraying of YSZ from liquid feedstocks with hybrid-water stabilized plasma torch R. Musalek* Institute of Plasma Physics CAS, Czech Republic, J. Medricky, J. Kotlan, T. Tesar, F. Lukac, T. Chraska</p>	<p>Functionalized coatings by cold gas spray for biomedical applications N. Cinca, A. Vilardell, I. Garcia Cano* University of Barcelona, Spain, S. Dosta, J. Guilemany</p>	<p>In-situ acoustic monitoring of thermal spray process using high-frequency impulse measurements W. Luo* University of Dortmund, Germany, M. Haack, J. Nellesen, W. Tillmann, F. Walther</p>	<p>The influence of grain size on the mechanical properties of plasma sprayed zirconia coatings P. Sokolowski* Wroclaw University of Technology, Poland, L. Latka, M. Michalak, R. Musalek</p>	<p>Effect of surface condition on the adhesion of thick copper coating for nuclear waste container J. Legoux* National Research Council of Canada, Canada, D. Poirier, J. Giallonardo, P. Vo, S. Bournival</p>
12:30	<p>Lunch Break, CCD Congress Center Dusseldorf, Stadthalle, Hall X, Foyers Poster Session, CCD Congress Center Dusseldorf, Stadthalle, Hall X, Foyers</p>					

Time	Hall Y	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
	<p>Maritim Industry & Off-Shore Technologies</p> <p>Session Chairs: J. Legoux, National Research Council of Canada, Canada F. Prenger, Grillo-Werke AG, Germany</p>	<p>Power Generation – Fuel Cell</p> <p>Session Chairs: L. Leblanc, GE-Fuel Cells, USA T. Lampke, Chemnitz University of Technology, Germany</p>	<p>Medical Industry II</p> <p>Session Chairs: C. Wasserman, TeroLab Surface Group SA, Switzerland R. Bamola, Surface Modification Systems Inc., USA</p>	<p>Wear Protection I</p> <p>Session Chairs: R. Schmid, Oerlikon Metco AG, Switzerland A. Killinger, University of Stuttgart, Germany</p>	<p>Suspension Spraying I</p> <p>Session Chairs: N. Curry, Treibacher Industrie AG, Austria P. Hollingsworth, Siemens AG, Germany</p>	<p>Equipment / Consumables & Powders, Wires, Suspensions I</p> <p>Session Chairs: A. Bachmann, Oerlikon Metco AG, Switzerland N. Espallargas, Seram Coatings AS, Norway</p>
14:00	<p>A case study of repair work on ship engine valve stems</p> <p>P. Nielsen* FORCE Technology, Denmark, K. Grønning Sørensen, P. Pallesen</p>	<p>Experimental and numerical study of the effect of gas-shrouded plasma spraying on cathode coating of alkaline electrolysis cells</p> <p>T. Liu* German Aerospace Center, Germany, A. Ansar</p>	<p>Sintering treatment after deposition of suspension plasma sprayed bioactive glass coatings</p> <p>E. Cañas* University Jaume I, Spain, M. Vicent, M. Orts, E. Sánchez</p>	<p>Hot-gas corrosion-erosion resistance by thermally-sprayed pseudo-alloys</p> <p>R. Drehmann, H. Pokhmurska, R. Winkelmann* Brandenburgische Technische Universität Cottbus-Senftenberg, Germany</p>	<p>SPS coating microstructure controlled by the surface topography using laser texturing</p> <p>R. Kromer, P. Sokolowski, R. Candidato, S. Costil* University Bourgogne Franche-Comté, France, L. Pawlowski</p>	<p>Ultrafine powder feeding in thermal spray application</p> <p>S. Desaulniers* Polycontrols, Canada</p>
14:20	<p>Influence of the substrate thickness on properties of cold gas sprayed bronze coatings</p> <p>M. Villa-Vidaller* Helmut-Schmidt-University of the Federal Armed Forces, Germany, G. Frank, C. Stefano, K. Thomas</p>	<p>Atmospheric plasma-sprayed coatings for SOFCs</p> <p>F. Bozza* Turbocoating S.p.a., Italy, N. Antolotti, L. Tagliaferri, M. Thoma, E. Ghidini</p>	<p>Microstructure and mechanical properties of cold sprayed titanium coatings</p> <p>W. Zórawski, J. Mdry, J. Sienicki* PZL Mielec, Poland, M. Makrenek, A. Góral, S. Kowalski</p>	<p>Cavitation erosion characteristics of HVOF thermal sprayed WC-cermet coatings</p> <p>A. Kanno* Tocalo Co., Ltd., Japan, K. Takagi, M. Arai</p>	<p>Formation of cauliflower-like features and columnar microstructure in suspension plasma sprayed titanium dioxide (TiO₂) coatings</p> <p>N. Sharifi* Concordia University, Canada, M. Pugh, A. Dolatabadi, C. Moreau</p>	<p>Tribological behavior of WC-Co HVOF-sprayed coatings modified by nano-sized TiC addition</p> <p>H. Myalska* Silesian University of Technology, Poland, L. Lusvarghi, G. Bolelli, P. Sassatelli, G. Moskal</p>
14:40	<p>Partial repair of thermally-sprayed and sealed corrosion protection organic coating material or thermal spraying?</p> <p>T. Wilhelm* GSI mbH, Branch SLV Duisburg, Germany, T. Maghet, M. Sallai, J. Mährlein, S. Friedrich, R. Regenspurger, R. Feser, C. Klesen</p>	<p>Thermally sprayed porous copper coatings for capillary transport of liquids</p> <p>C. Feng* University of Toronto, Canada, S. Yugeswaran, S. Chandra</p>	<p>Deposition of hydroxyapatite obtained from biowaste by suspension plasma spray</p> <p>G. Clavijo* University of Limoges, France J. Hermann, J. Rincon, A. Giraldo, H. Ageorges, J. Muñoz</p>	<p>Sliding wear behavior of FeAl coatings at high temperature</p> <p>N. Cinca* University of Barcelona, Spain, S. Cygan, L. Jaworska, S. Dosta, I. Garcia Cano, C. Senderowski, J. Guilemany</p>	<p>Characteristics of dense Al₂O₃ coating prepared by suspension plasma spraying</p> <p>H. Ibe* FUJIMI Incorporated, Japan, T. Masuda, K. Sato, N. Kato</p>	<p>Influence of feedstock powder modification by heat treatments on the properties of APS-sprayed Al₂O₃-40%TiO₂ coatings</p> <p>L. Berger* Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany, R. Vaßen, Y. Sohn</p>
15:00	<p>Improvements of coating properties and residual stress states in arc sprayed aluminum bronze coatings by using an alternative gas mixture</p> <p>M. Hauer* Fraunhofer-Research Institution for Large Structures in Production Engineering, Germany, S. Krebs, W. Krömmel, K. Henkel</p>	<p>A new technology for spraying advanced low-temperature (300–600 °C) solid oxide fuel cells</p> <p>K. Yuan* Beijing General Research Institute of Mining and Metallurgy, P.R. China, Y. Yu, X. Lu, B. Zhu</p>	<p>The influence of stand-off distance on phase composition of in-flight particles and hydroxyapatite coatings</p> <p>X. Liu* College of Materials Science and Engineering, P.R. China, Y. Wang, Z. Zhou, G. Wang, Z. Tan, D. He</p>	<p>Modeling the effect of microstructure on impact and abrasion wear performance of novel Fe-based MMC coatings</p> <p>T. Suhonen* VTT Technical Research Centre of Finland, Finland, T. Andersson, A. Laukkanen, J. Cheney, D. Sordelet</p>	<p>Suspension plasma spray with ethanol and water based suspensions</p> <p>F. Bozza, N. Antolotti, L. Tagliaferri, S. Bursich, E. Ghidini, O. Ligabue* Turbocoating S.p.a., Italy</p>	<p>Dry-sliding wear of laser clad nickel aluminide / chromium carbide coatings against cast iron</p> <p>S. Bengtsson* Höganäs AB, Sweden, S. Dizdar, K. Gong</p>
15:20	<p>Coffee Break CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p>					

“Young Professionals”

Session Chairs: K. Bobzin, RWTH Aachen University, Germany | E. Turunen, VTT Technical Research Centre of Finland, Finland

Time	Hall Y	Time	Hall Y
15:40	<p>Tribological properties of high velocity suspension flame sprayed (HVSFS) ceramic coatings A. Förg* University of Stuttgart, Germany, A. Killinger, G. Konrath, A. Kailer, R. Gadow</p> <p>Lamellar bonding enhanced NiCr-Mo coating with comparable erosion resistance to similar bulk by plasma-spraying shell-core-structured powders C. Li, J. Tian* Xi'an Jiaotong University, P.R. China, Y. Wang, C. Li, G. Yang</p> <p>Development of wear-resistant high-entropy alloy coatings produced by thermal spray technology M. Löbel* Chemnitz University of Technology, Germany, T. Lindner, C. Kohrt, T. Uhlig, T. Lampke</p> <p>Thermal spraying of thin metallic coatings F. Trenkle, M. Winkelmann, R. Köhler* obz innovation gmbh, Germany, S. Hartmann, J. Luth</p> <p>Oxide based thermoelectric generator enabled by additive and layered manufacturing H. Lee* Stony Brook University, USA, S. Sampath, R. Chidambaram-Seshadri</p> <p>Cold gas spraying of lead-free bearing bronzes S. Theimer* Helmut-Schmidt-University of the Federal Armed Forces, Germany, B. Patrick, F. Gärtner, T. Klassen</p>	15:40	<p>Processing of sub-micron sized ceramic particles at room temperature by aerosol deposition (AD) process T. Mishra* Forschungszentrum Jülich GmbH, Germany, R. Mücke, R. Singh, J. Malzbender, R. Vaßen</p> <p>Characterization of scattering for particle size measurement in plasma spray A. Akbarozari* Concordia University, Canada, S. Amiri, A. Dolatabadi, C. Moreau</p> <p>Multiscale modeling of the mechanical response of chromium oxide coating microstructures T. Suhonen, T. Pinomaa* VTT Technical Research Centre of Finland, Finland, A. Laukkanen, J. Metsäjoki, T. Andersson</p> <p>Failure mode analysis of thermally sprayed coatings by camera supported shear tests K. Bobzin, W. Wietheger* RWTH Aachen University, Germany, T. Königstein, M. Öte</p> <p>Nozzle-internal particle velocity measurements and loading effect on particle acceleration inside a cold spray nozzle M. Meyer* The University of Dublin, Ireland, F. Caruso, R. Lupoi</p>
Each presentation 5 minutes!		Each presentation 5 minutes!	
17:00	<p>Award Ceremony:</p> <ul style="list-style-type: none"> ■ ITSC Best Paper Awards ■ René Wasserman Prize ■ Oerlikon Metco Young Professionals Award 		
17:40	End of ITSC 2017 Conference Program		
18:00	<p>Exhibitor Welcome Reception, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p> <p>Poster Session, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p>		

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
	<p>Automotive Industry</p> <p>Session Chairs: A. Wank, GTV Verschleißschutz GmbH, Germany C. Coddet, University Bourgogne Franche-Comté, France</p>	<p>Industrial Forum I</p> <p>Session Chairs: W. Krömmer, The Linde Group, Germany</p>	<p>Wear Protection II</p> <p>Session Chairs: L. Pawlowski, University of Limoges, France L. Berger, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany</p>	<p>Suspension Spraying II</p> <p>Session Chairs: R. Vaßen, Forschungszentrum Jülich GmbH, Germany A. McDonald, University of Alberta, Canada</p>	<p>Modeling & Simulation I</p> <p>Session Chairs: M. Öte, RWTH Aachen University, Germany J. Mostaghimi, University of Toronto, Canada</p>
09:00	<p>New mechanical roughening process as surface preparation of engine cylinder bores before thermal spraying</p> <p>C. Verpoort, A. Roffe* Autocraft Drivetrain Solutions Ltd., Great Britain, G. Sanuk, M. Joschko, M. Kesting, T. Birkner, M. Hague-Morgan, M. Waiblinger</p>	<p>Individual development and customization of sealers</p> <p>P. Detloff* DIAMANT Metallplastic GmbH, Germany</p>	<p>Effect of laser treatment on plasma sprayed molybdenum coating on ET4A steel</p> <p>M. Yu* Southwest Jiaotong University, P.R. China, Y. Min, M. Hao, H. Junwei, L. Yan, C. Hui</p>	<p>Microstructural characteristics and performances of Cr₂O₃ and Cr₂O₃-15%TiO₂ SHVOF-coatings obtained from water-based suspensions</p> <p>F. Toma* Fraunhofer Institute for Material and Beam Technology, Germany, N. Kulissa, A. Potthoff, R. Kratzsch, C. Leyens</p>	<p>Numerical study of suspension HVOF spray and particle behavior near flat substrates</p> <p>M. Jadidi, A. Dolatabadi* Concordia University, Canada</p>
09:20	<p>Development of novel Fe-based coating systems for internal combustion engines</p> <p>T. Königstein* RWTH Aachen University, Germany, K. Bobzin, M. Öte, K. Dröder, H. Hoffmeister, G. Mahlfed, T. Schläfer</p>	<p>The quantum dust collector, the newest addition to the camfil APC range</p> <p>F. Theisen* Camfil A.P.C., Great Britain</p>	<p>The possibilities of applying industrial WCCoCr carbide coatings of ultra-fine powders to sliding rings of mechanical seals using the HVOF spraying process</p> <p>A. Iwaniak* Silesian University of Technology, Poland, G. Wieclaw, L. Norymberczyk</p>	<p>Effect of substrate temperature and torch power on the microstructure and crystallization of ZnO films by solution precursor plasma spray</p> <p>Z. Yu* University Bourgogne Franche-Comté, France, Y. Zhao, J. Huang, Z. Feng, W. Wang, M. Moliere, H. Liao</p>	<p>A comparative CFD study of the influence of combustion chamber geometry in the HVFSF process</p> <p>M. Plachetta* University of Stuttgart, Germany, P. Eckert, P. Krieg, A. Killinger</p>
09:40	<p>Developments and challenges with regard to cylinder bore coatings</p> <p>T. Linke* Dillingen I Nemak Europe, Germany, F. Feikus, M. Speicher, D. Schnubel</p>	<p>Significance of personnel qualification and quality management for thermal spray plants</p> <p>A. Ohliger-Volmer* GSI mbH, Branch SLV München, Germany, R. Huber, H. Cramer</p>	<p>Analysis of deposition behavior of patterns fabricated by vacuum kinetic spray using mask</p> <p>H. Kwon* Hanyang University, Republic of Korea, H. Park, C. Lee</p>	<p>Influence of suspension characteristics on microstructure of axial suspension plasma-sprayed coatings</p> <p>A. Ganvir* University West, Sweden, N. Markocsan, M. Gupta, R. Calinas, N. Vitorino, F. Lukac, J. Ekberg</p>	<p>Multiscale modeling of the mechanical response of chromium oxide coating microstructures</p> <p>T. Suhonen, T. Pinomaa* VTT Technical Research Centre of Finland, Finland, A. Laukkanen, J. Metsäjoki</p>
10:00	<p>Thermal spray coatings as friction surfaces of lightweight brake rotors</p> <p>S. Popa* University of Stuttgart, Germany, R. Gadow, A. Killinger</p>	<p>Effizient solutions for wire arc spraying</p> <p>C. Rupperecht* Eastcoat Oberflächentechnik, Germany, M. Stark</p>	<p>Understanding the influence of micro- and sub-micro structural features on the mechanical properties of HVO/AF sprayed WC-CoCr cermets</p> <p>M. Parco* TECNALIA, Spain, I. Fagoaga, G. Barykin, A. Chuvilin, C. Vaquero</p>	<p>Study of the influence of substrate curvature on coating microstructure in suspension plasma spray</p> <p>F. Caio* Concordia University, Canada, C. Moreau</p>	<p>Interaction between rotary arc and injected particles in a non-transferred DC plasma spray with externally applied magnetic field</p> <p>H. Saito* University of Tsukuba, Japan, T. Fujino, H. Takana, J. Mostaghimi</p>

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
10:20	<p>The effect of microstructure and carbon contents on wear properties of arc-sprayed carbon steel coatings</p> <p>J. Lee* Hanyang University, Republic of Korea, J. Kim, H. Kwon, C. Lee</p>	<p>Extraction and separation systems for the thermal spraying process</p> <p>M. Hack* Keller Lufttechnik GmbH & Co. KG, Germany, C. Brockmann</p>	<p>Effect of different shroud principles on the performance of a NiTi coating produced by means of twin-wire arc spraying (TWAS) process</p> <p>M. Abdulgader* University of Dortmund, Germany, W. Tillmann, D. Bezerra</p>	<p>Optimization of high-velocity suspension flame spraying (HVSFS) by PIV measurements for improving Al₂O₃ coatings micro-hardness</p> <p>S. Goutier* University of Limoges, France, M. Baubias, A. Killinger, A. Denoirjean, P. Müller, A. Foerg, M. Plachetta, R. Gadow</p>	<p>Numerical investigation of the melting degree of ceramic powder particles during air plasma spraying</p> <p>I. Alkhasli* RWTH Aachen University, Germany, K. Bobzin, M. Öte, M. Knoch, U. Reisgen, O. Mokrov, O. Lisnyi</p>
10:40	<p>Coffee Break CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p>				
	<p>Aviation & Power Generation Industry II</p> <p>Session Chairs: A. Schwenk, AMT AG, Switzerland M. Oechsner, TU Darmstadt, Germany</p>	<p>Industrial Forum II</p> <p>Session Chairs: A. Bachmann, Oerlikon Metco AG, Switzerland</p>	<p>Characterization & Testing Methods I</p> <p>Session Chairs: T. Duda, Emerson, Switzerland S. Zimmermann, University of the Federal Armed Forces Munich, Germany</p>	<p>HVAF Spraying</p> <p>Session Chairs: G. Bolelli, University of Modena and Reggio Emilia, Italy K. Möhwald, Leibniz University Hannover, Germany</p>	<p>Tribological Coatings</p> <p>Session Chairs: T. Schläfer, GTV Verschleißschutz GmbH, Germany C. Lima, UNIMEP - Methodist University of Piracicaba, Brazil</p>
11:00	<p>Thermal conductivity and interfacial thermal resistance of thermal barrier coatings</p> <p>S. Takahashi* Tokyo Metropolitan University, Japan, M. Akoshima, A. Kanno, T. Suidzu</p>	<p>Capillary active sealer for the use on finned walls in incinerator plants</p> <p>P. Detloff* DIAMANT Metallplastic GmbH, Germany</p>	<p>Interplay among adhesion, residual stress, and tensile properties of thermal spray coated laminates</p> <p>G. Smith* Stony Brook University, USA, D. Luo, D. Vackel, P. Sampath</p>	<p>Effect of nozzle geometry on the microstructure and properties of HVAF sprayed hardmetal coatings</p> <p>V. Matikainen* Tampere University of Technology, Finland, H. Koivuluoto, P. Vuoristo</p>	<p>A study on the tribological behavior of arc sprayed vanadium doped stellite coatings</p> <p>L. Hagen* University of Dortmund, Germany, W. Tillmann, D. Duda</p>
11:20	<p>Performance of atmospherically plasma sprayed self-healing thermal barrier coatings</p> <p>R. Vaßen* Forschungszentrum Jülich GmbH, Germany, D. Koch, A. Carabat, W. Sloof</p>	<p>Automated thermal spraying process with zinc for corrosion protection</p> <p>F. Prenger* Grillo-Werke AG, Germany</p>	<p>Porosity measurements on heat treated suspension plasma sprayed YSZ coatings using NMR cryoporometry</p> <p>J. Ekberg* Chalmers University of Technology, Sweden, U. Klement</p>	<p>Development of HVAF-sprayed novel Fe-based coatings for large area applications</p> <p>J. Sommer* RWTH Aachen University, Germany, K. Bobzin, M. Öte, M. Knoch</p>	<p>Practical experiences using HVOF-sprayed tungsten carbide coatings in the plastic foil industry</p> <p>K. Möhwald, O. Brandt* Becon Technologies GmbH, Switzerland, W. Reimche, O. Bruchwald, H. Maier</p>
11:40	<p>Mechanical properties of YTTRIA-stabilised-zirconia for thermal barrier coating Systems: Effects of testing procedure and thermal aging</p> <p>P. Planques* CIRIMAT - Safran Helicopter Engines, France, V. Vidal, P. Lours, V. Proton, F. Carbos, J. Huez, B. Viguier</p>	<p>Highest surface qualities of thermal sprayed hard metal and ceramic coatings within a few helium light band planarity</p> <p>S. Siegmann* Nova Werke AG, Switzerland</p>	<p>Study of the interface strength and residual stress within plasma sprayed alumina coatings involving LASAT (laser shock adhesion test)</p> <p>V. Guipont* MINES ParisTech, France, H. Sapardanis, A. Koster, V. Maurel, F. Borit, A. Debray</p>	<p>Comparison between high velocity oxygen-fuel (HVOF) and high velocity air-fuel (HVAF) deposition of FeVCrC-alloy coatings</p> <p>G. Bolelli* University of Modena and Reggio Emilia, Italy, M. Bursi, H. Koivuluoto, L. Lusvarghi, V. Matikainen, R. Rigon, P. Sassatelli, P. Vuoristo</p>	<p>Thermally sprayed hydrodynamic main bearings for wind turbines</p> <p>W. Wietheger* RWTH Aachen University, Germany, K. Bobzin, M. Öte, T. Königstein, T. Schröder, G. Jacobs, D. Bosse</p>

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
12:00	<p>Composition, structure and oxidation mechanism of the MAX-phase thermally sprayed coatings</p> <p>I. Mazilin* Technological Systems for Protective Coatings, Ltd., Russian Federation, N. Zaitsev, L. Baldaev</p>	<p>Cold gas coated brazing and tin-based alloys for industrial solder applications</p> <p>S. Hartmann* obz innovation GmbH, Germany</p>	<p>On the determination of delamination toughness in multi-layer thermal barrier coating systems</p> <p>M. Adam* Technical University Darmstadt, Germany, M. Frommherz, M. Elsaß, A. Scholz, M. Oechsner</p>	<p>Nanostructural WC-Co coatings by utilizing novel powder manufacturing route using water soluble raw materials</p> <p>M. Karhu* VTT Technical Research Centre of Finland, Finland, J. Lagerbom, K. Kaunisto, T. Suhonen, T. Lindroos, E. Turunen</p>	<p>Tribological behavior of flame-sprayed PTFE/Ni composite coatings</p> <p>X. Suo, Y. Xu, Y. Liu* Chinese Academy of Sciences, P.R. China, Y. Gong, J. Huang, H. Li</p>
12:20	<p>On the formation of dense vertically cracked yttria stabilized zirconia coatings: An investigation to relate the particle and deposition states with stress-micro-structure characteristics</p> <p>R. Chidambaram Seshadri, G. Dwivedi, G. Smith* Stony Brook University, USA, S. Sampath</p>	<p>Wire arc spray coatings for high temperature corrosion protection in waste incineration plants</p> <p>B. Allebrodt* DURUM Verschleiss-Schutz GmbH, Germany, F. Schreiber</p>	<p>Microscale adhesion strength evaluation of cold sprayed copper deposit</p> <p>Y. Ichikawa* Tohoku University, Japan, R. Tokoro, K. Ogawa</p>	<p>Factors affecting the HVAF WC coating quality on ID's less than 100mm</p> <p>M. Breitsameter, A. Verstak* Kermetico, USA, B. Gries</p>	<p>Hybrid powder-suspension Al₂O₃-ZrO₂ coatings by axial plasma spraying: Processing, characteristics & tribological behavior</p> <p>S. Joshi* University West, Sweden, S. Goel, S. Björklund, U. Wiklund</p>
12:40	<p>Lunch Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers Poster Session, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p>				
	<p>Aviation & Power Generation Industry III</p> <p>Session Chairs: E. Lugscheider, RWTH Aachen University, Germany M. Thoma, AERTEC S.p.A., Italy</p>	<p>Industrial Forum III</p> <p>Session Chairs: W. Krömmer, The Linde Group, Germany</p>	<p>Laser Cladding & PTA</p> <p>Session Chairs: F. Tiggemann, Flow Serve Flow Control GmbH, Germany P. Vuoristo, Tampere University of Technology, Finland</p>	<p>Pre- & Post-Treatment</p> <p>Session Chairs: B. Wielage, Chemnitz University of Technology, Germany S. Popa, University of Stuttgart, Germany</p>	<p>Equipment / Consumables & Powders, Wires, Suspensions II</p> <p>Session Chairs: J. Beczkowiak, H.C. Starck GmbH, Germany S. Siegmund, Nova Werke AG, Switzerland</p>
13:40	<p>An assessment of thermal spray technologies for deposition of environmental barrier coatings (EBC)</p> <p>E. Bakan* Forschungszentrum Jülich GmbH, Germany, G. Mauer, R. Vaßen</p>	<p>Advanced high pressure cold spray equipment, coatings and selected applications</p> <p>P. Richter* Impact Innovations GmbH, Germany</p>	<p>Iron based hardfacing alloys for applications exposed to abrasion</p> <p>B. Maroli* Höganäs AB, Sweden, S. Dizdar, S. Bengtsson</p>	<p>Wear-resistant iron-based coatings using a modified gas nitriding process as thermochemical post heat treatment</p> <p>P. Kutchmann, T. Lindner, K. Börner, U. Reese, T. Lampke, T. Grund* Chemnitz University of Technology, Germany</p>	<p>Development and application of binary suspensions in the ternary system Cr₂O₃-TiO₂-Al₂O₃ for SHVOF spraying</p> <p>A. Potthoff* Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany, R. Kratzsch, N. Kulissa, O. Kunze, M. Barbosa, F. Toma</p>
14:00	<p>Multilayered suspension plasma sprayed thermal barrier coatings for high temperature applications</p> <p>M. Gupta* University West, Sweden, N. Markocsan, R. Rocchio-Heller, J. Liu, B. Callen, X. Li, L. Östergren</p>	<p>A cascaded plasma gun technology based on a new innovative principle</p> <p>A. Schwenk* AMT AG, Switzerland</p>	<p>Advanced processes and system technology for high-performance laser cladding</p> <p>S. Nowotny* Fraunhofer Institute for Material and Beam Technology, Germany, H. Hillig, F. Kubisch, R. Willner, F. Toma, C. Leyens</p>	<p>Ultrasonic shot peening of high-velocity wire arc sprayed coatings</p> <p>C. Rupprecht* Technische Universität Berlin, Germany, G. Paczkowski, M. Schneeweiß, J. Glühmann, F. Lichtenthäler, M. Stark</p>	<p>Suspension plasma spray YSZ feedstocks and delivery system for improved spray distance and cost effective throughput</p> <p>B. Callen* Oerlikon Metco (Canada) Inc., Canada, R. Rocchio-Heller, J. Liu, O. Sabouni</p>

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
14:20	<p>Suspension plasma spray thermal barrier coatings high deposition rate and multi-layer structures</p> <p>N. Curry* Treibacher Industrie AG, Austria</p>	<p>New generation coating equipment supporting high quality standards</p> <p>J. Tewes, R. Enzl* Oerlikon Metco AG, Switzerland</p>	<p>High speed steel deposited by pulsed PTA frequency influence</p> <p>P. Rohan* Czech Technical University, Czech Republic, M. Boxanova, L. Zhang, T. Kramar, F. Lukac</p>	<p>Influence of the surface structure on the adhesion strength of ZnAl₂ coatings on thermal instable polymers printed by means fused layer modeling (FLM)</p> <p>C. Schaak* University of Dortmund, Germany, W. Tillmann, K. Bleicher</p>	<p>Ultrafine powders for low-power HVOF and HV-APS spraying</p> <p>A. Lizan, G. Matthäus* Thermico GmbH & Co. KG, Germany, V. Verlotzki, S. Janzen</p>
14:40	<p>Comparing the micro-structures and thermal conductivity values of YSZ TBCs manufactured via air plasma spray (APS), suspension plasma spray (SPS) and finely-dispersed-particle air plasma spray (FAPS)</p> <p>R. Lima* National Research Council of Canada, Canada, B. Guerreiro, B. Marple</p>	<p>From F4 to MC60 for an economic coating production</p> <p>H. Gruner* Medicoat AG, Switzerland</p>	<p>Alloyed carbides beyond WC as a new material platform for solving challenges in hardfacing</p> <p>P. Fiala* Oerlikon Metco (Canada) Inc., Canada, R. Hepp, A. Zikin</p>	<p>Microstructural evolution and mechanical property enhancement of a cold sprayed Cu-Zn alloy coating by post-spray friction stir processing</p> <p>C. Huang, C. Huang, W. Li, Y. Xie, M. Planche, H. Liao, G. Montavon, C. Verdy* University Bourgogne Franche-Comté, France</p>	<p>Design, development and characterization of advanced TBC powders and coatings</p> <p>B. Gallo* Ansaldo Energia, Italy A. Scrivani, C. Gualco, A. Bonadei</p>
15:00	<p>The influence of sintering on the microstructure and mechanical properties of suspension plasma sprayed YSZ thermal barrier coatings</p> <p>D. Zhou* Forschungszentrum Jülich GmbH, Germany, J. Malzbender, R. Vaßen</p>	<p>Equipment for thermal spraying of thermoplastic plastic powders</p> <p>A. Berg* Ibeda GmbH, Germany</p>	<p>Aptitude of different types of carbides for production of durable rough surfaces by laser dispersing</p> <p>A. Wank* GTV Verschleiss-Schutz GmbH, Germany, C. Schmengler, K. Müller-Roden, F. Beck, T. Schäfer</p>	<p>Understanding the infiltration behavior of sealers into thermally-sprayed coatings</p> <p>M. Knoch* RWTH Aachen University, Germany, K. Bobzin, M. Öte</p>	<p>Lamellar bonding enhanced NiCr-Mo coating with comparable erosion resistance to similar bulk by plasma-spraying shell-core-structured powders</p> <p>C. Li, J. Tian* Xi'an Jiaotong University, P.R. China, Y. Wang, C. Li, G. Yang</p>
15:20	<p>Coffee Break CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p>				
	<p>Aviation & Power Generation Industry IV</p> <p>Session Chairs: C. Moreau, Concordia University, Canada B. Hazel, Pratt & Whitney, USA</p>	<p>Industrial Forum IV</p> <p>Session Chairs: J. Beczkowiak, H.C. Starck GmbH, Germany</p>	<p>Wear & Corrosion Protection</p> <p>Session Chairs: H. Jungklaus, Voith Paper Rolls, Austria A. Melzer, Grillo-Werke AG, Germany</p>	<p>HVOF Spraying</p> <p>Session Chairs: C. Schaak, University of Dortmund, Germany G. Bloschies, Baumann Plasma Flame Technic AG, Switzerland</p>	<p>Cold Gas Spraying II</p> <p>Session Chairs: T. Klassen, Helmut-Schmidt-University of the Federal Armed Forces, Germany P. Richter, Impact Innovations GmbH, Germany</p>
15:40	<p>Characterization of bondcoat roughness profiles and effects on thermal barrier coating-lifetime</p> <p>G. Mauer* Forschungszentrum Jülich GmbH, Germany, K. Rauwald, P. Terberger, R. Mücke, D. Mack, R. Vaßen</p>	<p>The state of the art on the commercial implementation of downstream injection cold spray in the americas</p> <p>J. Villafuerte* Centerline Windsor Ltd., Canada</p>	<p>A comparative study of the wear performance of Stellite 6 hardfacing coatings applied by HVOF and GMAW hot wire cladding onto steel substrates</p> <p>C. Lima* UNIMEP - Methodist University of Piracicaba, Brazil, M. Xavier Belém, R. Libardi, F. Camargo</p>	<p>Substrate preparation by laser texturing for improved coating adhesion on AZ91D magnesium alloy</p> <p>G. Kaushal, S. Aulakh* Punjab Technical University, India</p>	<p>Cold sprayed coatings with adjusted curie temperatures for influencing magnetic susceptibility</p> <p>F. Trenkle, S. Hartmann, E. Schopp* obz innovation gmbh, Germany</p>

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
16:00	<p>Isothermal oxidation behavior of the HVOF-sprayed NiCoCrAlY coating: Effect of surface modification</p> <p>P. Zhang, E. Sadeghimeresht, R. Peng* Linköping University, Sweden, X. Li, S. Johansson, S. Joshi</p>	<p>eGUN TM ethanol fueled HVOF technology - update, latest results and success stories</p> <p>J. Jutte* Flame Spray Technologies BV, The Netherlands</p>	<p>Influence of the stand-off distance and spray angle on the coating formation and properties during three-cathode plasma spraying</p> <p>L. Zhao* RWTH Aachen University, Germany, K. Bobzin, M. Öte, T. Königstein, M. Oechsner, M. Siebers, G. Andersohn, J. Ellermeier</p>	<p>Effect of nozzle-length, powder feed-rate and spray distance on HIPOJET 2700 HVOF sprayed Cr₃C₂-NiCr coatings.</p> <p>S. Matthews* The University of Auckland, New Zealand, J. Woo, J. Daniel</p>	<p>Impact Energy as a unifying concept for comparison of kinetic and thermal spraying</p> <p>H. Assadi, S. Krebs, M. Watanabe, S. Kuroda, H. Katanoda, W. Krömmer, F. Gärtner* Helmut-Schmidt-University of the Federal Armed Forces, Germany, T. Klassen</p>
16:20	<p>Heat treatment of the thermally sprayed coating system NiCrSi-NiCoCrAlY-Al for repair brazing high pressure turbine blades</p> <p>M. Nicolaus* Leibniz University Hannover, Germany, K. Möhwald, M. Hans Jürgen</p>	<p>New applications based on new HVOF ID coating technology</p> <p>M. Breitsameter* H.C. Starck GmbH, Germany</p>	<p>Impact of the stand-off distance and spray angle on the corrosion, cavitation and erosion behavior of thermal spray layers deposited by the three-cathode spraying</p> <p>M. Siebers* Technical University Darmstadt, Germany, M. Oechsner, G. Andersohn, J. Ellermeier, K. Bobzin, L. Zhao, M. Öte, T. Königstein</p>	<p>New developments in HVOF spraying for internal diameter coatings</p> <p>J. Gutleber* Oerlikon Metco (US) Inc., USA, J. Colmenares-Angulo, R. Molz, J. He</p>	<p>Nozzle-internal particle velocity measurements and loading effect on particle acceleration inside a cold spray nozzle</p> <p>M. Meyer* The University of Dublin, Ireland, F. Caruso, R. Lupoi</p>
16:40	<p>The influence of the coating deposition process on the interdiffusion behavior between nickel-based superalloys and MCrAlY bond coats</p> <p>M. Elsass* Technical University Darmstadt, Germany, M. Frommherz, A. Scholz, M. Oechsner</p>	<p>HVOF system technology and coating centers for the treatment of ultra-fine powders</p> <p>A. Lizan* Thermico GmbH & Co. KG, Germany</p>	<p>Development of HVOF-sprayed TiC-FeCrAl coatings</p> <p>G. Bolelli, L. Lusvarghi, P. Puddu, R. Rigon, P. Sassatelli* University of Modena and Reggio Emilia, Italy</p>	<p>Thermal spraying of pure nickel via HVOF: Effect of fuel and shroud gas variation on particle in-flight characteristics and final coating properties</p> <p>C. Hambrock* voestalpine Stahl GmbH, Austria, C. Grill, G. Schimo, A. Hassel</p>	<p>An experimental approach to gain insight into cold gas spraying of ceramics</p> <p>H. Gutzmann* Helmut-Schmidt-University of the Federal Armed Forces, Germany, I. Irkhin, F. Gärtner, T. Klassen</p>
17:00	<p>Microstructural evolution of NiCoCrAlHfYSi and NiCoCrAlTaY coatings deposited by activated combustion high velocity air fuel spray</p> <p>Y. Han* Shanghai University, P.R. China, H. Chen, G. Yang, J. Fan, B. Liu, Y. Gao</p>	<p>Capability of various laser based surface treatment processes</p> <p>A. Wank* GTV Verschleißschutz GmbH, Germany</p>	<p>Wear and corrosion protection and control using tungsten carbide cobalt WC-12Co nano-structured material- technology overview</p> <p>N. Alharbi* Dublin City University, Ireland, A. Al Hamed, K. Benyounis, L. looney, J. Stokes</p>	<p>Novel HVOF torch for spraying internal diameters</p> <p>A. Burgess* Spraywex Technologies, Inc., Canada</p>	<p>Spray pattern and microstructure of copper coatings with the optimized rectangular cross-section nozzle by the computational fluid dynamics (CFD) in high-pressure cold spraying</p> <p>K. Sakaki* SHINSHU University, Japan, S. Arai</p>
17:20	End of ITSC 2017 Conference Program				
19:30	ITSC 2017 Networking Event with Awards Presentation, ESPRIT ARENA (Düsseldorf's Football Arena) TSS Hall of Fame TSS President's Award JTST Best Paper Award				

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
	Aviation & Power Generation Industry V Session Chairs: R. Lima, National Research Council of Canada, Canada N. Bagcivan, Schaeffler Technologies AG & Co. KG, Germany	Industrial Forum V Session Chairs: W. Krömmel, The Linde Group, Germany	Characterization & Testing Methods II Session Chairs: L. Lusvarghi, University of Modena and Reggio Emilia, Italy G. Mauer, Forschungszentrum Jülich GmbH, Germany	Metal Coatings Session Chairs: C. Verpoort, Ford-Werke GmbH Research & Innovation Center Aachen, Germany S. Costil, University Bourgogne Franche-Comté, France	Modeling & Simulation II Session Chairs: A. Dolatabadi, Concordia University, Canada A. Vardelle, University of Limoges, France
09:00	Low pressure and vacuum plasma processes for gas turbine engine applications R. Gansert, R. Herber, L. Guggenheim, S. Keller, A. Schwenck* AMT AG, Switzerland	Developments and investigations in DC-plasma generators and their possible fields of application S. Zimmermann* University of the Federal Armed Forces Munich, Germany, J. Schein, M. Szulc, J. Zierhut	Effect of HVOF thermal spray parameters on the deposition of NiCoCrAlYTa bond coats A. Mora García* Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Mexico, H. Ruiz Luna, C. Poblano Salas, U. Glatzel, L. Trapaga Martinez, J. Muñoz Saldaña	The effect of Mo substrate oxidation on splat formation C. Li, J. Wang* Xi'an Jiaotong University, China, C. Li, G. Yang	Metals cold-sprayed on ceramic substrates thanks to laser texturing surface pre-treatment R. Kromer, Y. Danlos, S. Costil, H. Liao* University Bourgogne Franche-Comté, France
09:20	Evolution of residual stress in the thermally grown oxide of PS-PVD TBCs during thermal cycling S. Tao* Shanghai Institute of Ceramics, Chinese Academy of Sciences, P.R. China, J. Yang, H. Zhao, C. Liu, Y. Zhuang, J. Ni, X. Zhong	Advanced materials for wear applications S. Zimmermann* Oerlikon Metco Europe GmbH, Germany	Investigation of wetting properties of ceramic reinforced metal matrix composites on varied roughness profiles S. Vijay* University West, Sweden, N. Markocsan, C. Lyphout, B. Roy	Residual stresses of metal coatings on polymers deposited with cold spray method A. Malachowska* Wroclaw University of Science and Technology, Poland, M. Winnicki, B. Kania, L. Rypina, M. Stachowicz	Twin wire arc torch with optimized flow parameters A. Farrokhpahan, L. Pershin, J. Mostaghimi* University of Toronto, Canada
09:40	Potential growth mechanism of columnar ceramic coating in plasma spray-physical vapor deposition W. He* Forschungszentrum Jülich GmbH, Germany, G. Mauer, R. Vaßen	Breakthrough-oriented co-creative industrial and research ecosystem Thermal Spray Center Finland TSCF U. Kanerva* Valmet Technologies Inc., Finland	The effect of components content in fire-proof coating for protection of metal surfaces against open flame in fire conditions is investigated R. Ismagilova* Technological Systems for Protective Coatings, Ltd., Russian Federation, L. Baldaev, S. Baldaev, M. Fedorova, I. Mazilin, Z. Nikolay	Characterization of vapors and droplets Al based coatings deposited by very low pressure plasma spray X. Fan, M. Planche, G. Darut* University Bourgogne Franche-Comté, France, N. Kang, G. Montavon	The effect of substrate roughness on the heat transfer coefficient of an impinging cold spray air jet A. Mahdavi* University of Alberta, Canada, A. McDonald
10:00	Ten year performance review of HVOF WC/Co in place of hexavalent chrome for USAF landing gear D. Webb* ES3, USA, R. Van der Straten, R. Montgomery, B. Martin	Tensile bond strength comparison of Ni5Al, Ni18.5Cr6Al and inconel 718 thermally sprayed onto existing coatings of similar composition with respect to thermal spray process and substrate type E. Schellenberg, J. Doesburg* MTU Maintenance Berlin-Brandenburg GmbH, Germany	Influence of alloying elements on properties of arc sprayed Fe-C-Cr-B-Al Ycoatings from cored wires Y. Korobov* Ural Federal University, Russian Federation, V. Shumiakov, M. Filipov, A. Makarov, I. Malygina, S. Nevezhin, R. Savrai, N. Soboleva, G. Tkachuk	Detonation spraying of refractory metals D. Dudina, V. Ulianitsky* Russian Academy of Science, Russian Federation, I. Batraev, I. Smurov	Open FOAM modeling of particle heating and acceleration in cold spraying K. Leitz* Plansee SE, Austria, M. O'Sullivan, A. Plankensteiner, H. Kestler, L. Sigl

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
10:20	<p>Tribological performance of NiCrAlYSi-BaF₂/CaF₂-polyester coating deposited by air plasma spray</p> <p>Q. Li* Beijing Aeronautical Manufacturing Technology Research Institute, P.R. China, S. Li</p>		<p>Energy efficient production of thermally-sprayed coatings through the use of modified twin wire arc spraying processes - final results of a bavarian research foundation funded project</p> <p>A. Atzberger* University of the Federal Armed Forces Munich, Germany, K. Hartz-Behrend, J. Schein, W. Mayr, M. Szulc, J. Zierhut, W. Krömmer, M. Aumiller, E. Abler</p>	<p>Deposition of PVD thin films on thermal barrier coatings for a wear resistant thermal insulation</p> <p>M. Dildrop* University of Dortmund, Germany, W. Tillmann, M. Dildrop</p>	<p>Processing of sub-micron sized ceramic particles at room temperature by aerosol deposition (AD) process</p> <p>T. Mishra* Forschungszentrum Jülich GmbH, Germany, R. Mücke, R. Singh, J. Malzbender, R. Vaßen</p>
10:40	<p>Coffee Break CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p>				
	<p>Power Generation – Steam</p> <p>Session Chairs: M. Nestler, Oerlikon Metco (US) Inc., USA S. Tao, SICCAS, P.R. China</p>	<p>Electronics & Sensoric</p> <p>Session Chairs: M. Knoch, RWTH Aachen University, Germany P. Sokolowski, Wroclaw University of Technology, Poland</p>	<p>Corrosion Protection</p> <p>Session Chairs: M. Jeandin, MINES ParisTec, France J. Jutte, Flame Spray Technologies BV, The Netherlands</p>	<p>Suspension Spraying III</p> <p>Session Chairs: C. Li, Xi'an Jiaotong University, P.R. China J. Gutleber, Oerlikon Metco (US) Inc., USA</p>	<p>Cold Gas Spraying III</p> <p>Session Chairs: J. Villfuerte, Centerline Windsor Ltd., USA S. Hartmann, obz innovation gmbh, Germany</p>
11:00	<p>The high temperature wear and oxidation behavior of CrC-based HVOF coatings</p> <p>S. Houdkova* VZU Plzen s.r.o., Czech Republic, Z. Cesanek, F. Lukac, E. Smazalova</p>	<p>The evolution of thermal spray as additive manufacturing technology of TEGs: How far can we go?</p> <p>M. Barbosa* Fraunhofer Institute for Material and Beam Technology, Germany, M. Barbosa, F. Toma, C. Leyens</p>	<p>In-flight particle temperature and velocity effects on the corrosion resistance of HVOF-sprayed stainless steel coatings in artificial sea water.</p> <p>A. Nascimento* Concordia University, Canada, F. Ben Ettouil, C. Moreau, S. Gateman, J. Mauzeroll, S. Savoie, R. Lacasse, R. Schulz</p>	<p>Suspension plasma sprayed YAG coatings: Formation and development of the phase composition after heat treatment.</p> <p>J. Medricky* Institute of Plasma Physics CAS, Czech Republic, R. Musalek, F. Lukac, J. Kotlan, T. Tesar, T. Chraska</p>	<p>Low pressure spray of stainless steel based composite coatings, particle strain localization process</p> <p>V. Leshchynsky* University of Windsor, Canada, R. Maev, E. Strumban, D. Dzhurinsky, E. Maeva</p>
11:20	<p>Amorphous thermal spray coatings to extend life of boiler tubes</p> <p>E. Vogli* Liquid Metal Group Holdings, USA, P. Kim, J. Kang, R. Salas</p>	<p>Correlation of the process-structure-thermoelectric relationship of thermal spray synthesized sub-stoichiometry TiO₂-x</p> <p>H. Lee* Stony Brook University, USA, S. Sampath, R. Chidambaram-Seshadri, S. Han</p>	<p>Enhanced corrosion resistance of magnesium alloys by transplantation of thermally sprayed coatings</p> <p>M. Rodriguez Diaz* Leibniz University Hannover, Germany, P. Knödler, M. Otten, K. Möhwald, H. Maier, D. Freiburg, P. Kersting, D. Biermann</p>	<p>High velocity precursor and suspension flame spraying of metal coatings</p> <p>P. Krieg* University of Stuttgart, Germany, A. Killinger, J. Luth, M. Winkelmann, F. Trenkle, R. Gadow</p>	<p>Thermal spraying of thin metallic coatings</p> <p>F. Trenkle, M. Winkelmann, R. Köhler* obz innovation gmbh, Germany, S. Hartmann, J. Luth</p>
11:40	<p>Effect of secondary carbide precipitation on chlorine high temperature corrosion of HVOF and HVAF sprayed Cr₃C₂-NiCrMoNb coatings</p> <p>D. Fantozzi* Tampere University of Technology, Finland, V. Matikainen, M. Uusitalo, H. Koivuluoto, P. Vuoristo</p>	<p>Demonstrating usability of thermally sprayed coatings for mechatronics and power electronics applications</p> <p>J. Luth* obz innovation gmbh, Germany, R. Trache, F. Toma, S. Hartmann, F. Trenkle</p>	<p>Fe-based powder alloys deposited by HVOF and HVAF spraying - a salt spray test ranking</p> <p>S. Dizdar* Höganäs AB, Sweden</p>	<p>Comparison of sliding wear performance of thermally sprayed WC-Co coatings</p> <p>R. Ahmed, O. Ali* Heriot-Watt University, Great Britain, H. Alawadhi, M. Shameer, N. Faisal, N. Al-Anazi, M. Goosen</p>	<p>Development of high-performance cold-sprayed nano-structured Ni-20Cr coatings for harsh environment of power plant boilers</p> <p>M. Kumar* CGC College of Engineering Landran, India, H. Singh, N. Singh, N. Chavan, S. Kumar, S. Joshi</p>

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
12:00	<p>Post-plasma-spraying gas nitriding of some metallic coatings on a Fe-based superalloy and their high temperature corrosion behavior</p> <p>V. Chawla* Punjab Technical University, India</p>	<p>Transfer of wire arc sprayed metal coatings onto plastics parts</p> <p>X. Liao* RWTH Aachen University, Germany, K. Bobzin, M. Öte, M. Knoch, C. Hopmann, P. Ochotta, P. Ochotta</p>	<p>Tribological properties of high velocity suspension flame sprayed (HVSFS) ceramic coatings</p> <p>A. Förg* University of Stuttgart, Germany, A. Killinger, G. Konrath, A. Kailer, R. Gadow</p>	<p>Suspension high velocity oxy fuel spraying of alumina and graphene nanoplatelet (GNP) composites for extreme wear</p> <p>T. Hussain* University of Nottingham, Great Britain, J. Murray, F. Xu</p>	<p>Systematic tuning of cold spray parameters for achieving bulk properties</p> <p>T. Klassen* Helmut-Schmidt-University of the Federal Armed Forces, Germany, F. Gärtner, H. Assadi, J. Hirschbeck</p>
12:20	<p>HVAF spraying for biomass boiler applications: Oxidation behavior of Ni-based coatings in moisture-laden environment</p> <p>E. Sadeghimeresh* University West, Sweden, J. Eklund, J. Phother Simon, J. Liske, N. Markocsan, S. Joshi</p>	<p>Liquid flame spray fabrication of WO₃-graphene nanocomposite coatings for gas-sensing applications</p> <p>H. Li* Chinese Academy of Sciences, P.R. China, Y. Liu, J. Huang, X. Suo</p>	<p>Comparative study of the corrosion and cavitation resistance of HVOF and HVAF FeCrMnNiSi and FeCrMnNiSiB coatings</p> <p>L. Silveira* Universidade Tecnológica Federal do Paraná, Brazil, A. Geraldo Marena Pukasiewicz, A. José Zara, P. Nylén, S. Björklund</p>	<p>Plasma spraying of industrial and home-made YSZ suspensions - A comparison</p> <p>C. Moreau* Concordia University, Canada, A. Dolatabadi, F. Tarasi</p>	<p>Effect of spraying parameters on the bonding strength of detonation sprayed WC-Ni coatings</p> <p>S. Baldaev* Technological Systems for Protective Coatings, Ltd., Russian Federation, L. Baldaev, B. Khamitsev</p>
12:40	<p>Lunch Break, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers Poster Session, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers</p>				
	<p>Aviation & Power Generation Industry VI</p> <p>Session Chairs: M. Erne, MTU Maintenance Hannover GmbH, Germany L. Hagen, University of Dortmund, Germany</p>	<p>Additive Manufacturing</p> <p>Session Chairs: S. Joshi, University West, Sweden L. Zhao, RWTH Aachen University, Germany</p>	<p>Amorphous Coatings</p> <p>Session Chairs: S. Zimmermann, Oerlikon Metco Europe GmbH, Germany T. Königstein, RWTH Aachen University, Germany</p>	<p>Plasma Spraying II</p> <p>Session Chairs: J. Zierhut, Zierhut Messtechnik GmbH, Germany T. Grund, Chemnitz University of Technology, Germany</p>	<p>Cold Gas Spraying IV</p> <p>Session Chairs: F. Gärtner, Helmut-Schmidt-University of the Federal Armed Forces, Germany S. Dosta, University of Barcelona, Spain</p>
13:40	<p>Effect of the microstructural design of plasma-sprayed thermal barrier coatings on its thermal cycling behavior</p> <p>C. Li* Xi'an Jiaotong University, P.R. China, T. Liu, S. Yao, C. Li, G. Yang</p>	<p>Layer-by-layer buildup strategy for cold spray additive manufacturing</p> <p>P. Vo* National Research Council of Canada, Canada, M. Martin</p>	<p>Microstructure and wear resistance of Fe-based amorphous metallic coatings by thermal spray on aluminum alloy</p> <p>H. Yao* Beijing University of Technology, P.R. China, Z. Zhou, L. Wang, Z. Qian, G. Wang, D. He</p>	<p>Influence of Ti particle oxidation during APS process on the microstructure of laser remelted NiTi coatings</p> <p>Y. Wang* University Bourgogne Franche-Comté, France, J. Liu, G. Darut, T. Poirier, J. Stella, H. Liao, M. Planche</p>	<p>Microstructure and tribological behaviours of WC-Co-Ni composite coating fabricated via cold spray</p> <p>S. Yin, R. Lupoi* The University of Dublin, Ireland</p>
14:00	<p>A high bondstrength interlayer for metal coating on polymer composites fabricated by super-detonation spray</p> <p>C. Wang* BIAM, P.R. China, Y. Cui, J. Gao, H. Tian</p>	<p>Hybrid aerosol deposition (HAD) process towards delight design</p> <p>K. Shinoda* National Institute of Advanced Industrial Science and Technology (AIST), Japan, T. Saeki, J. Akedo</p>	<p>Amorphous steel coatings deposited by HVOF and cold gas spray processes</p> <p>F. Marra, M. Tului* Centro Sviluppo Materiali S.p.A., Italy, A. Bezzon, A. Marino, S. Matera, G. Pulci</p>	<p>On the validity of continuum computational fluid dynamics approach in very low pressure plasma spray conditions</p> <p>D. Ivchenko* University of Limoges, France, T. Zhang, G. Mariaux, A. Vardelle, C. Li, S. Goutier, T. Itina</p>	<p>Solution heat treatment of gas atomized aluminium alloy powders: Microstructural changes and resultant mechanical properties</p> <p>A. Sabard* University of Nottingham, Great Britain, H. Lovelock, P. McNutt, D. Harvey, T. Hussain</p>

Time	Hall 12	Hall 14	Hall 26	Hall 27	Hall 28
14:20	<p>The behavior of modified overlay Sol-Gel Al₂O₃ layer on TBC System H. Abdeldaim* Ain Shams University, Egypt, N. Elmahallawy</p>	<p>Experimental and numerical study of the influence of powder characteristics in the cold spraying of Al-based alloys for additive manufacturing using low-pressure, medium-pressure and high-pressure cold spray facilities M. Bunel* MINES ParisTech, France, F. Delloro, F. Borit, M. Jeandin, A. Bacciochini, E. Meillot, K. Roche, G. Surdon</p>	<p>Microstructural studies of Fe-based metallic glass coatings by cold gas spray process A. Khalid* University of New South Wales, Australia, P. Munroe</p>	<p>Influence of porosity of 8YSZ thermal barrier coatings produced by atmospheric plasma spraying on CMAS and volcanic ash infiltration behavior M. Rivera-Gil* Centro de Investigación y de Estudios Avanzados del Instituto Politecnico National, Mexico, R. Naraparaju , U. Schulz , J. Muñoz Saldaña</p>	<p>Residual stress and mechanical properties of cold-sprayed inconel 718 for repair of aero engine components R. Singh* Forschungszentrum Jülich GmbH, Germany, S. Schrüfer, S. Wilson, R. Vaßen</p>
14:40	<p>Deposition mechanism of quasi-columnar YSZ coatings during plasma spray physical vapor deposition L. Gao* Beijing General Research Institute of Mining and Metallurgy, P.R. China, X. Ji, X. Lu, J. Shen, D. Zhang, Y. Yu</p>	<p>Functional WC cemented carbide by the direct selective laser forming J. Yamada* FUJIMI Incorporated, Japan, H. Ibe, K. Sato, N. Kato</p>	<p>Tribological performances of Al₂O₃/YAG amorphous ceramic coating fabricated by atmospheric plasma spraying K. Yang* Shanghai Institute of Ceramics, Chinese Academy of Sciences, P.R. China, J. Rong, C. Liu, Y. Zhuang, S. Tao, C. Ding</p>	<p>Alloying and deposition of nickel and aluminum by LPPS and VLPPS to be applied as electrodes for electrolysis D. Marciano* Forschungszentrum Jülich GmbH, Germany, G. Mauer, R. Vaßen</p>	<p>Fatigue behavior of ZK60 Mg alloy coated with Al alloys coatings via in-situ shot-peening assisted cold spray C. Li, Y. Wei* Xi'an Jiaotong University, P.R. China, X. Luo, C. Li, C. Li</p>
15:00	<p>Influence of the interface healing between the splashed particles and underlying bond coating on the cyclic oxidation behavior of LPPS MCrAlY bond coats B. Zhang* Xi'an Jiaotong University, P.R. China, G. Yang, C. Li, C. Li</p>	<p>Large size Fe-based bulk metallic glass composite prepared by additive manufacturing via HVOF thermal spraying C. Zhang, W. Wang, L. Liu* Huazhong University of Science and Technology, P.R. China</p>	<p>A review on the improvement of wear, impact and corrosion resistance of the Iron based amorphous coatings by the addition of alumina particles M. Yasir* Institute of Space & Technology, Pakistan, L. Lin, Z. Cheng</p>	<p>Fabrication of boron carbide coating by atmospheric inductively coupled plasma spraying L. Li* Chinese Academy of Sciences, P.R. China, P. Zhao, Q. Guo, Q. Zhou, J. Cheng, Y. Meng</p>	<p>Simulation of effect of interface evolution on the bonding during the high-velocity particle impacts in cold spray by using Eulerian approach C. Li, Y. Li* Xi'an Jiaotong University, P.R. China, X. Luo, C. Li, C. Li</p>
15:20	End of ITSC 2017 Conference Program				

CONFERENCE COMMITTEES AND ENDORSING SPONSORS

General Chairs

W. Krömmer, The Linde Group, Primarily Responsible (DE)
D. G. Puerta, Element Materials Technology (US)

Technical Chairs

K. Bobzin, RWTH Aachen University, Primarily Responsible (DE)
A. McDonald, University of Alberta (CA)

ASM/TSS and DVS thank K. Bobzin, M. Öte, RWTH Aachen University, and W. Krömmer, The Linde Group, for their excellent support!



DVS Representatives

A. Bachmann	Oerlikon Metco AG (Switzerland) (CH)
J. Beczkowiak	H.C. Starck GmbH (DE)
K. Bobzin	RWTH Aachen University (DE)
B. Brommer	DVS – German Welding Society (DE)
F. Ernst	KS HUAYU AluTech GmbH (DE)
F. Gärtner	Helmut Schmidt University (DE)
T. Grund	Chemnitz University of Technology (DE)
S. Hartmann	obz innovation GmbH (DE)
X. Huang	TSCC Thermal Spray Committee of Chinese Surface Engineering Association (CN)
J. Jerzembeck	DVS – German Welding Society (DE)
T. Klassen	Helmut Schmidt University (DE)
W. Krömmer	The Linde Group (DE)
T. Lampke	Chemnitz University of Technology (DE)
T. Linke	Nemak Dillingen GmbH (DE)
E. Lugscheider	RWTH Aachen University (DE)
H. Maier	Leibniz University (DE)
G. Mauer	Forschungszentrum Jülich GmbH (DE)
K. Möhwald	Leibniz University (DE)
K. Nassenstein	GTV Verschleißschutz GmbH (DE)
M. Öte	RWTH Aachen University (DE)
C. Rupprecht	Technische Universität Berlin (DE)
F. Schreiber	DURUM Verschleiss-Schutz GmbH (DE)
W. Tillmann	TU Dortmund University (DE)
R. Vaßen	Forschungszentrum Jülich GmbH (DE)
C. Wasserman	TeroLab Surface Group SA (CH)
S. Weinreich	DVS – German Welding Society (DE)
B. Wielage	Chemnitz University of Technology (DE)



ASM/TSS Representatives

C. Dambra	Oerlikon Metco (US)
M. Fukumoto	Toyohashi University of Technology (JP)
R. Gansert	Advanced Materials and Technology Services Incorporated (US)
A. Gupta	University of Central Florida (US)
D. Hayden	Hayden Corporation (US)
E. Irrisou	National Research Council Canada (CA)
C. Kay	ASB Industries (US)
H. Koivuluoto	Tampere University of Technology (FI)
K. Laul	Chromalloy (US)
J. G. Legoux	National Research Council Canada (CA)
R. Lima	National Research Council Canada (CA)
A. McDonald	University of Alberta (CA)
R. Miller	Eutectic Corporation (US)
C. Moreau	Concordia University (CA)
K. Ogawa	Tohoku University (JP)
L. Pouliot	Tecnar Automation Ltd. (CA)
D. Puerta	Element (US)
J. Rudd	General Electric (US)
P. Ruggiero	Curtiss-Wright (US)
K. Shinoda	National Institute of Advanced Industrial Science (JP)
G. Smith	Stony Brook University (US)
K. Sridharan	University of Wisconsin-Madison (US)
M. VandenBergh	VandenBergh & Associates Inc. (US)
J. Veilleux	Université de Sherbrooke (CA)
J. Villafuerte	Centerline Windsor Limited (CA)
D. Williams	The Ohio State University (US)

Endorsing Sponsors

Asian Surface Technologies, PTE. Ltd (SG) · BIL Belgisch Instituut voor Lastetechniek (BE) · CEREM/CEA (FR) · Commission of the European Community (BE) · DGO - Deutsche Gesellschaft für Galvano- und Oberflächentechnik e. V. (DE) · DGM - Deutsche Gesellschaft für Materialkunde e. V. (DE) · DKG - Deutsche Keramische Gesellschaft e. V. (DE) · DVS - Research Association (DE) · GTS - Gemeinschaft Thermisches Spritzen e.V. (DE) · International Thermal Spray Association (US) · IOT - Surface Engineering Institute RWTH Aachen University (DE) · Japan Thermal Sprayers Association (JP) · JTSS - Japanese Thermal Spray Society (JP) · TSSEA - Thermal Spraying & Surface Engineering Association (GB) · TWI The Welding Institute (GB) · VDI Verein Deutscher Ingenieure (DE) · VTS – Vereniging voor Thermische Spuittechnieken (NL) · ZMB – Zentrum Metallische Bauweisen e.V. RWTH Aachen University (DE)



POSTER SESSION / INDUSTRIAL FORUM

Poster Session

During the ITSC 2017 event a Poster Session will be held.

Poster Session during the Exhibitor Reception

Wednesday, June 7, 2017, 18:00, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

The poster presenters will be available for discussion in the Foyers scheduled as follows:

Wednesday, June 7, 2017, 12:30 – 14:00 (18:00 during the Exhibitor Reception)

Thursday, June 8, 2017, 12:40 – 13:40

Friday, June 9, 2017, 12:40 – 13:40

In addition further contacts with the authors can be arranged.

Industrial Forum

The Industrial Forum will take part during ITSC 2017 in the CCD Congress Center Düsseldorf, Stadthalle, Hall 14. Invited companies will present on industry related topics and products during conference and exposition hours.

All presentations are given in English and are limited to 20 minutes including question & answer (Q&A). Beside the ITSC conference registrants, also all Expo only attendees are invited to visit the Industrial Forum.

Forum Hours:

Thursday, June 8, 2017, 09:00 – 17:00

Friday, June 9, 2017, 09:00 – 10:20

Applications – Aviation Industry

- S/TEM investigations of thermal barrier coatings based on $Gd_2Zr_2O_7$ zirconate**
G. Moskal*
Silesian University of Technology, Poland
- Non line of sight chrome alternatives for high strength steel substrates**
D. Webb*
ES3, USA, R. Van der Straten, D. Frederick, B. Martin, C. Sauer, C. Dambra
- Effect of surface roughness on the oxidation resistance of SiC coatings on C/SiC composites**
F. Jia*
Beijing General Research Institute of Mining and Metallurgy, P.R. China, X. Ji, H. Peng, J. Shen, D. Zhang, Y. Yu
- Diode laser modified thermal barrier coating erosion resistance**
N. Zaitsev*
Technological Systems for Protective Coatings, Ltd., Russian Federation, I. Mazilin, L. Baldaev, V. Ovchinnikov
- Coupled thermo-mechanical analysis of the ceramic thermal barrier coatings of 8YSZ $Gd_2Zr_2O_7$ and $Gd_2Zr_2O_7/8YSZ$ double ceramic layer type**
G. Moskal*
Silesian University of Technology, Poland, G. Kokot, A. Jasik
- A high bondstrength interlayer for metal coating on polymer composites fabricated by super-detonation spray**
C. Wang*
BIAM, P.R. China, Y. Cui, J. Gao, H. Tian
- Corrosion performance of $WC_{10}Co_4Cr$ coatings on high strength steel**
W. Yang*
Beijing Aeronautical Manufacturing Technology Research Institute, P.R. China

Applications – Maritim Industry

- Cavitation-erosion resistance of HVAF-sprayed Fe-based metal coatings for marine applications**
C. Lyphout*
University West, Sweden, S. Dizdar

- Comparison of the corrosion resistance of different thermally sprayed coatings in the sweetwater and marine environment**
M. Fedorova*
Technological Systems for Protective Coatings, Ltd., Russian Federation, L. Baldaev, S. Baldaev, N. Baldaev, A. Akhmetgareeva, V. Martyanova

Applications – Medical Industry

- A review of utilization of niobium and tantalum for the enhancement in corrosion resistance and biocompatibility of bio-implants**
G. Singh*
Punjab Technical University, India, B. Singh, B. Singh Sidhu
- Hydroxyapatite nanostructured coatings on anodized magnesium AZ31 alloy by HVOF and flame spraying**
H. Salimijazi*
Isfahan University of Technology, Iran, M. Mardali, F. Karimzadeh, R. Soltani

Applications – Metals Processing

- Cold gas dynamic spraying: a novel repair method for laser-based additive manufactured component**
N. Kang, H. Liao*
University Bourgogne Franche-Comté, France, C. Coddet
- High velocity atmospheric plasma sprayer**
Y. Chivel*
MerPhotonics, France
- New approach in thermal spraying - laser thermal spraying**
Y. Chivel*
MerPhotonics, France
- An alternative die coating method on low pressure die casting mould by thermal spraying**
E. Altuncu*
Sakarya University, Turkey, Ö. ÇE, F. Ustel
- Abrasive wear resistance of NiCrBSi composite claddings with different type of reinforcement**
S. Nevezhin*
Technological Systems for Protective Coatings, Ltd., Russian Federation, V. Krivopusk, A. Gerasimov, S. Merchev, S. Baldaev

Applications – Power Generation - Fuel Cells & Solar

17. Characterization of plasma-sprayed $\text{La}_{0.3}\text{Sr}_{0.7}\text{TiO}_3$ - for high performance SOFC interconnect

C. Li, X. Chen*

Xi'an Jiaotong University, P.R. China, S. Zhang, C. Li, G. Yang, C. Li

18. Plasma processing of AB2 alloys negative electrode material for NiMH batteries

T. Öztürk *

Middle East Technical University, Turkey, E. Onur Ahin, C. Eyövgce

Applications – Power Generation - Industrial Gas Turbines

19. Chemical transformation behavior in the metal/ceramic interface of TBC systems containing PVD-Al interlayer

I. Ali*

Chemnitz University of Technology, Germany, T. Grund, T. Lampke

20. Strain-induced bonding ratio-dependent structural changes in thermal barrier coatings

G. Li*

Xi'an Jiaotong University, P.R. China, G. Yang, C. Li, C. Li

21. Evaluation of crack growth and mechanical property of multilayer coating system: a modified deposition process

P. Song*

Kunming University of Science and Technology, P.R. China, H. Luo, X. Xiong, J. Zang, C. Li, K. Chen, J. Lu, G. Liu

22. Thermal gradient cyclic lifetime of $\text{La}_2\text{Zr}_2\text{O}_7/\text{YSZ}$ double ceramic layer thermal barrier coatings with equivalent thermal insulation performance

B. Cheng, N. Yang, M. Zhang, Y. Zhang, G. Yang*

Xi'an Jiaotong University, China, C. Li, C. Li

23. Influence of the oxygen partial pressure of the oxidation atmosphere on the growth behavior of TGO on the LPPS MCrAlY bond coats

B. Zhang*

Xi'an Jiaotong University, P.R. China, G. Yang, C. Li, C. Li

24. Substrate constraint induced enhanced anisotropic healing kinetics of 2D Pores in plasma-sprayed thermal barrier coatings during thermal exposure

G. Li*

Xi'an Jiaotong University, P.R. China, G. Yang, C. Li, C. Li

25. Effect of spray parameters on plasma characteristic and microstructure of YSZ coatings deposited by very low pressure plasma spray

L. Zhu*

China First Heavy Industries, Tianjin Heavy Equipment Engineering Co., Ltd., P.R. China, N. Zhang, R. Bolot, H. Liao, C. Coddet

Applications – Power Generation - Steam

26. Microstructural and mechanical investigations of dissimilar metal joints of T91 and T22 ferritic steels

R. Mittal*

Punjab Technical University, India, B. Sidhu

27. Thermal gradient cyclic lifetime of DVC and lamellar thermal barrier coatings with equivalent thermal insulation performance

B. Cheng*

Xi'an Jiaotong University, P.R. China, G. Yang, C. Li, C. Li, G. Zhang, C. Li, C. Li, .

28. Heat treatment of cold spray copper on the weld closure zone of used nuclear fuel containers

J. Giallonardo*

Nuclear Waste Management Organization, Canada, J. Legoux, D. Poirier, C. Hoang, P. Keech, D. Doyle

Equipment / Consumables – Industrial Automation & Robotics

29. Improved sprayability on thermal spray coatings with different powder feeders

F. Bozza*

Turbocoating S.p.a., Italy, N. Antolotti, L. Tagliaferri, S. Bursich, E. Ghidini, L. Coppelletti

Equipment / Consumables – Powders, Wires, Suspensions

30. Preliminary studies of cold spraying sol-gel derived powders

A. Malachowska*

Wroclaw University of Science and Technology, Poland, M. Winnicki, A. Baszczuk, M. Jasiorski

Equipment / Consumables – Process Diagnostics, Sensors & Controls

31. **New expansion of mobile particle shape imaging and comparative measurements with other diagnostics**
S. Zimmermann*
University of the Federal Armed Forces Munich, Germany,
C. Franetzky, J. Schein

Properties – Ceramics Coatings

32. **Effect of bondcoat and substrate chemistry on oxide growth and lifetime in suspension plasma sprayed thermal barrier coatings**
M. Gupta*
University West, Sweden, N. Markocsan, X. Li, B. Kjellman
33. **Microstructural analysis of solution precursor plasma sprayed hydroxyapatite coatings using EBSD technique**
R. Candidato*
University of Limoges, France, U. Klement, Y. Yao, L. Pawlowski, D. Dietrich, P. Sokolowski
34. **YSZ/Al₂O₃/SiC composite coatings obtained by suspension plasma spraying**
E. Cañas, M. Vicent, M. Orts, R. Moreno, E. Sánchez*
University Jaume I, Spain
35. **Micro structure and characterization of hydroxyapatite coating (HAP) by rod flame spray process**
R. Upadhyaya*
Birla Institute of Technology & Science, India, S. Shrivastava, A. Modi, S. Modi
36. **Study on delta plasma spray process of nano YSZ coating with dense vertically cracked**
X. Lu*
Beijing General Research Institute of Mining & Metallurgy, P.R. China, Y. Yu, J. Shen, X. Ji, W. Hou
37. **Erosion behavior of plasma-sprayed ceramic coatings with different lamellar bonding controlled by deposition temperature based on the critical bonding temperature concept**
C. Li, S. Yao*
Xi'an Jiaotong University, P.R. China, T. Liu, C. Li, G. Yang
38. **Study of the first stages of HAP coatings deposition by HVOF thermal spray**
J. Hincapie-Bedoya*
Centro de Investigación y de Estudios Avanzados del Instituto Politecnico Nacional, México, A. Sanchez-Rodríguez, J. Hermann-Muñoz, A. Giraldo-Betancur, J. Corona-Castuera, C. Poblano-Salas, J. Muñoz-Saldaña, D. Espinosa
39. **Examination of lamellar pores between thermally sprayed splats using white light interferometry**
L. Chen*
Xi'an Jiaotong University, P.R. China, Y. Zhang, G. Yang, C. Li, C. Li
40. **Investigation of interfacial microstructures between LZ splats and YSZ substrate by HR-TEM**
L. Chen, F. Young*
Xi'an Jiaotong University, P.R. China, G. Yang, C. Li, C. Li
41. **Morphology and durability of Sm₂Zr₂O₇+8YSZ TBC systems during oxidation test at temperature 1100°C**
S. Jucha*
Silesian University of Technology, Poland, G. Moskal
42. **Development of methodology of cohesive strength evaluation of thermally sprayed coatings**
J. Schubert*
VZU Plzen s.r.o., Czech Republic, Z. Cesanek
43. **Multi-layer ceramic coatings applied by thermal spraying process on refractory bricks for high temperature applications**
D. Franco*
University of Limoges, France, F. Vargas Galvis, M. Lopez Gomez, H. Ageorges
44. **Wear characteristics of Al₂O₃-ZrO₂-ceramic coatings deposited by APS and HVOF -processes**
J. Kiilakoski*
Tampere University of Technology, Finland, H. Koivuluoto, P. Vuoristo
45. **Reactive plasma sprayed nitride coatings with improved conductivity**
M. Shahien*
National Institute of Advanced Industrial Science and Technology, Japan, M. Yamada, M. Fukumoto

Properties – Corrosion Protection

46. **Corrosion behavior of HVAF-sprayed Bi-layer coatings; Effect of intermediate layer s microstructure and chemical composition**
E. Sadeghimeresht*
University West, Sweden, N. Markocsan, P. Nylén
47. **KCl-induced corrosion behavior of HVAF-sprayed Ni-based coatings**
E. Sadeghimeresht*
University West, Sweden, R. Jafari, T. Shahrabi Farahani, N. Markocsan, S. Joshi
48. **Antifouling coatings obtained by thermal spray techniques**
N. Cinca, A. Cabrer, A. Concustell, I. Garcia Cano*
University of Barcelona , Spain, S. Dosta, J. Guilemany
49. **Comparison of corrosion resistance and oxides morphology of NiCrAlY plasma sprayed coating and sintered alloy**
D. Niemiec*
Silesian University of Technology, Poland, G. Moskal

Properties – Metal Coatings

50. **Microstructure and properties of Fe-based amorphous coatings by cold spray and HVOF**
H. Kim*
RIST, Republic of Korea, S. Yoon, J. Kim
51. **The influence of deposition temperature and thermal conductivity of substrate on splat interface bonding formation during plasma spraying of NiCr**
C. Li, J. Wang*
Xi'an Jiaotong University, P.R. China, C. Li, G. Yang
52. **Post-spraying annealing of aluminum-nickel composite cold sprayed coatings by various methods**
M. Winnicki*
Wroclaw University of Science and Technology, Poland, A. Baszczuk, M. Jasiorski, A. MaBachowska, M. Korzeniowski
53. **Performance of CoCrAlSiY Alloy Powder**
J. Liu*
Northeastern University, P.R. China

Properties – Polymer Coatings

54. **Liquid flame spray construction of polyimide-copper layers for marine antifouling applications**
H. Li*
Chinese Academy of Sciences, P.R. China, Y. Liu, Y. Gong, X. Suo

Properties – Pre- & Post-Treatment

55. **Coating of vulcanized fibre - pre-treatment**
A. Brinkhoff*
University of Dortmund, Germany, W. Tillmann, I. Baumann, K. Schmidt, R. Zielke
56. **Influence of coating properties and a mechanical post-treatment step on the corrosion resistance of sealed thermal sprayed coatings**
T. Lindner*
Chemnitz University of Technology, Germany, M. Löbel, T. Lampke, C. Pluta
57. **Design of experiment study of the relationship between roughness and laser processing conditions of both blended and singular nano-structured WC-12Co HVOF thermal spraying coating**
N. Alharbi*
Dublin City University, Ireland, K. Benyounis, L. Looney, J. Stokes
58. **The influence of post treatment presence on high temperature corrosion resistance of YSZ thermal barrier coatings**
A. Akhmetgareeva*
Technological Systems for Protective Coatings, Ltd., Russian Federation, S. Baldaev, I. Mazilin, L. Baldaev, T. Il inkova

Properties – Properties Characterization & Testing Methods

59. **Investigation of microstructure and mechanical properties of alumina-titania coatings by flexicord flame spraying**
E. Altuncu*
Sakarya University, Turkey, F. Üstel
60. **Isothermal and cyclic oxidation of CGS and HVOF iron aluminide coatings**
N. Cinca*
University of Barcelona, Spain, R. Pflumm, M. Rudolphi, M. Galetz, S. Dosta, I. Garcia Cano, J. Guilemany

61. Evaluation of low-pressure cold spray MMC coatings by acoustic emission-coupled four-point flexural testing
R. Lee*
University of Alberta, Canada, Y. Lee, M. Shibly, T. Hussain, A. McDonald

62. Influence of critical plasma spray parameters on properties to Cr₂O₃ coatings with online monitoring
X. Wang*
University of Electronic Science and Technology of China, P.R. China, X. Feng, L. Deng, Z. Li

63. Characterization of CrMoBW- Fe base in-flight particles and splats fabricated by nano-structured cored wire arc spraying
M. Tuiprae*
Rajamangala University of Technology, Thailand, K. Meekhanthong, S. Wirojanupatump, K. Chokethawai

64. The oxidation behavior of high density ZrB₂ ceramics with SiC and WC addition
X. Wang*
University of Electronic Science and Technology of China, P.R. China, X. Feng, L. Deng

65. Effect of thermal aging on properties and microstructure of AlSi-hBN coating
J. Liu*
Northeastern University, P.R. China

66. Research on abrasability of several abrasables rubbed to Ti₂AlNb
J. Liu*
Northeastern University, P.R. China, X. Cheng, Y. Yu, T. Liu, J. Shen, D. Zhang

Properties – Tribological Coatings

67. Effect of Mo content on tribological properties of plasma sprayed NiCrBSi-Mo composite coatings
C. Zhang, H. Xu, J. Xiao, L. Xu, H. Liao*
University Bourgogne Franche-Comté, France

Properties – Wear Protection

68. Direct Metal laser sintering technique- DMLST for prospective wear related applications
G. Kaushal, G. Grewal*
Punjab Technical University, India, B. Singla

69. Deposition of innovative hardmetal coatings by HVAF and HVOF processes
G. Bolelli, R. Bultrini, C. Lyphout, L. Lusvarghi, P. Puddu, R. Rigon, K. Sato, P. Sassatelli*
University of Modena and Reggio Emilia, Italy

70. Assessment of the adhesion, wear and corrosion behavior of thermally sprayed NiCrBSi, Cr₃C₂-NiCr and Nb₂O₅ coatings
C. Lima*
UNIMEP - Methodist University of Piracicaba, Brazil, M. Xavier Belém, R. Libardi, F. Camargo

Thermal Spray Processes – Additive Manufacturing

71. Production advantages using laser cladding as additive manufacturing method
P. Nielsen*
FORCE Technology, Denmark, S. Nielsen, U. Ditlev Bihlet

72. Low pressure cold spray additive manufacturing of molds and dies
V. Leshchynsky, R. Maev, E. Strumban, D. Dzhurinskiy, E. Maeva*
University of Windsor, Canada

Thermal Spray Processes – Arc Spraying & Laser Spraying

73. Influence of the size and velocity of the particles on the structure and properties of electric-arc sprayed coatings
R. Drehmann, M. Student, V. Hvozdetzkyi, T. Stupnytskyi, V. Posuvailo, H. Pokhmurska*
Chemnitz University of Technology, Germany

74. Organic-inorganic composite coatings fabricated by arc spraying for anti-biofouling applications
L. Fang*
Chinese Academy of Sciences, P.R. China, J. Huang, L. Gao, H. Li

Thermal Spray Processes – Cold Gas Spraying

75. Studies on the cold sprayability of mixed 316L/Fe powders
X. Chu*
McGill University, Canada, P. Vo, S. Yue

76. The interaction phenomena between the cold sprayed Cu coatings and the Sn substrate

J. Choi, K. Ko, H. Lee*
Ajou University, South Korea

77. A novel way to analyze the residual strain and stress in cold-sprayed coatings

R. Huang*
Guangdong Institute of New Materials, P.R. China, Y. Ye,
J. Huang, T. Shobu

78. Residual stresses of Inconel 625 cold sprayed coatings

N. Cinca, K. Zomeño, S. Dosta, N. Cinca, I. Garcia Cano,
J. Guilemany, J. Sanchez*
University of Barcelona, Spain

79. Comparison of the microstructure and tribological behavior of WC reinforced 18Ni-300 steel composites prepared by cold spraying and selective laser melting

X. Yan, N. Kang, H. Liao*
University Bourgogne Franche-Comté, France, R. Bolot,
L. Dembinski, M. Liu

80. Post spray heat treatment of cold sprayed C355 deposits for repair: microstructure and mechanical properties

T. Hussain*
University of Nottingham, Great Britain, M. Zuccoli, A. Sbard,
M. Guagliano, H. de Villers Lovelock

Thermal Spray Processes – HVOF / HVOF Spraying

81. Design of Fe-based amorphous composite coatings

C. Zhang*
Huazhong University of Science and Technology, P.R. China,
W. Wang, Y. Li, L. Liu

82. Thermal sprayed coatings for the replacement of hard Cr plating

S. Yoon*
RIST, Republic of Korea, H. Kim, J. Kim

83. Comparison of solution precursor plasma spraying and high velocity solution precursor flame spraying in coating functional titania and alumina films

P. Vu*
University of Stuttgart, Germany, A. Förg, A. Killinger

84. High temperature hot corrosion behavior of selected thermally sprayed coatings in an aggressive environment

Z. Cesanek*
VZU Plzen s.r.o., Czech Republic, S. Houdkova, J. Schubert

85. Effect of particle and carbide grain sizes on a HVOAF WC-Co-Cr coating for the future application on internal surfaces: microstructure and wear

J. Pulsford*
University of Nottingham, Great Britain, J. Murray, S. Kamnis,
T. Hussain

86. Wear, erosion and corrosion resistance of HVOF-sprayed WC and Cr₃C₂ based coatings for electrolytic hard chrome replacement

Q. Wang*
Hunan University, P.R. China, X. Wang, C. Ramachandran,
C. Fang

87. HVOF system technology and coating centers for the treatment of ultra-fine powders for the internal and outer coating.

A. Lizan, G. Matthäus*
Thermico GmbH & Co. KG, Germany, T. Kuhl, S. Bernardi

Thermal Spray Processes – Laser Cladding

88. The influence of process parameters on structure and functional properties of laser clad WC-NiCrBSi coating

M. Vostrak*
University of West Bohemia, Czech Republic, S. Houdkova,
Z. Cesanek

Thermal Spray Processes – Modeling & Simulation

89. Numerical investigation of thermo-mechanical phenomena by different trajectories in thermal spray

S. Deng, C. Chen, H. Liao*
University Bourgogne Franche-Comté, France, Z. Ren

90. Metals cold-sprayed on ceramic substrates thanks to laser texturing surface pre-treatment

R. Kromer, Y. Danlos, S. Costil*
University Bourgogne Franche-Comté, France, H. Liao

91. Numerical Analysis of the operating gas effect on the deposition of cold spraying coatings

N. Cinca, H. Canales*
University of Barcelona, Spain, S. Dosta, I. Garcia Cano,
J. Guilemany

92. Effects of momentum and heat transfer between plasma and suspensions on an axial injection plasma spraying

T. Suzuki*
University of Tsukuba, Japan, H. Saito, T. Fujino, M. Suzuki

- 93. Comparative study between two nozzle assembly for high velocity oxy-fuel process**
M. Aldosari*
Dublin City University, Ireland, K. BenYounes, J. Stokes
- 94. Comprehensive approach for computational simulation of residual stresses development in thermally-sprayed coatings**
M. Elhoriny*
University of Stuttgart, Germany, A. Killinger, R. Gadow
- 95. Development of strain gradient plasticity models of cold spray process**
V. Leshchynsky, P. Maev*
University of Windsor, Canada, E. Strumban, D. Dzhurinskiy, E. Maeva
- 96. Submodeling of alumina coatings by APS**
V. Martínez García*
University of Stuttgart, Germany, R. Gadow, K. Andreas, J. Moreno Nicolás

Thermal Spray Processes – New Processes

- 97. Modeling of heating the particles of powders In the new detonation system**
A. Rigin*
Cherepovets State University, Russian Federation, A. Maximov, O. Maximova, S. Parygina

Thermal Spray Processes – Plasma Spraying

- 98. Adhesive-corrosion resistance of high velocity metal droplet on atmospheric plasma sprayed Ni-WSe₂-BaF₂-CaF₂-Y-Ag-hBN solid lubricant coatings**
X. Yuan*
Xi'an Research Institute of Hi-Tech, P.R. China, B. Zha, X. Chen, N. Yang
- 99. Investigating influences of suspension plasma spray parameters on photocatalytic activity of TiO₂ films**
P. Vu*
University of Stuttgart, Germany, N. Otto, A. Vogel, F. Kern, A. Killinger, R. Gadow
- 100. Microstructure and photocatalytic activity of TiO₂ coatings prepared by plasma sprayphysical vapor deposition technique**
X. Liu*
Central South University, P.R. China, C. Deng, C. Deng, M. Liu, K. Zhou, L. Liu

- 101. Influence of substrate properties on the formation of suspension plasma sprayed coatings**
Y. Zhao, Z. Yu, M. Planche, A. Allimant, A. Lasalle, G. Montavon, H. Liao*
University Bourgogne Franche-Comté, France
- 102. Numerical analyzing the in-flight particle temperature and velocity in plasma spray**
R. Huang*
Guangdong Institute of New Materials, P.R. China, W. Ma, R. Huang, J. Huang
- 103. Numerical simulations and experimental studies on the behavior of plasma jet for atmospheric plasma spraying**
K. Wen*
Guangdong Institute of New Materials, P.R. China, M. Liu, K. Zhou
- 104. Pulsed current and pulsed powder operation of the one-cathode-one-anode-plasma-generator (OCOAPG)**
S. Zimmermann*
University of the Federal Armed Forces Munich, Germany, A. Atzberger, J. Schein, M. Szulc, J. Zierhut
- 105. Thermal cycling behavior of plasma sprayed yttria partially-stabilized zirconia thick thermal barrier coating**
X. Zhong*
Shanghai Institute of Ceramics, Chinese Academy of Sciences, P.R. China, J. Ni, H. Zhao, C. Liu, Y. Zhuang, S. Tao
- 106. Thermal shock resistance of bimodal structured thermal barrier coatings by atmospheric plasma spraying using nanostructured partially stabilized zirconia**
D. Yang*
Thermal Spray Center, P.R. China, T. Bohan
- 107. Characteristics of hybrid water stabilized plasma gun for versatile spraying of ceramics powders**
T. Chraska*
Institute of Plasma Physics CAS, Czech Republic, J. Medricky, R. Musalek, J. Matejcek
- 108. Multifunctional coating centers based on axial plasma technology for the coating of aircraft turbines components**
A. Lizan, G. Matthäus*
Thermico GmbH & Co. KG, Germany, T. Kuhl, S. Bernardi
- 109. Effects of hydrogen on properties of inductive coupled thermal plasma for spraying B₄C/Cu coating**
P. Zhao*
Institute of Plasma Physics, Chinese Academy of Sciences, P.R. China, Q. Guo, L. Li, Q. Zhou, J. Chen

110. Influence of particle in-flight characteristics on reactive plasma spray

M. Shahien*
National Institute of Advanced Industrial Science and Technology, Japan, M. Yamada, M. Fukumoto

Thermal Spray Processes – PTA – Plasma Transfer-red Arc

111. Tribological behavior and microstructural analysis of self-lubricating coatings deposited by plasma transfer-red arc

F. Marra, L. Baiamonte*
University of Rome, Italy, G. Pulci, M. Pujatti, C. Bartuli, T. Valente

Thermal Spray Processes – Suspension Spraying

112. Development of bondcoat layer for high lifetime suspension plasma sprayed thermal barrier coatings

M. Gupta*
University West, Sweden, N. Markocsan, X. Li, L. Östergren, J. Wigren

113. Microstructure and thermal properties of nanostructured YSZ coating manufactured by axial suspension plasma spraying at low pressure

C. Song, Z. Deng, C. Deng, H. Liao*
University Bourgogne Franche-Comté, France, M. Liu

114. Low thermal conductivity thermal barrier coating sprayed with SPS and APS

A. Burgess*
Spraywerx Technologies, Inc., Canada, P. NewBatt, R. Calinas, N. Vitorino, R. Lima

115. Potential of suspension spraying for dense coatings with improved mechanical and chemical performance

N. Curry*
Treibacher Industrie AG, Austria, S. Joshi, S. Bjorklund

116. Microstructure of YSZ coatings deposited by vacuum suspension plasma spraying

Y. Yoo*
Korea Institute of Materials Science, Republic of Korea, E. Byon, U. Nam

117. Axial feeding features of low power suspension plasma spraying

M. Shahien*
National Institute of Advanced Industrial Science and Technology, Japan, M. Suzuki

118. The possibility of using ultrasonic waves to support suspension plasma spraying process

P. Sokolowski*
Wroclaw University of Technology, Poland, S. Kozerski, M. Korzeniowski

119. The influence of powder particle size and solvent type on the microstructure of SPS coatings

P. Sokolowski*
Wroclaw University of Technology, Poland, M. Michalak, R. Candidato Jr. , A. Ambroziak, L. Latka



ACTING EXPERTS



PRESENTING AUTHORS, POSTER PRESENTERS AND SESSION CHAIRS ITSC 2017

- A**
- Abdeldaim, H.** Ain Shams University, Cairo/Egypt
- Abdulgader, M.** University of Dortmund, Dortmund / Germany
- Adam, M.** Technical University Darmstadt, Darmstadt/ Germany
- Akbarnozari, A.** Concordia University, Montreal/Canada
- Akhmetgareeva, A.** Technological Systems for Protective Coatings, Ltd., Moskow/Russian Federation
- Aldosari, M.** Dublin City University, Dublin/Ireland
- Alharbi, N.** Dublin City University, Dublin/Ireland
- Ali, I.** Chemnitz University of Technology, Chemnitz/Germany
- Ali, O.** Heriot-Watt University, Edinburgh/Great Britain
- Alkhasli, I.** RWTH Aachen University, Aachen/Germany
- Allebrodt, B.** DURUM Verschleiss-Schutz GmbH, Willich/ Germany
- Altuncu, E.** Sakarya University, Sakarya/Turkey
- Atzberger, A.** University of the Federal Armed Forces Munich, Neubiberg/Germany
- Aulakh, S.** Punjab Technical University, Punjab/India
- B**
- Bachmann, A.** Oerlikon Metco AG, Wohlen/Switzerland
- Bagcivan, N.** Schaeffler Technologies AG & Co. KG, Herzogenaurach/Germany
- Baiamonte, L.** Sapienza University of Rome, Rome/Italy
- Bakan, E.** Forschungszentrum Jülich GmbH, Jülich/ Germany
- Baldaev, S.** Technological Systems for Protective Coatings, Ltd., Moskow/Russian Federation
- Bamola, R.** Surface Modification Systems Inc., Santa Fe Springs/USA
- Barbosa, M.** Fraunhofer Institute for Material and Beam Technology, Dresden/Germany
- Beczowski, J.** H.C. Starck GmbH, Laufenburg /Germany
- Bengtsson, S.** Höganäs AB, Höganäs/Sweden
- Berg, A.** Ibeda GmbH, Neustadt/Germany
- Berger, L.** Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Dresden/ Germany
- Bloschies, G.** Baumann Plasma Flame Technic AG, Höri/ Switzerland
- Bobzin, K.** RWTH Aachen University, Aachen/Germany
- Boecking, R.** DVS – German Welding Society, Düsseldorf/Germany
- Bolelli, G.** University of Modena and Reggio Emilia, Modena/Italy
- Bozza, F.** Turbocoating S.p.a., Rubbiano di Solignano/Italy
- Brandt, O.** Becon Technologies GmbH, Thun/ Switzerland
- Breitsameter, M.** H.C. Starck GmbH, Laufenburg/Germany
- Brinkhoff, A.** University of Dortmund, Dortmund/ Germany
- Bunel, M.** MINES ParisTech, Evry/France
- Burgess, A.** Spraywerx Technologies, Inc., Vancouver/ Canada
- C**
- Caio, F.** Concordia University, Montreal/Canada
- Callen, B.** Oerlikon Metco (Canada) Inc., Fort Saskatchewan/Canada
- Canales, H.** University of Barcelona, Barcelona/Spain
- Cañas, E.** University Jaume I, Castellón/Spain
- Candidato, R.** University of Limoges, Limoges/France
- Cesaneck, Z.** VZU Plzen s.r.o., Plzen/Czech Republic
- Chawla, V.** Punjab Technical University, Punjab/India
- Che, H.** McGill University, Montreal/Canada
- Chen, L.** Xi'an Jiaotong University, Xi'an/P.R. China
- Chen, X.** Xi'an Jiaotong University, Xi'an/P.R. China
- Cheng, B.** Xi'an Jiaotong University, Xi'an/P.R. China
- Chivel, Y.** MerPhotonics, Saint Etienne/France
- Chraska, T.** Institute of Plasma Physics CAS, Prague/ Czech Republic
- Chu, X.** McGill University, Montreal/Canada
- Cinca, N.** University of Barcelona, Barcelona/Spain
- Cizek, J.** Czech Academy of Sciences, Prague/ Czech Republic
- Clavijo, G.** CINVESTAV Unidad Querétaro, Querétaro/ Mexico
- Coddet, C.** University Bourgogne Franche-Comté, Belfort/France
- Costil, S.** University Bourgogne Franche-Comté, Belfort/France
- Coyle, T.** University of Toronto, Toronto/Canada
- Curry, N.** Treibacher Industrie AG, Althofen/Austria
- D**
- Darut, G.** University Bourgogne Franche-Comté, Belfort/France
- Desaulniers, S.** Polycontrols, Brossard/Canada
- Detloff, P.** DIAMANT Metallplastic GmbH, Mönchengladbach/Germany
- Dildrop, M.** University of Dortmund, Dortmund/ Germany
- Dizdar, S.** Höganäs AB, Höganäs/Sweden
- Doesburg, J.** MTU Maintenance Berlin-Brandenburg GmbH, Ludwigsfelde/Germany
- Dolatabadi, A.** Concordia University, Montreal/Canada
- Dosta, S.** University of Barcelona, Barcelona/Spain

Drehmann, R.	Chemnitz University of Technology, Chemnitz/Germany	Hambrock, C.	voestalpine Stahl GmbH, Linz/Austria
Duda, T.	Emerson, Schaffhausen/Switzerland	Han, Y.	Shanghai University, Shanghai /P.R. China
E			
Ekberg, J.	Chalmers University of Technology, Göteborg/Sweden	Hartmann, S.	obz innovation gmbh, Bad Krozingen/ Germany
Elhoriny, M.	University of Stuttgart, Stuttgart/Germany	Hauer, M.	Fraunhofer-Research Institution for Large Structures in Production Engineering, Rostock/Germany
Elsass, M.	Technical University Darmstadt, Darmstadt/ Germany	Hazel, B.	Pratt & Whitney, East Hartford/USA
Enzl, R.	Oerlikon Metco AG, Wohlen/Switzerland	He, W.	Forschungszentrum Jülich GmbH, Jülich/ Germany
Erne, M.	MTU Maintenance Hannover GmbH, Hannover/Germany	Herzog, R.	MAN Diesel & Turbo SE, Oberhausen/ Germany
Espallargas, N.	Seram Coatings AS, Trondheim/Norway	Hincapie-Bedoya, J.	Centro de Investigación y de Estudios Avanzados del Instituto Politecnico National, Querétaro/Mexico
F			
Fang, L.	Chinese Academy of Sciences, Ningbo/P.R. China	Hollingsworth, P.	Siemens AG, Berlin/Germany
Fantozzi, D.	Tampere University of Technology, Tampere/ Finland	Houdkova, S.	VZU Plzen s.r.o., Plzen/Czech Republic
Fedorova, M.	Technological Systems for Protective Coatings, Ltd., Moscow/Russian Federation	Huang, R.	Guangdong Institute of New Materials, Guangdong/P.R. China
Feng, C.	University of Toronto, Toronto/Canada	Hussain, T.	University of Nottingham, Nottingham/Great Britain
Fiala, P.	Oerlikon Metco (Canada) Inc., Fort Saskatchewan/Canada	I	
Förg, A.	University of Stuttgart, Stuttgart/Germany	Ibe, H.	FUJIMI Incorporated, Kakamigahara/Japan
Franco, D.	University of Limoges, Limoges/France	Ichikawa, Y.	Tohoku University, Sendai/Japan
G			
Gallo, B.	Ansaldo Energia, Genova/Italy	Ismagilova, R.	Technological Systems for Protective Coatings, Ltd., Moscow/Russian Federation
Ganvir, A.	University West, Trollhättan/Sweden	Ivchenko, D.	University of Limoges, Limoges/France
Gao, L.	Beijing General Research Institute of Mining and Metallurgy, Beijing/P.R. China	Iwaniak, A.	Silesian University of Technology, Katowice/ Poland
Garcia Cano, I.	University of Barcelona, Barcelona/Spain	J	
Gärtner, F.	Helmut-Schmidt-University of the Federal Armed Forces, Hamburg/Germany	Jeandin, M.	MINES ParisTec, Evry/France
Giallonardo, J.	Nuclear Waste Management Organization, Toronto/Canada	Jia, F.	Beijing General Research Institute of Mining and Metallurgy, Beijing/P.R. China
Goutier, S.	University of Limoges, Limoges/France	Joshi, S.	University West, Trollhättan/Sweden
Grewal, G.	Punjab Technical University, Punjab/India	Jucha, S.	Silesian University of Technology, Katowice/ Poland
Grund, T.	Chemnitz University of Technology, Chemnitz/Germany	Jungklaus, H.	Voith Paper Rolls, Laakirchen/Austria
Gruner, H.	Medicoat AG, Mägenwil/Switzerland	Jutte, J.	Flame Spray Technologies BV, Duiven/The Netherlands
Gruner, P.	Medicoat AG, Mägenwil/Switzerland	K	
Guipont, V.	MINES ParisTech, Evry/France	Kanerva, U.	Valmet Technologies Inc., Jyväskylä/Finland
Gupta, M.	University West, Trollhättan/Sweden	Kanno, A.	Tocalo Co., Ltd., Minamifutami/Japan
Gutleber, J.	Oerlikon Metco (US) Inc., Westbury/USA	Karhu, M.	VTT Technical Research Centre of Finland, Tampere/Finland
Gutzmann, H.	Helmut-Schmidt-University of the Federal Armed Forces, Hamburg/Germany	Kay, C.	ASB Industries, Inc., Barberton/USA
H			
Hack, M.	Keller Lufttechnik, Kirchheim/Germany	Khalid, A.	University of New South Wales, Sydney/ Australia
Hagen, L.	University of Dortmund, Dortmund/ Germany	Khalil, O.	University of Dortmund, Dortmund/ Germany
		Kiilakoski, J.	Tampere University of Technology, Tampere/ Finland

Killinger, A.	University of Stuttgart, Stuttgart/Germany	Lindner, T.	Chemnitz University of Technology, Chemnitz/Germany
Kim, H.	RIST, Pohang/Republic of Korea	Linke, T.	Dillingen Nematik Europe, Dillingen/ Germany
Klassen, T.	Helmut-Schmidt-University of the Federal Armed Forces, Hamburg/Germany	Liu, J.	Northeastern University, Shenyang/P.R. China
Knoch, M.	RWTH Aachen University, Aachen/Germany	Liu, L.	Huazhong University of Science and Technology, Wuhan/P.R. China
Köhler, R.	obz innovation gmbh, Bad Krozingen/ Germany	Liu, T.	German Aerospace Center, Stuttgart/ Germany
Koivuluoto, H.	Tampere University of Technology, Tampere/ Finland	Liu, X.	Central South University, Changsha/P.R. China
Kong, L.	Institute of Metal Research, Shenyang/P.R. China	Liu, X.	College of Materials Science and Engineering, Beijing/P.R. China
Königstein, T.	RWTH Aachen University, Aachen/Germany	Liu, Y.	Chinese Academy of Sciences, Ningbo/P.R. China
Korobov, Y.	Ural Federal University, Ekaterinburg/ Russian Federation	Lizan, A.	Thermico GmbH & Co. KG, Dortmund/ Germany
Krieg, P.	University of Stuttgart, Stuttgart/Germany	Löbel, M.	Chemnitz University of Technology, Chemnitz/Germany
Krömmer, W.	The Linde Group, München/Germany	Lu, X.	Beijing General Research Institute of Mining & Metallurgy, Beijing/P.R. China
Kumar, M.	GGC College of Engineering Landran, Mahali/India	Lugscheider, E.	RWTH Aachen University, Aachen/Germany
Kwon, H.	Hanyang University, Seoul/Republic of Korea	Luo, W.	University of Dortmund, Dortmund/ Germany
L			
Lampke, T.	Chemnitz University of Technology, Chemnitz/Germany	Lupoi, R.	The University of Dublin, Dublin/Ireland
Leblanc, L.	GE-Fuel Cells, Malta/USA	Lusvardi, L.	University of Modena and Reggio Emilia, Modena/Italy
Lee, H.	Ajou University, Suwon/Republic of Korea	Luth, J.	obz innovation gmbh, Bad Krozingen/ Germany
Lee, H.	Stony Brook University, Stony Brook/USA	M	
Lee, J.	Hanyang University, Seoul/Republic of Korea	Ma, X.	Curtiss-Wright Corporation, East Windsor/ USA
Lee, R.	University of Alberta, Edmonton/Canada	Maev, P.	University of Windsor, Windsor/Canada
Legoux, J.	National Research Council of Canada, Boucherville/Canada	Maeva, E.	University of Windsor, Windsor/Canada
Leitz, K.	Plansee SE, Reutte/Austria	Mahade, S.	University West, Trollhättan/Sweden
Leshchynsky, V.	University of Windsor, Windsor/Canada	Mahdavi, A.	University of Alberta, Edmonton/Canada
Li, C.	Xi'an Jiaotong University, Xi'an/P.R. China	Malachowska, A.	Wroclaw University of Science and Technology, Wroclaw/Poland
Li, G.	Xi'an Jiaotong University, Xi'an/P.R. China	Marcano, D.	Forschungszentrum Jülich GmbH, Jülich/ Germany
Li, H.	Chinese Academy of Sciences, Ningbo/P.R. China	Maroli, B.	Höganäs AB, Höganäs/Sweden
Li, L.	Chinese Academy of Sciences, Hefei/P.R. China	Martínez García, V.	University of Stuttgart, Stuttgart/Germany
Li, Q.	Beijing Aeronautical Manufacturing Technology Research Institute, Beijing/P.R. China	Matikainen, V.	Tampere University of Technology, Tampere/ Finland
Li, Y.	Xi'an Jiaotong University, Xi'an/P.R. China	Matthäus, G.	Thermico GmbH & Co. KG, Dortmund/ Germany
Liao, H.	University Bourgogne Franche-Comté, Belfort/France	Matthews, S.	The University of Auckland, Auckland/New Zealand
Liao, X.	RWTH Aachen University, Aachen/Germany	Mauer, G.	Forschungszentrum Jülich GmbH, Jülich/ Germany
Ligabue, O.	Turbocoating S.p.a., Rubbiano di Solignano/Italy	Mazilin, I.	Technological Systems for Protective Coatings, Ltd., Moskow/Russian Federation
Lima, C.	UNIMEP – Methodist University of Piracicaba, Santa Bárbara d'Oeste /Brazil		
Lima, R.	National Research Council of Canada, Boucherville/Canada		

McDonald, A.	University of Alberta, Edmonton/Canada	Peng, R.	Linköping University, Linköping/Sweden
Medricky, J.	Institute of Plasma Physics CAS, Prague/ Czech Republic	Pershin, L.	University of Toronto, Toronto/Canada
Melzer, A.	Grillo-Werke AG, Duisburg/Germany	Petorak, C.	Praxair Surface Technologies, Indianapolis/ USA
Meyer, M.	The University of Dublin, Dublin/Ireland	Pinomaa, T.	VTT Technical Research Centre of Finland, Vtt/Finland
Mihm, S.	Medicoat AG, Mägenwil/Switzerland	Plachetta, M.	University of Stuttgart, Stuttgart/Germany
Mishra, T.	Forschungszentrum Jülich GmbH, Jülich/ Germany	Planques, P.	CIRIMAT – Safran Helicopter Engines, Toulouse/France
Mittal, R.	Punjab Technical University, Punjab/India	Pokhmurska, H.	Chemnitz University of Technology, Chemnitz/Germany
Möhwald, K.	Leibniz University Hannover, Garbsen/ Germany	Popa, S.	University of Stuttgart, Stuttgart/Germany
Mora García, A.	Centro de Investigación y de Estudios Avanzados del Instituto Politecnico National, Querétaro/Mexico	Potthoff, A.	Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Dresden/ Germany
Moreau, C.	Concordia University, Montreal/Canada	Pouliot, L.	TECNAR Automation, Ltd., St. Bruno/ Canada
Moskal, G.	Silesian University of Technology, Gliwice/ Poland	Prenger, F.	Grillo-Werke AG, Duisburg/Germany
Mostaghimi, J.	University of Toronto, Toronto/Canada	Pulsford, J.	University of Nottingham, Nottingham/Great Britain
Mubarok, F.	Sepuluh Nopember Institute of Technology, Surabaya/Indonesia		
Musalek, R.	Institute of Plasma Physics CAS, Prague/ Czech Republic	Q	
Myalska, H.	Silesian University of Technology, Gliwice/ Poland	Quet, A.	CEA-DAM, Monts/France
N		R	
Nascimento, A.	Concordia University, Montreal/Canada	Ravi, K.	Tohoku University, Sendai/Japan
Nestler, M.	Oerlikon Metco (US) Inc., Westbury/USA	Richter, P.	Impact Innovations GmbH, Rattenkirchen/ Germany
Nevezhin, S.	Technological Systems for Protective Coatings, Ltd., Moscow/Russian Federation	Rigin, A.	Cherepovets State University, Cherepovets/ Russian Federation
Nicolaus, M.	Leibniz University Hannover, Garbsen/ Germany	Rivera-Gil, M.	Centro de Investigación y de Estudios Avanzados del Instituto Politecnico Nationale, Querétaro/Mexico
Nielsen, P.	FORCE Technology, Broendby/Denmark	Rodriguez Diaz, M.	Leibniz University Hannover, Garbsen/ Germany
Niemiec, D.	Silesian University of Technology, Katowice/ Poland	Roffe, A.	Autocraft Solutions Ltd., Grantham/Great Britain
Nowotny, S.	Fraunhofer Institute for Material and Beam Technology, Dresden/Germany	Rohan, P.	Czech Technical University, Prague/Czech Republic
O		Rupprecht, C.	Technische Universität Berlin, Berlin/ Germany
Oechsner, M.	Technical University Darmstadt, Darmstadt/ Germany	S	
Ohliger-Volmer, A.	GSI mbH, Branch SLV München, München/ Germany	Sabard, A.	University of Nottingham, Nottingham/Great Britain
Ö		Sadeghimeresht, E.	University West, Trollhättan/Sweden
Öte, M.	RWTH Aachen University, Aachen/Germany	Saito, H.	University of Tsukuba, Tsukuba/Japan
Öztürk, T.	Middle East Technical University, Ankara / Turkey	Sakaki, K.	SHINSHU University, Nagano City/Japan
P		Salimijazi, H.	Isfahan University, Isfahan/Iran
Parco, M.	TECNALIA, Donostia-San Sebastián/Spain	Sánchez, E.	University Jaume I, Castellón /Spain
Pawlowski, L.	University of Limoges, Limoges/France	Sanchez, J.	University of Barcelona, Barcelona/Spain
		Sander, P.	Airbus Operations GmbH, Hamburg/ Germany

Sassatelli, P.	University of Modena and Reggio Emilia, Modena/Italy	Toma, F.	Fraunhofer Institute for Material and Beam Technology, Dresden/Germany
Schaak, C.	University of Dortmund, Dortmund/Germany	Trenkle, F.	obz innovation gmbh, Bad Krozingen/Germany
Schein, J.	University of the Federal Armed Forces Munich, München/Germany	Tuiprae, M.	Rajamangala University of Technology, Chiang Mai/Thailand
Schläfer, T.	GTV Verschleißschutz GmbH, Luckenbach/Germany	Tului, M.	Centro Sviluppo Materiali S.p.A., Lamezia Terme/Italy
Schmid, R.	Oerlikon Metco AG, Wohlen/Switzerland	Turunen, E.	VTT Technical Research Centre of Finland, Vtt/Finland
Schopp, E.	obz innovation gmbh, Bad Krozingen/Germany		
Schubert, J.	VZU Plzen s.r.o., Plzen/Czech Republic	U	
Schwenk, A.	AMT AG, Döttingen/Switzerland	Ulianitsky, V.	Russian Academy of Science, Novosibirsk/Russian Federation
Shahien, M.	National Institute of Advanced Industrial Science and Technology, Tsukuba/Japan	Upadhyaya, R.	Birla Institute of Technology & Science, Pilani/India
Sharifi, N.	Concordia University, Montreal/Canada		
Shinoda, K.	National Institute of Advanced Industrial Science and Technology, Tsukuba/Japan	V	
Siebers, M.	Technical University Darmstadt, Darmstadt/Germany	Vardelle, A.	University of Limoges, Limoges/France
Siegmann, S.	Nova Werke AG, Effretikon/Switzerland	Vaßen, R.	Forschungszentrum Jülich GmbH, Jülich/Germany
Sienicki, J.	PZL Mielec, Mielec/Poland	Verdy, C.	University Bourgogne Franche-Comté, Belfort/France
Silveira, L.	Universidade Tecnológica Federal do Paraná, Ponta Grossa/Brazil	Verpoort, C.	Ford-Werke GmbH Research & Innovation Center Aachen, Aachen/Germany
Singh, G.	Punjab Technical University, Punjab/India	Verstak, A.	Kermetico, Benicia/USA
Singh, R.	Forschungszentrum Jülich GmbH, Jülich/Germany	Vijay, S.	University West, Trollhättan/Sweden
Smith, G.	Stony Brook University, Stony Brook/USA	Villafuerte, J.	Centerline Windsor Ltd., Windsor/Canada
Sokolowski, P.	Wroclaw University of Science and Technology, Wroclaw/Poland	Villa-Vidaller, M.	Helmut-Schmidt-University of the Federal Armed Forces, Hamburg/Germany
Sommer, J.	RWTH Aachen University, Aachen/Germany	Vo, P.	National Research Council of Canada, Boucherville/Canada
Song, P.	Kunming University of Science and Technology, Kunming/P.R. China	Vogli, E.	Liquid Metal Group Holdings, Lake Forest/USA
Stoltenhoff, T.	TeroLab GmbH, Germany, Langenfeld/Germany	Vostrak, M.	University of West Bohemia, Plzen/Czech Republic
Suhonen, T.	VTT Technical Research Centre of Finland, Espoo/Finland	Vu, P.	University of Stuttgart, Stuttgart/Germany
Suzuki, T.	University of Tsukuba, Ibaraki/Japan	Vuoristo, P.	Tampere University of Technology, Tampere/Finland
T		W	
Takahashi, S.	Tokyo Metropolitan University, Hachioji/Tokyo	Wang, C.	BIAM, Beijing/P.R. China
Takao, Y.	University of Tsukuba, Ibaraki/Japan	Wang, J.	Xi'an Jiaotong University, Xi'an/P.R. China
Tao, S.	Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai/P.R. China	Wang, X.	University of Electronic Science and Technology of China, Chengdu/P.R. China
Theimer, S.	Helmut-Schmidt-University of the Federal Armed Forces, Hamburg/Germany	Wang, Y.	University Bourgogne Franche-Comté, Belfort/France
Theisen, F.	Camfil A.P.C., Heywood/Great Britain	Wank, A.	GTV Verschleißschutz GmbH, Luckenbach/Germany
Thoma, M.	ARTEC S.p.A., Rubbiano di Solignano/Italy	Wasserman, C.	TeroLab Surface Group SA, Lausanne/Switzerland
Tian, J.	Xi'an Jiaotong University, Xi'an/P.R. China	Webb, D.	ES3, Clearfield/USA
Tiggemann, F.	Flowserve Flow Control GmbH, Ettlingen/Germany	Wei, Y.	Xi'an Jiaotong University, Xi'an/P.R. China
Tillmann, W.	University of Dortmund, Dortmund/Germany		

- Wen, K.** Guangdong Institute of New Materials, Guangzhou/P.R. China
- Wielage, B.** Chemnitz University of Technology, Chemnitz/Germany
- Wietheger, W.** RWTH Aachen University, Aachen/Germany
- Wilhelm, T.** GSI mbH, Branch SLV Duisburg, Duisburg/Germany
- Winkelmann, R.** Brandenburgische Technische Universität Cottbus-Senftenberg, Senftenberg/Germany
- Winnicki, M.** Wroclaw University of Science and Technology, Wroclaw/Poland
- Y**
- Yamada, J.** FUJIMI Incorporated, Kakamigahara/Japan
- Yang, D.** Thermal Spray Center, Dalian/P.R. China
- Yang, F.** The University of Dublin, Dublin/Ireland
- Yang, G.** Xi'an Jiaotong University, Xi'an/P.R. China
- Yang, K.** Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai/P.R. China
- Yang, W.** Beijing Aeronautical Manufacturing Technology Research Institute, Beijing/P.R. China
- Yao, H.** Beijing University of Technology, Beijing/P.R. China
- Yasir, M.** Institute of Space & Technology, Islamabad/Pakistan
- Yoo, Y.** Korea Institute of Materials Science, Changwon/Republic of Korea
- Yoon, S.** RIST, Pohang/Republic of Korea
- Yu, M.** Southwest Jiaotong University, Chengdu/P.R. China
- Yu, Z.** University Bourgogne Franche-Comté, Belfort/France
- Yuan, K.** Beijing General Research Institute of Mining and Metallurgy, Beijing/P.R. China
- Yuan, X.** Xi'an Research Institute of Hi-Tech, Xi'an/P.R. China
- Z**
- Zaitsev, N.** Technological Systems for Protective Coatings, Ltd., Moscow/Russian Federation
- Zhang, B.** Xi'an Jiaotong University, Xi'an/P.R. China
- Zhang, C.** Huazhong University of Science and Technology, Wuhan/P.R. China
- Zhang, X.** Guangzhou Institute of Non-Ferrous Metal, Guangzhou/P.R. China
- Zhao, L.** RWTH Aachen University, Aachen / Germany
- Zhao, P.** Institute of Plasma Physics, Chinese Academy of Sciences, Hefei/P.R. China
- Zhong, X.** Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai/P.R. China
- Zhou, D.** Forschungszentrum Jülich GmbH, Jülich/Germany
- Zhu, L.** China First Heavy Industries, Tianjin Heavy Equipment Engineering Co., Ltd., Tianjin/P.R. China
- Zierhut, J.** Zierhut Messtechnik GmbH, München/Germany
- Zimmermann, S.** Oerlikon Metco Europe GmbH, Kelsterbach
- Zimmermann, S.** University of the Federal Armed Forces Munich, Neubiberg/Germany
- Zomeño, K.** University of Barcelona, Barcelona/Spain



EXPOSITION

Concurrent with the conference, the ITSC 2017 Exposition, organized by Messe Essen GmbH, will take place in the CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers.

Kick-off ITSC 2017 Exposition

Wednesday, June 7, 2017, 12:00, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

Exhibitor Reception and Poster Session

Wednesday, June 7, 2017, 18:00, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

Exposition Hours

Wednesday, June 7, 2017, 12:00 – 18:00

Thursday, June 8, 2017, 09:00 – 18:00

Friday, June 9, 2017, 09:00 – 16:00

MESSE
ESSEN

Contact ITSC 2017 Exposition

Christina Kleinpaß

Messe Essen GmbH

Norbertstr. 2

45131 Essen / Germany

P +49. (0)201. 7244-529

F +49. (0)201. 7244-555

christina.kleinpass@messe-essen.de

Exhibitor List

(Status: May 2017)

Exhibitor	Country	Exhibitor	Country
Air Products NV/SA	Belgium	LiquidMetal Group Holdings Inc.	USA
AMT AG	Switzerland	LSN Diffusion	Great Britain
ARTEC S.p.A.	Italy	Luoyang Golden Egret Geotools Co., Ltd.	P.R. China
Beijing United Coatings	P.R. China	MBN Nanomaterialia S.p.A.	Italy
BGRIMM Advanced Materials Science & Technology Co., Ltd.	P.R. China	Medicoat AG	Switzerland
C&M Technologies GmbH	Germany	Metallizing Equipment Co. Pvt., Ltd.	India
Castolin Eutectic	Switzerland	Millidyne Oy	Finland
Chengdu Huarui Industrial Co., Ltd.	P.R. China	Mogul Metallizing GmbH	Germany
COHERENT (Deutschland) GmbH	Germany	Northwest Mettech Corp.	Canada
DeWAL Industries, Inc.	USA	Oerlikon Metco AG	Switzerland
Diamant Metallplastic GmbH	Germany	OSEIR Ltd.	Finland
DURUM Verschleiss-Schutz GmbH	Germany	Plasma Giken USA	USA
Dycoment Europe BV	The Netherlands	Polymet Corporation	USA
Eastcoat Oberflächentechnologie UG	Germany	Powder Alloy Corporation	USA
Flame Spray Technologies BV	The Netherlands	Praxair Surface Technologies	USA
Fraunhofer Institut für Werkstoff- und Strahltechnik (IWF)	Germany	Progressive Surface, Inc.	USA
Fujimi Incorporated	Japan	Saint Gobain	USA
Global Tungsten & Powder Corp.	USA	Seram Coatings AS	Norway
Green Belting Industries Limited	Canada	Sewon Hardfacing Co., Ltd.	Korea
Grillo-Werke AG	Germany	SMS group GmbH	Germany
GSI – Gesellschaft für Schweißtechnik International mbH, NL SLV München	Germany	TCPP	France
GTS – Gemeinschaft Thermisches Spritzen e. V.	Germany	TECNAR Automation Ltd.	Canada
GTV Verschleißschutz GmbH	Germany	Thermal Spray Centre (CPT)	Spain
H.C. Starck GmbH	Germany	Thermico GmbH & Co. KG	Germany
HÖGANÄS SWEDEN AB	Sweden	Treibacher Industrie AG	Austria
IBEDA Sicherheitsgeräte & Gastechnik GmbH & Co. KG	Germany	TSS/ASM International, DVS	USA / Germany
Imerys Fused Minerals Murg GmbH	Germany	Turbocoating S.p.A.	Italy
Impact Innovations GmbH	Germany	UniqueCoat Technologies	USA
Keller Lufttechnik GmbH + Co. KG	Germany	WALL Colmonoy Ltd.	Great Britain
Kermetico, Inc.	USA	WISDOM CONSUMABLES	P.R. China
LESCAV Sprl.	Belgium	Zhengzhou Ruite Diamond Belts Co., Ltd.	P.R. China
Linde AG, Gases Division	Germany	Zhuzhou Jiangwu Boda Hardfacing Materials Co., Ltd.	P.R. China
		Zierhut Messtechnik GmbH	Germany



SOCIAL EVENTS PROGRAM / AWARDING



Opening

Wednesday, June 7, 2017, 09:00, CCD Congress Center Düsseldorf, Stadthalle, Hall Y

- Welcome
- Plenary Lecture

Session “Young Professionals” with Awards Presentation

Wednesday, June 7, 2017, 15:40, CCD Congress Center Düsseldorf, Stadthalle, Hall Y

ITSC Best Paper Awards

René Wasserman Prize

Oerlikon Metco Young Professional Award

All awards will be presented at the end of this session.

Exhibitor Reception

Wednesday, June 7, 2017, 18:00, CCD Congress Center Düsseldorf, Stadthalle, Hall X, Foyers

All registrants are invited by Messe Essen GmbH for a snack and drinks.

ITSC 2017 Networking Event with Awards Presentation

Thursday, June 8, 2017, 19:30, ESPRIT arena, Platinum Club, Arena-Str. 1, 40474 Düsseldorf / Germany (Barbecue in Düsseldorf's Football Arena)

TSS Hall of Fame

TSS President's Award

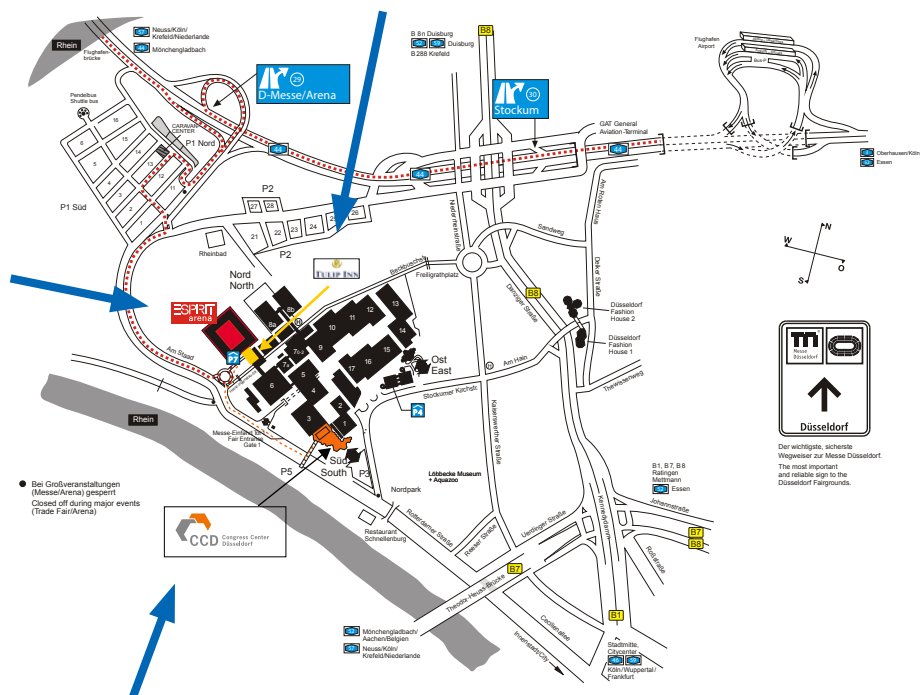
JTST Best Paper Award

Join us Thursday at the ITSC 2017 Networking Event, a Barbecue in Düsseldorf's Football Arena.

Enjoy food, beverages and music in an extraordinary ambience. All awards will be presented at the beginning of this evening.

Entrance (Car and Pedestrian) via P7 (Red Gate), **Parking Zone** K3/K4.

Follow the signage!



*UniCoatPro
packs advanced
features in a
small footprint.*



The Simple Choice for a Perfect Surface

Great things come in small packages!

Our new **UniCoatPro** thermal spray system platform gives you the advanced features found in high end system platforms in a small footprint and a moderate price tag. UniCoatPro has an easy-to-use Touchscreen Interface with attractive functionality such as sophisticated Trending and Reporting, Multi-Level Alarms and Diagnostics, and Remote Maintenance. It's bound to become a favorite in your spray shop.

Run traditional plasma spray guns or save more time and costs using our cascading arc SinplexPro spray gun with **UniCoatPro Plasma**. Run our liquid-fuel HVOF WokaJet or high efficiency WokaStar gun with **UniCoatPro LF**.

With Oerlikon Metco, your choice is simple!



Visit us at ITSC 2017, Düsseldorf, 7 – 9 June
CCD Congress Center Düsseldorf, Germany, Booth B4
www.oerlikon.com/metco

oerlikon
metco