5TH INTERNATIONAL VGB WORKSHOP
MATERIALS AND QUALITY ASSURANCE 2019

The 5th International VGB Workshop “Materials and Quality Assurance” takes place in Dresden hosted by Fraunhofer IWS.
Aim of the workshop is to permit results of advanced materials, welding and quality assurance aspects.
The main topics are:
- Lifetime Assessment, Flexibility | Materials and Components
- Modern Welding Technologies, Additive Manufacturing
- Quality Assurance, Damages | Renewable Energy
The workshop is aimed at manufacturers, planners, operators, insurers and experts interested in technology and its environment, researchers, authorities and associations.
We look forward to seeing you in Dresden/Germany.

PROGRAMME [Subject to change]
THURSDAY, 23 MAY 2019
08:00  Registration, Welcome-Coffee
09:00  Opening
       Dr. J. Standiuss, Fraunhofer IWS, Dresden/Germany

Section I: Lifetime Assessment, Flexibility
Moderator: Dr. J. Barea, EnBW, Stuttgart/Germany
09:15  Impact of Changing Markets on Both Operational Behaviour and Component Integrity
       Dr. C. Wignall, Uniper Technologies Limited, Nottingham/UK
09:40  Fatigue monitoring of a boiler recirculation pump
       Dr. T. Müller, KSB SE & Co. KGaA, Frankenthal/Germany, Dr. K. Metzger, Grosskraftwerk Mannheim AG, Mannheim/Germany, S. Bergholz, Framatome GmbH, Erlangen/Germany, and F. Silber, MPA Stuttgart/Germany
10:05  Life assessment, maintenance and repair of welded joints of piping at high temperatures
       M.Sc. R. Pohja, Tampere University of Technology, Tampere/Finland
10:30  Coffee break
11:00  Probabilistic Creep-Fatigue Lifetimes Assessment Approach: An Example Application
       F. Kozic, Technische Universität Darmstadt, Darmstadt/Germany, Dr. K. Heltbig, GE Power AG, Mannheim/Germany, Dr. C. Kontermann and Prof. M. Oechsner, Technische Universität Darmstadt, Darmstadt/Germany
11:25  Creep Life Assessment for Welded Joint of P91 Steel
       Considering Material Properties of Each Pipe Used at Power Plant
       Dr. M. Yaguchi, Central Research Institute of Electric Power Industry, Yokosuka/Japan
11:50  Challenges of Creep Rupture Data Assessment using the example of a large dataset of Grade P91
       Dr. M. Schwenkheer, Technische Universität Darmstadt, Darmstadt/Germany
12:15  Development of Boiler Material Technology and the Verification of its Practical Applicability in Japanese National AJUSC Project
       Dr. T. Takarai, Mitsubishi Hitachi Power Systems Ltd., Hiroshima/Japan and M. Kitamura, Mitsubishi Hitachi Power Systems Ltd., Yokohama/Japan
12:40  Super VM12 - The new 12Cr steel for high-temperature applications
       Dr. M. Sabanović, Dr. rer. nat. J. Pirón, M. Jarrar, A. Gauss and Dr. rer. nat. André Schneider, Vallourec Deutschland GmbH, Düsseldorf/Germany
15:15  Recent Damage Evaluations on Austenitic Boiler Tubes associated with Supercritical Plant
       Dr. S. Heckmann, RVVE Power AG, Essen/Germany
15:45  Forced Draft Fan Damages and Premature Fatigue Fractures in Cold Air Suction Ducts
       Dr. F. Unterimsberger, Mitsubishi Hitachi Power Systems Europe GmbH, Duisburg/Germany

Section II: Materials and Components
Moderator: C. Ullrich, VGB, Essen/Germany
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13:05  Lunch break

Section III: Quality Assurance, Damages
Moderator: Dr. G. Maier, Fraunhofer IWM, Freiburg/Germany
14:00  Non-Destructive Weld Inspection during the Welding Process – Possibilities and Limitations of an Inline Monitoring Approach
       Dr. F. Schubert, Dr. B. Bendjus, Dr. U. Cikalo, M. Stephan, R. Hipp, E. Schulze, M. Barth and Z. Bor, Fraunhofer IKT, Dresden/Germany
14:25  Depth sizing methods of operation induced flaws with automated phased array ultrasonic inspections
       A. Marx und S. Mendenbach, M&M Müller und Mendenbach GmbH, Gladbeck/Essen
15:00  Challenges of the repair of service exposed membrane walls
       Dr. C. Ullrich1, T. Hauke2 and P. Körner1
15:30  Recent Damage Evaluations on Austenitic Boiler Tubes associated with Supercritical Plant
       Dr. S. Heckmann, RVVE Power AG, Essen/Germany
16:10  Forced Draft Fan Damages and Premature Fatigue Fractures in Cold Air Suction Ducts
       Dr. F. Unterimsberger, Mitsubishi Hitachi Power Systems Europe GmbH, Duisburg/Germany
FRIDAY, 24 MAY 2019

Section IV: Renewable Energy
Moderator: Dr. S. Heckmann, RWE Power AG, Essen/Germany
08:30 V15 Damage Experiences in Solar Thermal Power Plants
Dr. B. Persienn, Dr. J. Stieber and R. Weber,
Allianz Risk Consulting GmbH, Munich/Germany
08:55 V16 Offshore Wind Energy – Steel Structures
Dr. S. Weise and S. Danelik, OWI GmbH,
Leer/Germany
09:20 V17 Lessons learned from damages of mechanical drive trains of wind turbines
Dr. T. Griggel and T. Gellermann,
Allianz Risk Consulting GmbH, Munich/Germany
Coffee break
09:45

Section V: Welding Technologies, Additive Manufacturing
Moderator: Dr. D. Dittrich, Fraunhofer IWS, Dresden/Germany
10:15 V18 Laser-Multi-Pass Narrow-Gap Welding of Thick-Worked High Temperature Materials – 140 mm thick Alloy 617 occ
B. Keilner, Dr. D. Dittrich, Prof. B. Brenner and
Prof. C. Leyens, Fraunhofer IWS, Dresden/Germany
10:35 V19 Microstructure and Fatigue Behavior of Laser Welded Alloy 617 occ
Prof. M. Zimmermann, Dr. J. Kaspur, R. Kuhne and
Prof. Brenner, Fraunhofer IWS, Dresden/Germany
10:55 V20 Advanced concepts for design life and residual life assessment of welded components under flexible operation applied on Alloy 617occ,
Dr. G. Maier, Dr. I. Vartolomeev and H. Oberlin,
Fraunhofer IWM, Freiburg/Germany
11:15 V21 Additive Manufacturing of powdery Ni-based Superalloys for Advanced Application
J. Moritz, Dr. E. Lopez, A. Seidel, M. Riede, F. Brückner and
Prof. C. Leyens, Fraunhofer IWS, Dresden/Germany

11:35 V22 Inline Monitoring of Material Parameters in Additive Manufacturing by Laser Speckle Photometry
Dr. U. Cikalova, Dr. B. Berndus, Fraunhofer-Institut für Keramische Technologien und Systeme IKTS,
Dresden/Germany
11:55 V23 Discussion of presentation, information about working groups
Moderator: Dr. J. Borell, EnBW, Stuttgart/Germany
12:10 Lunch break
13:10 Working groups with practical presentations
A – Potentials for Laser Beam Welding of High Temperature Alloys
Dr. D. Dittrich, Fraunhofer IWS, Dresden/Germany
B – Microstructure and fatigue behavior
Dr. M. Zimmermann, Fraunhofer IWS, Dresden/Germany
C – Activities and Potentials of additive manufacturing
Dr. E. Lopez, Fraunhofer IWS, Dresden/Germany

End of the workshop
15:00

Visit us: www.iws.fraunhofer.de

VGB office regrets, being unable making reservations.
Please make your reservation before 1 May 2019.
Within 14 days prior to the workshop               100 %
Up to 14 days prior to the workshop      EUR 50.00

VENUE
Fraunhofer-Institut für Werkstoff- und Strahntechnik Dresden

PRACTICAL INFORMATION

VENUE
Fraunhofer-Institut für Werkstoff- und Strahntechnik IWS
Winterbergstrasse 28 | 01277 Dresden/Germany
Phone: +49 351 83391-3228 | www.iws.fraunhofer.de

EVENING EVENT
On Thursday, 23 May 2019 every participant is invited to join our evening event at the “Salonschiff MS Gräfin Cosel”.
Admittance: 18:45 | Start: 19:30
Pier on ‘Terrassenfahrt’ – access via Münzgasse.
Please take your conference badge with you.

All information as of 10 May 2019.

ALL INFORMATION ARE ALSO AVAILABLE ON OUR WEBSITE

16:35 V14 Remaining lifetime assessment of expansion joints in district heating grid
P. Buhl, R. Northrup, EnBW Energie Baden-Württemberg AG, Stuttgart/Germany
Evening event at the ship “Salonschiff MS Gräfin Cosel”
Riverboat trip, International Dixieland Festival, Fireworks
hosted by KSB SE & Co. KGaA, Frankenthal/Germany
18:45