### Working Group W10 "High-temperature Behaviour"

#### Working Group W14 “Creep Crack Growth Analysis”

**ASME Papers from W10 and W14: High-temperature Research in Mechanical Integrity I+II (ThC 29-11 | ThD 2913)**

<table>
<thead>
<tr>
<th>Paper / Presenter</th>
<th>WG</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| **Aspects of Creep Fatigue Lifetime Assessment for High-temperature Components with Accumulative Model**  
Dr.-Ing. Christian Kontermann, Head - High-temperature Materials  
Centre for Structural Materials - State Materials Testing Institute Darmstadt, Institute for Materials Technology (MPA-IW | W10   |                |
| **Application Concepts and Experimental Validation of Constitutive Material Models for Creep-Fatigue Assessment of Components**  
Dr.-Ing. Christian Kontermann, Head - High-temperature Materials  
Centre for Structural Materials - State Materials Testing Institute Darmstadt, Institute for Materials Technology (MPA-IW | W10   | Journal        |
| **Towards a Better Understanding of Crack Growth in Nickel-Cast Alloys under Creep-Fatigue and Thermo-Mechanical Fatigue Conditions**  
Dr.-Ing. Karl Michael Krämer, Researcher - Experimental and Theoretical Description of the Crack / Crack Growth Behaviour under Thermomechanical High-temperature Loading  
Centre for Structural Materials - State Materials Testing Institute Darmstadt, Institute for Materials Technology (MPA-IW | W14   | Journal        |
| **Assessment of Power Plant Components with Flaws and Defects Operating in the Long-term Creep Range**  
Dr.-Ing. Magdalena Speicher, Deputy Department Head "NDT and Materials Characterisation"  
Materials Testing Institute (MPA) | W14   | Journal        |
| **Probabilistic Lifetime Assessment Approach of 2%-Cr Steel Considering Material and Loading Profile Scatter**  
Dr.-Ing. Klaus Helbig, Engineering Manager - Life Cycle Condition Assessment, PWR PS-ENG-Parts Reliability & Outage, Power Services  
GE Power | W10 / AG Turbo | Journal Best Paper Award |
<table>
<thead>
<tr>
<th>Paper / Presenter</th>
<th>WG</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| **Probabilistic Lifetime Assessment Approach of 2%-Cr Steel Considering Material and Loading Profile Scatter**  
  Dr.-Ing. Klaus Helbig, Engineering Manager - Life Cycle Condition Assessment, PWR PS-ENG-Parts Reliability & Outage, Power Services  
  GE Power | W10 / AG Turbo | Journal                |
| **Thermo-Structural Analysis of Steam Turbine in Pre-warming Operation with Hot Air**  
  Piotr Luczynski, M. Sc.  
  Institute of Power Plant Technology, Steam and Gas Turbines (IKDG) | AG Turbo | Journal                |
| **Investigation of Steam Turbine Warm-keeping by Use of Air**  
  Dennis Toebben, M. Sc.  
  Institute of Power Plant Technology, Steam and Gas Turbines (IKDG) | AG Turbo | Journal                |
| **Model-based Analysis of the Start-up Improvement of a CCPP due to Steam Turbine Warm-keeping with Air**  
  Dennis Toebben, M. Sc.  
  Institute of Power Plant Technology, Steam and Gas Turbines (IKDG) | AG Turbo |                   |
| **Investigation and Thermal Modeling of the Thermal Contact Resistance at a Steam Turbine Blade Root**  
  Dennis Toebben, M. Sc.  
  Institute of Power Plant Technology, Steam and Gas Turbines (IKDG) | AG Turbo |                   |

Status: June 2019