Completion and adoption of the
IAPWS Guideline on the Fast Calculation of Steam and Water Properties with the Spline-Based Table Look-Up Method (SBTL)

Project of the IAPWS Task Group “CFD Steam Property Formulation”

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IAPWS Annual Meeting 2016, September 12-15, Dresden, Germany
Completion and Adoption of the IAPWS Guideline

Progress:

- Draft IAPWS Guideline has been adopted by the Working Groups IRS and TPWS at the IAPWS Annual Meeting 2015 in Stockholm, Sweden
  - EC Minute 8.1: Guideline approved for Postal Ballot after editorial changes

- Editorial changes have been made by 16th December 2015

- Guideline was circulated to the Heads of National Committees of IAPWS on 17th December 2015 for Postal Ballot

- No negative votes were responded – Guideline became official by 31st March 2016

- IAPWS Guideline on the Fast Calculation of Steam and Water Properties with the Spline-Based Table Look-Up Method (SBTL) is now available at www.iapws.org.
Application of the SBTL Method

SBTL is currently applied in:

- TRACE, CFD code by German Aerospace Center (DLR)
- KRAWAL & DYNAPLANT, power plant design and analyses software by SIEMENS
- EBSILON, heat-cycle simulation software by STEAG
- RELAP-7, nuclear-reactor system safety analysis code developed by the Idaho National Laboratory (INL)

Planned projects:

- BISON, nuclear fuels performance code by the Idaho National Laboratory (INL)
- ATHLET, thermal - hydraulic computer code developed by the Gesellschaft für Anlagen - und Reaktorsicherheit (GRS)
- ANSYS FLUENT & CFX, CFD codes

SBTL Guideline is applied in a growing number of process simulation software tools.
Publication in the ASME Journal of Engineering for Gas Turbines and Power

DRAFT document is ready for submission:

The IAPWS Guideline on the Fast Calculation of Steam and Water Properties with the Spline-Based Table Look-Up Method (SBTL)*

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Thank you for your attention.