

German National Committee to IAPWS

Research Activities on the Thermodynamic Properties of Water and Steam Report "Research in Progress 2014"

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Projects

1. Development of Fast Property Algorithms Based on Spline Interpolation
 - The algorithms for the fast spline-interpolation method have been developed and applied to the calculation of thermodynamic properties of steam and water in CFD and non-stationary calculations.
 - The draft "IAPWS Guideline on the Fast Calculation of Steam and Water Properties in Computational Fluid Dynamics Using the Spline-Based Table Look-Up Method (SBTL)" has been completed and evaluated.
2. Industrial Calculation of the Thermodynamic Properties for Seawater
 - The paper "The IAPWS Industrial Formulation for the Thermodynamic Properties of Seawater" has been completed and submitted to the Journal Desalination and Water Treatment.

Recent Publications

- Wagner, W., Dauber, F., Kretzschmar, H.-J., Mareš, R., Miyagawa, K., Span, R. Extended equation for region 5 of the Industrial Formulation IAPWS-IF97. Proceedings of the International Conference on the Properties of Water and Steam, September 2013, University of Greenwich, London, UK, Institution of Mechanical Engineers, London SW1H 9JJ, UK.
- Kretzschmar, H.-J., Feistel, R., Wagner, W., Miyagawa, K., Harvey, A. H., Cooper, J. R., Hiegemann, M., Blangetti, F. L., Orlov, K. A., Weber, I., Singh, A., Herrmann, S. The IAPWS Industrial Formulation for the Thermodynamic Properties of Seawater. Accepted for publication in Desalination and Water Treatment (2014).