



## Research Activities on the Thermodynamic Properties of Water and Steam Report "Research in Progress 2006"

1. Supplementary backward equations  $p(h,s)$  for regions 1 and 2 of IAPWS-IF97
  - The comprehensive article on the backward equations  $p(h,s)$  appeared in the "Journal of Engineering for Gas Turbines and Power" in 2006.
2. Supplementary backward equations  $T(p,h)$ ,  $v(p,h)$ , and  $T(p,s)$ ,  $v(p,s)$  for region 3 of IAPWS-IF97
  - The comprehensive article on the backward and boundary equations will appear in the "Journal of Engineering for Gas Turbines and Power" in September 2006.
3. Supplementary backward and boundary equations  $p(h,s)$  for region 3 of IAPWS-IF97
  - The comprehensive article on the backward and boundary equations for the "Journal of Engineering for Gas Turbines and Power" was prepared.
4. Thermodynamic derivatives from IAPWS Formulations
  - The Advisory Note No. 3 was prepared.
5. Investigations on thermodynamic properties of humid air - part of the project "Advanced Adiabatic Compressed Air Energy Storage" (AA-CAES) of the European Union
  - Comparison calculations of different models for calculating thermodynamic properties of humid air were carried out.
6. Property libraries for water and steam, humid gases, and aqueous mixtures
  - The property library LibAmWa for Ammonia/Water mixtures was developed.
  - The Add-In
    - FluidEXL for Excel®
    - and the Add-On
      - FluidMAT for Mathcad®were extended.
7. The download "Steam Tables on Pocket Calculators" were prepared for the IAPWS website.

8. The homepage [www.iapws.de](http://www.iapws.de) of the German National Committee of IAPWS was prepared.

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*H.-J. Kretzschmar*