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The IAEA Coordinated Research Project on Sodium Properties and Safe Operation of Experimental Facilities in Support of the Development and Deployment of Sodium-cooled Fast Reactors (NAPRO)

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The International Atomic Energy Agency (IAEA) recently established a Coordinated Research Project (CRP) on "Sodium Properties and Safe Operation of Experimental Facilities in Support of the Development and Deployment of Sodium-cooled Fast Reactors - NAPRO", to be carried out in the period 2013 –2017.
Eleven institutions from ten Member States participate in this CRP.
The complete scope of this CRP is covered by three work packages.
A specific work package (WP1), under the coordination of the Argonne National Laboratory (USA), is focused on the compilation and expert assessment of data sets of Na physical and chemical properties, as well as correlations for pressure drops and heat transfer in Na facilities. Identification of gaps in the data sets, and recommendations for their closure are included.
A second work package (WP2), under the coordination of the Institute of Physics and Power Engineering – IPPE (Russian Federation), addresses the compilation, evaluation and development of best practices and guidelines for the design, operation and maintenance of Na facilities.
Finally, Work Package 3 (WP3), coordinated by the French Alternative Energies and Atomic Energy Commission (CEA), concentrates in the compilation and development of guidelines and rules for the safe operation of Na facilities, including, among others, the prevention, detection and mitigation of Na leaks and fires.
This work presents an overview of the compiled data bases and correlations of WP1, including recommendations for their use, as well as a summary of the guidelines and rules evaluated and developed in WP2 and WP3.

Country/Int. Organization

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