

FOREWORD

Under the auspices of the NEA Nuclear Science Committee (NSC), the Working Party on Scientific Issues of the Fuel Cycle (WPFC) was established to co-ordinate scientific activities regarding various existing and advanced nuclear fuel cycles, including advanced reactor systems, associated chemistry and flow sheets, development and performance of fuels and materials, and accelerators and spallation targets. The WPFC has different subgroups to cover the wide range of scientific fields in the nuclear fuel cycle.

Created in 2002, the Working Group on Lead-bismuth Eutectic (WG-LBE) technology is a WPFC subsidiary group which co-ordinates and guides LBE research in participating organisations while enhancing closer and broader-based collaboration. The aim is to develop a set of requirements and standards as well as consistent methodology for experimentation, data collection and data analyses. It was agreed to publish the results in the form of a handbook. Due to a rising interest in the Pb-cooled option in the Generation IV International Forum, the WG-LBE also decided to include data and technology aspects of both LBE and Pb.

The current edition of the handbook is a state-of-the-art, critical review of existing data and discrepancies, open points and perspectives for both Pb and LBE technological development. The reader may wish to note that the publication of a revised edition of the handbook is foreseen towards 2009 in order to integrate more experimental results from the various national and international research programmes currently being carried out on heavy liquid metal technology.

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