



Preface

The 3-day International Conference on the 'Advances in Nuclear materials: processing, performance and phenomena', ANM-2006 was held at Bhabha Atomic Research Centre (BARC), Mumbai, India during December 12–14, 2006. It was organized by BARC and The Indian Institute of Metals, supported by the International Atomic Energy Agency, Vienna. Generous financial support from the Board of Research in Nuclear Sciences, Department of Atomic Energy, India and staff support from BARC contributed to the successful organization of the conference. IAEA provided financial support for a few delegates from developing countries to participate in the conference.

The ANM-2006 was a gathering of 200 Indian participants and more than 40 participants from overseas having vast experience in R&D in materials science, nuclear reactor operation and nuclear fuel cycle management. The conference mainly dealt with sharing of operational experience of PHWRs in several countries and managing its fuel cycle. At this time of nuclear renaissance all over the world, the international conference on this theme proved to be appropriate. Such conferences in the past concentrated mainly on processing and phenomena while in this conference emphasis was also on the importance of studying materials performance. In addition to the topics on materials performance in PHWRs, papers dealing with materials development for advanced reactors, fuel modeling, innovative nuclear energy systems, fuel cycle options, zirconium alloys, plutonium and thorium fuels etc., were also presented. In all, 59 oral presentations and more than 100 poster presentations covering the entire theme of the conference were made.

The conference was organized in the BARC premises as one of the events of its Golden Jubilee year. The plenary talks were held in the Central Complex conference hall and the parallel sessions in the adjoining computer centre. The conference had a day-long session on experience sharing of materials performance in PHWRs. Participation of a number of scientists from India and Canada, the holders of PHWR technology has made the Conference very lively. Representatives from Argentina, China, Korea and Romania who have experience in operating PHWRs also deliberated and shared their experience in this special session. In the sidelines of the conference, informal discussions were held between scientists working in various aspects of nuclear energy.

The success of the conference is due to the efforts of many people grouped as international advisory committee or National and Local Organizing Committees. Among the papers presented during the conference, the guest editorial board selected 29 papers on the basis of reviewer's comments for publishing as the proceedings of the Conference. The delay in publishing the proceedings is due to the review process and the extensive revisions that were required.

We, the Guest Editors are grateful to the efforts of authors, reviewers of the paper and the organizing committees of the conference ANM-2006.

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