Preface

Twenty-First International Conference on Nuclear Engineering (ICONE21) was held in Chengdu, China on from July 29th to August 2nd, 2013, which was organized by Chinese Nuclear Society, American Society of Mechanical Engineers, and Japan Society of Mechanical Engineers. The theme of the conference was “Nuclear Energy, Secure World”, which was chosen with a belief that nuclear energy will play a key role in the realization of secure world. After the great east Japan earthquake disaster and the accident of Fukushima-Daiichi nuclear power plants on March 2011, it has been thought that the belief can be achieved when the safety improvement is extremely growing. Many studies were started in the world, and the one thousand and one (1001) presentations were accepted at the ICONE21.

This Special Issue has the same theme as ICONE21, which contains the similar but enhanced contents of the papers published in the conference as well as new papers of the topics including plant operation and maintenance, nuclear fuel and materials, next generation reactors, nuclear safety including beyond design based accident, fuel cycle, radioactive waste management and decommissioning, thermal hydraulics, CFD, and so on. Based on the nomination from session chairs and the members of Technical Program Committee, 35 papers were selected as the appropriate topics for the Mechanical Engineering Journal (MEJ), and 22 new papers were submitted as original papers. These papers were reviewed in the review process of MEJ. 14 papers were included in this special issue.

Thanks to the high quality of the papers in the diversity of the topics. This special issue will certainly be valuable in both the academic and industrial fields.

We would like to take this opportunity to thank the session organizers, the members of the Technical Program Committee, and editorial members of MEJ for their outstanding effort in making the publication of this special issue possible.

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