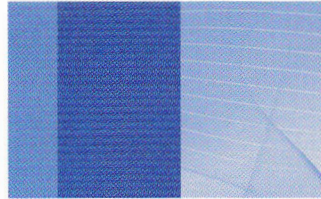


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7. Conclusion



The interest in nuclear technology rekindled in early 21st century – the so-called “nuclear renaissance” – stepped up the demand for nuclear research facilities, and for research reactors in particular. Plans for creation and improvement of innovative and evolutionary nuclear energy technologies can never be put into effect without substantial in-pile studies. Nothing has abated the need for neutrons produced in research reactors, which make possible fundamental studies in nuclear and condensed-matter physics. Moreover, good prospects are shown by applied activities at research reactors, associated primarily with production of radionuclides for medical and industrial purposes.

This is why it may be important and well-timed to give a general picture of the Russian nuclear research facilities and their experimental capabilities.

The idea of this book, intended for managers and specialists working in various fields of nuclear science and technology, emerged more than two years ago. It appeared useful in the first time to describe the whole mix of Russian nuclear research facilities in one publication, making it complete but succinct. The book “Nuclear Research Facilities in Russia” was produced by collective effort of professionals from about twenty Russian organizations of different departmental affiliations.

This book appears in print in the year of the 60th anniversary of the Research and Development Institute of Power Engineering (OJSC NIKIET), which since 1957 has had development of nuclear research facilities among its high priorities. A special chapter is devoted to this Institute, depicting its role in the making and evolution of domestic NFRs.

Central to this book is the Chapter 3 “From F-1 to MBIR”, which introduces nineteen Russian Operators with NFRs in service. It opens with description of the facilities belonging to the National Research Center “Kurchatov Institute” – the Father of Russian nuclear power in general and of research reactors in particular.

Chapter 4 is devoted to the ongoing work on designing a multipurpose fast neutron research reactor (MBIR), the construction of which is provided for by the Federal Target Program for Development of Nuclear Energy Technologies of a New Generation in the Period to 2015 and in a Longer Term to 2020.

Chapter 5 briefly describes the design of advanced research reactors which are expected to replace the operating facilities built in the 20th century or may be proposed for construction in the countries seeking to develop nuclear technologies.

Chapter 6 deals with the Center for Analysis of Information on Safety of Russian Nuclear Research Facilities (NRF IAC), which undertook the difficult job of collecting and integrating materials for this book.

In conclusion, we extend our sincere gratitude to all the scientists and engineers who made their contribution to this publication. Their names and photographs are presented in the corresponding chapters. We hope that the appearance of this book will be an important event as well as a good reward for all the participants of this effort.