

FOREWORD

Seismic isolation is one of the most significant seismic engineering developments in recent years. Research and development, together with application experience — especially for numerous isolated civil structures, but also for existing nuclear reactors and facilities, had already shown in past years that this technique is extremely promising for a wide range of uses in the industrial field, in particular for advanced nuclear plants. The development and application of further innovative techniques — such as passive energy dissipation, provisional restraints, and active control of vibrations — has begun and has also shown great potential for reducing seismic or other dynamic loads acting on structures.

The International Seminar on Isolation, Energy Dissipation and Control of Vibrations of Structures provided an opportunity for the exchange of updated and detailed information on the state-of-the-art in these technologies. The seminar addressed the development and application of innovative techniques that have been developed for the abatement of seismic vibrations of structures. In addition to base isolation techniques which have been accepted for construction in some countries, the topics covered by the seminar were floor isolation, passive energy dissipation and active control of vibrations. The seminar was held following the recommendation of the International Working Group on Fast Reactors at its 26th Annual Meeting which was held in Vienna, Austria, from 4 to 7 May 1993.

This report summarizes the contributions to the seminar together with the main technical issues and conclusions. Particular attention is paid to contributions which provided new or updated information with respect to that given at the IAEA Specialists Meeting on Seismic Isolation Technology, held at San Jose (California, USA), 18–20 March 1992. Attention is also paid to the development and implementation of more recent but very promising innovative techniques for the reduction of seismic and other dynamic loads.

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