

FOREWORD

Looking back to the past, the forerunners of Japanese delegates have elaborated for compiling and editing the State-of-the-Art volume on the developments of earthquake engineering in Japan, taking advantage of the four-yearly World Conference on Earthquake Engineering beginning at the 4WCEE in Chile. These efforts have been continued five times until 1984 when 8WCEE was held in USA. However, the edition was discontinued ever since the 9WCEE probably because of heavy burden carried by those involved in the editing work.

During the last ten years particularly after the devastating earthquake in Kobe on January 17, 1995, however, there have been remarkable advances in the areas of earthquake engineering in Japan which were developed by various organizations and individuals. In view of the diversity and immensity of the advances, it has been felt necessary to summarize and make up documented rewords and publicize them in the form of the State-of-the-Art report, which is in the same context as attempted previously. In this regard, the 13th World Conference on Earthquake Engineering was considered to be the most relevant and timely occasion to fulfill this goal. Thus, Ad hoc committee was established within the Japan Association of Earthquake Engineering to work out compilation and edition of the SOA reports with Professor Y. Kitagawa acting as Chairman. The aims and contents of this undertaking are summarized as follows.

- 1) to document the outcome of field investigations on the disruption of the 1995 Kobe earthquake and address every issue of engineering and socio-economic importance to be reflected on the earthquake-resistant design and policy in-general for disaster mitigation in the future.
- 2) to address new tenets or concepts that have been implemented for revising regulations or codes for seismic design of structures and facilities.
- 3) to introduce developments of new techniques for controlling strong seismic motions of infrastructures.
- 4) to publicize a series of new initiatives to strengthen the nation's potential for research and practice in earthquake engineering including reinforcing the network of strong motion recording and the construction of prototype earthquake simulator.
- 5) to show socio-economic features of disruption and evaluation-management of seismic risk for avoiding disorder in the operation and functioning of social and infrastructure system in urban areas.

For these undertakings, overall cooperation was obtained from 20 universities and 10 national or privately-run research institutes. A total of 60 professionals or engineers have collaborated extensively and gave finishing touches to this project.

The state-of-the-art reports compiled herein are published as a Special Issue of the Journal of the Japan Association for Earthquake Engineering. I would like to express my mind of sincere thanks and appreciation to those all involved in the present project.

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President of the Japan Association
for Earthquake Engineering (2003-2004)