

PROCEEDINGS
OF
THE SECOND WORLD CONFERENCE
ON
EARTHQUAKE ENGINEERING

Tokyo and Kyoto, Japan

July 11—18, 1960

Volume I



Conference Organized by the

SCIENCE COUNCIL OF JAPAN

in cooperation with the

JAPAN SOCIETY OF CIVIL ENGINEERS
ARCHITECTURAL INSTITUTE OF JAPAN
SEISMOLOGICAL SOCIETY OF JAPAN

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PREFACE

The Second World Conference on Earthquake Engineering which was sponsored by the Science Council of Japan with the cooperation of the Japan Society of Civil Engineers, the Architectural Institute of Japan, and the Seismological Society of Japan, was held during July 11 through July 18, 1960 at Tokyo and Kyoto.

The Organizing Committee for this conference is exceedingly gratified that 481 scientists and engineers from 30 countries participated to make the conference a great success. In all, 120 papers were accepted and printed prior to the opening of the conference of which 74 papers were orally presented while the remaining papers were summarized by the reporters of the following five sessions:

Session 1. Soil and Foundation Conditions Relative to Earthquake Problems

Session 2. Analysis of Structural Response and Instruments

Session 3. Seismicity and Earthquake Ground Motion

Session 4. Earthquake Resistant Design, Construction and Regulations

Session 5. Recent Strong Motion Earthquakes and Resulting Damage

Special reports on the recent destructive earthquakes that occurred in Iran, Morocco and Chile were heard which were not originally included in the conference program. There were two special lectures at the opening and closing sessions, respectively, and the Chairman of the Organizing Committee gave a summary of all the papers presented at the technical sessions in Tokyo.

In view of the desirability of fostering greater international cooperation in the field of earthquake engineering, a tentative draft on the formation of an international organization for this purpose was prepared by the Organizing Committee which was distributed to expected participants prior to their arrival in Japan. This draft was further studied and discussed by a group consisting of at least one member from each of the countries represented at the Conference during the Tokyo sessions. The final draft prepared by this group was essentially as follows: To foster greater international cooperation in the field of earthquake engineering, an international organization for this purpose shall be formed which shall have as its principal aims, the holding of future world conferences, facilitating investigation of earthquake damage and dissemination of technical knowledge in earthquake engineering. For the attainment of this objective, a Preparatory Committee be formed composed of one representative from each interested country.

This recommendation was adopted unanimously at the Business Session in Kyoto and the Chairman of the Organizing Committee for the 2nd WCEE was designated to become the Chairman of the Preparatory Committee and instructed to complete its function within two years after the adoption of the above recom-

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mentation.

The Organizing Committee also prepared three sound films relating to earthquake engineering. Instruments and technical data on engineering seismology and earthquake engineering which were submitted by participating countries were exhibited at Sankei Kaikan in Tokyo and models of traditional Japanese wooden buildings at Kyoto Kaikan in Kyoto. The Committee likewise prepared a special publication entitled "Earthquake Resistant Regulations of the World, 1960" containing aseismic design regulations presently in force in 13 countries. This was made possible through the cooperation of contributing individuals in these countries for which appreciation is expressed.

The Proceedings of the 2 WCEE endeavors to cover the entire field of activities of the conference mentioned above and it is hoped that these volumes will contribute to increase international development of scientific and technical knowledge and serve to protect mankind from the ravages of devastating earthquakes.

Finally, appreciation is respectfully expressed to the members of the Publications Committee for their strenuous efforts in compiling the Proceedings.

Kiyoshi Muto

Chairman, Organizing Committee for

the Second World Conference on Earthquake Engineering

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November 14, 1960