of MITI.

- \* Six World Conference on Earthquake Engineering was held in New Delhi, India from January 10 to 14, 1977. Participants from ERS Research Center were Dr. K. Kubo, C. Tamura, T. Okada, H. Shibata, K. Suzuki, K. Sogabe, K. Takanashi, T. Katayama and Mr. N. Sato. Seven papers were presented and the titles are recorded in "LIST OF PAPERS BY THE MEMBERS OF ERS RESEARCH CENTER" of this volume.
- \* Dr. H. Shibata, Professor, attended at WG and Technical Review Committee for Safety Guid SG S2 "Aseismic Analysis and Testing of Nucliar Power Plant" held by IAEA in Vienna in February and April.

  On the way to Vienna he attended at "Iran Conference on Transfer of Nuclear Technology" is Shiraz, Iran in April.

  On the way from Vienna he made a survey on the damages of oil-refinaries and power stations in Romania by the earthquake of March 4, 1977 as an activity of the member of the "Anti-earthquake Design of High-pressure Gas Manufacturing Installations"
- \* Dr. T. Katayama, Associate Professor, visited the Institute of Earthquake Engineering and Engineering Seismology, Skopje, Yugoslavia, as a UNESCO consultant for three months beginning from February, 1977. There, he gave two series of lectures, "Response of Structures to Earthquake Effects" and "Aseismic Design of Transportation Facilities", to post-graduate students of the institute.
- \* Dr. T. Okada, Associate Professor, was invited as a main participant to the Workshop on Earthquake Resistant Reinforced Concrete Building Constructions held at Berkeley, California, USA, July 11-15, 1977.
- \* Dr. G. Miki, Professor, and Dr. F. Tatsuoka, Associate Professor, attended the 9th International Conference on Soil Mechanics and Foundation Engineering held in Tokyo from July 11 to 15, 1977. Dr. Miki presented a paper entitled "The Principle and Field Experiences of a Sturry Mole Method for Tunnelling in the Soft Ground" for the Specialty Session 1. And Dr. Tatsuoka presented a paper entitled" Effects of Soil Liquefaction on Dynamic Behavior of pile Foundations" for the Specialty Session 10.
- \* ERS Research Center had two visitors: Dr. R. Yarar, Professor at Technical University of Istanbul on July 29, 1977 and Dr. N. Radhakrishnan, Special Technical Assistant of the V. S. Army Corps of Engineers, Waterways Experiment station on October 4, 1977.
- \* In August Dr. H. Shibata, Professor, attended at "Conference on Structural Mechanics in Reactor Technology (SMiRT - 4)" in San Francisco and acted as the session co-ordinator, chairman and invited speaker, and also attended at "Conference on Current State of Knowledge of Lifeline Earthquake Engineering" held by

ASCE in Los Angeles.

- \* Dr. H. Shibata, Professor, attended as an observer at the "U.S. and Southeast Asia joint Symposium on Engineering for Natural Hazard Protection" in Manila in September.
- \* Dr. H. Tanaka, Professor, was erected to the director of the Institute of Industrial Science, University of Tokyo. The tenure is three years beginning from November, 1977.
- \* Dr. H. Shibata, Professor, was a scientific secretary for "JSME HOPE (Hazard-free Operation for Potential Emergency) International Symposium which was held in Tokyo in November. This symposium covered various kinds of area including earthquake hazard, structural reliability and protection of human body.
- \* An earthquake, with a Richter magnitude of 7, occurred on January 14, 1978 and caused damage in the eastern part of the Izu Peninsula, which is about 20km apart from the epicenter.

Property damage was estimated at about 30,000 million yen and 25 persons were killed by landslides which burried houses and passing vehicles. Roads, railroad tunnel walls, buildings (Fig. 1), concrete block walls and others were damaged. Tailings dams in the center part of the Izu Peninsula, which were holding sludge from a mine, were destroyed and highly poisonous sludge with sodium cyanide flowed into the Mochikoshi and Kano rivers due to the liquefaction of the sludge (Fig. 2). Several members of ERS Research Center carried out the field survey.

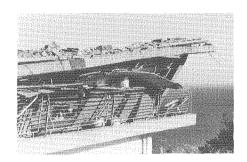


Fig. 1: Damage of Steel Building



Fig. 2-1: Liquifaction of Sludge

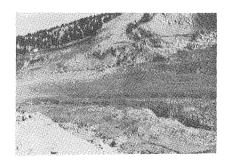


Fig. 2-2: Failure of Tailings Dam