

This second issue of **PANEL UPDATE**, the eNewsletter of the Panel on Wind and Seismic Effect's, reports on two Panel Task Committees and PWRI's upgraded 3-D Shake table. The Panel Task Committees continue in their mission to improve civil engineering design and construction practices as with PWRI's shake table to improve simulating seismic loads on structures.

PANEL TASK COMMITTEES

- **TASK COMMITTEE D. WIND.** The Task Committee conducted its 3rd *Workshop on Design for Wind and Wind Hazard Mitigation* in Seattle during 2-5 October, 2002. Twenty-two participants attended the workshop; 10 from Japan and 12 from the US and presented 24 papers. The T/C's work is focused on: wind characteristics and wind hazards; wind effects on buildings; wind effects on bridges; and evolving technologies. Emphasis is on the development of data and information that serves as a technical basis to revise Japan and US wind codes. The T/C is planning its 4th Workshop in 2004, and has four active continuing efforts in the general areas covered by the topics above.

Persons interested in obtaining a copy of the workshop should contact Professor Partha Sarkar, Director of Wind Simulation and Testing Laboratory, Department of Aerospace Engineering and Engineering Mechanics, Iowa State University, Ames, IA 50011-2271; ppsarkar@iastate.edu; 515-294-0719.

- **TASK COMMITTEE G. TRANSPORTATION.** The 19th US - Japan Bridge Engineering Workshop is scheduled during 27-29 October 2003, Tsukuba, Japan. The Workshop Themes are: 1) Advancing Technology in Seismic Engineering and 2) Innovative Technology on Extending Bridge Service Lives. During the afternoon of 29 October, the 9th FHWA/MLIT Bridge Engineering Workshop will be conducted. These Workshops will be followed by three-days of technical site visits to discuss recent Japan bridge engineering technologies.

Persons interested in obtaining a copy of the 18th US-Japan Bridge Engineering Workshop should contact: Professor David H. Sanders, Department of Civil Engineering/258, University of Nevada, Reno, NV 89557; sanders@unr.edu; 775-784-4288.

PWRI UPGRADED 3-D SHAKE TABLE

In June 2003, the Public Works Research Institute (PWRI) completed the upgrade of its 3-D shake table that has increased the operational stability of the table and the efficiency of the laboratory. Responding to the increased importance of verifying seismic performance of structures by experimental testing following the 1995 Hyogo-ken Nanbu (Kobe) earthquake, PWRI constructed its new 3-D shake table during February 1996 – March 1997. The table's shaking capability remains the world's largest and reproduces strong motion records from past major earthquakes three dimensionally. The maximum and rated payloads are 300 metric tons and 100 metric tons, respectively. The maximum horizontal acceleration is 2.0 G for the rated payload, and the maximum horizontal stroke is 60 cm. The upgrade includes:

- 1) Hydraulic Pumps. The previous system had two groups of hydraulic pumps; one was used for the 2-D and 3-D shaking tables in common. New pumps were installed that are now dedicated to directing its hydraulic supply system to the 3-D shake table.
- 2) Overhead Crane. A 980 kN (100 ton) crane replaced one of the two 196 kN (20 ton) overhead cranes.
- 3) Laboratory Expansion. The laboratory building was partially reconstructed and its fabrication area was extended by approximately 400 m².

The first test conducted after the upgrade was a hybrid vibration experiment, which integrates numerical response computation with vibration experiment using a partial model of structure, and reproduces the seismic behavior of the whole system. The objective of this test was to study seismic behavior of a highway bridge on the liquefiable soils – a first of its kind in the world.

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Newly installed hydraulic pumps