



Guest Editorial

Special Issue on Seismic Engineering

This special issue of the ASME Journal of Pressure Vessel Technology is focused on various technical aspects of seismic engineering. Design of pressure equipment for earthquake loadings is an important consideration in many facilities.

The first Seismic Engineering Pressure Vessels and Piping Division conference volume (with T. H. Liu and Alex Marr as Editors) was published in 1987. Each year, many seismic engineering papers are published at the PVP conference with contributors from all over the world. In this special issue of the Journal, a selection of the outstanding papers from the last few conferences are assembled to illustrate the various technical issues that are the focus of the Seismic Engineering Technical Committee of the Pressure Vessel and Piping Division of ASME.

The collected papers in this issue cover a wide range of the seismic engineering aspects of analysis; design; and testing of buildings, piping, equipment, and seismic restraints. Many of the articles include test and analysis correlations. The topics include:

- Special types of dampers—magnetic friction and magneto-rheological fluid
- Shake table control and measurement
- Dynamic analysis methods for hysteresis elements, nonlinear supports, rigid body sliding, non-classically damped coupled systems, and soil-structure interaction
- Properties of rubber bearings for seismic isolation systems

- Testing and analysis of a pendulum isolation system, seismic ties on boiler structures, and piping systems
- Nonlinear seismic response of a container crane
- Identification of structural parameters from acceleration measurements
- A concept for stabilization of a damaged building
- Testing of earthquake resistant computer structures
- Japan building code for seismic isolation
- Japan seismic design code for high pressure gas facilities

The Pressure Vessel and Piping Division of ASME is composed of eight technical committees, one of which is the Seismic Engineering Technical Committee. The SETC was originally organized as a subcommittee under the Design and Analysis Committee. Founding members included T. Ariman, Luc Geraets, Rudy Scavuzzo, Kohei Suzuki, Y. K. Tang, and A. G. “Jack” Ware. The PVPD endorsed the nomination of T. H. Liu as the first Chair, and the Seismic Engineering Subcommittee of the Design & Analysis (D&A) Committee was born in 1987 and became a Technical Committee in 1993.

I would like to thank the authors and reviewers for their efforts to publish this special issue on seismic engineering.

Gerry Slagis
Seismic Engineering Technical Committee