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Title

The PHRI Geotechnical Centrifuge [abstract]

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Publication Date

1984-07-18

Peer reviewed

Proceedings of the
SYMPOSIUM ON RECENT ADVANCES
IN GEOTECHNICAL CENTRIFUGE MODELING

A symposium on Recent Advances in Geotechnical Centrifuge Modeling was held on July 18-20, 1984 at the University of California at Davis. The symposium was sponsored by the National Science Foundation's Geotechnical Engineering Program and the Center for Geotechnical Modeling at the University of California at Davis.

The symposium offered an opportunity for a meeting of the International Committee on Centrifuges of the International Society for Soil Mechanics and Foundation Engineering. The U.S. participants also met to discuss the advancement of the centrifuge modeling technique in the U.S. A request is being transmitted to the American Society of Civil Engineers to establish a subcommittee on centrifuges within the Geotechnical Engineering Division.

ABSTRACTS I

THE PHRI GEOTECHNICAL CENTRIFUGE

by

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ABSTRACT

A large scale centrifuge was installed in the Port and Harbour Research Institute, Ministry of Transport for geotechnical studies in the March of 1980. Various data acquisition system including photo-instrumentation and surrounding facilities were completed in the following two years. This is the largest centrifuge among four active ones existing in Japan (i.e., Osaka City University, Tokyo Institute of Technology, Chuo University, and PHRI).

In the article, details of the centrifuge, current research projects and scope of the future are described with brief comment on the already published test results. A summary of major specifications is listed in Table I.

Paper included in the Proceedings of International Symposium on Geotechnical Modeling, in Tokyo, in April of 1984.

TABLE I
Major Specifications

Maximum acceleration (G)	115
Diameter of rotating arm (mm)	9650
Maximum effective radius (mm)	3800
Maximum number of rotation (rpm)	185
Space of swinging platform (mm)	1600x1600
Maximum payload (kg)	2710
Maximum G-tons	300
Main motor (kW)	400
Electric slip rings (poles)	80
Rotary transformer (kVA)	5.2
Number of hydraulic joints (ports)	10
Total weight of the centrifuge (t)	87

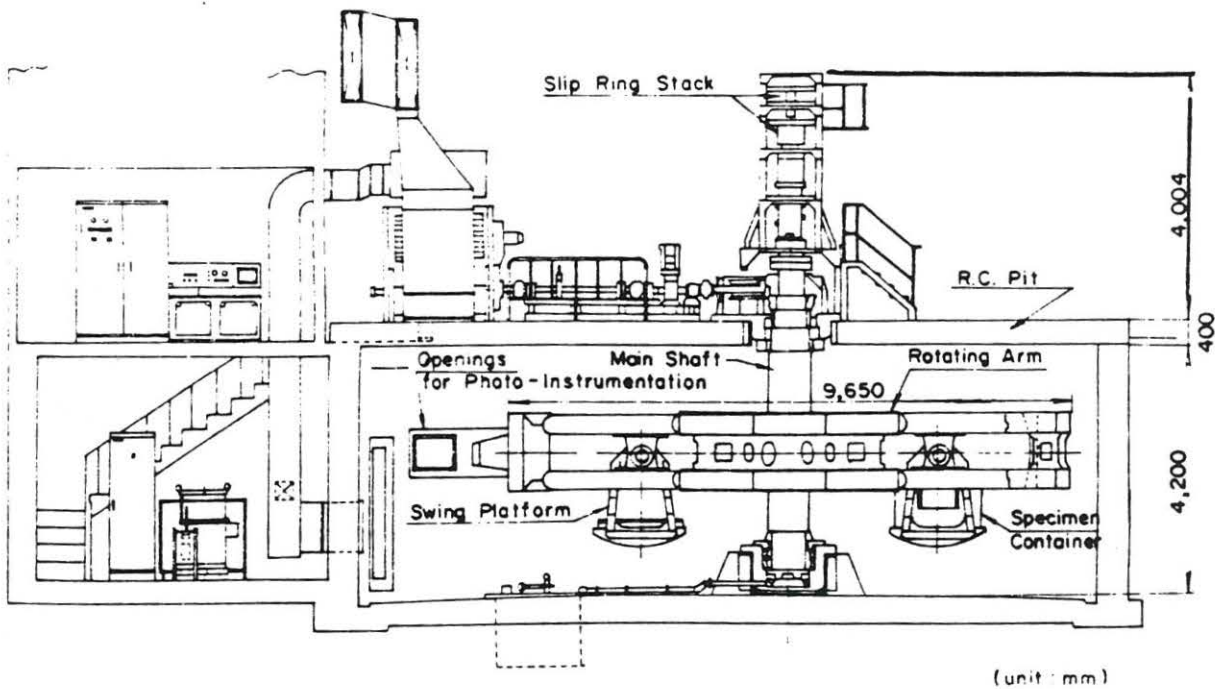


FIGURE 1. PHRI Geotechnical Centrifuge