Committee Reports

New Fracture Subcommittee Formed

The SEM Fracture Technical Activities Committee met on November 4, 1984 at the Society's Fall Conference in Milwaukee. Among the business it conducted, the committee agreed to form a subcommittee on Fracture of Concrete and Rock. An organizational meeting of the subcommittee was held the next day.

The Fracture Committee recognizes that there has been great interest in the topic of fracture of concrete in the U.S. during the past 20 years. The National Science Foundation and Department of Defense support a good deal of research in the field. In the past five years there has been an outburst of activity in fracture of concrete. This has been due largely to the newly developed sophisticated equipment to obtain experimental data on structural members. Although much work is being done worldwide in fracture of concrete, the Fracture Committee feels that no technical societies or committees in this country are effectively exploring and developing the topic.

Prior to the formation of the Subcommittee on Fracture of Concrete and Rock, Stuart E. Swartz, the chairman and organizer of the group, took an international survey asking various practitioners whether or not they felt SEM should form a group to study fracture of concrete. The responses he received were overwhelmingly in favor of the group's formation. On the whole, the researchers surveyed felt that SEM, a group that cuts across many disciplines, should take the lead in developing this relatively young field. They also conveyed the opinion that the SEM subcommittee should work closely with other similar groups, such as the European group RILEM's Committee TC-50 FMC (Fracture Mechanics of Concrete). Professor Swartz is a corresponding member of this committee. Surendra P. Shah (SEM Fracture Subcommittee vice-chairman) is a member of it. The subcommittee does plan to work with RILEM's committee, as well as with several U.S. groups that study fracture of concrete to some extent, including the American Society of Civil Engineers, the American Concrete Institute and ASTM. ASTM has a subcommittee similar to SEM's new subcommittee. SEM subcommittee members plan to interact with ASTM's subcommittee in several areas—particularly when methodologies have developed to a point of acceptance at which standards may be considered.

Stuart E. Swartz

Subcommittee Goals

The Subcommittee on Fracture of Concrete and Rock will explore currently used numerical methods and experimental techniques for fracture testing of different specimen geometries. It will disseminate these findings to promote the development of new techniques and approaches and their use in design applications. The subcommittee also seeks to aid in the development of fracture standards. It will do this by exploring, analyzing and describing the many different approaches to determining fracture in concrete and rock in order to discover which approach is the most acceptable.

Subcommittee members set forth certain goals at the group's formative meeting in Milwaukee. First of all, they agreed to work on a review of current notation for the determination of standards. Such notation is now in a somewhat confusing state; for each value, there exists a number of different symbols. By compiling information on the various symbols, the group hopes to develop a single, coherent system.

Subcommittee Officers Selected

Officers for the SEM subcommittee were selected at the Milwaukee meeting. Stuart E. Swartz, Kansas State University, will serve as chairman; Surendra P. Shah, Northwestern University, will serve as vice-chairman; and Methi Wecharatana, New Jersey Institute of Technology, will serve as secretary. Ten persons attended the meeting. They were: D.B. Barker, University of Maryland; Z.P. Bazant, Northwestern University; B.W. Cotterman, U.S. AMMRC; W.L. Fourney, University of Maryland; K.A. Galione, SEM Headquarters; A.S. Kobayashi, University of Washington; S.P. Shah; S.H. Smith, Battelle Memorial Institute; S.E. Swartz; and M. Wecharatana.

Upcoming Meetings

The members also agreed to organize two technical sessions for the 1986 SEM Spring Conference on Experimental Mechanics to be held in New Orleans, LA. They will meet next at the Society's 1985 Spring Conference in Las Vegas, NV.

Anyone interested in joining the new subcommittee is invited to attend its Las Vegas meeting, or to contact Professor Swartz, subcommittee chairman, Kansas State University, Civil Engineering Department, Seaton Hall, Manhattan, KS 66506; (913) 532-5862. Details concerning the conference are available from SEM Headquarters, (203) 775-6373.