

## TECHNICAL EDITOR'S PAGE

With this fourth issue of the *JOURNAL OF ENERGY RESOURCES TECHNOLOGY* we have completed our first year of operations as a Transactions Journal. Papers representing many areas of energy resources technology have been published from the Energy-sources Technology Conference and Exhibition, the Offshore Technology Conference, and the Winter Annual Meeting of ASME. Several papers currently being reviewed for publication have been submitted directly to the Technical Editor without prior oral presentation at a technical meeting. A summary of topics covered during this year is given below.

Histories of the Petroleum and Ocean Engineering Divisions of ASME have been published. These histories document the progress of these two divisions and have been recorded in this journal for future reference value.

Many technical papers are of interest to workers in several areas of energy resource technology. For example, papers involving stress analysis may contain information of importance in rock mechanics, pipeline technology and arctic engineering. In this summary an attempt has been made to describe rather broad areas and the reader is encouraged to consult the original papers.

Rock mechanics papers have reviewed the mechanics of hydraulic fracturing and described work in explosive fracturing. Work has been presented relating to thermally induced cracks in brittle solids, failure of inclined boreholes and three-dimensional stress analysis. Papers have also been concerned with the theory of rock fracture during drilling and the analysis of rock/bit tooth interaction in ductile rocks. The rock mechanics of crude oil storage has also been addressed.

Drilling papers have described how to reduce drilling costs by using high pump pressures, and have reported on the design, fabrication and field testing of new types of diamond bits. Results of a laboratory study of the influence of bit configuration on shale drilling effectiveness have also been reported.

Arctic engineering papers have been published to provide data on the mechanical properties of sea ice and to analyze the ice forces on structures. A heat balance in simulations of permafrost behavior has been given as well as a mathematical analysis of a heat conducting well casing.

Pipeline transportation problems have been attacked in papers concerned with fractures in gas pipelines and in papers relating to the Trans Alaska pipeline. Pipe stresses during offshore pipe laying operations have also been discussed.

A number of papers have been published that should be of interest to those concerned with Offshore Technology and Ocean Engineering. These papers include semi-submersible rig motion studies, impact motion of buoyant cylinders released underwater, marine riser vibrations analysis, fatigue analysis of offshore structures, soil-structure interaction analysis, and structural response in short-crested seas.

Papers from Emerging Energy Technologies have also been concerned with ocean resources. These papers have described Ocean Thermal Energy Conversion (OTEC) projects, and methods for obtaining power from ocean waves. Another emerging energy resource, geothermal energy, was the subject of several papers.

In the present issue there are two papers from the Solid Waste Division of ASME. These papers report on heat recovery from industrial wastes and municipal refuse. We welcome these contributions.

From the foregoing description of work published in the *JOURNAL OF ENERGY RESOURCES TECHNOLOGY* during 1979 one can appreciate the scope of the technology we cover in this journal. With the continued cooperation of the authors, associate editors and technical reviewers, we look forward to our second year.

**John B. Cheatham, Jr.**