### 3A. Mud chemicals

ONGC imports a variety of mud and speciality chemicals needed for formulation and treatment of mud systems for high temperature and high pressure wells. These chemicals are used for correcting rheological and filtration loss properties, lubricating properties under bottom hole conditions.

The subject matter was discussed under the following scheme: (a) Ferrochrome ligno sulphonate, (b) Chrome lignite, (c) Resinex, (d) Loss circulation agent and (e) Spotting fluid.

## B. Cement additives

Cement additives were discussed as under: (a) Fluid loss control additives, (b) Friction reducer/turbulance inducer, (c) Retarder.

#### 4. Oil well cement

The class 'G' cement has been selected since this is

basic cement and is not chemically treated or tailored. Associated Cement Companies Ltd., as well as Dalmia Cements (Bharat) Limited, have come forward for indigenization of class 'G' oil well cement. The cement produced by them have shown good performance.

## Projection or requirement

ONGC is purchasing oil well chemicals and cement worth crores of rupees every year. With a view to give some idea regarding their anticipated requirement in terms of quantity and money, projections have been worked out. These projections are given in table 1.

Further information about the Symposium can be had from Dr R. M. Mathur, Superintending Chemist, ONGC, No. 3, Ist Lane, N. H. Road, Madras 600 034 or Shri C. L. Kaul, D.G.M. (Chem.), ONGC, Makarpura Road, Baroda 390 009.

# **ANNOUNCEMENT**

# INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS (IUTAM)

The International symposium of the IUTAM to be held at different places during July to December 1985 are as follows:

IUTAM Symposium on Mechanics of Damage and Fatigue: Place: Haifa and Tel Aviv, Israel, Date: July 1-4, 1985, Chairmen: Prof. S. R. Bodner, Technion, Faculty of Mech. Engineering, Haifa 32000, Israel; Prof. Z. Hashin, School of Engineering, Tel Aviv University, Ramat Aviv, Tel Aviv 69978, Israel.

IUTAM Symposium on Aero- and Hydroacoustics: Place: Lyon, France, Date: July 3-5, 1985, Chairmen: Prof. G. Comte-Bellot, Ecole Centrale de Lyon, Laboratoire de Mecanique des Fluides, B.P. No. 163, F-69131 Ecully Cedex, France, and Prof. J. E. Ffows Williams, University of Cambridge, Department of Engineering, Trumpington Street, Cambridge CB2 1PZ, England.

IUTAM Symposium on Hydrodynamics of Ocean Wave-Energy Utilization: Place: Lisbon, Portugal, Date: July 8-10, 1985, Chairmen: Prof. A. F. de O. Falcao, Instituto Superior Techico, Departmento de Engenharia Mecanica, Avenida Rovisco Pais, 1096

Lisboa Codex, Portugal, and Dr D. V. Evans, University of Bristol, School of Mathematics, University Walk Bristol, BS8 1TW, England.

IUTAM Symposium on Inelastic Behaviour of Plates and Shells: Place: Rio de Janeiro, Brazil, Date: August 5-9, 1985, Chairman: Prof. L. Bevilacqua, PUC-RJ, Centro Teonico Cientifico, R. Marques de S. Vicente 225, Gavea, Rio de Janeiro, CEP 22453, Brazil.

IUTAM Symposium on Macro- and Micro-Mechanics of High Velocity Deformation and Fracture: Place: Tokyo, Japan, Date: August 12-14, 1985, Chairman: Prof. K. Kawata, Department of Mechanical Engineering Science, University of Tokyo, Yamazaki, Noda, Chiba-ken 278, Japan.

IUTAM Symposium on Mixing in a Stratified Fluid: Place: Perth, Australia, Date: August 26-30, 1985, Chairmen: Prof. J. Imberger, University of Western Australia, Department of Mathematics, Nedlands, Western Australia 6009, and Prof. G. Batchelor, University of Cambridge, Department of Applied Mathematics and Theoretical Physics, Silver Street, Cambridge CB3 9EW, England.