

transport by conduction and by the transport of internal energy of clusters.

The difficulties in experimental techniques have stood in the way of a fuller study of the influence of pressure on chemical reactions on lines similar to the influence of temperature. The section on chemical reactions is useful, particularly in whetting one's interest by showing the very limited work that has been possible so far. The provocative contribution of Laidler develops the classical van't Hoff picture of the influence of pressure on equilibrium constants and considers them from the picture of volume changes in the overall reaction or activation process. In ionic reactions, the ionic volume can be the sum of two terms made up of the intrinsic volume of the ion and a term related to the electrostriction of the solvent molecule in its neighbourhood. The general considerations advanced lead to a certain amount of correlation between molar volume changes and temperature coefficients of these changes in dealing with solvent influences and the results available appear to give some support to the speculative concepts on the role of electrostriction in solvent influence on reactions. While the free radical decomposition of benzoylperoxide shows no significant mechanistic change with pressure, in styrene polymerisa-

tion, initiation is little influenced by pressure though propagation of the reaction chain is noticeably affected. The difficulty in generalisation is clearly shown by work on ethylene which appears to suggest that in catalysed reactions under pressure, mechanistic changes are also possible with consequent changes in the overall activation energies. Similarly liquid phase studies lead to changes in reaction rates very much larger than changes in molar volumes.

The last section of the symposium starts with an excellent summary of the basis of detonation theory which, however, is not adequate for one unfamiliar with the field to follow the subsequent contributions. We have in the section an indication of the techniques involved in the study of explosions and measurements of detonation velocities in compressed acetylene, a useful summary of probable reaction mechanisms in the region of the detonation wave and studies on solid explosives. We notice here not only the difficulty in the experimental techniques but also the very limited knowledge we possess on the subject.

In such a valuable symposium, one cannot help noticing the absence of contributions from astrophysicists.

S. V. ANANTAKRISHNAN.

SYMPOSIUM ON "RECENT DEVELOPMENTS IN FOUNDRY TECHNOLOGY"

THE Symposium scheduled to be held at Jamshedpur in the first week of February 1958, has been arranged by the National Metallurgical Laboratory, Jamshedpur, in active collaboration with the Indian Institute of Foundrymen.

The main object of this venture is to study the latest scientific developments that have taken place all the world over with regard to the heavy machinery and engineering industries and to help the industrial expansion of India envisaged during the Second Five-Year Plan.

The Symposium will cover the following subjects: (1) Raw materials for moulds and cores; (2) Materials and methods for fettling and handling of materials in the foundry; (3) Modern innovations in foundry technology like CO₂ process, shell-moulding; (4) New

developments in melting including casting techniques and latest equipment; (5) Recent developments in the founding of ferrous and non-ferrous metals and alloys; (6) The position of foundry industry in India vis-a-vis Second Five-Year Plan; (7) Foundry mechanisation and layout; (8) Foundry management.

Technical papers to be presented at the Symposium and other correspondence may be addressed to: Dr. T. Banerjee, Assistant Director, National Metallurgical Laboratory, Jamshedpur-7.

An Exhibition depicting the present stage of Indian Foundry Industry's progress in relation to future expansion plans is also proposed to be arranged at the National Metallurgical Laboratory.