

several experts who are entitled to speak with authority in their respective fields. The editors of the English translation have maintained the same ideal in view and have selected translators from among the Firestone Research staff, who are best qualified to translate the section of the book apportioned to them. The translators' notes and comments, which appear as footnotes, constitute a valuable feature of the English translation since they amplify, corroborate or supplement the information and thus furnish the reader with an enlarged and extended experience covering the newer developments since the German original was written.

The chapter on the Chemistry of rubber has an added interest since it includes a résumé of the work on the synthesis of rubber conducted in Germany under the stress of war, in the course of which a number of normal and abnormal types of artificial rubber were produced. It is not improbable, that in the near future, most of these will find an appropriate use in industry.

The chapter on vulcanisation, the fundamental process responsible for the phenomenal development of rubber industry, treats with all the latest theories of vulcanisation and accelerator action and indicates the future lines of development. To those interested in the physical properties of rubber, the chapter on the physics of rubber will offer the most interesting and stimulating reading. The colloid chemist in particular will welcome this chapter since it deals with the swelling and solution of rubber and provides him with an array of problems requiring elucidation. It may, however, be mentioned that in the course of reading the book one gets the impression that the pure research that has been conducted on the various aspects of rubber have an intimate

bearing on the industrial application. For example, the results on the permeability of rubber to gases in the relation to the quality and treatment of rubber, which has been investigated so thoroughly have been exploited in the development of aeronautics. The optical and electrical properties of rubber and its solution, which are of great technical importance, have also been treated.

For the first time, the physical methods of testing rubber have been brought together in a single chapter and this constitutes a very valuable contribution from the point of view of a technologist since most of these methods suggest possibilities of application in other fields of technology, more particularly in the fields of resins and plastics.

The chapter on the microscopy of technical vulcanizates, describes methods by which rubber can be investigated by reflected and transmitted lights as also by the dark field illumination, and these observations are illustrated by a series of faithfully and beautifully reproduced colour plates.

The fact that the Firestone Tyre and Rubber Company have permitted the members of their technical staff to engage themselves in this work of translation not only speaks of their progressive ideas but also of the high esteem in which Memmler's book is held by rubber technologists. This treatise on the science of rubber will be gratefully welcomed not only by those interested in the science and technology of rubber, but also by those interested in allied fields. It is hoped that the enterprising publishers who deserve to be congratulated in publishing this volume, will soon bring out an equally authoritative and comprehensive companion volume on the technology of rubber.

M. S.

Archæological Discoveries at Narunjadharao.

CONSIDERABLE importance is attached to the discoveries of Mr. U. T. Thakur, a young Sindhi Scholar at Narunjadharao, in Khairpur State. Experimental excavations have yielded interesting relics such as shells, bangles, images of Buddha, gold and copper, skeletons and pottery. It is anticipated that these discoveries will throw consider-

able light on the Mohenjadhara civilisation and the site will be revealed to the world as a centre of pre-Aryan culture. It is reported that Professor Ghory of Bombay has supported the claims of the discoverer. The State authorities have reserved the sites for further excavation and further work will be started in the coming winter.