

reliance upon examinations" and kindred "paraphernalia". -He issues a warning to well-meaning enthusiasts, but there is not the slightest evidence that he would apply such an antidote as our vast and complicated examination machine. He would be more likely to say, trust your teachers, and if they cannot even trust themselves, reform your system until they feel strong enough to do so. In other words, he would assuredly prefer the spirit of the Norwood Report to that of Mr. Brereton's book.

T. RAYMONT.

BRITISH ELECTRIC POWER STATION PRACTICE

Electric Power Stations

By T. H. Carr. Vol. 1. Second edition revised and enlarged. Pp. xii+507. (London: Chapman and Hall, Ltd., 1944.) 32s. net.

MORE than 10 per cent of all the coal mined in Great Britain is used in electric power stations, and the electrical energy produced in these stations is an important factor in determining the standard of living of the population of Great Britain. Books on power stations are scarce, so that the appearance of a new edition of the only up-to-date British publication is a matter of considerable interest and importance.

The volume under review comprises a foreword by Sir Leonard Pearce, two author's prefaces, nine chapters and a subject index. The chapters deal in turn with some fundamentals of station design, civil engineering and buildings, circulating water systems, cooling towers, coal-handling plant, ash-handling plant, boiler plant, pipework and turbine plant. Twenty-nine pages are devoted to fundamentals of design. They provide an ill-assorted series of what purport to be general principles relating to plant rating, choice of thermal cycle, choice of voltage of generation, and station operation. Civil engineering works and buildings are considered in a more comprehensible manner; but the treatment remains scrappy. Some of the facts provided, for example, the tables giving floor areas and volumes of boiler and turbine houses per kW. installed, are potentially useful to those who are interested in power station design. Circulating water systems and cooling towers are described in some detail; but insufficient emphasis is given to the fact that modern developments in cooling tower design and construction are having a profound influence on the economics of electricity supply. Coal and ash-handling plants of all the principal types encountered in Great Britain are briefly commented on in the light of operating experience. The chapter on boiler plant deals with chain grate and retort stokers, pulverized fuel systems and apparatus, natural circulation and forced circulation, steam generators, and instruments used in connexion with steam production. A chapter is devoted solely to steam and water pipes, joints and valves. Turbines and their accessories are considered in the final chapter.

The volume is illustrated by 249 figures which are in the main well-chosen, apart from a few which are too elementary to justify their inclusion in an important treatise. The figures provide more and better information than does the descriptive matter.

The author has done his best to emphasize points of special importance, and has been unsparing in his

efforts to safeguard his readers from dangers and difficulties encountered in power station design, construction and operation.

His work is pervaded by a sort of naïve enthusiasm which is quite infectious; but this leads him to make numerous interjections which, although intended to help, actually hinder the reader from getting a proper grasp of the subject in general. The English is frequently so faulty that many sentences are incomprehensible, and the work is further marred by several gross typographical errors. The few calculations which are included are of an elementary and inconsequential nature.

There are only scrappy references to American or other foreign plants, and even those which are included are not direct. Power station development in the United States has always been in advance of that in the rest of the world, and many European stations have novel and interesting features which should be made known to our home engineers.

The author has made an effort to supply a long-felt want in British engineering literature. It is evident from the fact that the second edition of his book has been called for within three years that he has had some measure of success. In the opinion of the reviewer, however, the volume under consideration is in most respects of indifferent quality, and does not adequately meet the requirements of specialists interested in power station design, construction or operation.

C. W. MARSHALL.

LANGUAGES, NATURAL AND ARTIFICIAL

The Loom of Language

A Guide to Foreign Languages for the Home Student. By Frederick Bodmer. Edited and arranged by Lancelot Hogben. (Primers for the Age of Plenty, No. 3.) Pp. 670. (London: George Allen and Unwin, Ltd., 1943.) 15s. net.

TO anyone who learnt languages in the traditional fashion, Dr. Bodmer's work must bring a feeling of frustration. In the time spent at the average school on memorizing one language, the intelligent student could, by the method here displayed, learn to understand a group of related languages.

The first part of the book deals with the evolution of languages, with alphabet, accidence, syntax and classification. The second part instructs the reader first how to begin the task of learning the essentials of a language, and then gives the basis of Teutonic grammar and of the languages of Latin descent. Part 3 deals shortly with those languages, such as Russian and Chinese, furthest removed from our own, with the history of the artificial languages, and with a suggestion for yet another planned language for international use. Finally, there is a series of basic vocabularies for the Teutonic and Romance languages and of Greek roots of international currency.

Anyone with some knowledge of European languages reading this book will emerge at the other end with an enriched vocabulary, a sounder understanding of their meaning, and a new capacity for interpreting the unknown words in his future foreign reading. In school an enthusiastic teacher could have no better text-book.

For an adult who wishes to learn a language, the reviewer offers the following prescription. Prepare