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PREFACE TO THE THIRD EDITION

So many developments have taken place in railway practice since 1926, when this book was first published, that for the Third Edition an entire revision became necessary. This task has been accomplished, with the assistance and encouragement of the publishers, during a period of intense hostility and with London the especial target of enemy bombers. The methods and practices described are those which prevailed on the outbreak of war. Some of them have been adapted to meet wartime conditions and may possibly experience post-war revision. But the general principles of railway operation will remain, the peacetime facilities herein reviewed will be revived, and the value of this textbook should in consequence remain unimpaired. Pre-occupied with war work, the author could devote but little time to the requisite painstaking research and preparation of several additional chapters. He therefore desires to express to Mr. Charles F. Klapper, his assistant on the editorial staff of *Modern Transport*, his appreciation of the collaboration without which the issue of this thoroughly revised and amplified edition would inevitably and indefinitely have been postponed.

D. R. L.

April, 1941

PREFACE TO THE SECOND EDITION

DEVELOPMENTS in British railway practice since the initial publication of this work twelve months ago are not such as to necessitate any considerable alterations in the text. Evidence of the fact that the companies realize the need for combating the effective competition of road transport is afforded by the recent introduction of an extensive system of cheap fares from stations within easy distance of the principal towns and pleasure resorts, and by the acquisition of a number of economical steam power units.

An interesting locomotive development was concerned in the use, for the first time in Great Britain, of a Ljungström turbo-condensing locomotive. Built by a British firm—Beyer, Peacock & Co., Ltd., of Gorton, Manchester—this engine began extended experimental service on the London Midland and Scottish Railway in November last. The latter company has also recently acquired, for the movement of its heavy mineral traffic between Toton and Brent, a number of "Garratt" articulated locomotives, a type of engine to which reference is made on page 127, although a slight variation in design has been effected to meet the particular requirements of the L.M.S.R.

In October last the Southern Railway produced a new 4-6-0 four-cylinder express passenger locomotive, the first of what is now known as the "Lord Nelson" class, which, with a tractive effort at 85 per cent boiler pressure of 14.96 tons, surpassed the then British record of 14.12 tons, held by the Great Western Railway "Castle" class locomotives. Early in July, however, the Great Western Company completed "King George V," the first of twenty "King" class four-cylinder 4-6-0 express locomotives,

having a tractive effort of 17.99 tons, and thereby again achieved the lead.

Finally, at the beginning of last month, the London Midland and Scottish introduced the "Royal Scot," the first of a new series of three-cylinder express engines, again of the 4-6-0 type, built on the single-expansion principle and using superheated steam at an initial pressure of 250 lb. per square inch, the tractive effort in this case being 14.8 tons. Another interesting innovation of the last-named company was the setting up, at the end of last year, of an executive consisting of a president and four vice-presidents to control the undertaking, an arrangement in many respects similar to that which has proved successful in railway practice in the United States.

D. R. L.

September, 1927

PREFACE

THIS is an age of specialization. The multiplicity of operations involved in the production of materials and commodities necessitates the employment of individuals each expert in a specific routine. Particularly is this the case in connection with transport, in the production of which the railways are incessantly engaged. And whilst it is true that any modern industrial undertaking must necessarily benefit by the vocational training of the staff engaged in the various processes of manufacture, the consideration is especially applicable to the administration of a railway, where efficiency depends mainly upon the satisfactory relationship and inter-working of a large number of separate departments.

Unfortunately, there has been little opportunity in the past for railway employees to gain information and knowledge as to the functions of departments other than those in which they are immediately engaged, with the inevitable result that even those who have attained to the higher ranks, though fully competent in their own particular spheres, have often been ill-equipped in experience of other branches of the service. Of recent years, however, efforts have been made to overcome this deficiency, and on certain railways some of the younger and more promising members of the staff have been afforded valuable opportunity for acquiring omni-departmental experience.

It is to be hoped that this movement will be extended. The problems of railway management are becoming increasingly complex, and their solution will be possible only by those who are able to exercise judgment and initiative, founded upon all-round knowledge of railway administration and working. In this connection the Institute of Transport has already afforded valuable service, and it is at the request of the Institute that this

textbook has been written. Intended primarily as a guide to those studying for the Institute examinations, the work has been prepared with the object of indicating the latest practices in railway working, and several references are made to the views of leading authorities, to whom the author desires to express his indebtedness. Whilst fully aware of its many shortcomings, he trusts that the book, in which the aim has been to convey a true perspective of the subject, will be of some service to all who are interested in the intricacies of modern railway operation.

DAVID R. LAMB

July, 1926

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