

**THE BROADWAY SERIES OF
ENGINEERING HANDBOOKS,
VOL. XV. STEAM BOILERS
AND COMBUSTION**

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The Broadway Series of Engineering Handbooks, Vol. XV. Steam Boilers and Combustion by
John Batey

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STEAM BOILERS AND COMBUSTION

THE BROADWAY SERIES OF ENGINEERING HANDBOOKS
VOLUME XV

STEAM BOILERS AND COMBUSTION

BY
JOHN BATEY
AUTHOR OF "THE SCIENCE OF WORKS MANAGEMENT"

WITH EIGHTEEN DIAGRAMS

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PREFACE

SOME explanation is probably expected for the introduction of another book on such an apparently hackneyed subject as Steam Boilers; yet this work may be more necessary to-day, in spite of the large number of treatises extant, and the deduction is reasonable when so many scientists and professional engineers are engaged in the laudable purpose of seeking improved methods to gain a higher efficiency in practice.

Unfortunately most of the books published are highly technical works dealing with what has been done and not with the possibilities of future development. This spells a great danger to initiative—which is discounted to a great extent—by placing too much reliance on the past rather than encouraging a determined attack on future possibilities.

A learned professor has gone farther than most in this direction when he asserted that engineers and boiler experts had been fostering wrong ideas in spite of the fact that extended practice qualified present laws. His declaration that the theories accepted, and their laws, were utterly wrong, is a deduction from what his own experiments revealed.

Credit is due to him for his courageous pronouncement, and no one doubts the sincerity of his intentions, yet it may be that his professional zeal carried him farther than he really intended.

That he attained a much higher quantitative efficiency than was usual to ordinary practice there can be no question; but there may be a suspicion that his enthusiasm led him astray when he attributed effects to causes that may be erroneous.

In pursuance of a purpose, problems of combustion will be examined, and as far as possible cause will be traced back from effect, and the causes will be referred to well-known effects as a comparison. Principles, as accepted, will not be described, though their application may sometimes be questioned.

All analysis will be based on recognised science, and results will be compared with authorised deductions, and any comparative performances will be those that have received publicity through the pages of the Engineering Press, or are embodied in the pages of the reports of Scientific Societies.

So far as the writer knows, no work of this character, as outlined, has been published; yet attention must be called to Mr. C. W. William's work, which so many years ago received much well-merited attention in spite of its highly technical character.

That work was more in the nature of an analysis of chemical science in regard to combustion, whereas the present purpose is a desire to incite ingenuity to throw off all restraining trammels, with the intention of trying to stop the tremendous waste now going on in the majority of steam plants throughout the world.

JOHN BATEY.

COVENTRY, *April*, 1915.

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