

**THE ABUSE OF THE STEAM
JACKET PRACTICALLY
CONSIDERED**

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The abuse of the steam jacket practically considered by William Fletcher

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WILLIAM FLETCHER

**THE ABUSE OF THE STEAM
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CONSIDERED**

THE ABUSE OF
THE STEAM JACKET

PRACTICALLY CONSIDERED

With a Statement of some of the requirements for
obtaining beneficial results.

BY

WILLIAM FLETCHER,

MECHANICAL ENGINEER.

WITH ILLUSTRATIONS.

LONDON:—E. & F. N. SPON, 46, CHARING CROSS.

Basingstoke:—

PUBLISHED AND PRINTED BY CHARLES J. JACOB,
1878.

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THIS WORK
IS RESPECTFULLY DEDICATED
TO ALL
WHO ARE ENTRUSTED WITH THE DESIGNING—
MANUFACTURE—ERECTION OR DRIVING OF
THE STEAM ENGINE
BY
THEIR OBEDIENT SERVANT,
THE AUTHOR.



P R E F A C E .



The ORIGIN of this little book may soon be told.

Some two years ago I purposed writing a letter to one of our Engineering Journals on the Steam Jacket, in reply to a correspondent who sought information on the subject, for which object at considerable trouble (for the literature of this subject is most meagre) I collected a tolerably large amount of information, but owing to the time devoted to the search, I was led to relinquish the idea of the letter, but continued the study with a view at some distant date of writing a Treatise on the Steam Jacket, this idea is now being carried out, the "Complete Treatise on Steam Jacketing," is in active preparation, and while busily engaged with this work, I was astonished to find that very little or

nothing had been said respecting the misapplication of the Steam Jacket, or Its Abuse as I have termed it, notwithstanding that in practice the utility of about four out of every six Jackets that I have examined was very much impaired, if not wholly destroyed, occasioned by their imperfection ; which accounts for the appearance of this little treatise, wherein I have sought not only to point out the defects in many steam jackets in use to-day, but also to lay down some principles relating to their proper design and application, and seeing that this book furnishes the only information on this neglected subject, I trust that the contents may prove of some service to designers and makers of steam engines.

I may mention here, that the fact of the scarcity of Engineering books written by practical men* has served as an incentive to energy, and caused me to hope that this first literary venture, emanating from the drawing office and works, may, (irrespective of its faults) meet with some measure of support and approval.

* Well written, practical books, from the pens of competent practical men, are as scarce, and nearly as valuable as gold. "The Engineer," 17th May, 1872.

Our cleverest engineers and those most competent to write good practical books which would be of permanent value to the rising generation of engineers, are so busily engaged in the manufacture of engines, that they have not the time to write about them, for the very reason that the manufacture of engines is a far more profitable undertaking than the production of books relating to engines.

In many engineering books, the efforts of the authors are spread over such a large surface, that the information given is too superficial to be of any real value: where a few lines are devoted to the explanation of each detail of the steam engine for instance, in all probability those few lines will fail to supply the information needed, and serve no good purpose to the enquiring mind. Who does not remember reading numerous books of this class in the hope of finding some valuable notes, and after wading through the contents have had to close them in disappointment?

Take, for illustration, the valuable detail we are studying—the steam jacket. In many works on the steam engine it is not even mentioned, in some, two or