

DIRECT-ACTING STEAM PUMPS

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Direct-Acting Steam Pumps by Frank F. Nickel

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FRANK F. NICKEL

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DIRECT-ACTING STEAM PUMPS

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PREFACE

The direct-acting pump has received scant attention from writers on pumping machinery. While this class of machinery in general is looked upon abroad with contempt and as a sort of necessary evil, in this country its advantages over other types of pumps were recognized early, even in the face of lower economy in fuel. The abundance of fuel and the scarcity of skilled labor, no doubt, were deciding factors in this development.

Within the past fifteen years the field has been encroached upon greatly by the centrifugal pump, but there are many conditions, especially where the exhaust steam is usable, in which the direct-acting pump is unlikely to be displaced. Evidence of this is found in many modern plants where direct-acting pumps are found side-by-side with centrifugal pumps, each supplying the service for which it is best fitted.

The author has considered it a duty to preserve the history of the development of this class of pump and the results of his experience, extending over thirty years in this line, and is confident that this book will supply much information that is looked for elsewhere in vain. In the few cases where material was used that is not original, due credit is given.

Grateful acknowledgment is made to Mr. Alfred D. Blake, Associate Editor, *Power*, for his valuable assistance in editing and for many excellent suggestions.

FRANK F. NICKEL.

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