

**THE MECHANICAL AND OTHER  
PROPERTIES OF IRON AND  
STEEL IN CONNECTION WITH  
THEIR CHEMICAL COMPOSITION**

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The Mechanical and Other Properties of Iron and Steel in Connection with Their Chemical Composition by A. Vosmaer

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**A. VOSMAER**

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BY  
A. VOSMAER, ENGINEER.



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TO

MR. R. A. HADFIELD,

ENGINEER OF THE HADFIELD STEEL FOUNDRY COMPANY, SHEFFIELD,

THIS WORK

IS RESPECTFULLY INSCRIBED BY

THE AUTHOR.

MADE IN U.S.A.

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INTRODUCTION.

THE object in view in preparing this work was to give a brief outline of the actual knowledge on the subject. It has been gathered from the widely scattered information upon the now generally acknowledged intimate connection that exists between the properties of steel and iron and their chemical composition.

It was considered best to treat the matter under heads, each dealing with one element at the time; however, as the different elements at times greatly influence one another, they often had to be considered simultaneously. In general, the following rule has been followed,—first, to say a few words on the metallurgical behaviour of the elements in question; next, to deal with their influence on pig iron, cast iron, wrought iron, and steel; lastly, to set forth the special uses made of them, and their occurrence in manufactured objects.