

**ELECTRIC FURNACES: THE
PRODUCTION OF HEAT FROM
ELECTRICAL ENERGY AND THE
COSTRUCTION OF ELECTRIC
FURNACES**

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Electric Furnaces: The Production of Heat from Electrical Energy and the Construction of Electric Furnaces by Wilhelm Borchers & Henry G. Solomon

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WILHELM BORCHERS & HENRY G. SOLOMON

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ELECTRIC FURNACES

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AND

THE CONSTRUCTION OF ELECTRIC
FURNACES

BY

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TRANSLATED

BY

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CONSULTING ELECTRICAL ENGINEER

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TRANSLATOR'S PREFACE

THE present volume is an English version of the second German edition of "Die elektrischen Öfen" by Dr. Borchers, the well-known authority on electro-metallurgy. The English edition has been brought up to date as far as possible by the inclusion of descriptions of two of the most recent and most successful electric steel furnaces used on the Continent. These descriptions were also kindly supplied by Dr. Borchers, and have been added in an appendix, as the information concerning the furnaces was only obtained after the work had been translated and printed.

The method of treatment and classification of electric furnaces adopted is from the point of view of the heating system on which their action is based, and their development and application are examined in an authoritative and critical manner.

As close a translation of the original as possible has been adhered to, and the English equivalents of the metrical measurements given in the text have been added, together with extra references to English patents, the latter being enclosed in square brackets. For the purpose of an English book the subject-matter has been further arranged under suitable headings in chapters corresponding with the main sections of the German original, without, however, altering the sequence.

The recent rapid development, notably abroad, of the electric furnace is sufficient proof of the important part it is playing, and is destined to play in a still greater degree in the near future, in

connection with all classes of metallurgical operations. Mention need only be made of the application of electric furnaces in the electro-metallurgy of steel and iron on the Continent, in America, and in Canada, in the aluminium industry in this country and abroad, and in the manufacture of the alkali metals, etc. By the aid of electric furnaces it should be possible to develop new industries, and in districts hitherto unsuitable for electrical enterprise, especially where the raw materials are readily obtainable for the production of the substance desired, and current can be cheaply generated and supplied, as by the utilisation of waste furnace gases and overhead transmission.

H. G. SOLOMON.

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