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# Blast Furnace Irregularities

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The Cleaning of Blast-furnace Gases  
Smelting in the Lead Blast Furnace  
Studies of Blast Furnace Phenomena  
Alabama Blast Furnaces  
The Designing and Equipment of Blast Furnaces  
Blast Furnace Practice  
Occupational Hazards at Blast-furnace Plants and  
Accident Prevention  
Smelting Iron Ore with Anthracite  
The Iron Blast Furnace  
A Study of the Blast Furnace  
Chemical Abstracts  
The Blast Furnace and Steel Plant  
The Blast Furnace and Steel Plant  
Chemical Phenomena of Iron Smelting  
The Principles, Operation and Products of the  
Blast Furnace  
The Iron Blast Furnace  
Studies of Blast Furnace Phenomena ...  
Modern Blast Furnace Ironmaking  
The Iron Age  
Effect of Sized Ore on Blast-furnace Operation  
American Manufacturer and Trade of the West  
Proceedings-Blast Furnace, Coke Oven, and Raw  
Materials Committee of the Iron and Steel  
Division, The Metallurgical Society of the  
American Institute of Mining, Metallurgical, and

Petroleum Engineers  
Blast Furnace Technology, Science and Practice  
The Blast Furnace and the Manufacture of Pig Iron  
The Foundry Trade Journal  
Reports Upon Blast-furnace Field Tests  
International Conference on Advances in the  
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2009), December 09-11,2009  
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Combustion in the Gas Producer and the Blast  
Furnace  
Studies of Blast Furnace Phenomena  
IRON MAKING AND STEELMAKING  
Blast Furnace and Steel Plant  
Iron Age  
Blast Furnace Operations with Very Low Slag  
Rates  
The Journal of Chemical Technology  
Blast Furnace and Steel Plant  
Significance of Experimental Operations to  
Industrial Blast- Furnace Practice  
Industrial World  
Models of Blast Furnaces for Smelting Iron  
Coke Reactivity and Its Effect on Blast Furnace  
Operation

*Blast  
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The Cleaning of Blast-  
furnace Gases BoD -  
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Go to resource on all

the furnaces that made Alabama internationally significant in the iron and steel industry. This work is the first and remains the only source of information on all blast furnaces built and operated in Alabama, from the first known charcoal furnace of 1815 (Cedar Creek Furnace in Franklin County) to the coke-fired giants built before the onset of the Great Depression. Woodward surveys the iron industry from the early, small local market furnaces through the rise of the iron industry in support of the Confederate war effort, to the giant internationally important industry that developed in the 1890s. The bulk of the book consists of individual illustrated

histories of all blast furnaces ever constructed and operated in the state, furnaces that went into production and four that were built but never went into blast. Written to provide a record of every blast furnace built in Alabama from 1815 to 1940, this book was widely acclaimed and today remains one of the most quoted references on the iron and steel industry.

**Smelting in the Lead Blast Furnace** PHI Learning Pvt. Ltd. The Iron Blast Furnace: Theory and Practice presents the significant role of iron blast furnace by which iron is efficiently and rapidly reduced from ore and it is the basis for all primary steelmaking. This book discusses the

importance of blast-furnace process as a complete operation. Organized into 14 chapters, this book begins with an overview of the existing experimental, theoretical, and operational evidence about the blast furnace. This text then examines the blast furnace from the outside, including its size, production rate, products, raw materials, operation, and costs. Other chapters consider the primary objective of the blast furnace to produce molten iron of constant composition. This book discusses as well the operation of the furnace from the point of view of what happens to the raw materials after they enter the furnace. The final chapter deals with

the linear programming methods by using the known physical constraints on industrial furnaces.

This book is a valuable resource for engineers.

Studies of Blast

Furnace Phenomena

Marcel Dekker

Reprint of the original, first published in 1874.

Alabama Blast

Furnaces Iron & Steel

Society

This book describes the blast furnace process for operators. As a starting point, the blast furnace is seen as a simple iron ore melter, while gradually the physical, chemical and metallurgical background is clarified. Operational observations, challenges and remedies are explained from this perspective. Optimization of the blast furnace process is

not only based on “best practice transfer”, but also requires conceptual understanding of what works when. In other words: operational improvement is not only based on know-how, but on know-why as well. With *Modern Blast Furnace Ironmaking – An Introduction* (Third Edition, 2015) the reader has a compact compendium of the blast furnace process available: by operators and for operators and for those who are preparing to become operators.

**The Designing and Equipment of Blast Furnaces** Allied Publishers

This authoritative account covers the entire spectrum from iron ore to finished steel. It begins by

tracing the history of iron and steel production, right from the earlier days to today’s world of oxygen steelmaking, electric steelmaking, secondary steelmaking and continuous casting. The physicochemical fundamental concepts of chemical equilibrium, activity-composition relationships, and structure-properties of molten metals are introduced before going into details of transport phenomena, i.e. kinetics, mixing and mass transfer in ironmaking and steelmaking processes. Particular emphasis is laid on the understanding of the fundamental principles of the processes and their application to the optimisation of actual

processes. Modern developments in blast furnaces, including modelling and process control are discussed along with an introduction to the alternative methods of ironmaking. In the area of steelmaking, BOF plant practice including pre-treatment of hot metal, metallurgical features of oxygen steelmaking processes, and their control form part of the book. It also covers basic open hearth, electric arc furnace and stainless steelmaking, before discussing the area of casting of liquid steel—ingot casting, continuous casting and near net shape casting. The book concludes with a chapter on the status of the ironmaking and steelmaking in India. In line with the

application of theoretical principles, several worked-out examples dealing with fundamental principles as applied to actual plant situations are presented. The book is primarily intended for undergraduate and postgraduate students of metallurgical engineering. It would also be immensely useful to researchers in the area of iron and steel.

Blast Furnace Practice  
University of Alabama  
Press

Contributed articles presented in the International Conference on Advances in the Theory of Ironmaking and Steelmaking; organized by the Dept. of Material Engineering, IISc., Bangalore.

**Occupational Hazards at Blast-**

**furnace Plants and  
Accident Prevention**

Elsevier

*Smelting Iron Ore with  
Anthracite* IOS Press

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