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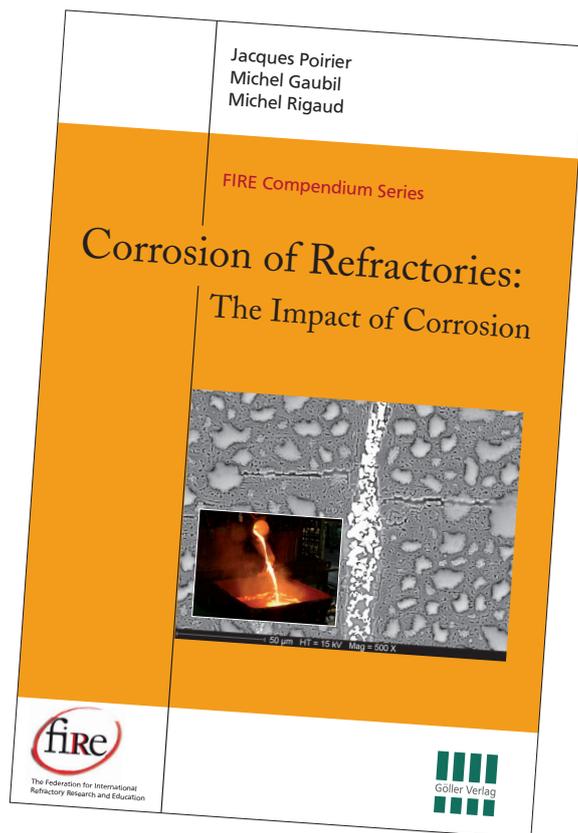
Corrosion of Refractories: The Impact of Corrosion

Jacques Poirier, Michel Gaubil and Michel Rigaud, **Editors**

This is the third book on the theme of corrosion, preceded by the one on **The Fundamentals (2A)** and on **Testing and Characterization Methods: Ways to evaluate Corrosion Damages (2B)**

The three books are dedicated to a wide readership of refractory manufacturers and users of refractories from the industrial sectors of iron and steels, non-ferrous metals, aluminium, cement and lime, glass, chemical and petrochemical, power generation and waste incineration. The books are intending to serve not only as reference books but also to serve for educational purposes, hence should be of interest to academia, students and research engineers in this field of expertise

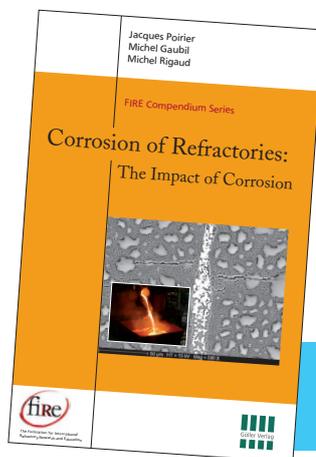
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The Federation for International Refractory Research and Education, **FIRE** is a non-profit organisation established to promote refractory related research and education on a global basis. **FIRE** aims to stimulate and reinforce international education and research programmes for the refractory industry. Its strength is a unique grouping of expertise with 27 members drawn from all sectors of the refractory producing, supplying and consuming industries coupled with the world's leading academic institutions involved in refractory research. **FIRE** is committed to a series of research programmes, which are by definition pre-

competitive and are aimed at leveraging the research network capability of **FIRE** with contributions from both industrial and academic partners. They are designed to further refractory science and provide a basis for education through academic research. In order to further promote refractory research and education, **FIRE** is launching a compendium series in association and in partnership with Göller-Verlag publishing to make refractory science and technology available to academia, students, refractory raw material suppliers, producers, users and others interested in the refractory industry.



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FIRE Compendium Series

Volume 2C: Corrosion of Refractories – The Impact of Corrosion

Jacques Poirier, Michel Gaubil and Michel Rigaud

Wear by corrosion of refractory materials remain a major concern for plant operators, manufacturers of refractories, installers and refractory engineers involved in R&D and Education in this field of expertise. This third volume on the theme of corrosion is focused on the modes of degradation met in practical situations, for a better understanding of the corrosion processes.

Once characterization of corroded samples has been achieved, from micro-, meso-, and macro- scale, it is essential to integrate all the data, taking on account the lining construction and lining maintenance schedule, the operation process fluctuations, the dismantling and sampling procedures, with the cost consideration.

The volume is divided into three chapters. Chapter I is about the definition of the context in which refractories wear down to be able further to distinguish between the notion of continuous and discontinuous wear, authored by T.Vert and M.Rigaud.. Chapter II is to illustrate how to benefit from post-mortem

analysis, and case studies considering a total of 14 different applications, in Steelmaking (BOF; EAF; Ladles; Continuous Casting; Vacuum Degasser) in specific cases of the Aluminum, Non-Ferrous, Cement, Glass Industries, as well as in Incinerators, Boilers, Gasifiers and Induction furnaces. Principal authorship is by T. Vert; P. Prigent; In-Ho Jung; J. Poirier; R. Telle; G. Pacheco; T. Tonnesen; A. Villaba-Weinberg; J. Bennett; J. Soudier with several other collaborators. Chapter III is on the impacts of corrosion on 1- Quality of the products, in Steemaking, authored by P.Galliano et al. and in Glass Melting. 2- Refractory Management in Steel-Plants by T. Vert 3- on New Processes at Ultra High Temperatures and Ultra-Low Partial Pressures, by A. Maître.

The content of the book has been outlined and reviewed by 14 fellow experts (industrials and academics). It represents a major contribution to understand corrosion of refractories and to appreciate its impact on the plant availability and quality of products