

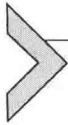
Corrosion Control for Offshore Structures

Cathodic Protection and High-Efficiency Coating



Ramesh Singh





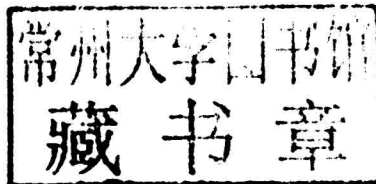
CORROSION CONTROL FOR OFFSHORE STRUCTURES

Cathodic Protection and
High-Efficiency Coating

First edition

By

RAMESH SINGH



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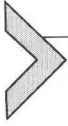
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CORROSION CONTROL FOR OFFSHORE STRUCTURES

DEDICATION

This book is dedicated to the memory of my beloved Rui who left us before I could complete the book.

Now that the book is completed and I am free to take her on walk, I do not have Rui by my side.



ACKNOWLEDGMENT

Writing this book made me realize the complexities of the subject. In normal work life we often tend to think in a relatively unidirectional way about a subject and we focus on the task ahead.

In trying to explain the same subject, the topics that we take for granted need to be explained in detail. I do not pretend to have explained every one of them, but I have tried to cover as many as I could.

A book like this can never be said to be all inclusive for two very specific reasons.

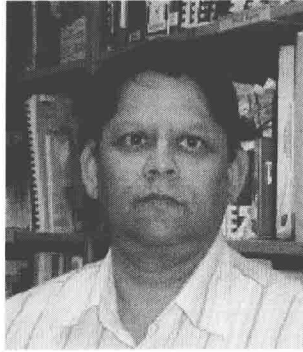
1. There are so many supporting subjects, all complex enough to be a book in itself; and
2. The changing nature of challenges, which are further complicated by the improving technologies.

I am extremely grateful to my employers and clients who gave me opportunities to learn new technologies and face new challenges in the field. How could I have learned without these opportunities?

In writing this book, I also thank my colleagues who always encouraged me to take up this project. I am also indebted to the encouragement, support, and help from my friend Olga Ostrovsky. She helped me negotiate the obstacles of writing and editing the drafts. Without her expert help this book would not be possible.

Last but not least, I am also grateful to my loving wife Mithilesh, and my son Sitanshu for their support in accomplishing this goal. Mithilesh tolerated me while I concentrated on the project. Without her support and understanding this task was not possible.

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He provides consultancy services on management of welding, materials, and corrosion expertise through Nadoi Management, Inc. (nadoi51@yahoo.com; Tel.: +1-832-724-5473).

PREFACE

Materials on this subject can be found in various international specification and project files stored in the archives of engineering companies, and I can confidently say that NACE International (www.nace.org) has greatly advanced the subject over the years.

Other bodies that have played prominent roles in developing and promoting the technology are Det Norske Veritas (DNV) (www.dnv.com) and the International Organization for Standardization (ISO) (www.iso.org), and many publications address corrosion, coating, and cathodic protection.

In this book, I intend to introduce to the concept of cathodic protection. With the foundation of knowledge provided by the book, the practitioner can explore and reference the industry data and specifications and then learn the subject by practicing it. This book can also be used as guide for cross-referencing and validating a practitioner's current understanding of corrosion prevention.

For readers trying to steer through the subject, this book provides useful guide for balancing the theory and practice of cathodic prevention. My objective is to keep budding engineers moored in the theory of offshore structure corrosion control, as well as its applications. The book can also serve as a reference for engineers, nonengineers, managers, and inspectors.

For readers seeking more detailed studies on any specific topic covered in this book, specialized associations and institutions can offer further guidance, and there are several published works available from these bodies that can support the reader in developing an in-depth understanding of specific subjects related to corrosion control.

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