

Foreword

Failure is not an option. In high risk, high value industries, such as oil and gas production, refining, nuclear and thermal power, aviation, shipping etc., corrosion failures have many repercussions: loss of money, loss of production, safety and environment damage. Therefore, every industry takes utmost care that failures due to corrosion do not occur. Best industry practices are implemented to avert or minimize corrosion failures. But failures still happen. Wise men say, "We should learn from others' failures". Failure is an opportunity to learn. If you blame someone else, there is no end to the blame game.

Every year during the CORCON conference organized by NACE International Gateway India Section (NIGIS), papers are presented on failures due to corrosion, analyses of such failures and remedial actions. Delegates benefit from these papers and implement the knowledge they have gained. During one of the NIGIS meetings, an idea was floated that this wealth of knowledge on failure analyses should be consolidated for the greater benefit of industry. This book is an effort to compile knowledge that has been pooled by the authors of articles at CORCON conferences so that others can be better informed to avert failures at their work places. The case histories included in this book are gleaned from eight CORCON conferences organized during 2000 – 2007.

Failure investigation is an intricate exercise, mainly because of the variety in practices, operations and events. This exercise is made more complex by limited understanding of materials, designs and environment. This compilation will not only enrich readers on reasons of various failures, but will also enable understanding the methodology of failure analyses for appropriate corrective actions.

NIGIS is grateful to all the authors who have consented for publication of their articles in this book. We are also thankful to all the editors of this book, who have contributed to its publication.

Governing Board
NACE International Gateway India Section

Preface

NACE International Gateway India Section organizes CORCON conferences. Proceedings of these conferences contain a number of technical papers on studies concerning corrosion problems/occurrences - anticipated and experienced; investigated, analyzed, and diagnosed; averted, controlled and mitigated. A number of patrons and delegates during the CORCON Conferences had suggested that this wealth of practical data and knowledge should be consolidated and made available in the form of a book. In response to this demand, this publication has been brought out, as a contribution of the authors of technical papers and organizers of the CORCON conferences for growth and development in the field of corrosion and its control in India and worldwide.

Numerous papers have been presented and / or classified as case study papers in CORCON Conferences. It was very difficult to process the papers of conferences that were held before 2000. Therefore, this book contains 73 papers selected from proceedings of conferences held during years 2000-07. This book is divided into eight sections. The sections are sequenced industry / area / element-wise. In each section, papers are placed chronologically.

The CORCON conference papers were not edited and presented with the objective of their becoming a part of this book. Therefore, publication of this book required a comprehensive review of all conference proceedings for selection of papers, communication with principal authors of selected papers to obtain their consent for inclusion of their papers in this book and retyping of all papers in a consistent / acceptable style and format. The selected papers have been reviewed by editors to ensure consistency of style and format of reporting with no changes / modifications in their technical contents. Views expressed in case studies belong to the authors of the papers alone. As far as possible, Standard International units have been used, except in those cases where use of other units is generally practiced.

We acknowledge with thanks the cooperation of authors for allowing us to include their papers in this book in the present form and hope that our efforts will result in benefit for all.

We feel privileged to thank NACE International Gateway India Section – the principal organizer of CORCON conferences and sponsor of this book, for giving us an opportunity to contribute towards its mission of promoting awareness of corrosion and its control.

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