

Contents

The Use of Knowledge Management to Improve Pipeline Safety	1
Giovanna Gabetta and Giulia Gori	
Development and Applications of a Specialty Nickel-Based Alloy and the Need for Corrosion Education	17
Aziz I. Asphahani	
Pipeline Regulation in Canada	27
Alan Murray and Joe Paviglianiti	
Fracture Mechanics Approach to Stress Corrosion Cracking of Pipeline Steels: When Hydrogen Is the Circumstance	37
J. Toribio	
Degradation of Properties of Long Term Exploited Main Oil and Gas Pipelines Steels and Role of Environment in This Process	59
H.M. Nykyforchyn, E. Lunarska, and P. Zonta	
Assessment Methodologies for Girth Weld Defects in Pipelines	75
W.R. Tyson, S. Xu, and D.-M. Duan	
Weldability of a Supermartensitic Stainless Steel 12Cr4Ni1Mo Pipeline and the Effect of Welding Current on Precipitated Ferrite δ in the HAZ	91
A. Nouri and M. Bouabdallah	
“Canadian Experience in SCC of Pipelines and Its Remedies” Recent Progress in SCC of Pipelines in Near-Neutral pH Environment	99
Mimoun Elboujdaini, Binyang Fang, and Reg Eadie	

Hydrogen Embrittlement of Steels – Testing and Modelling as a Joint Effort	115
Wolfgang Dietzel	
The Role of Material and Corrosion Engineering in Managing the Service-Life Integrity of Flow and Export Lines.....	127
Manuela Gentile, Roberta Vichi, Roberto Bruschi, and Furio Marchesani	
Protection for Natural Gas Installations Against the Corrosive Effect of Mercury by a Chemical Nickel Coating.....	157
C. Fares, A. Merati, M.A. Belouchrani, and A. Britah	
Corrosion Study of API 5L X60 Gas Pipelines Steels in NS₄ Simulated Soil.....	167
A. Benmoussat and M. Traisnel	
Leak Detection: General Remarks and Examples	181
Anita Calcatelli	
Corrosion Defect Assessment on Pipes Using Limit Analysis and Notch Fracture Mechanics.....	207
Guy Pluvinage	
A Damage Evolution Approach in Fracture Mechanics of Pipelines	227
Yu.G. Matvienko	
Two Parameter Engineering Fracture Mechanics: Calculation of the Relevant Parameters and Investigation of Their Influence on the Surface Notch	245
Mohamed Hadj Meliani, Zitouni Azari, Guy Pluvinage, and Yu.G. Matvienko	
Crude-Oil Flow Modelling in Pipeline Conditions	275
Madjid Meriem Benziane and Abdelkrim Liazid	
Corrosion Risk Assessment of Pipelines Based on Cathodic Protection Survey	285
Luciano Lazzari	
Above Ground Coating Integrity Assessment: Experience with SUMED Pipelines.....	311
Saher Shawki	

Integrity of Pipelines Transporting Hydrocarbons

Corrosion, Mechanisms, Control, and Management

Bolzon, G.; Boukharouba, T.; Gabetta, G.; Elboujdaini, M.; Mellas, M. (Eds.)

2011, XVI, 322 p., Hardcover

ISBN: 978-94-007-0587-6