

18th International Corrosion Congress 2011

**Perth, Australia
20-24 November 2011**

Volume 1 of 3

ISBN: 978-1-61839-363-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by the Australasian Corrosion Association
All rights reserved.

Printed by Curran Associates, Inc. (2012)

For permission requests, please contact the Australasian Corrosion Association
at the address below.

Australasian Corrosion Association
P.O. Box 112 Kerrimuir
Victoria 3129 Australia

Phone: 61 3 9890 4833
Fax: 61 3 9890 7866

aca@corrosion.com.au

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Volume 1

ORAL PAPERS

013 Measurement of Surface Resistivity/Conductivity of Organic Thin Films Coated on Carbon Steel Substrate by Optical Shearography Technique	1
<i>K. Habib</i>	
014 Corrosion Risk of Reinforced Concrete Structures Following 3 Years of Interrupted Cathodic Protection	12
<i>C. Christodoulou, J. Webb, G. Glass, S. Austin, C. Goodier</i>	
028 Corrosion Prevention or Environment Preservation: A Choice, A Dilemma	27
<i>R. Javaherdashti</i>	
030 Humber Bridge – Suppressing Main Cable Corrosion by Means of Dehumidification	35
<i>C. Christodoulou, M. Bulmer, C. Cocksedge, D. Wilkinson, J. Cooper, P. Hill, S. Austin, C. Goodier</i>	
031 A Novel Approach to Installing Sacrificial Anodes to Protect Glass Flake Lined Large Diameter Seawater Pipeline Systems	47
<i>J. Shanmugam, D. Gibson</i>	
032 The Mokelumne Aqueduct Recoating Project	56
<i>M. Lewis</i>	
038 Food-grade Corrosion Inhibitor for High Temperature Acidic Environment	66
<i>Y. Choudhary, A. Sabhapondit, A. Kumar, G. Misra</i>	
040 Improvement of New Cyclic Corrosion Test Device	76
<i>H. Masuda</i>	
046 Investigation of Hydrogen Induced Cracking on a Ni-Base Alloy	81
<i>K. Gao, Y. Wang, Y. Zhang, X. Pang, Q. Liu</i>	
047 Durability of Steel in Geopolymer Concrete	87
<i>D. S. Cheema</i>	
052 Using the Integrity Management Plan to Measure and Control the Threat of Metallic Corrosion in Industrial Structures	96
<i>F. Saeed, A. Abdelhadi, G. Abbasi</i>	
053 Determination of Cathodic Protection Potential for 7A52 Aluminium	109
<i>Y. Huang, G. Song, X. Shao, H. Ding</i>	
056 Cathodic Protection Performance of Al-Zn-In-Mg-Ga-Mn Sacrificial Anode	114
<i>J. Ba, X-B. Liu, Y-B. Huang, D-G. Liu</i>	
059 Corrosion Resistance and Biocompatibility of Ti-6Al-7Nb Alloy with Nano-scaled Surface Topography	119
<i>H-H. Huang, C-P. Wu</i>	
060 Improvement in Alkaline Resistance of Developed Thermoplastic Polyester Powder Coating for Telecommunication Plant	124
<i>Y. Takeshita, T. Kamisho, S. Sakata, T. Sawada, Y. Watanuki, T. Ueda</i>	
063 Evaluation of the Anticorrosion Performance of Rust Preventive Oil Using an ACM Sensor	136
<i>N. Nagase, T. Mitomi</i>	
071 Structural Steel Profile Sections with Continuous Hot-dip Zn-12Al Coating	146
<i>D. Harrison, W. Ganther, Y. Liu</i>	
072 A Comparison on the Influence of Molybdenum on the Pitting of Stainless Steels in Chloride and Bromide Solutions	157
<i>D. Blackwood, S. Chua</i>	
076 Why Cathodically Protected Pipelines Fail by Corrosion	166
<i>B. Martin</i>	
077 The Influence of Nanocrystalline State of Iron on the Corrosion Resistance of Passive Film in Simulated Concrete Pore Solution	172
<i>V. Afshari, C. Dehghanian</i>	
080 Top of the Line Corrosion in Sour Environments - Study of the Controlling Parameters	179
<i>M. Singer</i>	
082 Corrosion Inhibition of CRAs in Systems with Supercritical Carbon Dioxide	189
<i>G. Schmitt, Y. Zhang, K. Gao</i>	

086 Anodizing of Zinc for Improved Surface Properties	199
<i>M. A. Imam, M. Moniruzzaman, M. A. Mamun</i>	
090 The Right Profile: Importance and Measurement of Anchor Pattern from Blast Cleaning	207
<i>R. Francis</i>	
091 Influence of Frequency and Vibrator-to-Specimen Distance of Ultrasound on Growth Behaviour of Pitting Corrosion of SUS304 Stainless Steel in NaCl Aqueous Solution	217
<i>R. Wang, M. Kido, Y. Shinhara</i>	
101 Investigation of Coatings by Standard and Advanced Electrochemical Techniques	227
<i>S. L. Wijesinghe, L. Ming, C. Low, A. Soutar, D. Blackwood</i>	
103 GIXS Approach to Characterize Nano-Structure of Titanium Surface	241
<i>M. Kimura, M. Kaneko</i>	
109 A New Approach in Corrosion Science's Education	247
<i>A. Marinho Jr.</i>	
110 Atmospheric Corrosion of Metals at 58 Locations in India: Influence of Atmospheric Pollutants and Deficiency of the ISO 9223 Norm	256
<i>M. Natesan, S. Ramu</i>	
115 Service Experience with Stainless Steels in Corrosive Waters	266
<i>L. Boulton</i>	
116 Anodic Oxidation of AZ31 Mg Alloy in Ionic Liquid	274
<i>J-A. Latham, P. Howlett, D. Macfarlane, M. Forsyth</i>	
119 Time, Gentlemen. Please	285
<i>P. Dove</i>	
120 Case Studies of Utility and Package Boiler Tubes Failures	292
<i>R. Yin, F. Habiby, R. Imtiaz, K. Al-Obaidi</i>	
124 The Effects of Human and Biological Interactions on the Corrosion of WWII Iron Shipwrecks in Chuuk Lagoon	298
<i>I. Macleod, V. Richards, M. Beger</i>	
127 Cracking Behaviour under Cyclic Loading of Austenitic Stainless Steels with Different Alloying Concepts	310
<i>C. Vichytil, G. Mori, M. Panzenböck, R. Pippan, R. Fluch</i>	
137 Composite Anticorrosion PEO-Coatings on Metals and Alloys	323
<i>S. Gnedenkov, S. Sinebryukhov</i>	
141 SCC Evaluation on Weldments of 7A52 Aluminum Alloy	335
<i>X. Zhang, K. Mei, W. Xiong, M. Guo, F. Lu</i>	
145 Coatings Formed by Plasma Electrolytic Oxidation on Metals Used as Implants	344
<i>S. Sinebryukhov, S. Gnedenkov, O. Khrisanfova, A. Puz', A. Zavidnaya</i>	
149 Environmentally Friendly Conversion Coating for Aluminium Alloy AA6014	355
<i>F. Andreatta, M. Bortolotto, A. Lanzutti, L. Paussa, D. Bravin, L. Fedrizzi</i>	
154 Corrosion Mitigation of Metallic Implants: Electrophoretic Deposition of Nano-Crystalline Hydroxyapatite on 316L SS	367
<i>N. Abdel Ghany, A. Elbasiony</i>	
156 Modelling of Long-term Corrosion of Mild Steel in Unpolluted Fresh and Sterile Waters	375
<i>R. Melchers</i>	
157 Characterization and Property of Nicotinic Acid/Calcium Phosphate Composite Coatings on Mg Alloy	385
<i>Y. Song, D. Shan, E. Han</i>	
158 Study on the Corrosion Resistance of Phytic Acid Conversion Coating for AA2024-T3	392
<i>H. Shi, E-H. Han, F. Liu</i>	
160 Electrochemical Evaluation of a Shape-memory Coating as a Self-healing System for Corrosion Protection of Metals	402
<i>Y. González-García, T. Muselle, I. De Graeve, G. Van Assche, G. Scheltjens, B. Van Mele, H. Terryn, J. M. C. Mol</i>	
162 Local Electrochemical Evaluation of a Self-Healing Coating Based on Encapsulated Healing-Agent	408
<i>J. M. C. Mol, Y. González-García, S. García, H. Fischer, A. Hughes</i>	
163 Synthesis and High Temperature Oxidation Resistance of Protective Coatings from Aluminium Microparticles	414
<i>F. Pedraza, M. Mollard, B. Rannou, B. Bouchaud, J. Balmain, G. Bonnet</i>	
168 Electrochemical Corrosion Behaviour of Alloy 690 in Simulated PWR High Temperature Aqueous Environments	424
<i>X. Wu, X. Liu, J. Huang, E.-H. Han, W. Ke</i>	
171 The Application of Ultrasonic Guided Wave in Pipeline Corrosion Inspection	434
<i>Z. Feng, W. Wang, Y. Wang, J. Wang, Z. Liu</i>	

172 The Application of Planar Guided Wave on Storage Tank Floor Corrosion Defect Inspection	440
<i>Z. Feng, W. Wang, C. Zhao, M. Ai, J. Wang</i>	
173 Long-term Marine Corrosion of Welds on Steel Piling	446
<i>I. Chaves, R. Melchers</i>	
175 Effects of Microarc Oxidation Surface Treatment on High Strength Aluminium Alloys	458
<i>Z. Sun, M. Liu, Z. Wang, D. Guo, F. Lu, Z. Tang</i>	
177 Concrete Carbonation in Iberoamerican Countries DURACON Project: Six-year Evaluation	466
<i>O. Troconis De Rincón, Miguel Sánchez, Valentina Millano, Rafael Fernández, Emilia Anzola De Partidas, Isabel Martínez, Nuria Rebolledo, Mirta Barboza, Juan C. Montenegro, Rosa Vera, Ana Maria Carvajal, Ruby Mejia De Gutiérrez, Jorge Maldonado, Carmen Guerrero, Erika Saborio-Leiva, Catalina Villalobos-Gonzalez, José T. Pérez-Quiroz, Andres Torres-Acosta, Pedro Castro-Borges, Eric I. Moreno, Tezozomoc Pérez-López, Facundo Almeraya-Calderón, Wilfrido Martínez-Molina, Miguel Martínez-Madrid, Manuela Salta, Ana Paula De Melo, Gerardo Rodríguez, Miguel Pedrón, Marité Derrégibus</i>	
179 The Effect of Airborne Nutrients on Atmospheric Corrosion	479
<i>R. Jeffrey, R. Melchers</i>	
182 Metallographic Comparison to Tomography of Inclined SCC Cracks	491
<i>E. Gamboa, G. Sneddon</i>	
183 Microbial Corrosion of Sewer Pipe in Australia- Initial Field Results	503
<i>T. Wells, R. Melchers</i>	
184 Effect of Testing Parameters on NACE Standard TM0177 Method D, SSC Test	515
<i>L. Moderer, G. Mori, G. Klösch, J. Klarner, R. Sonnleitner</i>	
193 Understanding the Effect of Wet and Dry Cycles on the Atmospheric Corrosion of Aluminium Alloys	525
<i>S. Knight, W. Neil, A. Du Plessis, D. Engelberg, A. Davenport, A. Trueman</i>	
197 Pitting Initiation Mechanism Observed Using the Wire Beam Electrode Method	537
<i>Y. Tan</i>	
198 Microscopy Applied to Biofilms in Drinking Water Closed Loop	543
<i>B. Rosales, S. Rastelli, M. Viera</i>	
200 Photoelectrochemical Study of Corrosion Performance on the Complex of PESA and Tungstate on Cu-Ni Alloy B30	552
<i>Q. Xu, S-J. Ding, H. Yun, H-T. Pan</i>	
202 Limitations of the Stray Current Interference Criteria	561
<i>B. Ackland</i>	
203 A Quick Reference to Some Practical Measures against Microbial Corrosion	569
<i>R. Javaherdashti</i>	
205 Heterostructure Properties Study by Scanning Electrochemical Techniques	577
<i>A. Gnedenkov, S. Sinebryukhov, D. Mashtalyar, S. Gnedenkov</i>	
208 Interfacial Bonding Properties of Carboxylic Based Coatings on Zinc	584
<i>H. Terry, P. Taheri, T. Hauffman, J. M. C. Mol, J. Flores, F. Hannour</i>	
212 Durability Design of Infrastructure Assets - Working Towards a Uniform Approach	592
<i>F. Blin, S. Furman, A. Mendes</i>	
213 Low Temperature Sensitisation and its Effect upon the Atmospheric Corrosion of Marine Aluminium Alloys Measured Using X-Ray Micro Computed Tomography	604
<i>L. Pedrina, M. Salazaras, W. Neil, A. Trueman</i>	
219 Inhibiting Filiform Corrosion on Zn-Al-Mg Hot Dip Coated Steel	613
<i>D. Eaves, N. McMurray, G. Williams</i>	
220 Effect of Flow in the Formation of Biofilms on Different Materials in Drinking Water Distribution Systems	620
<i>M. Pujol, B. Rosales, N. López</i>	
221 A Model and Simulation for Carbon Steel Corrosion Under Oxygen Depleted Underground Environment	627
<i>T. Shibata</i>	
222 Corrosion of Thermal Barrier Coatings	638
<i>R. Wellman, G. Whitman, N. Ndamka</i>	
224 A Review of Intergranular Corrosion of Aluminium Alloys	647
<i>A. Sudholz, S. Knight, A. Trueman</i>	
225 Evaluation of Atmospheric Environment and Time-Dependent Corrosion Depth for Unpainted Carbon Steel Using Zn/Ag ACM Corrosion Sensor	659
<i>Y. Ito, S. Kainuma</i>	
232 The Use of Corrosion Evaluations to Demonstrate the Long Term Benefits of Cathodic Protection to Heritage Structures	665
<i>P. Noyce, G. Crevello</i>	

233 On The High Temperature Oxidation Resistance of Rare-Earth Oxide Coated Nickel Superalloy Exposed to Water Environments.....	674
<i>B. Bouchaud, J. Balmain, F. Pedraza</i>	
238 Characterization of Oxide Film Formed on Stainless Steel in Gamma-ray Irradiated High Temperature Water.....	685
<i>M. Yamamoto, C. Kato, Y. Nakahara, T. Tsukada, A. Watanabe, M. Fuse</i>	
239 Effects of Cyclic Stress and Spraying on the Pit Growth of A537 Steel.....	696
<i>B. Zhang, J. Ma, X. Y. Sun, E.-H. Han, W. Ke</i>	
241 Intergranular Corrosion Susceptibility of Super304H Stainless Steel.....	704
<i>Y. Gao, C. Zhang, X. Xiong, Z. Zheng, J. Zhao</i>	
243 Process Window Study of Heat Resistant Nano-Coated Steel.....	713
<i>C. Choi, J. Cho, Y.-J. Park, J.-S. Kim</i>	
244 Cut Edge Corrosion Behavior of Zn-coated Steel Sheets.....	724
<i>Y. Song, K. Gusieva, J. Kim, J. Cho, C. Choi, Y. Kim, H. Kim</i>	
245 Effect of Surface Modification of Metal Powders with Organosilanes on the Corrosion Resistance of Thin Zinc-Rich Coatings.....	729
<i>T.-H. Yun, J. H. Park, K. Kim, J. M. Park</i>	

Volume 2

246 The Inhibition Effect of BTA on Copper Alloy in Artificial Seawater.....	741
<i>G. Bereket, H. Gerengi</i>	
250 Testing for Chloride Threshold Levels of Stainless Reinforcing Bar.....	755
<i>S. Randström, M. Adair, M. Schönning</i>	
252 Materials Challenges to High Temperature Marine Environments.....	764
<i>D. Shifler</i>	
258 Pulsed Phase Thermography of Corrosion and Stone Chipping Damage.....	782
<i>A. Schönberger, V. Giese, S. Virtanen</i>	
260 The Preparation of Plasma Spray Zn Doped Hydroxyapatite Biocompatible Coatings on Titanium.....	790
<i>S. Take, M. Kawaguchi, M. Ohshim, Y. Itoi</i>	
261 Two Step Silane Coating for Corrosion Resistance of Steel.....	796
<i>S. Al-Saadi, R. Raman</i>	
262 Water Vapor Effect on Cyclic Oxidation of Fe-Cr Alloys at 950° C.....	806
<i>J. Zhang, N. Othman, D. Young</i>	
263 Evaluation of the Degradation of Lead Alloy Organ-Pipes Due to Organic Acids.....	815
<i>F. Deflorian, M. Fedel</i>	
272 Environmentally Friendly Surface Treatment of Light Alloy Materials for Automotive Applications.....	825
<i>D. Northwood, R. Hussein, X. Nie</i>	
273 The Potential of Milled SiO₂ and CeO₂ as Pigments for Corrosion Protection of Painted HDG Steel.....	837
<i>M. Fedel, F. Deflorian, S. Rossi, P. Kamarchik</i>	
274 Cerium Nitrate Doped ZrO₂ Sol-gel Pretreatments as Adhesion Promoters: an Electrochemical Characterization.....	846
<i>L. Paussa, N. Rosero-Navarro, F. Andreatta, D. Bravin, A. Duran, L. Fedrizzi</i>	
275 Durability of Duplex Coating Systems.....	854
<i>N. Adamson</i>	
277 The Transition from Internal to Protective Oxidation during Oxidation of Dilute Fe-Al Alloys in Ar-20% CO₂.....	865
<i>H. Li, P. Munroe, J. Zhang, D. Young</i>	
285 Relation between Sensitization and Environment Regarding Stress Corrosion Cracking in High Temperature Water.....	874
<i>Y. Tsukaue</i>	
286 Effects of Hydroxide Ions on Stress Corrosion Cracking of 18-8 Stainless Steel in High Temperature Water.....	886
<i>Y. Tsukaue</i>	
287 Effect of Cr and Zr Addition on Oxidation Resistance of Nanocrystalline Fe-Cr-Ni-Zr.....	895
<i>B. V. Mahesh, R. Raman, A. Atanacio, J. Fu, C. Koch</i>	
288 Managing Risk of SCC of Fin Fan Air Cooled Heat Exchangers.....	902
<i>P. Wilson, I. Cole, W. Ganther</i>	

289 Property of Surface Film on Alloy 690 in Simulated Primary Water	913
<i>J. Wang, Z. Zhang, E. Han, W. Ke</i>	
290 A Study on the Localized Corrosion Properties and Passivation Characteristics of Improved Duplex Stainless Steels for Nuclear Power Plants	920
<i>H-Y. Chang, H-B. Park, Y-S. Kim, S-K. Ahn, J-K. Lee, Y-Y. Jang</i>	
291 The Influence of MEG on CO₂ Corrosion of Carbon Steel	928
<i>H. Ehsani, K. Lepková, R. Gubner</i>	
296 Electrochemical Behavior of Al 356 Metallic Foams in Chloride Media	936
<i>M. Vásquez, J. Calderón, P. Fernández</i>	
300 In Situ Study of Starting Steps of Corrosion Phenomena on Zinc and Magnesium Surfaces	943
<i>S. Rossi, M. Fedel, F. Deflorian</i>	
301 Corrosion of Thermal Sprayed Zinc Aluminium Coatings	955
<i>R. Feser, F. Ziebarth, T. Maghet</i>	
302 Sulfide Stress Corrosion Cracking of Cyclically Strained Casing	964
<i>S. Asher, K. Gordon</i>	
303 Top-of-Line Corrosion Modeling in Wet Gas Pipelines	976
<i>S. Asher, W. Sun, R. Ojifinni, S. Ling, C. Li, J. Pacheco, J. Nelson</i>	
305 Prediction of Easy to Clean Properties of Coil Coated Materials in Field Conditions	984
<i>T. Prosek, D. Thierry</i>	
311 Cathodic Corrosion Inhibitors for Magnesium and its Alloys	991
<i>H. McMurray, G. Williams, D. Eaves</i>	
313 High Temperature Corrosion of Chromia-forming Alloys under Oxyfuel Firing Conditions	1000
<i>D. Young, T. Gheno, J. Zhang</i>	
315 The Influence of Mn on the Corrosion of Al-Free Mg-Alloys	1009
<i>D. Gandel, N. Birbilis, M. Easton, M. Gibson</i>	
316 Crevice Corrosion Behavior of a Duplex Stainless Steel	1018
<i>S. Aoki, Y. Nada, H. Yakuwa, M. Miyasaka, J. Sakai</i>	
324 Influence of Light and Temperature on Biodiesel Corrosiveness	1024
<i>I. Aoki, I. Aquino, R. Hernandez</i>	
326 Modeling the Galvanic Behavior of Cu: Fe: Zn Couple in Acidic Media at Various Temperatures, Speed of Agitation and Area Ratio	1036
<i>F. Saeed, A. Abdelhadi</i>	
327 Deposition and in-Vitro Degradation of Calcium Phosphate Coating on a Magnesium Alloy	1044
<i>L. Choudhary, R. Raman, J. Nie</i>	
328 Electric and Ionic Property of Oxide Scale Formed on Ferritic Stainless Steel Containing Titanium	1052
<i>H. S. Seo, K-Y. Kim</i>	
332 Study on Measurement and Numerical Simulation Concerning Off Potential	1063
<i>F. Zhang, H. Chen, Z. Xue, W. Wang, L. Liu</i>	
334 Further Developments in the Use of Portable FTIR for Analysis of Aircraft Coating Degradation	1070
<i>J. Colwell, J. Khan, A. Harman, A. Trueman, G. McAdam, G. George, G. Will</i>	
336 Tomography of Localized Corrosion in AA2024 Aluminium Alloy	1082
<i>X. Zhou, C. Luo, T. Hashimoto, A. Hughes, E. Koroleva, G. Thompson, P. Withers</i>	
339 Cathodic Prevention of Reinforced Concrete Seawater Cooling Towers	1092
<i>Z. Chaudhary, S. Shehri, W. Baig</i>	
341 The Underlying Reasons for Relatively Positive off Potential and Large IR Drop Around Current Drainage Point Areas	1102
<i>W. Bi, Z. Xue, F. Zhang, W. Wang, C. Xu, L. Liu</i>	
347 Evaluation of Cr / Mo Depletion Zones of Alloy 926	1107
<i>G. Mori, M. Prohaska, T. Wernig, F. J. Schmied, C. Teichert, M. Albu, G. Kothleitner, G. Tischler, R. Grill</i>	
349 Microbial EPS and Analogues for Protection against MIC	1120
<i>A. Kuklinski, M. Grooters, R. Stadler, W. Fürbeth, W. Sand</i>	
355 Corrosion Control in a Wet Gas Gathering System Using Glycol for Hydrate Control: Development of an Environmentally Acceptable Solution	1131
<i>N. Bretherton, D. Donaldson, A. Veisberga, S. Ubbels</i>	
357 Cathodic Protection of 1.2km Long Tunnel Across a Congested Harbour Facility - Design, Construction and Commissioning an ‘Oresome’ Experience	1142
<i>U. Kreher, I. Solomon, A. Vinnell</i>	
358 A Durability Plan with an ‘Exposure Environment Domain’ Approach	1157
<i>S. Zhou, S. Passmore</i>	
359 Sydney Desalination Pipeline: A Cathodic Protection Design to Meet the Challenges	1169
<i>J. Galanos, J. Kalis</i>	

360 A Comparison of the Metastable Pitting Response of Aluminium Alloys	1176
<i>R. Gupta, B. Hinton, C. Hutchinson, N. Birbilis</i>	
364 Aesthetic and Protective Properties of Polyester Powder Coatings for Architectural Applications	1183
<i>E. Scrinzi, S. Rossi, F. Deflorian</i>	
365 Effect of Passivation Temperature on Stability of Passive Film and Amount of Bound Water for Stainless Steel	1194
<i>T. Haruna, M. Hirose</i>	
371 Bacterial Community Structure in Natural Marine Biofilms and the Corrosion of Carbon Steel in Seawater	1199
<i>L. Machuca, S. Bailey, R. Gubner, E. Watkin, M. Ginige, A. Kaksonen</i>	
374 Cement Mortar Linings in Cast and Ductile Iron Pipes: Life Expectancy and Dependence Upon Water Chemistry	1211
<i>T. Muster, J. Gotama, S. Gould, D. De Silva, N. Beale, S. Burn, P. Davis</i>	
377 SECM Observation of Polycrystalline Iron Corroding in Sulphuric Acid Solution	1223
<i>K. Fushimi, K. Matsushita, H. Tachikawa, Y. Hasegawa</i>	
378 Corrosion Monitoring Systems on Military Aircraft	1231
<i>P. Trathen</i>	
379 The Influence of Alloying and Impurity Elements on the Corrosion of Magnesium Alloys	1241
<i>A. Sudholz, N. Birbilis</i>	
380 Development and Application of MEG Reclamation Process-compatible Corrosion Inhibitors for Upstream Oil and Gas Developments	1249
<i>R. Harrington, M. Gough, S. Davoren</i>	
385 The Effect of Preparation and Cleaning Techniques on Electrochemical Testing of Aluminium Anodes	1261
<i>B. Linde, R. Northey</i>	
388 Cathodic Protection Application to a High-rise Building Post-tensioned Slab	1270
<i>P. Johnsson, P. Karajayli, B. McGuinness</i>	
391 Thiobenzamide as Inhibitor for Under-Deposit Corrosion of Carbon Steel	1279
<i>V. Pandarinathan, K. Lepková, R. Gubner</i>	
392 The Effect of Zinc Ferrite Nanoparticles on the Corrosion Performance of Polyester/Melamine Nanocomposite Coating	1286
<i>S. Mahvidi, M. Gharagozlou, M. Mahdavian</i>	
393 Galvanic Anodes for Steel Reinforced Concrete Structures	1294
<i>J. Ball, G. Sergi, D. Simpson</i>	
394 The Role of Durability in Risk-based Asset Management of Deteriorating Infrastructure	1305
<i>P. Davis, C. Crawshaw, K. Wilson</i>	
396 A Detailed Case Study of Carbonation Profiles in Prestressed Concrete Beams from an Aggressive Marine Environment	1317
<i>T. Papè, R. Melchers</i>	
397 Chloride Effect on Corrosion & Corrosive Wear of High-Cr Cast Irons in Different Ph Solutions	1335
<i>M. Salasi, G. B. Stachowiak, G. W. Stachowiak</i>	
398 Electrochemical Determination of Corrosion Rates of Water Mains in Soils: A Review	1347
<i>D. Nicholas, P. Ferguson, M. Dafter</i>	
403 Evaluation of Graphitic Corrosion of Gray Cast Iron Using Hardness Test	1358
<i>C. Jang, J. Kim, J. Hong, K. Na, J. Lee</i>	
404 Protecting Zinc Using Cerium Based Mixed Oxides	1365
<i>S. Thomas, M. Venkatraman, N. Birbilis, I. Cole</i>	
405 Occurrence of Type I Pitting Corrosion of Copper Tube by Accelerated Immersion Test	1376
<i>S. Hananki, M. Nakatani, H. Uchida, T. Hosogi, A. Ishibashi</i>	
406 A Study on Stress Corrosion Cracking of Magnesium Alloys by Slow Strain Rate Technique	1383
<i>H. Uchida, S. Hanaki, M. Nakatani, Y. Tanaka, K. Itakura, T. Takahashi, T. Murai</i>	
408 Investigations of Anodic Dissolution of Metals by Channel Flow Electrode in Frequency Domain	1390
<i>M. Itagaki, N. Tsuchiya, I. Shitanda</i>	
412 An Appropriate Method for Silver Tarnish Removal	1397
<i>V. Gouda, A. Awad</i>	
416 Electrochemical Behaviour of CoCrMo Biomedical Alloy in Presence of Localized Impurities	1407
<i>C. Zanella, N. Vicente, F. Casari, A. Molinari, F. Deflorian</i>	
418 Preparation Methionine Self-Assembled Membranes with Fluorescence Emission for Copper Corrosion Prevention	1416
<i>D. Zhang, P. Liu, L. Gao, L. Li, G. Geng</i>	
419 Evaluation of Atmospheric Corrosion Behaviors of Carbon Steel by ACM Type Corrosion Sensor	1426
<i>T. Shinohara, A. Tahara, Y. Hosoya, S. Motoda, W. Oshikawa</i>	

427 Atmospheric Induced Stress Corrosion Cracking of Austenitic Stainless Steels under Limited Chloride Supply	1438
<i>A. Cook, N. Stevens, J. Duff, A. Mshelia, T-S. Leung, S. Lyon, J. Marrow, W. Ganther, I. Cole</i>	
428 Suitability of the Electrochemical Noise Technique for the Detection of SCC in Stainless Steel	1450
<i>S. Ritter, H. P. Seifert</i>	
431 Advances in a Multi-Scale Model of Corrosion	1460
<i>I. Cole, M. Venkatraman, W. Ganther, P. Corrigan, N. Azmat, K. Ralston, D. Paterson, T. Muster, E. Schindelholz, B. Emmanuel</i>	
433 Layered Double Hydroxides: Versatile Nanostructures Applied to Active Corrosion Protection	1472
<i>M. Ferreira, J. Tedim, M. Zheludkevich</i>	
436 Application of Automated Corrosion Sensors for Real Time Monitoring in Atmospheres Polluted with Organic Acids	1477
<i>T. Prosek, F. Dubois, M. Kouril, B. Scheffel, Y. Degres, M. Jouannic, M. Taube, M. Dubus, V. Hubert, D. Thierry</i>	
440 On the Metal Dusting Corrosion of Alloy 800 Ferrules in a Petrochemical Environment	1485
<i>F. Mulaudzi, L. Cornish, G. Slabbert, F. Mahlangu, J. Zhang</i>	
441 Different Steels in a High Temperature Reducing Environment	1494
<i>L. Cornish, L. Chown, M. Grant, B. Williams</i>	
442 Failure Analysis of Steel Support Frames for Tunnel Wall Panels	1504
<i>N. Tripathi</i>	
445 The Formation of Protectiveness Layer on Weathering Steel in Initial Stage of Exposure to Vietnam Tropical Climate	1510
<i>L. Lien, H. Hong</i>	
446 Effect of the Fluctuation of Stress on the Cracking of Steel in H₂O-CO-CO₂	1519
<i>J. Van Der Merwe</i>	
447 On the Phosphatibility of High-strength Aluminium Alloys	1529
<i>L. Kwiatkowski, A. Zych</i>	
450 Electrochemical Behaviour of 2101, 2101 with Ruthenium and 316 SS	1541
<i>O. Olaseinde, J. Van Der Merwe, L. Cornish, P. Olubambi</i>	
454 Influence of the Inhomogeneous Deformation on the Mechanism for HISC of Duplex Stainless Steels	1549
<i>U. Kivisäkk, S. Ciurea</i>	
456 Predicting Subsurface Enrichment/Depletion Processes during High-Temperature Oxidation of Alloy 625 Thin Foils	1556
<i>A. Chyrkin, P. Huczkowski, V. Shemet, L. Singheiser, W. Quadackers</i>	

Volume 3

457 The Effect of Polypyrrole Coating on the Corrosion of Steel Electrode	1567
<i>S. Bilgic, S. Akpolat</i>	
462 Performance Evaluation of AISI 316L and Super Duplex AISI F53 Stainless Steels Regarding Crevice Corrosion	1580
<i>Z. Panossian, C. Pecequilo, N. Almeida, G. Pimenta</i>	
466 Synergistic Corrosion Inhibition in Galvanically Coupled Metals	1597
<i>M. Zheludkevich, S. Kallip, K. Yasakau, A. Bastos, M. Ferreira</i>	
476 Inhibition of Corrosion-driven Organic Coating Delamination on Iron by Phenyl Phosphonic Acid	1602
<i>C. Glover, G. Williams</i>	
477 Surface Treatments for Corrosion Resistance of Aluminium AA1050	1611
<i>I. Costa, W. Dos Santos, D. Yoshikawa, J. Rossi, S. De Assis</i>	
482 Mitigation of CO₂ Corrosion of Carbon Steel Pipelines with pH Stabilization	1620
<i>M. Seiersten, T. Berntsen, S. Slåtten, E. Gulbrandsen</i>	
483 Smart Coatings Containing Linseed Oil Microcapsules as Self-healing Agent	1626
<i>I. Aoki, M. Baptiste</i>	
484 Smart Release Anti-Corrosion Pigments Based on Organic Ion-Exchange Resins	1633
<i>G. Williams, S. Geary, H. McMurray</i>	
488 Don't Let Salt Assault Your Stainless Surface	1643
<i>G. Sussex, A. Gouch</i>	
489 Multilayer Metal Oxides: A New Approach to Corrosion Protection	1652
<i>T. Markley, S. Dligatch, A. Trinchi, D. Lau, P. Martin, A. Bendavid, A. Bradbury, T. Muster</i>	

490 The Degradation of Passive Film on Carbon Steel in Concrete Pore Solution under Compress and Tensile Stresses	1659
<i>Y. Zuo, X. Feng, Y. Tang</i>	
491 Using Localized Electrochemical Impedance Spectroscopy to Study the Corrosion of Al/Cu Model Electrodes	1667
<i>H. De Melo, J. Ferrari, N. Pébère, B. Tribollet, V. Vivier</i>	
492 Comparison of Wetness Sensing Methods during Atmospheric Exposure	1680
<i>E. Schindelholz, I. Cole, R. Kelly, W. Ganther, T. Muster</i>	
496 Visual Guide of Zinc for Estimation of Corrosion Levels	1690
<i>W. Ganther, I. Cole</i>	
497 A Risk Based Approach to Planned a Sour Gas Field Facilities Inspection.....	1699
<i>V. Afshari</i>	
502 Corrosion Detection in Aluminium Alloy Airframes	1705
<i>J. Fernandes, P. Venancio</i>	
504 The Mechanical Properties of Surfactant, Corrosion Inhibitor Films by AFM Measurements	1717
<i>B. Kinsella, Y. Xiong, A. Pailleret, S. Nesic</i>	
506 10+ Years Performance of Concrete Cathodic Protection Systems on Marine Wharf Substructures	1732
<i>W. Green, S. Masia, B. Dockrill</i>	
511 A Case Study Review of Concrete Deterioration by ASR/DEF	1743
<i>J. Au, A. Peek</i>	
514 Characterization of TiO₂ Nano-powder Embedded Ni Composites Electroplated on Alloy 600 for Dissimilar Metal Welds in NPPs.....	1755
<i>J. S. Kim, M. J. Kim, D. J. Kim, H. P. Kim</i>	
515 A Morphological and Numerical Characterization of FAC with Flow Properties at Near Metal Surface.....	1760
<i>T. Moteki, K. Suga, M. Kikuchi</i>	
519 Effect Of La (4OH-Cin)₃ On Filiform Corrosion Of Coated Steel.....	1768
<i>R. Catubig, M. Forsyth, B. Hinton</i>	
520 Investigating the Effect of Solution pH on Speciation of La (4OH-Cin)₃ with Correlation to Electrochemical Behaviour and Corrosion Efficiency	1776
<i>M. Seter, M. Forsyth, B. Hinton</i>	
521 The Corrosion Inhibition of Aluminium Alloy 7075-T651 with Cerium and Mischmetal Di Phenyl Phosphate	1787
<i>B. Hinton, F. Varela, J. Hill, T. Markley, M. Forsyth, N. Birbilis, P. Howlett</i>	
523 Electrochemical Impedance Spectroscopy of Soils.....	1796
<i>M. Dafter</i>	
524 Protective Coating of the Gates on the Ord River Diversion Dam	1807
<i>M. Harrington</i>	
526 Control of Biodegradation of a Mg Alloy in Simulated Body Fluid	1813
<i>Y. Zhang, M. Forsyth, B. Hinton, G. Wallace</i>	
529 Long-term Corrosion Performance of Cast Iron Bridge Piers	1821
<i>F. Carroll, G. Chadbourn</i>	
531 Earthing, Safety and Rectifier Reliability for Above Ground Storage Tanks	1831
<i>R. Brodribb, I. Solomon</i>	
533 Influence of Cations on Corrosion Behavior of Aluminum Alloys in Drinkable Water and Model Tap Water	1841
<i>M. Sakairi, Y. Kaneko, K. Otani, Y. Seki, D. Nagasawa</i>	
535 Anodising AA5083 Aluminium Alloy Using Ionic Liquids.....	1851
<i>P. Huang, P. Howlett, D. Macfarlane, M. Forsyth</i>	
536 Sulphuric Acid Corrosion of Nickel Base Alloys and Tantalum at 225° C	1859
<i>N. Yusoff, M. Ko, K. Lichti, R. Julian</i>	
538 Deterioration of Flexible Polypropylene Reservoir Covers in Contact with Potable Water	1870
<i>P. Vince, G. Moore, J. Scheirs</i>	
539 Water Borne Protective Coatings for Container Factories in China.....	1880
<i>S. Nyborg Rasmussen, N. Jensen, K. Hui</i>	
540 Understanding Magnesium Corrosion, Recent Progress at UQ	1893
<i>A. Atrens</i>	
542 Corrosion Behaviour of Nanocrystalline Materials Basing on Electrochemical Aspect	1897
<i>F. Wang, Y. Li, L. Liu</i>	
544 Study of Thiosulphate-Induced Degradation of Alloy 800	1898
<i>J. Luo, R. Zhu</i>	

545 Behaviour of AAR-affected Concrete Piles Subjected to CP Currents	1909
<i>A. Shayan, A. Xu, R. Pritchard</i>	
546 Welding Aspects and Corrosion Performance of New Ferritic and Manganese Bearing Stainless Steels in the Coastal Environment.....	1921
<i>M. Karpenko, P. Gümpel</i>	
548 Volt Equivalent Diagrams as a Means of Displaying the Electrochemical Thermodynamics of Aqueous Systems.....	1935
<i>D. Macdonald, S. Sharifiasl</i>	
549 Kinetic Theory of Depassivation.....	1947
<i>D. Macdonald</i>	
550 Extended Point Defect Model for Nickel-Chromium Alloys	1958
<i>M. Urquidi-Macdonald, B. Normand, H. Mendy, D. Macdonald</i>	
551 Inspection of Pier 6 Substructure at Progreso's Port in México	1970
<i>P. Castro-Borges, A. Torres-Acosta, M. Balancán-Zapata, M. León-Irola, A. López-González, R. López-Montalvo, A. Zozaya-Ortiz, J. Pacheco-López, A. Domínguez-Robles</i>	
554 Corrosion Protection of 15CDV6 High Strength Steel by Chromate Free, Epoxy Polyaniline Phosphate Based Primer	1982
<i>S. Indumathi, T. Vasudevan, S. Sundarrajan, B. Subba Rao, C. Murthy, D. Yadav</i>	
555 Stress Corrosion Cracking Behavior of High Strength Pipe Steels in an Acidic Soil Environment	1992
<i>X. Li, Z. Liu, C. Du, X. Cheng, Y. Cheng</i>	
556 The U.S. Department of Defense Corrosion Program	2005
<i>D. Dunmire, G. Keller</i>	
558 Corrosion and Protection of Corrugated Galvanised Mild Steel Tunnels & Culverts.....	2016
<i>P. Clark</i>	

POSTERS

050 A Corrosion Control Concept by Scale Engineering: A Novel Green Inhibitor Applied to High Temperature and Pressure Aqueous Supercritical CO₂ Systems	2021
<i>J. Han, J. Carey, J. Zhang</i>	
092 Application of Metal Magnetic Memory Method in Heating Coil Corrosion Detection.....	2028
<i>S. Lin, W. Wang, Z. Ren, K. Wang, T. Lin, F. Liang, Y. Q. Wang</i>	
100 Influence of Laser Melting on the Sulphide Inclusions in AISI 416	2032
<i>S. Wijesinghe, Y. Tan, G. Ng, D. Blackwood</i>	
102 The Effect of Temperature on the Corrosion of Deepwater Structures.....	2037
<i>A. Olowe, N. Renton</i>	
118 The Rehabilitation Method of Electrochemical Chloride Removal.....	2041
<i>E. Monteiro, P. Helene</i>	
122 The Effect of Elements (Al And Cr) on Corrosion Behavior of Ni₃ (Si,Ti) In Acidic Solutions	2047
<i>G. Priyotomo, S. Wagle, A. Iwase, Y. Kaneno, T. Takasugi, R. Nishimura</i>	
133 A Simple Approach to Enrich the Chromium-free Conversion Coating System on Magnesium Alloy for Corrosion Resistance	2052
<i>J. Sudagar, J. Lian, Q. Jiang</i>	
134 Inspection and Integrity Assessment of Cased Pipe for Gas Pipeline.....	2059
<i>J. Zhao, Z-Y. Xue, W-B. Wang, Q-S. Feng, J. Wang</i>	
140 Characterization of Cold-Sprayed Al and Al-Zn Coatings	2066
<i>F. Lu, X. Zhang, X. Zhou, B. Yu, Y. Ma, C. Luo</i>	
146 Corrosion Behaviors and Interfacial Contact Resistance (ICR) of TiN and CrN Coatings on 316L Stainless Steel for PEMFC Bipolar Plate.....	2075
<i>J-B. Lee, I. Oh</i>	
159 Corrosion Properties of Low Friction Coatings on Titanium Alloy Deposited by Magnetron Sputtering.....	2080
<i>M. Grobelny, B. Dytkowicz, B. Wendler, P. Nolbrzak, M. Makowka</i>	
191 Influence of Laser Parameters on Microstructure and Corrosion Kinetics of Laser Treated ZE41	2085
<i>P. Chakraborty Banerjee, R. Raman, Y. Durandet, G. McAdam</i>	
196 A Study on Localised Corrosion Inhibition by Organic Molecules	2089
<i>Y. Tan, M. Mocerino, T. Paterson, D. Morley</i>	
199 Anti-Corrosion Behaviour of Ni/Ti₂N Composite Coated Sintered NdFeB Permanent Magnets	2095
<i>K. M. Deen, A. Ali, A. Ahmad, R. Ahmad</i>	

201 Fabrication of Hydrophobic Surfaces on Cupronickel B30 and Research on Anti-corrosion Properties	2100
<i>Q. Xu, X. Cai, H. Yun</i>	
230 Correspondence between Electrochemical Fluctuations and Phenomenon for Localized Corrosion of Chromatized Zinc Electrode	2104
<i>Y. Itoi, S. Take</i>	
235 Effects of Dissolved Magnesium Ion on Phosphating of Zn-Mg Alloy Coated Steel	2111
<i>J-K. Min, H. Sohn, Y. You, Y. Kwak, T. Kim, K. Kim</i>	
251 Preliminary Study on the Benefits and Side Effects of Nitrate Injection on Pitting Corrosion of UNS S31603	2115
<i>A. Halim, R. Gubner, E. Watkin</i>	
254 Studies of the Reduction of Iron Oxides on Rebars During Electrochemical Realkalization of Concrete	2122
<i>J. Zhang, J. Lu, L. Yan, J. Jiang, K. Wang, W. Qu</i>	
256 Inhibitor Evaluation for Hot, Sweet Gas Gathering Lines	2129
<i>Y. Tomoe, T. Sunaba, T. Ito</i>	
264 Microbial Induced Corrosion due to Desulfotomaculum Nigrificans	2135
<i>A. Singh, S. Lata, C. Sharma</i>	
268 Anticorrosive Performances of Some New Organic Coatings	2140
<i>S. Drob, M. V. Popa, E. Vasilescu, P. Drob, J. Calderon Moreno, C. Vasilescu</i>	
270 Modelling of Long Term Behaviour of Some Implant Biomaterials	2144
<i>M. V. Popa, E. Vasilescu, P. Drob, M. Popa, C. Vasilescu, S. Drob</i>	
281 Corrosion Behavior of 2205 Duplex Stainless Steel in Vacuum Salt Industry	2148
<i>M. Gong, X. Lin, Z. Zou, H. Luo, L. Yu, X. Zheng, M. Feng</i>	
282 Advanced Anticorrosive Electroactive PI Prepared from Oxidative Coupling Polymerization	2152
<i>H-Y. Huang, T-C. Huang, J-M. Yeh</i>	
306 Inhibition Effect of the New Friendly Environment Inhibitors for Anticorrosion Protection of Cooling Water Systems	2159
<i>F. Branzoi, V. Branzoi, A. Stanca, M. Iordoc</i>	
310 2-mercaptobenzothiazole as Corrosion Inhibitor of 316 Stainless Steel in Acid Solution	2173
<i>N. Goudarzi, M. Peikari, R. Motefakkerfard</i>	
314 Corrosion Behavior in Simulated Body Fluid of Micro-arc Oxidation Coating Prepared on Ti6Al4V Alloy	2183
<i>X-Z. Lin, M. Gong, P. Zhang, H. Luo, L. Chen</i>	
317 Fitness-For-Service Standards and Guides for Assessment of Corrosion; A Review	2187
<i>A. Shadman, M. Peikari, M. Maddahi</i>	
321 Corrosion Performance of Electrogalvanized Steel Treatment with Cr(III) Based Products	2191
<i>C. Tomachuk, A. Di Sarli, C. Elsner</i>	
323 Characterization of Hydrophobic Films used as Corrosion Inhibitors	2205
<i>I. Aoki, J. Passadore</i>	
329 Sour Properties of API X70/80 Grade Hot Rolled Steel	2213
<i>W. K. Kim, J. H. Bae, K. M. Noh, K. S. Kim</i>	
330 Study on Property of Anti Corrosion Composite Coatings of Tannic Acid- H₂TiF₆/SiO₂ on Hot-Dip Galvanized Steel Sheet	2217
<i>Z. Xu, D. Mei, Q. Xu, Y. Lou</i>	
337 Dark Rusting of Zn-Mg Alloy Coated Steel in Aqueous Environment	2225
<i>K-Y. Kim, S-J. Kim, Y-J. Kwak, T-Y. Kim</i>	
340 EIS Study on the Passive Film of Nanograined 304 Stainless Steel After ECAP	2230
<i>J. Zheng, Y. Gao</i>	
342 Corrosion of Ancient Glass Beads from Southern Thailand	2236
<i>P. Dararutana, K. Won-In, Y. Thongkam, S. Pongkrapan</i>	
350 Modified Electrodes Based on the Conductive Polymers and Functionalized Carbon Nanotubes	2240
<i>V. Branzoi, F. Branzoi, A. Musina</i>	
353 Influence of Alloying Elements Amount on Growth of ZrO₂ Ceramic Film Formed by PEO on Biomedical ZrNbTa Ternary Alloys	2252
<i>M. Iordoc, V. Branzoi, F. Branzoi, A. Teisanu, V. Marinescu</i>	
366 Performance of Erosion Resistant Rail in Pangang	2253
<i>D. Li, C. An</i>	
376 Aniline Pentamer-based Electroactive Polyurea Prepared from Oxidative Coupling Polymerization: Synthesis, Characterization and Properties	2258
<i>T. Yeh, J. Yang, J. Yeh</i>	

389 The Effect of Iron Addition on Hydrogen Absorption to Titanium	2263
<i>S. Kijitori, T. Haruna</i>	
401 Development of Super-weatherable Color Steel.....	2266
<i>M. Yoon, K. Yang, B. Lee, Y. Kim, M. Moon</i>	
423 Dry Etching and Laser Cleaning of Ancient-like Bronzes.....	2272
<i>P. Vassiliou, O. Papadopoulou, J. Novakovic, E. Drakaki, A. Serafetinides, S. Grassini, E. Angelini</i>	
426 An Investigation of Self Healing Efficiency of Microencapsules in Different Polymers and its Evaluation by Electro Chemical Impedance Spectroscopy	2281
<i>M. Selvaraj, S. Ramu</i>	
429 Environmentally-assisted Crack Initiation Behaviour of Low-alloy Steel in Simulated BWR Environment - Effect of Chloride	2286
<i>S. Ritter, H. P. Seifert</i>	
430 Preparation, Characterization and Properties of Electroless Ni-PZrO₂ Composite Coatings	2291
<i>P. Vassiliou, J. Novakovic, V. Gouda</i>	
434 Effects of Tungsten, Zirconium and Chromium in the Passivity of Sputter Deposited W-Zr-Cr Alloys in Aggressive Environments	2303
<i>J. Bhattarai</i>	
439 Corrosion of Materials in Nitrogen Based Fuels	2307
<i>G. Shter, I. Kap, M. Starostin, G. Grader</i>	
464 Cylindrical Rotating Geometry to Simulate the Performance of Corrosion Inhibitors.....	2312
<i>M. Elizalde, J. Robles</i>	
468 Mathematical and Physical Simulation to Predict Corrosion in Turbulent Flow Caused by Different Physical Variables	2319
<i>J. Robles, M. Elizalde</i>	
485 Investigation on Passivation Treatments in Nb Solutions	2325
<i>R. Lima, I. Costa</i>	
486 Corrosion of a Gold Alloy in Saline and Acidic Environments.....	2330
<i>L. Ward, D. Chen, A. O'Mullane, S. Bhargava</i>	
493 Corrosion Protection of Mg-Rich Epoxy Primer on Silane Pretreated AZ91D Magnesium Alloy	2335
<i>Y. Zuo, X. Lu, X. Zhao, Y. Tang</i>	
498 Effect of Surface Modification on the Corrosion Resistance of CP Titanium	2345
<i>I. Costa, J. De Queiroz, M. Terada, S. De Medeiros, C. Alves Jr.</i>	
503 Corrosion Erosion of 316L Stainless Steel in Sulfuric Acid Solution	2351
<i>B. Widyanto</i>	
518 Corrosion Protection of Magnesium Alloy AZ31 via Phosphonium Based Ionic Liquids	2360
<i>J. Lin, P. Howlett, M. Forsyth</i>	
552 Clarifying Certain Aspects of the Atmospheric Corrosion of Weathering Steels.....	2370
<i>D. De La Fuente, M. Morcillo, I. Díaz, H. Cano, B. Chico</i>	
553 Anticorrosive Protection of Magnesium Alloys by Different Conversion and Plasma Electrolytic Oxide Coatings.....	2375
<i>D. De La Fuente, J. Simancas, B. Chico, L. Madueño, F. Camón, M. Blanco</i>	
557 Investigation into Causes of Corrosion in 316-type Stainless Steel.....	2379
<i>K. Kannoorpatti, D. Lilley, G. Webb</i>	
Author Index	