

Table of Contents

Preface and Organizing Committee

Chapter 1: Corrosion and Surface Engineering, Corrosion Protection

Novel Concepts on the Growth of Corrosion Fatigue Small and Short Cracks	3
M. Lukaszewicz, S.G. Zhou and A. Turnbull	
Corrosion Fatigue Crack Propagation Rates for Steam Turbine Blade 13% Cr Steels	7
A. Bashir, W. Dudziński, M. Dudziński and T. Ptak	
Corrosion Behaviour of Amorphous and Nanocrystalline Alloys	11
A. Królikowski	
Influence of Plastic Deformation on the Corrosion Behaviour of As-Cast AlMg2 and AlCu4Mg1 Aluminium Alloys in NaCl Solution	15
V. Vignal, H. Krawiec and Z. Szklarz	
Influence of the Crystallographic Orientation of Grains and Plastic Deformation on the Electrochemical Behavior of Pure Aluminum in Sodium Chloride Solution	19
Z. Szklarz, H. Krawiec and M. Wróbel	
Structure and Corrosion Behavior of Mg-Cu-Y-(Zn,Ni) Bulk Metallic Glasses	23
R. Babilas, K. Cesarz-Andraczke, D. Babilas and W. Simka	
The Influence of Deformation on the Corrosion Resistance of Titanium Grade2	27
M. Zwolińska, A. Sotnickzuk, K. Topolski, A. Królikowski and H. Garbacz	
Influence of Ageing on the Corrosion Resistance of the ZnAl22Cu3 and ZnAl40Cu3 Alloys	31
R. Michalik	
Resistance to Electrochemical Corrosion of Extruded Magnesium Alloy AZ31	35
J. Przondziona, E. Hadasić, W. Walke and J. Szala	
The Corrosion Processes Effect on Surface Roughness of Bonded Magnetic Material Based on Nd-(Fe,Co)-B Powder Type	39
K. Radomska, G. Pawłowska and D. Klimecka-Tatar	
The Influence of Reinforcement Purity on Corrosion Resistance of AM50/SiC Composites	43
K. Kamieniak and M.A. Malik	
The Properties of Refined Glasses with Aluminum Hydroxide Nano-Molecules	47
M. Drajewicz, M. Pytel, P. Rokicki and M. Góral	
Corrosion Resistance of Sinters CNT-Cu/Cu	51
P. Zygoń, M. Gwoździk, Z. Nitkiewicz and K. Jagielska-Wiaderek	
A Study on the Inhibition of J55 and P110SS Steel in 3.5% NaCl Solution Saturated with CO₂ by Seed Extract of <i>Momordica charantia</i> (Karela)	55
A. Singh, Y.H. Lin, W.Y. Liu, L.J. Zhou, K.H. Deng and B. Huang	
Inhibition Effect of Guar Gum on the Corrosion Behaviour of Carbon Steel (K-55) in Fracturing Fluid	59
G. Palumbo and J. Banaś	
Investigation of Some Mannich Bases Corrosion Inhibitors for Carbon Steel	63
I. Manciulea, C. Bogatu, C. Cazan, L. Dumitrescu and A. Duta	
The Effect of Chloride Ions on the Passive Films of Titanium in Sulfuric Acids	67
J. Liu, A. Alfantazi and E. Asselin	
Effect of Cadmium Addition on the Galvanic Corrosion of AM60 Magnesium Alloy in 0.1 M Sodium Chloride Solution	71
M.E. Ikpi, J. Dong and W. Ke	
Studies on the Corrosion Properties of High-Mn Austenitic Steels	75
M. Jabłońska and R. Michalik	
The Electrochemical and Immersion Corrosion of Casting Magnesium Alloys Containing Rare Earth Elements	79
A. Kiełbus, J. Michalska and B. Dybowski	
Corrosion Behavior of MRI153M Magnesium Alloy in 3% NaCl Solution	83
O. Gaon, B. Kazanski and A. Lugovskoy	

Corrosion Behaviour of Magnesium Lithium Alloys in NaCl Solution	87
A. Dobkowska, B. Adamczyk-Cieslak, J. Mizera, J. Kubásek and D. Vojtěch	
Corrosion of WE43 and AE44 Magnesium Alloys in Sodium Sulfate Solution	91
A. Mościcki, B. Chmiela and M. Sozańska	
Electrochemical Corrosion Behaviour of Stainless Steels AISI 304 and 316L in Caribbean Sea Water	
D.M. Herrera-Zamora, L. Veleva and J.L. López	95
Adsorption Kinetics of Benzothiazole and 2-Mercaptobenzothiazole on Microcrystalline Gold and Silver Surfaces	
J. Ramírez Cano and L. Veleva	99
Corrosion Resistance in Saline Environment of Colored Based Alumina Spectrally Selective Surfaces	
C. Bogatu, C. Cazan, I. Manciulea and A. Duta	103
The Effects of Inappropriate Corrosion Protection	
M. Janczewski	107
The Effect of Ti and REE Addition on the Corrosion Resistance of the AlZn12Mg3.5Cu2.5 Alloy in "Acid Rain" Environment	
R. Michalik and H. Woźnica	111
Corrosion Resistance of AA2024-T3 Coated with Graphene/Sol-Gel Films	
M. Hernandez, J. Genesca, C. Ramos, E. Bucio, J.G. Bañuelos and A. Covelo	115
Corrosion Behavior of Hybrid Sol-Gel Films Reinforced with Electrospun Nanofibers	
A. Covelo, J. Genescá, A. Barba, C. Menchaca, J. Uruchurtu and M. Hernández	119
Epoxy-Polyelectrolyte Composites as a Basis of Intellectual Coating for Protection from Underfilm Corrosion on Cathodically Polarizable Structures	
N.N. Petrov, T.V. Koval, I.V. Falina, R.V. Gorokhov, N.V. Sheldeshov and N.N. Bukov	123
Properties of Functional Epoxy Coatings Modified by Carbon Nanoparticles	
L. Diblíková, A. Koukalová, J. Kudláček, M. Zoubek and F. Herrmann	127
Solid State NMR and EIS Examination of SiO₂-Epoxy Hybrid Coatings on Stainless Steel	
J. Masalski, U. Wawrzaszek, M.J. Potrzebowski, B. Kucharczyk, J.G. Chęćmanowski, W. Tylus and B. Szczygieł	131
Anticorrosive Property of Potassium Dichromate Film on Galvanized Coating in Distilled Water	
O. Adetunji, P.O. Aiyedun and O.S. Bello	135
Anodic Treatment of Zn-Ni Alloy in Alkaline Solutions	
A. Maciej, J. Michalska, W. Simka, M. Sowa, T. Gorewoda and G. Dercz	139
Electrodeposition of Zinc Coatings from Ionic Liquid	
D. Nieszporek, W. Simka, K. Matuszek, A. Chrobok and A. Maciej	143
Galvanic Formation of Zn-Ni/Zn-Co Type Multilayer Alloy Coatings on Steel Substrate	
A. Nagrabia, M. Sowa, W. Simka and A. Maciej	147
Microplasma Oxidation of Magnesium Alloy AZ91D by Impulse Current	
G. Nawrat, M. Wierzbieńska, T. Wieczorek, Ł. Nieużyła, A. Krząkała, A. Maciej, W. Simka and K. Raga	151
XPS Study of Surface Layer Formed on AISI 316L after High-Current Density Electropolishing	
K. Rokosz, T. Hryniiewicz and S. Rzadkiewicz	155
Evaluation of the Growth Mechanism of Ti-Containing Conversion Coatings Using XPS	
W. Tylus, J. Winiarski and B. Szczygieł	159
Corrosion Resistance of Cerium Based Silane-Zeolite Coatings on AA6061 Alloy	
A. Capri, L. Calabrese, L. Bonaccorsi and E. Proverbio	163
Corrosion Resistance of Copper Sheet after Laser Treatment	
T. Onyszczuk, M. Zwolińska, M. Mazurkiewicz, J. Marczak, A. Sarzyński and H. Garbacz	167
Thermally Sprayed Coatings as Corrosion Protection for Steel Structures – Influence of the Manufacturing Processes on the Coating Quality	
T. Maghet, J. Mährlein, T. Wilhelm, M. Sallai, S. Friedrich, R. Regensburger and R. Feser	171
Zirconium Modified Aluminide Coatings Obtained by the CVD Method	
J. Romanowska, M. Zagula-Yavorska, M. Góral and J. Sieniawski	174
Study of Interaction between Liquid Magnesium Alloy and Glassy Carbon Particles	
A. Olszówka-Myalska and J. Chrąpoński	178

Chapter 2: Concrete Corrosion

Corrosion Inhibition of Concrete Steel-Reinforcement in Saline/Marine Simulating-Environment by <i>Rhizophora mangle</i> L.	
J.O. Okeniyi, C.A. Loto and P. Popoola	185
Deterioration of Cement Composites with Silica Fume Addition due to Chemical and Biogenic Corrosion Processes	
A. Eštoková, M. Kovalcikova and A. Luptáková	190
The Influence of Waste Expanded Perlite on Chemical Durability of Mortars	
W. Pichór, M. Barna, E. Kapeluszna, A. Łagosz and Ł. Kotwica	194
Corrosion Behavior of Hybrid Organic-Inorganic Coated Steel in Simulated Concrete Pore Solution	
M. Criado, I. Sobrados, J.M. Bastidas and J. Sanz	199
Mild Steel Passivation and Depassivation in Simulated Concrete Pore Solution Containing Bacteria Metabolites	
E. Volpi, M. Stefanoni, A. Olietti and S. Trasatti	203
Bio-Corrosion of Fibrous Cement Boards and Cement Composites	
V.O. Harbuľáková, A. Eštoková, A. Luptáková and M. Kovalčíková	207

Chapter 3: Corrosion and Surface Engineering in Industry

Sulphur Species Corrosivity in Refinery Feed Stock	
M.I. Suleiman	213
The Corrosion of HDG Zinc Coatings on the Road and Urban Infrastructures	
A. Królikowska and L. Komorowski	217
Comparison of Human Health and Safety Loss due to Corroded Gas Pipeline Failure in Rural and Urban Areas: A Case Study in Malaysia	
N.M. Hanafiah, L. Zardasti, N. Yahaya, N.M. Noor and A.A. Safuan	221
The Consequence Assessment of Gas Pipeline Failure due to Corrosion	
L. Zardasti, N.M. Hanafiah, N.M. Noor, N. Yahaya and A.S.A. Rashid	225
Investigation of the Degradation Mechanism of Platinum-Rhodium Catalytic Wires during Oxidation of Ammonia Process	
J. Pura, P. Kwaśniak, P. Wiecinski, H. Garbacz, J. Zdunek, Z. Laskowski and M. Gierej	229
Properties of Rubber Lining after Sixteen Years Operation in Different Places of FGD Plant	
I. Drela, J. Masalski, M. Łukaczyńska and B. Szczygieł	233

Chapter 4: Atmospheric Corrosion, Tribocorrosion, Erosion, Hydrogen Degradation and Diffusion

Atmospheric Corrosion Protection of Metallic Structures Using Geocements-Based Coatings	
P.V. Krivenko, S. Guzii and H.A.J. Al-Musaedi	239
Nanocomposite Layers Obtained by Electro-Co-Deposition: Corrosion and Tribocorrosion Properties	
L. Benea	243
Microstructure and Tribocorrosion Properties of Titanium Matrix Nanocomposites Manufactured by Selective Laser Sintering/Melting Method	
A. Biedunkiewicz, P. Figiel, W. Biedunkiewicz, D. Grzesiak, M. Krawczyk and A. Stasiukiewicz	247
The Influence of Temperature on Erosion Resistance of Carbide Coatings Deposited by APS Method	
P. Sosnowy, M. Góral, S. Kotowski, G. Hanula, J. Gwizdała, J. Drzał, M. Kobylarz, P. Borowski and R. Gargała	251
Microstructural Phenomena Occurring during Early Stages of Cavitation Erosion of Al-Si Aluminium Casting Alloys	
B. Dybowski, M. Szala, A. Kiełbus and T. Hejwowski	255

Hydrogen Diffusion Characteristics in the TRIP 800 C-Mn-Si Steel	259
J. Sojka, M. Sozańska, P. Váňová, V. Vodárek and F. Filuš	
Hydrogenation and Corrosion Properties of LaNi_{4.5}Co_{0.5}-Based Alloy Doped with 1.7 at% Sn	263
M. Dymek, H. Bala, H. Drulis and A. Hackemer	
The Effect of Pre-Hydrogen Charging on Corrosion Behaviour of Superduplex Stainless Steel Welded Joints	267
J. Łabanowski, A. Świerczyńska and J. Michalska	
Hydrogen Absorption by Co-Substituted Nd-Fe-B High Coercivity Magnetic Material	271
H. Bala, M. Dymek, S. Szymura and Y.M. Rabinovich	
Nickel Electrode Precursor Covered by Pt, Ni and Pt/Ni Layers Using Sol-Gel Method	275
A. Jaroń and Z. Żurek	

Chapter 5: Microbiological Corrosion

Inhibition of Steel-Rebar Corrosion in Industrial/Microbial Simulating-Environment by <i>Morinda lucida</i>	281
J.O. Okeniyi, C.A. Loto and P. Popoola	
Growth of <i>Acidithiobacillus thiooxidans</i> Biofilm on Glass, Concrete and Stoneware	286
W. Dec, B. Cwalina, J. Michalska and D. Merkuda	
Differences between <i>A. thiooxidans</i> and <i>A. ferrooxidans</i> Biofilms Formed on Concrete and Stoneware	290
W. Dec, B. Cwalina, J. Michalska and A. Parzentina	
Microbiologically Induced Corrosion Monitoring Using Open-Circuit Potential (OCP) Measurements	294
R. Mohd Rasol, A. Abu Bakar, N.M. Noor, N. Yahaya and M. Ismail	
Turbidity Method to Measure the Growth of Anaerobic Bacteria Related to Microbiologically Influenced Corrosion	298
A. Abu Bakar, R. Mohd Rasol, N. Yahaya, N.M. Noor and M.K.F. bin Mohd Ali	
Biofilm Formation on NiTi Surface by Different Strains of Sulphate Reducing Bacteria (<i>Desulfovibrio desulfuricans</i>)	302
B. Cwalina, W. Dec, W. Simka, J. Michalska and M. Jaworska-Kik	

Chapter 6: High-Temperature Corrosion and Surface Strength, Thermal Coating

The Effect of Pretreatment on the Corrosion Resistance of Superheater Materials	309
J. Lehmusto, P. Yrjas and M. Hupa	
The Effect of the Aluminide Coating on the Thermal Properties and Oxidation Resistance of Inconel 625 Ni-Base Superalloy	313
M. Zagula-Yavorska, J. Sieniawski, R. Filip and M. Drajewicz	
The Formation of TBCs Using LPPS, CVD and PS-PVD Methods on CMSX-4 Single-Crystal Nickel Superalloy	317
M. Góral, M. Pytel and M. Drajewicz	
The Influence of Overaluminizing on TGO Formation on Thermal Barrier Coatings Deposited by Low Pressure Plasma Spraying and Chemical Vapour Deposition Methods on Rene 80 Nickel Superalloy	321
M. Góral, M. Pytel, W. Cmela and M. Drajewicz	
Microstructure and Isothermal Oxidation Resistance of Thermal Barrier Coatings Deposited by LPPS, CVD and PS-PVD Methods on Inconel 617 Nickel Superalloy	325
S. Kotowski, J. Sieniawski and M. Drajewicz	
Heat Resistance and Heat Capacity of the Selected Nickel Superalloys	329
R. Przeliorz and M. Góral	
Microstructure of Thermal Barrier Coatings Deposited by Low Pressure Plasma Spraying and Chemical Vapour Deposition Methods on Rene 80 Nickel Superalloy	333
M. Góral, M. Pytel, W. Cmela and S. Kotowski	
Evaluation of Hot Corrosion Resistance of Directionally Solidified Nickel-Based Superalloy	337
M. Sozańska, B. Kościelniak and L. Swadźba	

The Impact of the Organic Form of Sulphur Originating from Coal on the Performance of Solid Oxide Fuel Cells	
M. Dudek	341
Oxidation Behavior of Aluminide Coated Ti-Al-Cr-Nb-Zr-Y Alloys at High Temperatures	
E. Basuki, D. Prajtno and Pawawoi	345
Degradation of Diffusive Aluminide Coating after Service in ZhS6K Superalloy	
B. Chmiela, M. Kianicova and M. Sozańska	349
Hafnium Modified Aluminide Coatings Obtained by the CVD and PVD Methods	
M. Zagula-Yavorska, J. Romanowska, J. Sieniawski and M. Wierzbiska	353
The Influence of Activator on Vapour Phase Aluminizing of TiAl Intermetallics	
M. Góral, A. Gradzik, J. Sieniawski, R. Filip, J. Sieniawski and M. Wierzbinska	357
The Oxidation Resistance of Nonmodified and Zr-Modified Aluminide Coatings Deposited by the CVD Method	
R. Filip, M. Zagula-Yavorska, M. Pytel, J. Romanowska, M. Maliniak and J. Sieniawski	361
The Influence of the Chemical Composition of Superalloys on the Oxidation Resistance of Aluminide Coating	
M. Zagula-Yavorska, J. Sieniawski and R. Filip	365
Influence of Deposition Parameters on Structure of TDCs Deposited by PS-PVD Method	
M. Góral, T. Kubaszek, S. Kotowski, J. Sieniawski and S. Dudek	369
Microstructure of TBC Coatings Deposited by HVAF and PS-PVD Methods	
K. Szymański, M. Góral, T. Kubaszek and P.C. Monteiro	373
The Technology of TBC Deposition by EB-PVD Method	
P. Pędrak, A. Nowotnik, M. Góral, K. Kubiak, M. Drajewicz and J. Sieniawski	377
Analysis of Crystallite Size Changes in an Oxide Layer Formed on Steel during Long-Term Operation at an Elevated Temperature	
M. Gwoździk	381
Influence of Surface Condition on Oxides Layer Morphology on NiCrAlY Coating during Oxidation at Temperature 1000°C and 1100°C	
G. Moskal and D. Niemiec	385
Studies on the Adhesion of Oxide Layer Formed on Steel Long-Term Operated at an Elevated Temperature	
M. Gwoździk	389
Comparison of High-Temperature Oxidation Onset Behavior of Sanicro 28 Steel with KCl, NaCl and K₂CO₃	
J.X. Sui, J. Lehmusto, M. Bergelin and M. Hupa	393
Evaluation of High-Temperature Corrosion on 16Mo3 Steel Long-Term Operated at an Elevated Temperature	
M. Gwoździk	397
High-Temperature Corrosion Resistance of Welded Joints in Sanicro 25 Steel	
P. Jamrozik and M. Sozańska	401
High-Temperature Corrosion Resistance of Welded Joints in HR6W Alloy	
P. Jamrozik and M. Sozańska	405
The Morphology of Corrosion Products in FeAl Alloys after Heat-Resistance Tests at Different Temperatures	
A. Fornalczyk, J. Cebulski and P. Dorota	409
Thermal Properties of YSZ Powders for Plasma Spraying	
M. Drajewicz, K. Dychtoń and M. Góral	413
Oxidation Resistance of Diffusion Silicide Coatings on Mo and TZM Alloy	
G. Moskal, B. Witala, J. Tracz, P. Kałamarz, W. Supernak, S. Polis, S. Jucha, A. Wrona and M. Osadnik	417
Nonstoichiometry and Chemical Diffusion in Co₃O₄ Cobalt Oxide	
Z. Grzesik, A. Kaczmarska and S. Mrowec	421
Process Temperature Effect on Surface Layer of Vacuum Carburized Low-Alloy Steel Gears	
K. Dychtoń, P. Rokicki, A. Nowotnik, M. Drajewicz and J. Sieniawski	425

Chapter 7: Corrosion of Biomaterials

Corrosion and Mechanical Behavior of Biodegradable Metallic Biomaterials	431
D. Vojtěch, J. Kubásek, J. Capek, A. Michalcová and I. Pospíšilová	
Corrosion Behaviour of Ti6Al4V and TiMo10Zr4 Alloys in the Ringer's Solution: Effect of pH and Plastic Strain	435
J. Loch, A. Łukaszczyk, V. Vignal and H. Krawiec	
Corrosion Study of Amorphous Mg₆₇Zn₂₉Ca₄ Alloy	439
R. Nowosielski, K. Cesarz-Andraczke, R. Babilas, A. Maciej and G. Nawrat	
Effect of Polarization Scan Rate on the Pitting Potential of the Self-Passivated NiTi Shape Memory Alloy in a Simulated Body Fluid	443
P. Osak, T. Goryczka and B. Łosiewicz	
Electrochemical Behavior of Materials Used in Dental Implantological Systems	447
A. Ziębowicz, B. Ziębowicz and B. Bączkowski	
Electrochemical Behaviour of Co-Cr and Ni-Cr Dental Alloys	451
J. Loch, A. Łukaszczyk, J. Augustyn-Pieniążek and H. Krawiec	
Fretting – Corrosion of Co-Cr-Mo Alloy in Oral Cavity Environment	455
M. Klekotka, J.R. Dąbrowski and W. Karalus	
Improvement of the Corrosion Resistance of Biomedical Magnesium Alloys in the Ringer's Solution Using Protective Coatings	459
I. Kot and H. Krawiec	
Influence of Ultrasound Bone Union Stimulation on Corrosion Resistance of Titanium Alloys	463
J. Szewczenko, A. Zabuga, M. Kaczmarek, M. Basiaga, W. Kajzer, Z. Paszenda and K. Nowińska	
Corrosion Properties of Anodically Oxidised and Alkaline Treated Titanium Nitride	467
A. Brojanowska, K. Kowalczyk, D. Sadłowska and J.R. Sobiecki	
Corrosion Properties of Plasma Oxidized Titanium Nitride for Biomedical Applications	471
J.R. Sobiecki, A. Brojanowska and K. Kowalczyk	
Corrosion Properties of Oxide Layers Produced on Titanium Nitride by Means of Plasma Electrolytic Oxidation of Various Duration	475
K. Kowalczyk, A. Brojanowska and J.R. Sobiecki	
Effect of the High Voltage Anodic Oxidation on the Titanium Corrosion Resistance	479
J.K. Koper and J. Jakubowicz	
Corrosion Resistance of Ti6Al7Nb Alloy after Various Surface Modifications	483
J. Szewczenko, M. Basiaga, M. Kiel-Jamrozik, M. Kaczmarek and M. Grygiel	
Electrochemical Properties of cpTi with Modified Surface Used for Implants in Blood and Vascular System	487
W. Walke, Z. Paszenda, M. Basiaga, P. Karasiński and M. Kaczmarek	
Impact of Surface Modification of Ti-6Al-7Nb Alloy on Electrochemical Properties in the Environment of Artificial Blood Plasma	491
M. Basiaga, Z. Paszenda, W. Walke, P. Karasiński and J. Marciniak	
Increasing the Surface Functionality of Mg Alloys by Means of Plasma Electrolytic Oxidation	495
L. Kwiatkowski, A. Kapuścińska, A. Bałkowiec and R. Lutze	
Influence of Electrolytic Polishing and Anodic Passivation on Corrosion Resistance of Ti-15Mo Alloy	499
D. Babilas, J. Michalska, E. Pamuła and W. Simka	
Corrosion Behaviour of Thermodiffusion Coatings on Titanium Implants in Simulated Body Fluids	503
O. Tkachuk, R. Proskurnyak, I. Pohrelyuk and V. Fedirko	
Corrosion Behavior of a Novel Hybrid Co/UHMWPE Composite Biocoating with Potential Application as a Biomaterial	507
E. Danaila, L. Benea and I. Bounegru	
Potential of Superhydrophobic Layer on the Implant Surface	511
E. Stodolak-Zych, A. Rapacz-Kmita and M. Dudek	
Electrochemical Impedance Spectroscopy Behaviour of NdFeB Coated Magnets in Saliva Solution for Orthodontic Applications	515
L. Calabrese, L. Bonaccorsi, C. Borsellino, A. Capri, F. Fabiano and E. Proverbio	
Corrosion Properties of Ti Scaffolds Prepared with Sucrose as a Space Holder	519
G. Adamek, K. Pałka and J. Jakubowicz	

Corrosion Resistance of Hip Endoprosthesis Cups in the Initial State and after Implantation	523
A. Kajzer, W. Kajzer, J. Semenowicz and A. Mroczka	
Effect of Artificial and Inflammatory Saliva on <i>Desulfovibrio desulfuricans</i> Growth and Biofilm Formation on NiTi Alloy	527
B. Cwalina, W. Dec, W. Simka, A. Mościcki, M. Jaworska-Kik and E. Kaczmarek	
Effects of Sn and Mo Contents on the Electrochemical Behavior of Biomedical Ti-Mo-Sn Alloys Prepared in the Powder Metallurgy Process	531
G. Dercz, W. Simka, A. Kazek-Kęsik, A. Maciej and S. Ogierman	

Chapter 8: Testing Methods

Experimental Corrosion Tests on Weathering Steel Bridges	537
V. Krivy, K. Kreislova and V. Urban	
Application of Research Methods in Expert Opinions	541
M. Zubielewicz and A. Królikowska	
Detection of the Corrosion of Axisymmetric Elements by Means of the Eddy Current Testing Method	545
A. Zbrowski and W. Józwik	
Application of the Electrochemical Microcell Technique in Solid State Surface Analysis	549
H. Krawiec	
The Concept of Using Model Gas Turbine for Burner Rig Corrosion Test	553
M. Góral, R. Filip and J. Dyrda	
Machine Vision System for Corrosion Detection as an Additional Tool beside EIS for Evaluation of Protective Properties of Electrolessly Deposited Ni-P Coatings	557
A. Stankiewicz, M. Stankiewicz, J. Winiarski, I. Szczygiel and B. Szczygiel	
Equipment for Low Pressure Plasma Spraying Processes – A Review	561
M. Góral and T. Kubaszek	