



CORROSION SCIENCE

The Journal on Environmental Degradation of Materials and its Control

Editor-in-Chief: G. T. BURSTEIN, University of Cambridge, U.K.

An Official Journal of the Institute of Corrosion

CONTENTS

Letter

A. HUGHES, T. H. MUSTER, A. BOAG,
A. M. GLENN, C. LUO, X. ZHOU,
G. E. THOMPSON and D. McCulloch

665 Co-operative corrosion phenomena

Papers

M. KAMRUNNAHAR and
M. URQUIDI-MACDONALD

669 Prediction of corrosion behavior using neural network as a data mining tool

O. ABOOTALEBI, A. KERMANPUR,
M. R. SHISHESAZ and M. A. GOLOZAR

678 Optimizing the electrode position in sacrificial anode cathodic protection systems using boundary element method

M. GENTILE, E. V. KOROLEVA, P. SKELDON,
G. E. THOMPSON, P. BAILEY and
T. C. Q. NOAKES

688 Influence of pre-treatment on the surface composition of Al-Zn alloys

J. MONNIER, D. NEFF, S. RÉGUER,
P. DILLMANN, L. BELLOT-GURLET,
E. LEROY, E. FOY, L. LEGRAND and
I. GUILLOT

695 A corrosion study of the ferrous medieval reinforcement of the Amiens cathedral. Phase characterisation and localisation by various microprobes techniques

S. KUMAR, T. S. N. SANKARA NARAYANAN,
S. GANESH SUNDARA RAMAN and
S. K. SESHADRI

711 Fretting corrosion behaviour of thermally oxidized CP-Ti in Ringer's solution

R. SÁNCHEZ-TOVAR, M. T. MONTAÑÉS and
J. GARCÍA-ANTÓN

722 The effect of temperature on the galvanic corrosion of the copper/AISI 304 pair in LiBr solutions under hydrodynamic conditions

W.-J. BEOM, K.-S. YUN, C.-J. PARK,
H.-J. RYU and Y.-H. KIM

734 Comparison of influences of NaCl and CaCl₂ on the corrosion of 11% and 17% Cr ferritic stainless steels during cyclic corrosion test

C. XU, X. PENG and F. WANG

740 Cyclic oxidation of an ultrafine-grained and CeO₂-dispersed δ -Ni₂Al₃ coating

R. M. SOUTO, Y. GONZÁLEZ-GARCÍA,
J. IZQUIERDO and S. GONZÁLEZ

748 Examination of organic coatings on metallic substrates by scanning electrochemical microscopy in feedback mode: Revealing the early stages of coating breakdown in corrosive environments

Contents continued on outside back cover

Continued from outside front cover

- R. POSNER, M. MARAZITA, S. AMTHOR, 754 Influence of interface chemistry and network density on interfacial ion transport kinetics for styrene/acrylate copolymer coated zinc and iron substrates
 K. J. ROSCHMANN and G. GRUNDMEIER
 M. CARBONERAS, M. D. LÓPEZ, P. RODRIGO, 761 Corrosion behaviour of thermally sprayed Al and Al/SiCp composite coatings on ZE41 magnesium alloy in chloride medium
 M. CAMPO, B. TORRES, E. OTERO and J. RAMS
 T. SHOJI, Z. LU and H. MURAKAMI 769 Formulating stress corrosion cracking growth rates by combination of crack tip mechanics and crack tip oxidation kinetics
 YONGHONG LU, WEI WANG, HAIBO XU, 780 Copper corrosion and anodic electrodisolution mechanisms in naturally aerated stagnant 0.5 M H₂SO₄
 XIANGFENG KONG and JIA WANG
 A. B. DA SILVA, E. D'ELIA and 788 Carbon steel corrosion inhibition in hydrochloric acid solution using a reduced Schiff base of ethylenediamine
 J. A. DA CUNHA PONCIANO GOMES
 D. ASEFI, M. ARAMI and N. M. MAHMOODI 794 Electrochemical effect of cationic gemini surfactant and halide salts on corrosion inhibition of low carbon steel in acid medium
 H. KIM, D. B. MITTON and 801 Corrosion behavior of Ni-base alloys in aqueous HCl solution of pH 2 at high temperature and pressure
 R. M. LATANISION
 W. WANG, Y. LU, Y. ZOU, X. ZHANG and 810 The heterogeneous electrochemical characteristics of mild steel in the presence of local glucose oxidase—A study by the wire beam electrode method
 J. WANG
 K.-S. JUNG and L. DE PIERREFEU 817 Electrochemical characterization of sintered magnetite electrode in LiOH solution
 R. P. B. HERNÁNDEZ, Z. PÁSZTI, 826 Chemical characterization and anticorrosion properties of corrosion products formed on pure copper in synthetic rainwater of Rio de Janeiro and São Paulo
 H. G. DE MELO and I. V. AOKI
 J. SOLTIS, D. P. KROUSE, N. J. LAYCOCK and 838 Automated processing of electrochemical current noise in the time domain: I. Simulated signal
 K. R. ZAVADIL
 I. S. COLE, W. D. GANTHER, S. A. FURMAN, 848 Pitting of zinc: Observations on atmospheric corrosion in tropical countries
 T. H. MUSTER and A. K. NEUFELD
 L. HAMADOU, A. KADRI and N. BENBRAHIM 859 Impedance investigation of thermally formed oxide films on AISI 304L stainless steel
 S. MARINETTI and V. VAVILOV 865 IR thermographic detection and characterization of hidden corrosion in metals: General analysis
 S. JAIN, N. D. BUDIANSKY, J. L. HUDSON 873 Surface spreading of intergranular corrosion on stainless steels
 and J. R. SCULLY
 R. SUEPITZ, M. UHLEMANN, A. GEBERT 886 Corrosion, passivation and breakdown of passivity of neodymium
 and L. SCHULTZ
 X. LIU, T. ZHANG, Y. SHAO, G. MENG and 892 In-situ study of the formation process of stannate conversion coatings on AZ91D magnesium alloy using electrochemical noise
 F. WANG
 A. SAKHRI, F. X. PERRIN, E. ARAGON, 901 Chlorinated rubber paints for corrosion prevention of mild steel: A comparison between zinc phosphate and polyaniline pigments
 S. LAMOURIC and A. BENABOURA
 A. VALOR, F. CALEYO, D. RIVAS and 910 Stochastic approach to pitting-corrosion-extreme modelling in low-carbon steel
 J. M. HALLEN
 S. GOIDANICH, L. LAZZARI and 916 AC corrosion. Part 2: Parameters influencing corrosion rate
 M. ORMELLESE
 I. B. OBOT, N. O. OBI-EGBEDI and 923 Acenaphtho [1,2-b] quinoxaline as a novel corrosion inhibitor for mild steel in 0.5 M H₂SO₄
 N. W. ODOZI
 F. MENG, J. WANG, E.-H. HAN and W. KE 927 The role of TiN inclusions in stress corrosion crack initiation for Alloy 690TT in high-temperature and high-pressure water

Contents continued on outside back matter

Indexed/Abstracted in Current Contents, Engng Ind Monthly & Author Index, PASCAL/CNRS Database, Corrosion Abstracts, Metals Abstracts, Chemical Abstracts, INSPEC Database, BMT Abstracts, Petroleum Abstracts, Aqua Abstr, Cam Sci Abstr, Chem Eng Abstr, Chem Haz in Indus, Edi Metal Abstr, Environ Per Bibl, Materials Science Citation Index, Applied Science & Technology Index, Wilson Applied Science & Technology Abstracts, Current Technology Index (CTI). Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®.

Available online at www.sciencedirect.com

ScienceDirect
