



*VI International Symposium on
Aluminium Surface Science and Technology*

*Hilton Sorrento Palace Hotel
May 27th-31st 2012, Sorrento, Italy*

-- FINAL AGENDA --

SUNDAY, MAY 27TH

5:00 p.m. to 8:00 p.m. ON SITE REGISTRATION

8:00 p.m. WELCOME RECEPTION AT HILTON SORRENTO PALACE HOTEL

MONDAY, MAY 28TH

8.00 a.m. onwards ON SITE REGISTRATION

*8.30 a.m. to 9.00 a.m. Welcome Address (Room **ULISSE**):*

P. Graziano, President of Naples Association of Industries, Naples, Italy;

*P. Salatino, Dean of Faculty of Engineering, University of Naples
"Federico II", Naples, Italy.*

Introduction by Congress Chairman:

F. Bellucci, University of Naples "Federico II".

*9.00 a.m. to 9.45 a.m. Plenary Session (Room **ULISSE**)*

Session Chairman: G.E. Thompson, University of Manchester, U.K.

*Guest Speaker: Alessandro Longi, Ferrari S.p.A., Bologna Area, Italy,
"Ferrari Aluminium Technology: Current Production and the Future"*

OPENING PARALLEL SESSIONS

ROOM ULISSE

10.00 a.m. to 11.00 a.m. SESSION – AUTOMOTIVE

Introductory Remarks by Congress Moderators:

G.E. Thompson, *University of Manchester, U.K.* / **A. Squillace**, *University of Naples, Italy.*

“Influence of User-Friendly Surface Pretreatments on the Durability of Adhesively Bonded Aluminum Assessed with NDI Impedance Spectroscopy”

D. Gallant and **S. Simard**, *Aluminium Technology Centre - Industrial Materials Institute, National Research Council Canada, Boul. de l'Université Est Saguenay QC, CA.*

“Adhesive Bonding of Aluminium Alloys for Automotive Applications”

H.-J. Brinkman, **J. Händel**, **T. Hentschel**; **K. Eckhard**, *Hydro Aluminium Rolled Products GmbH, Georg-von-Boeselager-Strasse 21, Bonn, Germany.*

“Surfaces Roughness Exploration Methods”

P. Hervieu, **S. Le-Roux**, *Constellium CRV, Voreppe CEDEX, France*; **S. Riber**, **A. Golfouse**, **F. Cochet**, *Constellium Neuf Brisach, ZI Rhénane, Biesheim, France.*

11.00 a.m. to 11.30 a.m. COFFEE / REFRESHMENT BREAK

11.30 a.m. to 1.10 p.m. SESSION – AUTOMOTIVE (continuation of the previous)

“Role of the Intermetallics on Modified Zirconium-based Surface Pretreatments for AA6014”

J. Cerezo, **H. Terryn**, *Materials Innovation Institute (M2i), Mekelweg 2, Delft, The Netherlands*, **J.H.W. de Wit**, **J.M.C. Mol**, *Delft University of Technology, Mekelweg 2, Delft, The Netherlands*; **I. Vandendael**, *Vrije Universiteit Brussel, Research Group Electrochemical and Surface Engineering, Pleinlaan 2, Brussels, Belgium*; **K. Lill**, *Henkel AG & Co. KGaA, Henkelstrasse 67, Dusseldorf, Germany.*

“Multi-Metal, Non-Chrome Conversion Coating Process Implemented by Daimler Trucks of North America”

E. Morris, **S. Smosarski**, *Deft Inc., 17451 Von Karman Ave, Irvine, CA 92563, USA*, **A. Plaxton**, *4747 North Channel Avenue, OR 97217, Portland, U.S.A.*; **A. Moody**, **M. Grahl**, *1400 Tulip Drive, Gastonia, NC 28052, USA.*

“Resistance of Bright Anodised Aluminium Alloys to Alkaline Solutions”

M. A. Kulas, **A. Afseth**, *Constellium Centre de Recherches de Voreppe, Parc Economique Centr'Alp, 725 Rue Aristide Bergès, BP 27, 38341 Voreppe Cedex, France*; **V. Gillich**, *Constellium T&I, Badische Bahnhofstrasse 16, CH-8212 Neuhausen, Schweiz*; **X. Zhou** and **G. E. Thompson**, *Corrosion and Protection Centre, School of Materials, The University of Manchester. Manchester M13 9PL, U.K.*

“Advanced Aluminium Extrusion Technology Produces a Novel Family of Aluminium-based Heating Products for the Automotive and other Markets”

G. E. Thompson, Y. Liu, X. Zhou, T. Hashimoto, Corrosion and Protection Centre, School of Materials, The University of Manchester, Oxford Road, Manchester, M13 9PL, U.K; **E. McAlpine, G. Scamans, C. Butler**, Innoval Technology Limited, Beaumont Close, Banbury, Oxon OX16 1TQ, U.K; **N. S. Malone, J. O'Connor, P. Howe, S. Mills, M. A. McCool**, Heat Trace Limited, Mere's Edge, Chester Road, Helsby, Frodsham, Cheshire, WA6 0DJ, U.K.

“Corrosion Performance of Roll-Bonded Al-Mg Alloy Laminates”

Y. Yuan, M. Gallerneault, J. Hunter and **D. Lloyd**, Novelis Global Technology Centre, 945 Princess Street, Kingston, Ontario, CA; **B. Wagstaff, B. Betts**, Novelis Solatens, 10221 E Montgomery, Spokane Valley, WA 99206, U.S.A.

1.10 p.m. to 2.30 p.m.

LUNCH BREAK

2.30 p.m. to 4.10 p.m.

SESSION – AUTOMOTIVE (continuation of the previous)

Introductory Remarks by Congress Moderators:

J. O. Nillson, Sapa Technology, Sweden / **X. Zhou**, University of Manchester, U.K.

Highlight Talk: “Corrosion and Surface Properties of Cu-free 7xxx-series Aluminium Alloys”

M. A. Kulas, A. Afseth, E. Hank, H. Dunlop, Constellium Centre de Recherches de Voreppe, Parc Economique Centr' Alp, 725 Rue Aristide Bergès, BP 27, 38341 Voreppe Cedex, France; **A. M. Cassell, X. Zhou** and **G. E. Thompson**, Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester M13 9PL, U.K.

“Aluminium Based Coatings with Titanium for Alkaline Protection”

M. Aggerbeck and **R. Ambat** Technical University of Denmark, Department of Mechanical Engineering, Kemitorvet 204, 2800 Kgs. Lyngby, Denmark.

“The Development of a Novel Coil-to-Coil Method of Engineering the Surface Topography of Rolled Products”

T. Warrender, J. Hunter, Y. Shi, Novelis Global Technology Center, 945 Princess street, Kingston, Ontario, CA; **T. Enneking, G. Bergman**, Machine Concepts, 2167 SR 66, PO Box 127, Minster, Ohio, U.S.A.

“Aluminium Oxidation and Hydration Mechanisms and Kinetics in Solid State”

M. Boehm, M. Roux-Michollet, H.M. Dunlop, Constellium CRV, Voreppe Research Center, 725 Rue Aristide Bergès, BP 27, Voreppe Cedex, France.

“New Vehicle Body Structure Concept for Metro Car”

F. Gherardi, N. Macciò, P. Petri, ANSALDOBREDA SpA, Pistoia, Italy; **F. Caccamo, B. Laganà**, ANSALDOBREDA SpA, Reggio Calabria, Italy.

4.10 p.m. to 4.40 p.m.

COFFEE / REFRESHMENT BREAK

4.40 p.m. to 6.00 p.m.

SESSION – AUTOMOTIVE (continuation of the previous)

“Influence of Near-Surface Deformed Layers on Filiform Corrosion of Painted AA3104 Aluminium Alloy”

Y. Liu, T. Hashimoto, X. Zhou, G. E. Thompson, Corrosion and Protection Centre, School of Materials, The University of Manchester, Oxford Road, Manchester M13 9PL, U.K; **G. Scamans**, Innoval Technology Limited, Beaumont Close, Banbury, Oxon OX16 1TQ, U.K; **M. F. Frolish, W. M. Rainforth**, Department of Engineering Materials, The University of Sheffield, Sir Robert Hadfield Building, Mappin Street, Sheffield, Sheffield S1 3JD, U.K; **J. A. Hunter**, Novelis Global Technology Centre, Kingston, Ontario, CA.

“The Mechanism of Localized Corrosion of 7475 Aluminium Alloy Processed by Hydrostatic Extrusion”

E. Ura-Binczyk, A. Z. Balkowiec, M. Lewandowska, Warsaw University of Technology, Faculty of Materials Science and Engineering, ul. Woloska 141, 02-507 Warsaw, Poland.

“Development of a Roping Criteria for Forming Simulation”

R. Denninger, M. Liewald, M. Sindel, Institute for Metal Forming Technology University of Stuttgart, Germany.

“Electrochemical Characterization of an AA4xxx/3xxx Brazing Sheet”

F. N. Afshar, Materials Innovation Institute (M2i), Mekelweg 2, 2628 CD Delft, the Netherlands; **H. Terryn**, Vrije Universiteit Brussel, Research Group Electrochemical and Surface Engineering, Pleinlaan 2, B-1050 Brussels, Belgium; **J.M.C. Mol, J.H.W. de Wit**, Delft University of Technology, Department of Materials Science and Engineering, Mekelweg 2, 2628 CD Delft, the Netherlands.

ROOM TRITONE

10.00 a.m. to 11.00 a.m.

SESSION – ELECTROCHEMISTRY AND INHIBITING TREATMENTS

Introductory Remarks by Congress Moderators:

A. Mol, Delft University of Technology, the Netherlands / **O. Lunder**, SINTEF, Norway.

“Microstructure and Corrosion Behaviour of Lean 7xxx Aluminium Alloy”

A. M. Cassell, G. E. Thompson, X. Zhou, The University of Manchester, School of Materials, Corrosion and Protection Centre, The Mill, Sackville Street, Manchester, M13 9PL, U.K; **A. Afseth, H. Dunlop, M-A. Kulas**, Constellium Centre de Recherches de Voreppe, Parc Economique Centr'Alp, 725 Rue Aristide Bergès - BP 27, 38341 Voreppe Cedex, France.

“Anomalous Dissolution of Copper in Al-Cu alloys”

S. Joma, E. Sutter, M. T. T. Long, B. Tribollet, CNRS, UPR15, Laboratoire Interfaces et Systèmes Electrochimiques, F-75005 Paris, France; **UPMC Paris 06, UPR15, LISE, 4 Place Jussieu, F-75005 Paris, France.**

“Simulation of Scanning Electrochemical Microscopy for Studying Local Corrosion”

L. Abodi, S. Van Damme, J. Deconinck, Vrije Universiteit Brussel, Research Group Electrochemical and Surface Engineering (SURF) Pleinlaan 2, 1050 Brussel, Belgium; **Y. Gonzalez-Garcia, J.M.C. Mol**, Delft University of Technology, Department of Materials Science and Engineering, Mekelweg 2, 2628 CD, Delft, the Netherlands.

11.00 a.m. to 11.30 a.m.

COFFEE / REFRESHMENT BREAK

11.30 a.m. to 1.10 p.m.

SESSION – ELECTROCHEMISTRY AND INHIBITING TREATMENTS (continuation of the previous)

“Localized Corrosion Susceptibility and Mechanisms of New Al- Cr- Fe Complex Metallic Alloys”

A. Beni, E. Ura-Binczyk, O. Guseva, P. Schmutz, Empa, Materials Science & Technology, Laboratory for Corrosion and Materials Integrity, Ueberlanstrasse 129, 8051, Duebendorf, Switzerland; **N. Ott, A. Ulrich**, Empa, Materials Science & Technology, Laboratory for Analytical Chemistry, Ueberlanstrasse 129, 8051, Duebendorf, Switzerland.

“Environmental-friendly Anodizing Process by Tartaric-Sulphuric Bath on Aluminium-Lithium Alloys”

B. Addivinola, M. Marchitto, Alenia Aeronautica, Viale dell’Aeronautica SNC, 80038 Pomigliano d’Arco (Na), Italy.

“Corrosion Protection of High Strength Al Alloys by Mono or Bi-layers Hybrid Coatings”

B. M. Vasconcelos, R. P.B. Hernández, Chemical Engineering Department of the University of São Paulo, CP 61548, CEP 05424-970, Brazil; **I. Recloux, M. G. Olivier, H. G. de Melo**, Université de Mons, Service Science des Matériaux, Belgium.

“Influence of the Surface Pretreatments on the Performance of AA2024 Aluminium Alloy”

Z. Feng, Y. Liu, T. Hashimoto, G. E. Thompson, P. Skeldon, Corrosion and Protection Centre, School of Materials, The University of Manchester, Oxford Road, Manchester M13 9PL, U.K.

“Aluminium Alloy Corrosion Inhibition by Chromate-Free Composition of Zinc Phosphate and Ion Exchanged Zeolite”

V. Pokhmurskii, I. Zin, L. Bily, V. Vynar, Y. Zin, Karpenko Physico-Mechanical Institute of National Academy of Sciences of Ukraine, Naukova Street, 5, Lviv, Ukraine.

1.10 p.m. to 2.30 p.m.

LUNCH BREAK

2.30 p.m. to 4.10 p.m.

SESSION – ELECTROCHEMISTRY AND INHIBITING TREATMENTS (continuation of the previous)

Introductory Remarks by Congress Moderators:

A. Hughes, CSIRO, Australia / **M. A. Páez**, Universidad de Santiago de Chile, Chile.

“Electrochemical and Morphological Investigation of AA2024-T3 Surfaces Modified by Cerium Compounds Precipitation: a Localized Approach”

L. Paussa, F. Andreatta, L. Fedrizzi, University of Udine, Department of Chemistry, Physics and Environment, Via del Cottonificio 108, 33100 Udine, Italy; **E. Bemporad**, Roma Tre University, Department of Mechanical and Industrial Engineering, Via della Vasca Navale 79, 00146 Roma, Italy.

“Pit Transition Potential in the Repassivation Process of Al Alloys”

M. Trueba, S. P. Trasatti, Department of Physical Chemistry and Electrochemistry, University of Milano, Via Golgi 19, 20133 Milan, Italy.

“Corrosion Behaviour of the 6101 Aluminium Alloy; Influence of Cold Drawing and Ageing Treatment”

A. Laurino, E. Andrie, G. Odemer, C. Blanc, Université de Toulouse, CIRIMAT, UPS/CNRS/INPT, 4 allée Emile Monso, 31030 Toulouse Cedex 04, France; **J. P. Harouard**, LEONI WIRING SYTEMS FRANCE, 5 Avenue de Newton, 78180 Montigny-le-Bretonneux, France.

“Local Electrochemical Study of Corrosion Protection Mechanisms of Organic and Inorganic REM-salts for AA2024-T3”

Y. González-García, J.M.C. Mol, Delft University of Technology, Department of Materials Science and Engineering, Mekelweg 2, 2628CD Delft, the Netherlands; **S.J. García**, Delft University of Technology, Novel Aerospace Materials, Kluyverweg 1, 2629 HS, Delft, the Netherlands.

“Stress Corrosion Cracking Behaviour of Conventional and Innovative Aluminium Alloys for Aeronautic Applications”

A. Astarita, C. Bitondo, A. Squillace, E. Armentani and F. Bellucci, Department of Materials and Production Engineering of University of Naples Federico II, Piazzale Tecchio 80, 80125 Naples, Italy.

4.10 p.m. to 4.40 p.m .

COFFEE / REFRESHMENT BREAK

4.40 p.m. to 5.40 p.m.

SESSION – ELECTROCHEMISTRY AND INHIBITING TREATMENTS (continuation of the previous)

“Corrosion of Pure Al and Al Alloys in Cl⁻ and Cu²⁺ Containing Solutions at High-Temperature”

M. Chiba, Y. Nakayama, T. Hiraga, H. Takahashi, Asahikawa National College of Technology, Shunkodai 2-2-1-6, Asahikawa City, Hokkaido, 071-8142, Japan; **Y. Shibata**, Daikin industries, Umeda Center Building, 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka, 530-8323, Japan.

“Microstructural Corrosion of Aluminium Alloys: a Predictive FEM Model Based on Corrosion-Mimicking Experiments”

C. Sorriano, R. Oltra, A. Zimmer, B. Vuillemin, C. Borkowski, Interfacial Electrochemistry Corrosion Group, Laboratoire ICB UMR CNRS 5209, CNRS-Université de Bourgogne, 9 Avenue A. Savary, 21078 Dijon France; **O. Néel**, CONSTELLIUM, Centre de Recherche de Voreppe, France.

“Influence Of Environmental Factors On The Susceptibility to Stress Corrosion Cracking Of High-Strength Al-Zn-Mg Alloys”

H. Jawan, University of Elmegib, Mechanical Department Alkhoms, Libya.

7.30 p.m.

CULTURAL EVENING AT “CHIOSTRO DI SAN FRANCESCO” AND COCKTAIL AT “IMPERIAL HOTEL TRAMONTANO”

TUESDAY, MAY 29TH

9.00 a.m. to 10.20 a.m.

Keynote Lectures (Room ULISSE):

Session Chairman: J. Wells, ONR Global, U.K.

“Preparation of Highly Ordered Anodic Porous Alumina and its Application to Functional Devices“

H. Masuda, T. Yanagishita, T. Kondo, K. Nishio, Tokyo Metropolitan University, 1-1 Minamiosawa, Hachioji, Tokyo 192-0397, Japan; Kanagawa Academy of Science and Technology, 5-4-30 Nishihashimoto, Sagamihara 252-0131, Japan.

“Structural Applications of Aluminium in Civil Engineering”

F. M. Mazzolani, Department of Structural Engineering, University of Naples “Federico II”, Piazzale Tecchio80, 80125 Naples, Italy.

OPENING PARALLEL SESSIONS

ROOM ULISSE

10.30 a.m. to 11.10 a.m.

SESSION – TECHNIQUE DEVELOPMENT AND JOINING

Introductory Remarks by Congress Moderators:

J. Wells, ONR Global, U.K. / D. Rodrigues, University of Coimbra, Portugal.

“Grain Stored Energy and the Propagation of IGC in AA2xxx Aluminium Alloys”

C. Luo, Y. Ma, T. Hashimoto, X. Zhou, G. E. Thompson, P. Skeldon, Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester, M13 9PL, U.K; A. E. Hughes, Division of Materials Science and Engineering, Commonwealth Scientific and Industrial Research Organisation, Private Bag 33 Clayton MDC, Clayton 3169, Australia.

“Revealing the 3D Internal Structure of Aluminium and its Alloys”

T. Hashimoto, X. li Zhong, M. Curioni, X. Zhou, P. Skeldon, P. J. Withers, G. E. Thompson, Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester, M13 9PL, England, U.K.

11.10 a.m. to 11.40 a.m.

COFFEE / REFRESHMENT BREAK

11.40 a.m. to 1.00 p.m.

SESSION – TECHNIQUE DEVELOPMENT AND JOINING (continuation of the previous)

“Crack Retardation in AA2099 Plates through Cu Electroplating”

B. Bozzini, P. Cavaliere, C. Mele, Dipartimento di Ingegneria dell’Innovazione, Università del Salento, Via Monteroni, 73100 Lecce, Italy; I. Sgura, Dipartimento di Matematica, Università del Salento, Via Arnesano 73100 Lecce, Italy.

“Investigating Localized Corrosion in Aluminium Alloys using in-situ Transmission Electron Microscopy”

S.R.K. Malladi, Q. Xu, F. D. Tichelaar, H. W. Zandbergen, Kavli Institute of Nanoscience, National Centre for HREM, Delft University of Technology, Lorentzweg 1, 2628 CJ, Delft, the Netherlands; **F. Hannour**, Tata Steel RD&T, 1970 CA IJmuiden, the Netherlands; **J. M. C. Mol, H. Terryn**, Department of Materials Science and Engineering, Delft University of Technology, Mekelweg 2, 2628CD, Delft, the Netherlands; **Materials Innovation Institute, Mekelweg 2, 2628CD, Delft, the Netherlands.**

“The Mechanical Behaviour of Aluminum Foam-based Composite Beams Made as One-Piece or by Welding Joining of Two-Pieces”

M. Moncada, F. Cognini, U. De Angelis, D. Ferrara, G. De Santis, L. Pilloni, A. Rinaldi, G. Barbieri, ENEA, C.R. Casaccia, Via Anguillarese 301, Santa Maria di Galeria, 310, 00123, Rome, Italy; **M. Sebastiani, E. Bemporad**, Mechanical and Industrial Engineering Department, University of "Roma Tre", Via della Vasca Navale 79, 00146 Rome, Italy.

“Bending Behaviour Of Sandwich Panels With Aluminium Foam Core”

L. Carrino, M. Durante, S. Ciliberto, V. Paradiso, Department of Materials and Production Engineering, University of Naples “Federico II”, Piazzale Tecchio 80, 80125 Naples, Italy.

1.00 p.m. to 2.00 p.m.

LUNCH BREAK

2.00 p.m. to 3.00 p.m.

POSTERS SESSION

3.10 p.m. to 4.10 p.m.

SESSION – SELF-HEALING AND NANOCOMPOSITE COATINGS

Introductory Remarks by Congress Moderators:

F. Deflorian, University of Trento, Italy / **K. Eckhard**, Hydro Aluminium, Germany.

Highlight Talk: “Self-healing Anticorrosive Organic Coating Based on Encapsulated Healing-agent: Local Electrochemical Evaluation”

Y. González-García, J. M. C. Mol, Delft University of Technology, Department of Materials Science and Engineering, Mekelweg 2, 2628CD Delft, the Netherlands; **S. J. García**, Delft University of Technology, Novel Aerospace Materials, Kluyverweg 1, 2629 HS, Delft, the Netherlands.

“Multiple Action Self-healing Coatings for the Corrosion Protection of Metals”

T. Muselle, A. Hubin, I. De Graeve, H. Terryn, Vrije Universiteit Brussel, Research Group Electrochemical and Surface Engineering, Pleinlaan 2, 1050 Brussels, Belgium; **J. Brancart, G. Van Assche, B. Van Mele**, Vrije Universiteit Brussel, Research Group Physical Chemistry and Polymer Science, Pleinlaan 2, 1050 Brussels, Belgium; **Y. González-García, J. M. C. Mol**, Department of Materials Science and Engineering, Delft University of Technology, Mekelweg 2, 2628CD Delft, the Netherlands.

“Potential of Mesoporous Sol-gel Layers to Constitute Inhibitor Nanocontainers for Corrosion Protection of 2024 AA: Synthesis and Characterization”

I. Recloux, M. Gonon, M.-Georges Olivier, University of Mons, Place du Parc, 23, 7000 Mons, Belgium; **Y. Paint**, Material Nova asbl, Avenue Copernic, 1, 7000 MONS, Belgium; **A. Lanzutti**, University of Udine, Via del Cotonificio, 108, 33100 Udine, Italy.

4.10 p.m. to 4.40 p.m.

COFFEE / REFRESHMENT BREAK

4.40 p.m. to 5.20 p.m.

SESSION – SELF-HEALING AND NANOCOMPOSITE COATINGS (continuation of the previous)

“Nanostructured LDH-Container Layer with Active Protection Functionality for AA2024”

J. Tedim, M. L. Zheludkevich, A. N. Salak, A. Lisenkov and M. G. S. Ferreira, CICECO, Department of Ceramics and Glass Engineering, University of Aveiro, 3810-193, Aveiro, Portugal.

“A Silanol-based Nanocomposite Coating for Protection of AA 2024 Aluminium Alloy”

E. Gonzalez, J. Pavez, I. Azocar, J. H. Zagal and M. A. Páez, Departamento de Química de los Materiales, Facultad de Química y Biología, Universidad de Santiago de Chile, Avenida Bernardo O'Higgins 3363, Casilla 40, Correo 33 Santiago, Chile; **X. Zhou, G. E. Thompson,** Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester M13 9PL, U.K.; **F. Melo,** Departamento de Física, Facultad de Ciencias, Universidad de Santiago de Chile, Avenida Bernardo O'Higgins 3363, Santiago, Chile.

5.20 p.m. to 6.20 p.m.

SESSION – ETCHING

“Effect of Zinc on Alkaline Etching Response of Aluminium”

D. Franke, K. Nisancioglu, Norwegian University of Science and Technology, Department of Materials Science and Engineering, N-7491 Trondheim, Norway; **O. Lunder,** SINTEF Materials and Chemistry, N-7465 Trondheim, Norway.

“Physico-chemical Characterization of Aluminium Oxide Films Grown on Etched Foils for Electrolytic Capacitors”

P. Bocchetta, M. Santamaria, F. Di Quarto, Materials Science Laboratory, DICA, Università di Palermo, Viale delle Scienze, 90128 Palermo, Italy.

“Discoloration of Anodic Films Due to Selective Oxidation of Mg₂Si Precipitates in AA6063 Aluminium Alloy”

Y. Ma, X. Zhou, G. E. Thompson, Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester M13 9PL, U.K.; **J. O. Nilsson, M. Gustavsson, A. Crispin,** Sapa Technology, SE-612 81 Finspong, Sweden.

ROOM TRITONE

10.30 a.m. to 11.10 a.m.

SESSION – HEAT EXCHANGERS

Introductory Remarks by Congress Moderators:

H. Dunlop, Constellium, France / **E. Verboom,** Aleris Aluminium BVBA, Belgium.

Highlight Talk: “High Strength Aluminium Brazing Material for Heat Exchanger Applications”

G. Hanko, A. Hajek, P. Oberhauser, AMAG Rolling GmbH, 5282 Ranshofen, P.O. Box 32, Austria; **P. Pulm,** University of Leoben, Nonferrous Metallurgy, 8700 Leoben, Franz-Josef-Straße 18, Austria; **C. Melzer,** Austria Metall GmbH (AMAG), 5282 Ranshofen, P.O. Box 3, Austria.

“Effect of Microstructure on the Corrosion Behaviour of Heat Exchanger Aluminium Alloys”

A. Laferrere, X. Zhou, G. E. Thompson, Corrosion and Protection Centre, The University of Manchester, M13 9PL Manchester, UK; N. Parson, Rio Tinto Alcan, Arvida R&D Centre, 1955 Mellon Boulevard, Jonquière, Québec G7S 4K8, Canada.

11.10 a.m. to 11.40 a.m.

COFFEE / REFRESHMENT BREAK

11.40 a.m. to 12.40 p.m.

SESSION – HEAT EXCHANGERS (continuation of the previous)

“In Situ Electrochemical Measurements During the OY Water Test Dedicated to Internal Corrosion of Automotive Heat Exchangers”

L. Peguet, M. Saint-Genis, M. Perrier, E. Perrin, Constellium CRV, Voreppe Research Centre, 725 Rue Aristide Bergès, BP 27, 38341 Voreppe Cedex, France.

“Localized Corrosion of Brazed, Clad Aluminium Sheet Characterized Using Height-Profiling SVET”

A. Howells, J. Hunter Swansea University, Singleton Park, Swansea SA2 8PP, U.K; McMurray, J. E. Board, Novelis Inc., Box 8400, 945 Princess Street, Kingston, Ontario, CAN K7L 5L9, CA.

“Optimization of Silane Sol-gel Coatings for the Protection of Aluminium Components of Heat Exchangers”

M. Fedel, R. Naderimahmoodi, F. Deflorian, Department of Materials Engineering and Industrial Technology, University of Trento, Via Mesiano 77, 38100 Trento, Italy; T. Urios, M. Poelman, Materia Nova ASBL, Avenue Copernic 1, 7000 Mons, Belgium; M. Olivier, University of Mons (UMONS), Faculty of Engineering, Materials Science Department, Place du Parc 20, 7000 Mons, Belgium.

1.00 p.m. to 2.00 p.m.

LUNCH BREAK

2.00 p.m. to 3.00 p.m.

POSTERS SESSION

3.10 p.m. to 4.10 p.m.

SESSION – MULTIMATERIALS

Introductory Remarks by Congress Moderators:

H. Habazaki, Hokkaido University, Japan / E. McAlpine, Innovaltech, U.K.

“Streamlined Aluminium Space Frame with Cast Nodes”

M. Eekhout, Delft University of Technology / Octatube International BV, Rotterdamseweg 200, Delft, the Nederland.

“Fatigue Behavior of Notched Ti-6Al-4V in Methanol Environment with Different Concentrations”

S. Baragetti, Department of Design and Technology, University of Bergamo, Viale Marconi 5, 24044, Dalmine, Italy; GITT - Centre on Innovation Management and Technology Transfer, University of Bergamo, Via Salvecchio 19, Bergamo 24129, Italy.

D. M. Rodrigues, I. Galvão, A. Loureiro, CEMUC, University of Coimbra, R. Luís Reis Santos, 3030-788 Coimbra, Portugal; N. Yasavol, Faculty of Engineering, Tarbiat Modares University, Tehran, Iran; D. Verdura, D. Gesto, AIMEN, Relva 27A Torneiros, 36410 Porriño, Spain.

4.10 p.m. to 4.40 p.m.

COFFEE / REFRESHMENT BREAK

4.40 p.m. to 6.00 p.m.

SESSION – MULTIMATERIALS (continuation of the previous)

“Copper-Clad Aluminium by Friction Stir Processing”

“Electrochemical Depth Profiling of Hot Dip Aluminium and Aluminium-Silicon Coatings on Steel”

I. Schoukens, I. De Graeve, H. Terryn, Research Group Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussel, Belgium; **F. Andreatta, A. Lanzutti, L. Fedrizzi**, University of Udine, Department of Chemistry, Physics and Environment, Via del Cottonificio 108, 33100 Udine, Italy; **J. De Strycker**, ArcelorMittal Global R&D Gent, OCAS NV, Pres. J. F. Kennedylaan 3, 9060 Zelzate, Belgium.

“Effect of Heat Treatment after Brazing Heating on Intergranular Corrosion”

T. Shimada, Y. Oya, Y. Kojima, Furukawa-sky Aluminium Corporation, Interface Design Research, Reserch Department II, Technical Research division, 1351 Uwanodai, Fukaya City Saitama Prefecture 366-8511, Japan.

“Manufacturing of Innovative Components Formed Using SPF Processes and Filled with Aluminum Metal Foams”

A. Astarita, L. Carrino, S. Franchitti, A. Langella, V. Paradiso, University of Naples “Federico II”, Department of Materials and Production Engineering, University of Naples Federico II, Piazzale Tecchio 80, 80125 Naples, Italy.

“Surface Treatment on LARES Satellite”

A. Paolozzi, Sapienza Università di Roma, Scuola di Ingegneria Aerospaziale, Via Salaria 851, 00138 Roma, Italy; **I. Ciufolini**, Università del Salento, Dipartimento di Matematica e Fisica, and INFN, Via per Monteroni, Lecce (LE), Italy; **G. Caputo, F. Passeggio, L. Caputo**, OMPM Srl, Via Fontana 5, Angri (SA), Italy; **E. Visca**, Associazione EURATOM-ENEA sulla Fusione, C.R. Frascati, Via E. Fermi 45, Frascati Roma, Italy; **F. Felli**, Sapienza Università di Roma, Dipartimento di Ingegneria Chimica Materiali e Ambiente (DICMA), Via Eudossiana, 18, 00184 Roma, Italy.

WEDNESDAY, MAY 30TH

9.00 a.m. to 10.20 a.m.

Keynote Lectures (Room ULISSE):

Session Chairman: A. Perez, Office of Naval Research, U.S.A.

“Cold Forming Technology vs. Aluminium Alloy Development”

P. K. Saha, The Boeing Company, Seattle, U.S.A.

“Corrosion Performance and Mechanisms of Al-Cu-Li Alloys”

C. Hénon, S. Rouault, C. Sigli, Constellium CRV, Parc Economique Centr'Alp, 725 Rue Aristide Bergès - BP 27, 38341 Voreppe Cedex, France.

OPENING PARALLEL SESSIONS

ROOM ULISSE

10.30 a.m. to 11.10 a.m.

SESSION – AEROSPACE

Introductory Remarks by Congress Moderators:

T. Hack, EADS, Germany / **A. Perez**, Office of Naval Research, U.S.A.

Highlight Talk: “A Consistent Description of Intermetallic Particle Composition and Crystal Structure in Modern AA2024-T3: an Analysis of 10 Batches of Material”

A.E. Hughes, **A.J. Morton**, Division of Materials Science and Engineering, Commonwealth Scientific and Industrial Research Organisation, Private Bag 33 Clayton South MDC, Clayton, Australia; **A. M. Glenn**, **N. Wilson**, **A. Moffatt**, Division of Process Science and Engineering, Commonwealth Scientific and Industrial Research Organisation, Private Bag 33 Clayton South MDC, Clayton, Australia; **R.G. Buchheit**, Department of Materials Science and Engineering, the Ohio State University, 2041 College Road Columbus, OH 43210, U.S.A.

“Micro-structural Characterisation of an Aircraft Paint Coating Using Automated Ultra-Microtome SEM”

A. Trueman, Defence Science and Technology Organisation, 506 Lorimer Street, Fishermans Bend VIC 3207, Melbourne, Australia; Defence Materials and Technology Centre, Melbourne, Australia; **S. Knight**, Royal Melbourne Institute of Technology University, Melbourne, Australia; **J. Colwell**, Queensland University of Technology, Brisbane, Australia; **T. Hashimoto**, **E. Koroleva**, **G. E. Thompson**, Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester, U.K.

11.10 a.m. to 11.40 a.m.

COFFEE / REFRESHMENT BREAK

11.40 a.m. to 1.20 p.m.

SESSION – AEROSPACE (continuation of the previous)

“Interplay between Parameter Variation and Oxide Structure of a Modified PAA Process”

M. Schneider, **K. Kremmer**, Fraunhofer Institute for Ceramic Technologies and Systems, 01277 Dresden, Winterberg strasse 28, Germany; **S. Weidmann**, **W. Fürbeth**, Karl-Winnacker-Institute of DECHEMA, Frankfurt, Theodor-Heuss-Allee, Germany.

“Optimizing the Cladding Composition on 7xxx Alloys Used for Transportation and Aircraft Applications”

P. Oberhauser, **G. Hanko**, AMAG Rolling GmbH, 5282 Ranshofen, P.O. Box 32, Austria; **P. Pulm**, **H. Antrekowitsch**, Montanistic University of Leoben, Nonferrous Metallurgy, 8700 Leoben, Franz-Josef-Straße 18, Austria; **P. Uggowitzer**, ETH Zurich, Department of Materials, 8093 Zurich, Wolfgang-Pauli-Strasse 10, Switzerland; **E. Kock**, Kock Aeroconsulting, 28211 Bremen, Gravelotte Strasse 61, Germany; **C. Melzer**, AMAG Austria Metall GmbH, 5282 Ranshofen, P.O. Box 3, Austria; **G. Mori**, Montanistic University of Leoben, CD Lab for Localized Corrosion, 8700 Leoben, Franz-Josef-Straße 18, Austria.

“Mechanical Characterization Of Scandium Reinforced Aluminum Alloy 7X3X For Aerospace Application”

S. Alguadich, **C. Pirozzi**, CIRA (Italian Aerospace Research Centre) Via Maiorise snc, 81043 Capua, Italy.

“Corrosion Sensing and Degradation Detection for Structural Health Monitoring of Aging Aircraft”

D. Darr, J. Morse and B. C. Laskowski, Analatom Incorporated, 562 E. Weddell Drive, Suite 4, Sunnyvale, CA, U.S.A.

“Investigation into the Influence of Electron Beam Induced Surface Modification on Corrosion of AA2024-T3”

A. M. Glenn, A. Torpy, N. C. Wilson, C. M. MacRae, CSIRO Division of Process Science and Engineering; Box 312, Clayton South, VIC, 3169, Australia; **A. E. Hughes, T. H. Muster, D. Lau**, CSIRO Division of Materials Science and Engineering, Australia.

1.20 p.m. to 2.30 p.m.

LUNCH BREAK

2.30 p.m. to 4.10 p.m.

SESSION – SURFACE TREATMENTS AND COATINGS

Introductory Remarks by Congress Moderators:

L. Fedrizzi, University of Udine, Italy / **R. Latanision**, Exponent, Inc., U.S.A.

“Improvement of Scratch Resistance and Barrier Properties of Acrylate Coatings Applied on 6016 Aluminium Alloy by an in-situ Formation of Silica Nanofillers”

F. Khelifa, M. E. Druart, F. Benard, Ph. Dubois, M. G. Olivier, University of Mons - UMONS, Place du Parc, 23, 7000 MONS, Belgium.

“The Use of the Electrochemical Micro-cell to Study Corrosion Inhibition by Cerium Species on AA1050 Aluminium Alloy”

F. Andreatta, A. Lanzutti, M. Lekka, L. Fedrizzi, University of Udine, Department of Chemistry, Physics and Environment Via del Cotonificio 108, 33100 Udine, Italy; **M. E. Druart, M. Olivier**, University of Mons (UMONS), Materials Science Department Place du Parc 20, 7000 Mons, Belgium; **A. Roobroeck**, Materia Nova ASBL, Belgium Avenue Copernic 1, 7000 Mons, Belgium.

“Corrosion Behavior of Zirconium Salts Conversion Layer on Coated and Uncoated AA 5xxx”

M. Formisano, A. Amitrano, M. Montuori, T. Monetta, F. Bellucci, University of Naples “Federico II”, Piazzale Tecchio 80, 80125 Naples, Italy; **T. Acconcia, A. Pennestri, C. Sinagra**, Laminazione Sottile spa, SS87 Km 21,200 S. Marco Evangelista 81020, Caserta (CE), Italy.

“A Complementary Surface Oxide and Interfacial Bonding Study of Coated Aluminium Alloys”

Ö. Özkanat, Materials Innovation Institute (M2i), Mekelweg 2, 2628 CD Delft, the Netherlands; **J. M. C. Mol, J. H. W. de Wit**, Delft University of Technology, Department of Materials Science and Engineering, Mekelweg 2, 2628 CD Delft, the Netherlands; **H. Terry**, Vrije Universiteit Brussel, Research Group Electrochemical and Surface Engineering, Pleinlaan 2, B-1050 Brussels, Belgium.

“Environmentally Friendly Surface Treatment of Aluminum Alloys for Aircraft and Aerospace Industry”

T. Monetta, A. Acquesta, V. Maresca, R. Signore, F. Bellucci, Department of Materials and Production Engineering, University of Naples “Federico II”, Piazzale Tecchio 80, 80125 Naples, Italy; **P. Di Petta, M. Lo Masti**, MBDA Missile System, Via Fusaro 267,80070 Bacoli, Naples, Italy.

4.10 p.m. to 4.40 p.m.

COFFEE / REFRESHMENT BREAK

4.40 p.m. to 6.00 p.m.

SESSION – SURFACE TREATMENTS AND COATINGS
(continuation of the previous)

Highlight Talk: “On the Debate of Self Assembling Monolayers on Aluminium: in Situ Versus ex Situ Approaches”

T. Hauffman, A. Hubin, H. Terryn, *Department of Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussels, Belgium.*

“Flame Deposited SiO_x Pretreatments for Aluminium Sheet Surfaces”

F. Truica-Marasescu, M. Wright, J. Hunter, S. Verdier, *Novelis Global Technology Center, 945 Princess Street, Kingston, Ontario K7L 5L9, CA.*

“Evaluation of Plasma Polymerized Allyl Methacrylate coatings as primer on aluminium substrate”

A. Kakaroglou, I. De Graeve, H. Terryn, *Vrije Universiteit Brussel (VUB), Research Group of Electrochemical and Surface Engineering (META), Pleinlaan 2, 1050 Brussel, Belgium;* **G. Scheltjens, M. Wadekar, G. Van Assche, B. Van Mele**, *Vrije Universiteit Brussel (VUB), Research Group Physical Chemistry and Polymer Science (FYSC), Pleinlaan 2, 1050 Brussel, Belgium;* **B. Nisol, F. Reniers**, *Université Libre de Bruxelles (ULB), Faculty of Sciences - Analytical and Interfacial Chemistry, Brussels, Belgium;* **R. Willem**, *Vrije Universiteit Brussel (VUB), High Resolution NMR Center, Pleinlaan 2, B-1050 Brussels, Belgium.*

“FSW of T Joints in Overlap Configuration: Process Optimization in Joining Dissimilar Aluminium Alloys for Aeronautic Application”

A. Squillace, U. Prisco, C. Velotti, A. Astarita, S. Ciliberto, *Department of Materials and Production Engineering, University of Naples Federico II, Piazzale Tecchio 80, 80125 Naples, Italy.*

ROOM TRITONE

10.30 a.m. to 11.10 a.m.

SESSION – FUNCTIONAL ANODIC SURFACES: MECHANISMS AND PROCESSINGS

Introductory Remarks by Congress Moderators:

F. Di Quarto, *University of Palermo, Italy* / **H. Takahashi**, *Asahikawa National College of Technology, Japan.*

“Fabrication of Super-liquid-repellent Surfaces by Anodizing”

T. Fujii, H. Sato, E. Tsujii, H. Habazaki, *Division of Materials Chemistry, Faculty of Engineering, Hokkaido University, Sapporo 060-8628, Japan;* **P. Skeldon, G.E. Thompson**, *Corrosion and Protection Centre, School of Materials, The University of Manchester. Manchester M13 9PL, U.K.*

“Formation of Alumina Films with Nano-Dots Structures by Liquid Phase Deposition and Anodizing”

M. Sakairi, R. Fujita, H. Jha, T. Kikuchi, *Division of Materials Science and Engineering, Faculty of Engineering, Hokkaido University, Kita-13, Nishi-8, Kita-ku, Sapporo, 060-8628, Japan.*

11.10 a.m. to 11.40 a.m.

COFFEE / REFRESHMENT BREAK

11.40 a.m. to 1.20 p.m..

SESSION – FUNCTIONAL ANODIC SURFACES: MECHANISMS AND PROCESSINGS (continuation of the previous)

“Anodic Alumina as a Catalyst Support”

E. McAlpine, Innoval Technology, Beaumont Close, Banbury, Oxfordshire OX16 7SP, U.K.

“Study of Black Anodic Coatings for Space Applications”

Y. Goueffon, P. Guigue, CNES, 18 Avenue Edouard Belin, 31401 Toulouse Cedex 9, France; **L. Arurault**, Université de Toulouse, CIRIMAT, UPS/INPT/CNRS, LCMIE, Bat 2R1, 118 Route de Narbonne, 31062 Toulouse Cedex 9, France; **C. Mabru**, Université de Toulouse, ISAE, Département Mécanique des Structures et Matériaux, 10 Avenue Edouard Belin, 31056 Toulouse Cedex 5, France; **C. Tonon**, ASTRIUM, 31 Rue des Cosmonautes, 31402 Toulouse Cedex 4, France.

“Growth of Porous Alumina in Borax Electrolyte”

A. Baron-Wiechec, P. Skeldon, G. E. Thompson, Corrosion and Protection Centre, The University of Manchester, Manchester, M13 9PL, U.K.; **J. J. Ganem, I. C. Vickridge**, SAFIR, Institut des Nano Sciences de Paris, Université de Pierre et Marie Curie, France.

“Preparation and Characterizations of Lubricating Porous Anodic Films on Aluminum Substrate”

J. Escobar, L. Arurault, V. Turq, Université de Toulouse, CIRIMAT, UPS/INPT/CNRS, LCMIE; 118 Route de Narbonne, 31062 Toulouse Cedex 09, France.

“In-Situ Study of Gas Transport through Al(OH)₃ Gels During AC Processing”

M. Tzedaki, J. Hammons, Y. Van Ingelgem, J. Ustarroz, I. De Graeve, H. Terryn, Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Pleinlaan 2, B-1050 Brussels, Belgium.

1.20 p.m. to 2.30 p.m.

LUNCH BREAK

2.30 p.m. to 4.10 p.m.

SESSION – FUNCTIONAL ANODIC SURFACES: MECHANISMS AND PROCESSINGS (continuation of the previous)

Introductory Remarks by Congress Moderators:

I. De Graeve, Vrije Universiteit Brussel, Belgium / **B. Kernig**, Hydro, Germany.

“The Influence of Composition in Determining the Solid State Properties of Al Mixed Oxides”

F. Di Quarto, M. Santamaria, F. Di Franco, Electrochemical Materials Science Laboratory, DICA, Università di Palermo, Viale delle Scienze, 90128 Palermo, Italy; **P. Skeldon, G. E. Thompson**, Corrosion and Protection Centre, School of Materials, The University of Manchester, PO Box 88, Manchester, M60 1QD, U.K.; **C. M. Rangel**, INETI-Electrochemistry of Materials Unit, Paço do Lumiar, 22 1649-038 Lisboa, Portugal.

“Effect of Electrolyte Species on Film Structure and Dielectric Properties of Crystalline Anodic Oxide Films for Aluminium Electrolytic Capacitor”

S. Ono, Y. Sato and H. Asoh, Department of Applied Chemistry, Faculty of Engineering, Kogakuin University, 2665-1 Nakano, Hachioji, Tokyo 192-0015, Japan.

“Study of the Mechanism of Interaction of Soluble Silicates with Porous Anodic Alumina”

R. Gaggiano, I. De Graeve, H. Terryn, *Research Group Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussels, Belgium*; **P. Moriamé**, *Agfa-Graphics N.V., Septestraat 27, B-2640 Mortsel, Belgium*.

“Metallographic Effects of Pure Aluminum on the Nano Porous Anodic Alumina Properties”

F. Rashidi, T. Masuda, H. Asoh, and S. Ono, *Department of Applied Chemistry, Faculty of Engineering, Kogakuin University, 2665-1 Nakano, Hachioji, Tokyo 192-0015, Japan*.

“Impedance Characteristics of Plasma Discharge in PEO”

A. Yerokhin, C. J. Liang, A. Matthews, *University of Sheffield, Sir Robert Hadfield Building, Mappin Street, Sheffield, S1 3JD, U.K.*; **E. Parfenov**, *Ufa State Aviation Technical University, 12 Karl Marx Street, Russia*.

4.10 p.m. to 4.40 p.m.

COFFEE / REFRESHMENT BREAK

4.40 p.m. to 6.00 p.m.

SESSION – FUNCTIONAL ANODIC SURFACES: MECHANISMS AND PROCESSINGS (continuation of the previous)

Highlight Talk: “Optimization of Anodizing Cycles for Enhanced Performance”

M. Curioni, P. Skeldon, E. Koroleva and G. E. Thompson *Corrosion and Protection Centre, School of Materials, The University of Manchester, M139PL, England, UK*; **T. Gionfini** *Almecc s.p.a, Via della Liberazione 15, 20098 San Giuliano Milanese, Milano, Italy*.

“Study of the Electrophoretic Mechanism Leading to the Impregnation of Porous Anodic Film on Aluminum Alloy”

B. Fori, L. Arurault, P. L. Taberna, J. P. Bonino, *Université de Toulouse, CIRIMAT, UPS/INPT/CNRS, 118 Route de Narbonne, 31062 Toulouse Cedex 9, France*; **C. Gazeau, P. Bares**, *MECAPROTEC Industries, 34 Boulevard Joffrery, 31605 MURET Cedex, France*.

“Anomalies in High Field Growth of Aluminium Oxide Using Pulse Anodizing”

M. Schneider, C. Heubner, C. Lämmel, A. Michaelis, *Fraunhofer Institute for Ceramic Technologies and Systems, Winterbergstrasse 28, 01277 Dresden, Germany*.

“Structural Study on Anodic Aluminum Oxides Fabricated by Using Different Chemical Etching Processes”

P. Ozer, B. Yuksel, Y. Birol, *TUBITAK Marmara Research Center, Material Institute, P.K. 21 41470 Gebze / Kocaeli, Turkey*.

8.30 p.m.

GALA DINNER AT “HILTON SORRENTO PALACE HOTEL”

THURSDAY, MAY 31ST

9.00 a.m. to 10.20 a.m.

Keynote Lectures (Room ULISSE)

Session Chairmen: **T. Monetta**, University of Naples, Italy / **H. Terryn**, Vrije Universiteit Brussel, Belgium.

“Surface Treatment of Aluminium Automotive Sheet: Mythology and Technology”

G. Scamans, Innoval Technology Ltd., Beaumont Close, Banbury, Oxon, OX16 1TQ, U.K.; **G. Thompson and X. Zhou** Corrosion and Protection Centre, School of Materials, The University of Manchester, P.O. Box 88, Manchester, M60 1QD, U.K.

“Novel Way to Analyse Fatigue Damage”

A. K. Vasudevan, Materials Division Code-332, Office of Naval Research, Arlington, VA-22203, U.S.A.

ROOM ULISSE

10.20 a.m. to 11.00 a.m.

SESSION – MODELING AND CORROSION TECHNIQUE DEVELOPMENT

Introductory Remarks by Congress Moderators:

T. Monetta, University of Naples, Italy / **H. Terryn**, Vrije Universiteit Brussel, Belgium.

“Modelling of the Corrosion in Electrolyte Trapped in Aluminum Alloy 2024 Lap Joints”

R. Oltra, B. Vuillemin, L. LE Thi My, A. Zimmer, Interfacial Electrochemistry Corrosion Group, Laboratoire ICB UMR CNRS 5209, CNRS-Université de Bourgogne, Dijon, France.

“Nanotomography for Understanding the Dealloying of Second Phase Particles in Aluminium Alloys”

T. Hashimoto, X. Zhou, M. Curioni, P. Skeldon and G. E. Thompson, Corrosion and Protection Centre, School of Materials The University of Manchester, Manchester, M13 9PL, U.K.

11.00 a.m. to 11.30 a.m.

COFFEE / REFRESHMENT BREAK

11.30 a.m. to 12.50 p.m.

SESSION – MODELING AND CORROSION TECHNIQUE DEVELOPMENT (continuation of the previous)

“The Study of Intergranular Corrosion in High-Strength Aluminium Alloys Using X-ray Tomography”

S.P. Knight, RMIT University, Plenty Road, Bundoora, Australia; **A. R. Trueman**, Defence Science and Technology Organisation, 506 Lorimer Street, Fishermans Bend, Australia.

“Health Monitoring of Metal Structures: a New Approach Based on Electrochemical Measurements”

A. Astarita, A. Scala, V. Paradiso, A. Squillace, T. Monetta and F. Bellucci, Department of Materials and Production Engineering, University of Naples Federico II, Piazzale Tecchio 80, 80125 Naples, Italy; **M. Iodice, M Indolfi.**, National Research Council, Microelectronic and Microsystems Institute, Naples Section, Via P. Castellino 111, 80131, Naples, Italy.

“Deflection and Strength of a Sandwich Beam with Thin Binding Layers between Faces and a Core”

K. Magnucki, M. Smyczynski, Institute of Applied Mechanics, Poznan University of Technology, 60-965Poznan, Poland.

“Crack Growth Behaviour of Bonded Stiffened Fuselage Panels”

E. Armentani, R. Sepe, Department of Material and Production Engineering, University of Naples, Piazzale Tecchio 80, 80125 Naples, Italy.

12.50 p.m. to 3.00 p.m.

CLOSING REMARKS, MONETARY AWARDS AND BUFFET LUNCH

****subject to changes***