

# **Corrosion & Prevention 2008**

**“The Impact of Corrosion on our Lives”**

**Wellington Convention Centre  
Wellington, New Zealand  
16 - 19 November 2008**

## **Preliminary Programme & Registration Brochure**



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## ***Your Hosts***

The Australasian Corrosion Association Inc (ACA) is a not-for-profit organisation, whose fundamental aim is to advance corrosion control through increased understanding of science, technology and engineering practices.

The ACA was established in 1955 to service the needs of Australian and New Zealand companies, organisations and individuals involved in the fight against corrosion. It is dedicated to protecting the environment, ensuring public safety, and reducing the economic impact of corrosion.

## ***Invitation from the Convenor***

The Australasian Corrosion Association invites you, your colleagues, friends and family to join us at our 48<sup>th</sup> annual conference, the first to be held in Wellington, New Zealand's capital city. 'Corrosion & Prevention 2008' will be held between 16<sup>th</sup> and 19<sup>th</sup> of November in the recently refurbished Wellington Town Hall, in the Central Business District.

Come along to hear presentations from invited international experts and Australasia's leading practitioners on the many aspects of corrosion and its mitigation, and join in forums run by the ACA's Technical Groups where you will hear about the latest developments in reducing the impact of corrosion on our industries and infrastructure.

Wellington is a convenient base to explore the different local attractions (many within walking distance of the conference venue) and has direct flights to tourist destinations such as Rotorua, Queenstown and Christchurch for those overseas visitors who are able to stay a little longer. Whether you are interested in art and culture, food and wine, water sports, mountain biking, native bird sanctuaries, botanical gardens, vintage cars and steam engines, or just corrosion prevention, Wellington is the place to be in November, so mark the date in your diaries now!

I look forward to welcoming you to my hometown and "the greatest little capital in the world".

*Willie Mandeno*  
Conference Convenor

## ***Disclaimer***

**This programme is a draft only based on the abstracts received by the advertised deadline. The ACA reserve the right to alter without notice any of the arrangements, timetables and programmes relating to the conference. Papers are subject to refereeing, and as such may be excluded from the final programme.**



# Keynote Speakers

## **Michael A. Lacasse, Senior Research Officer, National Research Council, Canada**

Dr. Michael A. Lacasse is a building engineer and senior research officer at the Institute for Research in Construction, National Research Council Canada. His work focuses on the weathertightness of facades and development of methods to assess the long-term performance of building materials, components and building envelope assemblies. More recently he has been involved in projects that center on evaluating water penetration of cladding and wall assemblies and the management of water entry at the wall-window interface.

## **Tim Burstein, Professor of Materials Chemistry and Corrosion, University of Cambridge, United Kingdom**

Tim Burstein is Professor in the Department of Materials Science and Metallurgy of the University of Cambridge, United Kingdom. He is the author of some 200 papers and articles, mainly in corrosion and electrochemistry of metal surfaces. He is Editor in Chief of Corrosion Science and co-edited the third edition of Corrosion (with Lionel Shreir and Ray Jarman). He is a Life Fellow of the Institute of Corrosion and an elected Fellow of the Electrochemical Society.



## **Keith A Lichti, Senior Consultant / Asset management Quest Reliability, New Zealand**

Keith Lichti has a BAsSc in Electrical Engineering (Semiconductor Physics), and an MASc in Mechanical Engineering (Materials Science), both from the University of Waterloo, Ontario, Canada. Keith is a Senior Consultant in Asset Management for Quest Reliability in New Zealand. His early work in materials for geothermal energy systems is continuing with more recent work including condition assessment and remaining life prediction in atmospheric corrosion, acid production environments, high temperature corrosion and oil and gas and refinery corrosion with an emphasis on total asset management services involving risk based assessment and inspection of aging plant and equipment.

## **Steven Nixon, Polymer Technical Manager, International Paint, United Kingdom**

Steven Nixon joined International Paint in 1980 after graduating with a degree in Applied Chemistry from the University of Northumbria, England. Steven has worked for International Paint for 28 years in a number of different market areas, including Marine, Protective Coatings and Powder Coatings and is currently Polymer Technical Manager - Worldwide Protective Coatings. During his career he has developed novel high solids/solvent free high performance top coat technology, high solids fast curing amine curing agent technology and low temperature curing powder coatings.



# Other Invited Speakers

**John R Black, Opus International Consultants**

**Les Boulton, Les Boulton & Associates**

**Robert Francis, Connell Wagner**

**Alex Garner, WorleyParsons**

**Bruce Hinton, Defence Science and Technology Organisation**

**Nick Laycock, Shell Todd Oil Services**

**Graham Sussex, Sussex Material Solutions**

# Programme

**This programme is a draft only. The ACA reserve the right to exclude any paper and to alter without notice any of the arrangements, timetables and programmes relating to the conference.**

Sunday 16th November				
10:00 - 17:00	Registration Desk Opens			
12:00 - 17:00	Exhibitor Pack In			
18:30	Welcome Function Sponsored by Incospec & Associates, Te Papa Museum			
Monday 17th November				
08:45	Opening address and starting of the Ed Potter Clock			
09:00	Official opening by Kerry Prendergast, Mayor of Wellington			
09:10	Plenary Session: Dr Michael Lacasse "Advances in Service Life Prediction – Differentiating amongst Deterioration Models when Estimating the Long-term Performance of Built Assets"			
09:50	PF Thompson Lecture: Mr Keith Lichti "Accelerated Corrosion Testing"			
10:30	Morning Tea			
	Corrosion for Non-corrosionists	Science	Concrete	Materials
11:00	Controlling Corrosion in Australasia – A Report Card  L Boulton Les Boulton & Associates 001	Quo Vadis? Some Thoughts about the Status of Research in the Field of Microbial Corrosion in Australia, Iran and Turkey Based on Papers Presented on MIC Within the Last Twenty Years  R Javaherdashti & E Sungur Curtin University of Technology, WA & Istanbul University, Turkey 005	Long-term Observations of Reinforcement Corrosion for Concrete Elements Exposed to the North Sea  RE Melchers & CQ Li The University of Newcastle, Australia & The University of Greenwich, England 079	Towards a Mechanistic Understanding of Atmospheric Induced Chloride Stress Corrosion Cracking of Type 304L and 316L Stainless Steel  A Cook, A Sherry, D Phan & S Lyon University of Manchester 114
11:30	Getting the Best from your Stainless Steel  G A Sussex Australian Stainless Steel Development Association 016	Effect of Temperature on Oxide Film Morphology on Steel Exposed to Bayer Liquor  J N Connor, R Wood & D Druskovich Central Queensland University 054	The Repair of Live Wastewater Facilities using Calcium Aluminate Mortars  M Kurtovich & M Lawson Construction Techniques Ltd 078	Assessment of the Tribocorrosion Properties of Sol-Gel Sealed Cast Aluminium Alloys  D C Culliton <sup>1</sup> , A J Betts <sup>2</sup> & D Kennedy <sup>1</sup> DIT, Ireland <sup>1</sup> & Directorate of Research & Enterprise, Ireland <sup>2</sup> 113
12:00	Preservation and Incorporation of Heritage Structures into the Contemporary Built Environment – An Assessment of Heritage Building Materials Exposed to Atmosphere in Victoria, Australia  K Wilson Maunsell Australia Pty Ltd 087	Mass Transfer Around Suspended Rotating Cylinder – Effect of Geometry, Velocity and Temperature  V Ruzic <sup>1</sup> , S Nestic <sup>2</sup> & M Veidt <sup>1</sup> The University of Queensland <sup>1</sup> & Ohio University <sup>2</sup> 044	Galvanic Liquid Applied Coating for the Protection of Concrete Reinforcement  M Hansen, A Hansen, A Green & A Furman Cortec Corporation, USA 007	Refining Industry Forum
12:30	Lunch			
13:15	ACA AGM			
	Corrosion for Non-corrosionists	Science	Concrete	Welding
13:45	Durability Planning for New Infrastructure Projects  S Furman Maunsell Australia Pty Ltd 055	Cathodic Mass Transfer Relationship of Carbonic Acid Solutions With Trace Dissolved Oxygen Contamination  D John, B Kinsella, S Bailey & R De Marco Curtin University of Technology 053	Electrochemical Techniques: Methodology for Studying the Corrosion Performance of Reinforcing Steel in Inorganic Polymer Mixes  C. K. Chua, R. Julian, J. Soltis & K. Lichti Quest Reliability Ltd 065	Intergranular Corrosion and Residual Stress Determination of Duplex Stainless Steel Pipeline Girth Welds  B Gideon <sup>1</sup> , L P Ward <sup>2</sup> , D G Carr <sup>3</sup> & O Muransky <sup>3</sup> <sup>1</sup> ARV Offshore, Thailand <sup>2</sup> RMIT University & <sup>3</sup> ANSTO 110
14:15	Calamities, Corrosion, Leaky Buildings and the Law  A McGregor Prosolve Ltd 046	MIC In Galvanized Potable Water Piping  R Jeffrey Pacific Testing Pty Ltd 038	Extension of Design Life of Existing Maritime Infrastructure – A Durability Perspective  F Blin <sup>1</sup> , M Dacre <sup>1</sup> , C opt <sup>1</sup> Hoog <sup>1</sup> & R Newcombe <sup>2</sup> Maunsell Australia Pty Ltd <sup>1</sup> & Patrick Ports <sup>2</sup> 068	Welding Industry Forum
14:45	Hindsight and Oversight – Corrosion Lessons Learned  A James Defence Technology Agency, New Zealand 028	Role of microstructure in corrosion of AZ91D: A SVET based study  A. Saxena <sup>1</sup> , R. K. Singh Raman <sup>1</sup> , S. Ramu <sup>2</sup> & A. K. Shukla <sup>2</sup> Monash University <sup>1</sup> , & Central Electrochemical Research Institute, India <sup>2</sup> 062	Structural Investigation and Conservation Options for the Garden Island Hammerhead Crane, Sydney  P Bignell & N Barker Robert Bird Group Pty Ltd 069	Welding Industry Forum
15:15	Afternoon Tea			

	Water Systems	Science	Coatings	Defence	Technical Group Forum
15:45	Protecting the Future of Queensland's Water Supply <b>F Carroll &amp; G Cope</b> <b>GHD &amp; Geoff Cope and Associates</b> <b>072</b>	Evidence for Microbiological Influenced Longer-term Corrosion in Tidal and Coastal Atmospheric Corrosion of Steel Elements <b>RE Melchers &amp; RJ Jeffrey</b> <b>The University of Newcastle</b> <b>080</b>	Environmentally Friendly High Performance Coatings <b>P K. Fisher</b> <b>Rust-Oleum Corporation, USA</b> <b>024</b>	Corrosion Control on ADF Aircraft and Future Challenges <b>B Hinton</b> <b>DSTO</b> <b>104</b>	Cathodic Protection
16:15	Hard Water Influences on Water Pipes in the Domestic Community, Northern Territory <b>R Everett</b> <b>Charles Darwin University, NT</b> <b>093</b>	Determination of Threshold Stress Intensity Factor (KISCC) of Simulated HAZ in Caustic Solution Using Circumferential Notch Tensile Technique <b>S Pal &amp; R.K. Singh Raman</b> <b>Monash University</b> <b>052</b>	2-Component Polyurethane Topcoats - Formulating Variables Affecting Weathering Performance <b>E Squiller &amp; K Best</b> <b>Bayer Material Science, USA</b> <b>004</b>	Evaluation of Corrosion Preventive Compounds Using ASTM Standards G44 and G50 <b>M Hollis,</b> <b>Defence Technology Agency,</b> <b>New Zealand</b> <b>026</b>	Cathodic Protection
16:45	Hobart Water's Approach to Developing a Long-Term Infrastructure Management Strategy <b>R Fox &amp; I Martin</b> <b>Hobart Water &amp; Maunsell Ltd, New Zealand</b> <b>066</b>	Computer Simulation of Pitting Corrosion: Multiple Interacting Pits <b>D.P. Krouse &amp; N.J. Laycock</b> <b>Industrial Research Limited &amp; Shell Todd Oil Services Limited</b> <b>097</b>	Assessing the Risk of Zinc Chromate in Paints <b>C Bodle &amp; F Salome</b> <b>CTI Consultants Pty Ltd</b> <b>048</b>	CPC Performance: A Chemistry Perspective <b>B Martin</b> <b>Defence Technology Agency,</b> <b>New Zealand</b> <b>035</b>	Cathodic Protection
17:15	Brisbane Water Implementation of an Asset Management Plan for Cathodic Protection of Buried and Submerged Metallic Infrastructure <b>M Jukes</b> <b>Brisbane Water</b> <b>043</b>	EIS Study on Corrosion Behavior of Low Alloy Steels in CO <sub>2</sub> -Containing Environments <b>R Labbaf &amp; M Baghernejad</b> <b>Tarbiat Modares University &amp; Iran University of Science and Technology</b> <b>020</b>	Paint System Specification Differs in Marine Environments <b>J K Saha</b> <b>Institute for Steel Development &amp; Growth, India</b> <b>057</b>	Corrosion of Marine Grade Aluminium Alloys <b>N. Gage, P. Mart, L. Pedrina, E. Pescott &amp; S. Russo</b> <b>Defence Science Technology Organisation, Melbourne</b> <b>067</b>	
18:00	Exhibition Opening				

Tuesday 18th November				
09:00	Plenary Lecture: Dr Tim Burstein "TBA"			
	Oil & Gas	Science	Asset Management	Technical Group Forum
09:45	Lesson Learned - Thermally Insulated Deepwater Pipelines <b>A Garner</b> <b>WorleyParsons</b> <b>002</b>	When Mythbusters Focus on MIC! Avoiding Common Pitfalls in the Practice of MIC <b>R Javaherdashti</b> <b>Curtin University of Technology, WA</b> <b>006</b>	A Global study of Chloride Induced Corrosion within RTA's Reinforced Concrete Bridge Stock <b>W Ariyaratne, G Chirgwin, P Manamperi &amp; M Moore</b> <b>RTA, New South Wales</b> <b>059</b>	Defence
10:15	Corrosion Risk Management and Assessment for Offshore Topsides Processing Facilities <b>V Afshari</b> <b>Namvaran Consulting Engineers</b> <b>058</b>	Relating Corrosion Inhibitor Efficiency to the Adsorbed Film Structure <b>S. Bosenberg, D. John, T. Becker, S. Bailey &amp; R. De Marco</b> <b>Curtin University of Technology, WA</b> <b>089</b>	Jordan River Bridge Refurbishment <b>S McCrossen &amp; R Fox</b> <b>Hobart Water</b> <b>049</b>	Defence
10:45	Morning Tea			
	Oil & Gas	Science	Asset Management	Concrete
11:15	Is Direct Assessment a Valid Approach for Pipeline Integrity Management? <b>CJ Argent<sup>1</sup>, J Healy<sup>1</sup>, D Norman<sup>2</sup> &amp; C Yoxhall<sup>3</sup></b> <b>MACAW Engineering<sup>1</sup>, Corrosion Control Ltd<sup>2</sup> &amp; ROSEN Inspection<sup>3</sup></b> <b>008</b>	Mechanism of Corrosion Product Growth on Nickel Aluminum Bronze / Ammonia or Seawater Interface: Modeling Based on Chemical Reaction Kinetics <b>A S. Rao &amp; W D. Sudduth</b> <b>Naval Surface Warfare Center, USA</b> <b>010</b>	Using Corrosion Data to Improve your Asset Management <b>J Morris</b> <b>Opus International Consultants Limited</b> <b>103</b>	Galvanic Corrosion Control Solutions for Reinforced Concrete Patch Repairs <b>P Battista</b> <b>Parchem Construction Products</b> <b>100</b>
11:45	A Decision Support System for the Analysis of Susceptibility to Corrosion Under Insulation <b>A A Mokhtar &amp; M C Ismail</b> <b>Universiti Teknologi PETRONAS, Malaysia</b> <b>023</b>	Electrochemistry of Zinc Anode Z1 AS 2239-2003 <b>H.J. Flitt &amp; D. P Schweinsberg</b> <b>Queensland University of Technology</b> <b>061</b>	Asset Risk Minimisation Plans for Steel Penstocks & Pipelines <b>J Davies</b> <b>Hydro Tasmania Consulting, Hobart</b> <b>051</b>	The use of Electro-Osmotic Pulse Technology to Stop Alkali-Silica Reaction in Concrete <b>V F. Hock &amp; O S. Marshall</b> <b>USACE Engineer Research and Development Center, USA</b> <b>115</b>
12:15	PipeLine Coatings: An Industry View <b>G Street</b> <b>Sulco Limited</b> <b>031</b>	Corrosion Resistance of Nanocrystalline Fe-Cr Alloys <b>R Kr. Gupta &amp; R K Singh Raman</b> <b>Monash University</b> <b>070</b>	Real-Time Downhole Corrosion Monitoring <b>M.I. Jafar<sup>1</sup>, S.A. Al-Jutaily<sup>1</sup>, A.H. Al-Rasheed<sup>1</sup>, A.A. Al-Shayeb<sup>1</sup>, A.A. Al-Ghafly<sup>1</sup> &amp; Kerry Spicer<sup>2</sup></b> <b>Saudi Aramco, Saudi Arabia<sup>1</sup> &amp; Intertek Ltd, UK<sup>2</sup></b> <b>077</b>	The use of Vitreous Enamel Coatings to Improve Bonding and Reduce Corrosion in Concrete Reinforcing Steel <b>V F. Hock, S.W. Morefield, D. C. Day, C A. Weiss, Jr. &amp; P G. Malone</b> <b>USAE Engineer Research and Development Center, USA</b> <b>116</b>
12:45	Lunch			

	Oil & Gas	Science	Asset Management	Materials	Technical Group Forum
13:45	Electrolytic Corrosion in Condensate Transportation Pipelines <b>N Laycock, T Irwin &amp; M Molyneaux</b> STOS, New Zealand 096	Stress Corrosion Cracking Behaviour of Biodegradable Magnesium-based Alloy in Simulated Physiological Condition <b>M. Bobby Kannan &amp; R.K. Singh Raman</b> Monash University 099	Concrete Degradation In Prestressed Concrete Bridge Piles <b>S.M. Bruce<sup>1</sup>, S.A. Freitag<sup>1</sup>, A. Shayan<sup>2</sup>, R. Slaughter &amp; R. Pearson</b> Opus International Consultants Ltd <sup>1</sup> & ARRB Ltd <sup>2</sup> 092	A Durability Assessment Tool for the New Zealand Building Code <b>N.P. Lee</b> BRANZ Ltd 086	Buildings & Concrete Structures
14:15	A New Approach to Cathodically Protecting Oil and Gas Transmission Piping Subjected to Induced Currents <b>R.A.Gummow &amp; S Segall</b> Corrosion Service Co , Canada 095	Quantum Chemical Characterisation of Pyridine Derivatives as HCl Inhibitors of Aluminium Surface <b>E. Jamalizadeh, A. H. Jafari &amp; S. M. A. Hosseini</b> University of Kerman, Iran 033	Refurbishment of the Paranga Road Bridge – Third Party Surveillance of QA Contract <b>V Thomas<sup>1</sup>, D Richards<sup>2</sup> &amp; F Salome<sup>3</sup></b> Thomas Contracting <sup>1</sup> , DTEI <sup>2</sup> & CTI Consultants <sup>3</sup> 047	Improving the Corrosion Resistance of a High-Strength Aluminum-Copper Casting Alloy <b>M Manivannan, J H. Sokolowski &amp; D O. Northwood</b> University of Windsor, Canada 019	Buildings & Concrete Structures
14:45	Case Histories of Stress Corrosion Cracking <b>W A Al-Harbi &amp; C van der Westhuizen</b> SABIC Technology Center 017	Corrosion Behavior of Different Alloys Exposed to Continuous Flowing Seawater by Electrochemical Impedance Spectroscopy (EIS) <b>K.Al-Muhanna &amp; K.Habib</b> SAFAT, Kuwait 009	Feasibility of Sacrificial CP as an Effective Corrosion –control Measure for Reinforced Concrete Bridges <b>G Chirgwin, P Manamperi &amp; M Moore</b> RTA, New South Wales 060	Corrosion of Friction Stir Welded AA6082 in an Accelerated Corrosion Environment <b>B Withy</b> Defence Technology Agency, New Zealand 025	Buildings & Concrete Structures
15:15	Afternoon Tea				
	Oil & Gas	Science	Cathodic Protection	Materials	Technical Group
15:45	The Experience Operation of Gas Pipeline Tubes of 1420 Mm Diameter Strength Category X67...70 by API 5L in Russia <b>S.A. Lubenskiy &amp; G.S. Rakitina</b> VNIIGAZ, Russia 003	Polarisation Behaviour of Twinning Induced Plasticity (TWIP) Steel <b>M. Bobby Kannan, A. Bakshi, R.K. Singh Raman &amp; S. Khoddam</b> Monash University 099	NSW Electrolysis Technical Committee's revision of "Guide for the Measurement of Interference Caused by Cathodic Protection and Rail Drainage Systems" <b>P Hosford</b> NSWETC 040	Stainless Steels – Corrosion Behaviour of Ferritic and Austenitic Grades Compared <b>A.J. Gouch &amp; W. McMillan</b> Crane Metals Distribution (Austral Wright Metals & Mico Metals) 045	Arthur River Bridge: A Corrosion Case History <b>D Ackx</b> Zintec Corrosion Solutions 105
16:15	Corrosion Under Insulation: Pin Hole Leak in Light End Column <b>S Velu</b> Ethylene Glycols Singapore 041	Durability Analysis for Stresses due to Corrosion Pits in 5059 Aluminum Alloys <b>R M. Pidaparti<sup>1</sup> &amp; A.S. Rao<sup>2</sup></b> Virginia Commonwealth University <sup>1</sup> & Naval Surface Warfare Center <sup>2</sup> , USA 012	Forensic Assessment and Rehabilitation of a 30 Year Old CP System on a Steel Piled Building <b>U Kreher &amp; I Solomon</b> Connell Wagner 085	Corrosion Behaviour of 304 Stainless Steel in Carburising Gas Atmospheres <b>J Zhang &amp; D J. Young</b> University of New South Wales 027	Coatings Group
16:45	Hydrogen Cracking in Welded AISI 321 Stainless Steel Handling Sour Environment / Case Study <b>H B. Rahmatalla<sup>1</sup>, M M Ahmad<sup>1</sup> &amp; S P Bangard<sup>2</sup></b> University of Qatar <sup>1</sup> & Dolphin Energy Ltd <sup>2</sup> 071	Studies on Dezincification of Alpha Brass and its Mitigation by Antimony Addition and Inhibitors <b>U.K. Chatterjee, K. Sridhar &amp; S.K. Roy</b> Indian Institute of Technology 021	Analysis of Anode Arrays <b>G Gummow</b> GHD, Melbourne 050	Anodizing of Aerospace Grade 7050 Aluminium Alloy for Improved Corrosion Resistance <b>L P Ward<sup>1</sup>, B Hinton<sup>2</sup>, A Butler<sup>2</sup>, D Cromwell<sup>1</sup> &amp; E Tang<sup>1</sup></b> <sup>1</sup> RMIT University & <sup>2</sup> DSTO 109	Coatings Group
17:15	Modern Achievements of Electrochemical Corrosion Protection Design in Russian Federation <b>I. Vjunitsky &amp; V. Pritula</b> VIINST, Russia 117	CO2 Corrosion in the Presence of Acetic Acid: Turbulent-Flow Conditions <b>M C Ismail &amp; S Turgoose</b> Universiti Teknologi PETRONAS, Malaysia & UMIST, UK 022	<b>Wayne Burns</b> Anode Engineering 112	Effect of Alloying Element on Corrosion Behavior of Stainless Steel 304 After Plastic Deformation <b>E. Jafari &amp; J. Hadianfard</b> Shiraz University, Iran 073	Coatings Group
19:00	ACA Annual Dinner and Awards, Sponsored by Denso, Duxton Hotel Ballroom				





Wednesday 19th November				
09:00	Plenary Lecture: Steven Nixon “The design of a one component, high solids, VOC compliant, high durability finish technology”			
	Science	Coatings	Concrete CP	Technical Group Forum
09:45	Role of Micro-/Nanocrystalline Structure in Corrosion <b>R.K. Singh Raman</b> <b>Monash University</b> <b>101</b>	International and Australasian Standards for Coating Selection: A Critical Comparison <b>R A Francis</b> <b>Connell Wagner</b> <b>076</b>	A Review of Design and Performance Criteria Requirements for the Cathodic Prevention of Concrete Structures <b>P Vimpani &amp; P Karajayli</b> <b>Maunsell Australia &amp; Savcor ART</b> <b>082</b>	Water Industry
10:15	Stress Corrosion Cracking (SCC) of Heat Exchanger 316L Stainless Steel Tube Handling Sea-water / Case Study <b>H B. Rahmatalla<sup>1</sup>, M M Ahmad<sup>1</sup> &amp; M Bendeddosh<sup>2</sup></b> <b>University of Qatar<sup>1</sup></b> <b>&amp; Qatar Petroleum<sup>2</sup></b> <b>075</b>	The Role of Protective Coatings in an Offshore Asset Maintenance System <b>G White</b> <b>Maunsell Australia Pty Ltd</b> <b>018</b>	Cathodic Corrosion Protection Of Precorroded Steel In Concrete With Galvanic Zinc Anodes <b>L. Stockert, A. Herrmann &amp; N. Braun</b> <b>University of Applied Sciences,</b> <b>Fachhochschule Wuerzburg-</b> <b>Schweinfurt</b> <b>090</b>	Water Industry
10:45	Poster Paper Session & Morning Tea			
	Marine	Water	Coatings	Concrete
11:15	Corrosion Profiles of Mild Steel in Varying Tidal Seawaters <b>R Jeffrey &amp; R Melchers</b> <b>University of Newcastle</b> <b>030</b>	Corrosion Measurement on Asbestos Cement Pipes <b>J Black &amp; J Morris</b> <b>Opus International Consultants</b> <b>036</b>	1k Polysiloxane Coatings – Features and Benefits <b>M N Bavin, K T Constable,</b> <b>L H P Gommans &amp; G Kay</b> <b>PPG Industries (NZ) Ltd</b> <b>014</b>	Galvanostatic Pulse Corrosion Rate Monitoring for Steel in Concrete <b>L Holloway<sup>1</sup>, Phil Karajayli<sup>1</sup> &amp; Nick Birbilis<sup>2</sup></b> <b>Savcor Group Pty Ltd<sup>1</sup></b> <b>&amp; Monash University<sup>2</sup></b> <b>088</b>
11:45	Combinations of Corrosion Protection Systems for Marine Structures & Jetties <b>S Pearce</b> <b>Winn &amp; Coales (Denso) Ltd, UK</b> <b>056</b>	The Current Understanding of Pipeline Corrosion and Failure Prediction <b>M Dafter</b> <b>Hunter Water Australia</b> <b>063</b>	An Assessment of Fluorotitanate Conversion Coatings for Pre-painted Applications <b>R Edavan, A Ruggieri &amp; R Kopinski</b> <b>Akzo Nobel Pty Ltd</b> <b>037</b>	Analysis of the Corrosion of Prestressing Tendons and Reinforcement in a 50 year old Bridge <b>T Pape &amp; R E Melchers</b> <b>The University of Newcastle</b> <b>081</b>
12:15	Using Induced Tension Polymer Wrap Technology for Trestle Pile as Corrosion Protection System at Yanbu Terminal <b>W M. Gahwagy</b> <b>Saudi Aramco</b> <b>013</b>	Pin Hole Failure in Cooling Water Return Circuit of a Reactor <b>S Velu</b> <b>Ethylene Glycols Singapore</b> <b>042</b>	Evaluation of Environmentally Benign New Chemical Rust Removing Agent - Hydroxyethane Diphosphonic Acid (HEDPA) <b>A. S Rao, A. Y Rao &amp; A S. Rao</b> <b>Naval Surface Warfare Center, USA</b> <b>011</b>	The use of Continho Rings and other Shrinkage Measurement Methods in Developing Repair Mortars to Meet EN 1504 <b>C Peterson</b> <b>BASF Construction Chemicals</b> <b>094</b>
12:45	Lunch			
	Marine	Science	Oil & Gas	Materials
13:45	Cathodic Protection of the Australian National Maritime Museum Wharves, Darling Harbour <b>A Zoras</b> <b>Austress Freyssinet</b> <b>083</b>	Quantum Chemical Study of Some Lactones as Inhibitors for the Corrosion of Mild Steel in 1 M Hydrochloric Acid <b>E. Jamalizadeh, S. M. A. Hosseini &amp; A. H. Jafari</b> <b>University of Kerman, Iran</b> <b>034</b>	Pitting Corrosion in a Carbon Steel Produced Water Line <b>N Laycock</b> <b>Shell Todd Oil Services</b> <b>091</b>	The Effect of Cold Work on Corrosion and Other Properties of Metals <b>G A Sussex</b> <b>Sussex Materials Solutions</b> <b>015</b>
14:15	Protecting the Melbourne Port Against Corrosion <b>J Pritchard &amp; A Hillier</b> <b>Austress Freyssinet</b> <b>084</b>	Inhibition of Metals Corrosion in Polydisperse Environments <b>D Kolesnik</b> <b>State Road Scientific Research Institute, Russia</b> <b>074</b>	The Integration of Corrosion & Process Engineering for Optimized Asset Integrity Management Practice <b>O Susic &amp; P Wilson</b> <b>Bass Gas, Origin Energy Resources &amp; Corrosion Risk Management</b> <b>102</b>	Three Year Observations of Corrosion Losses for Steels at a Severe Marine Atmospheric Site <b>R Jeffrey &amp; R E Melchers</b> <b>The University of Newcastle</b> <b>039</b>
14:45	Impressed Current Cathodic Protection Systems for Reinforced Concrete Marine Structures: An Anode for Tidal Range Applications <b>P.A. Bundy &amp; S.A. Ryder</b> <b>GHD Pty Ltd</b> <b>107</b>	Methods for the Determination of Ferrous- and Zinc-based Corrosion Rates in Aqueous Timber Preservatives Containing Copper <b>G Kear, Hài-Zhèn Wú &amp; M S. Jones</b> <b>Quest Reliability, Victoria University of Wellington &amp; BRANZ Ltd</b> <b>106</b>	Coating Durability Prediction of Buried Structures & Pipelines <b>N Adamson</b> <b>Altex Coatings Limited</b> <b>032</b>	Galvanizing Difficult Steels <b>J Robinson</b> <b>Mount Townsend Solutions</b> <b>029</b>
15:15	Closing Session			
15:45	Farewell Function Sponsored by the Galvanizers Association of Australia			



# Social Programme

## Welcome Function

Museum of New Zealand - Te Papa Tongarewa, Wellington

**Sunday 16th November, 2008**

Discover the history and culture of New Zealand, while sampling the best of Wellington's food and wine at the Te Papa Museum. Located on the stunning Wellington Harbour, the Museum is home to some of New Zealand's greatest cultural treasures. Sponsored by Incospec & Associates, delegates will enjoy a cocktail function within one of the museum's exhibits, as well as being treated to a traditional Maori cultural performance.

## Exhibition Opening

Wellington Town Hall

**Monday 17th November, 2008**

Visit with over 40 of Australasia's leading corrosion industry companies while networking with other delegates at the official opening of the C&P08 exhibition. Enjoy the entertainment while sipping on cocktails and canapes in the elegant heritage listed Town Hall Auditorium.

## Gala Dinner and Awards

Duxton Hotel Ballroom

**Tuesday 18th November, 2008**

Begin your night enjoying panoramic views of the harbour while sipping on cocktails in the Duxton Hotel Ballroom Foyer, before moving into the ballroom to sit down to a sumptuous three course meal. Sponsored by Denso, the ACA will present awards to outstanding performers in the corrosion industry, before guests enjoy a performance by celebrated comedian Raybon Kan.

## Farewell Function

Lion Harbourview Room, Wellington Convention Centre

**Wednesday 19th November, 2008**

Farewell delegates and friends while taking a last look at the dazzling Wellington Harbour. Sponsored by the Galvanizers Association of Australia, delegates can relax while enjoying cocktails and canapes, and reflect on being a part of one of the ACA's most successful conferences.

All function tickets are included in full delegate registration and full partner programme registration.



# Partner Programme

There will be a partners' programme that will take participants into the hinterland around Wellington as well as to many of the city's impressive sights. Delegates may want to add on a ferry ride to their visit, to go to the world-famous Marlborough vineyard region on the other side of Cook Strait.

**Monday:** Tour the city of Wellington and its surrounds, taking in some of the sights and tourist attractions made famous by the movie Lord of the Rings

**Tuesday:** Visit a winery and enjoy wine tasting and a lunch while taking in the gorgeous scenery

**Wednesday:** Free day to explore Wellington at your leisure



# ***The Destination***

New Zealand is the youngest country on earth - the last major landmass to be discovered. It has a rich and fascinating history, reflecting both Maori and European heritage. New Zealand has a unique and dynamic culture and the culture of its indigenous Māori people affects the language, the arts, and even the accents of all New Zealanders. Their place in the South Pacific, and their love of the outdoors, sport, and the arts make New Zealanders and their culture unique in the world.

With vast open spaces filled with stunning rugged landscapes, gorgeous beaches, spectacular geothermal and volcanic activity, a temperate climate and fascinating animal and plant life, it's no surprise that New Zealand's pure natural environment is so attractive to visitors from other countries.

Wellington, the capital of New Zealand, is a compact city built at the edge of a magnificent natural Harbour. Wellington offers the cosmopolitan atmosphere of a large city, while still being close by many of New Zealand's most spectacular sights and scenery. Take a few days to explore the great outdoors and wander picturesque vineyards, or shop till you drop and sample the culinary delights that Wellington city is famous for.



## ***Sponsorship***

With more than 300 industry practitioners from around the globe expected to attend Corrosion & Prevention 2008, it is an ideal opportunity to promote your organisation, product or service. With 55 exhibition booths sold and over 500 delegates in attendance at the 2007 conference, the benefit of a visible presence at ACA events is undeniable. Corrosion & Prevention 2008 will be widely promoted not only within Australasia, but to our substantial international contacts as well.

Opportunities are limited so book early to avoid disappointment. Details can be obtained from the Conference Secretariat.

## ***Exhibition***

There will be over 40 exhibition booths available in the exhibition hall – so get in fast to secure your place. The trade exhibition is a great place to display your product or service to the many asset owners and decision makers who will be attending the conference. The exhibition will be open for the duration of the conference and is a great place to exchange views and opinions, as well as learning about the leading technology advancements and solutions currently available in the commercial marketplace.



# Registration Form

Please register online at [www.cmsl.co.nz/go/corrosion](http://www.cmsl.co.nz/go/corrosion) or send this form to:  
Corrosion & Prevention Conference at Convention Management Services Ltd,  
PO Box 121050, Henderson, Auckland, 0650, New Zealand  
Ph: +64 4 479 4162, Fax: +64 9 835 1539, email: [dean@cmsl.co.nz](mailto:dean@cmsl.co.nz)

## PART 1 - DELEGATE INFORMATION

Title:.....First Name:.....Last Name:.....

Company:.....

Position:.....

Postal Address:.....

.....Post Code:.....Country:.....

Phone:.....Fax:.....

Email:.....

Special Dietary / physical Requirements:.....

If you would **not** like your name included in the list of delegates provided to fellow delegates or to sponsors and exhibitors, please tick this box ☐

## PART 2 - REGISTRATION

<b>FULL CONFERENCE REGISTRATION</b>	<b>PRICE (INC GST)</b>	<b>SUBTOTAL</b>
Includes attendance to all sessions, lunches and refreshment breaks, a copy of the proceedings on CD ROM, entry to the exhibition hall as well as tickets for the Welcome function (Sunday night), Exhibition function (Monday night), Gala dinner (Tuesday night) and the Farewell function (Wednesday afternoon).	<b>NZ \$1350</b>	
<b>DAY CONFERENCE REGISTRATION</b>		
Includes attendance to all sessions, lunch and light refreshments and entry to the exhibition hall on the day of registration. Proceedings and tickets to functions must be purchased separately. <b>Monday, Tuesday or Wednesday (please circle)</b>	<b>NZ \$450</b>	
<b>POSTGRADUATE STUDENT REGISTRATION</b>		
<b>Applies to full time postgraduate students only.</b> Students will need to supply a letter from their University before registration can be confirmed. Includes entry to all technical sessions, as well as tickets to all functions.	<b>NZ \$365</b>	
<b>UNDERGRADUATE STUDENT REGISTRATION</b>		
<b>Applies to full time undergraduate students only.</b> Includes attendance to all sessions, as well as a ticket to the exhibition function. Students must provide a letter from their University, TAFE or Polytechnic before registration can be confirmed.	<b>FREE</b>	
<b>PARTNER PROGRAMME</b>		
Monday: Wellington city and surrounds tour Tuesday: Winery tour and lunch Wednesday: Free day to explore Wellington at your leisure <b>INCLUDES TICKETS TO ALL FUNCTIONS</b>	<b>NZ \$ 450</b>	

## PART 3 - TECHNICAL PROCEEDINGS

<b>TECHNICAL PROCEEDINGS</b>	<b>PRICE (INC GST)</b>	<b>SUBTOTAL</b>
CD Rom Proceedings (Included in full registration)	<b>NZ \$100</b>	
Softbound Proceedings	<b>NZ \$125</b>	

## PART 4 - SOCIAL FUNCTIONS

**NOTE: FULL CONFERENCE REGISTRATION AND PARTNER PROGRAMME INCLUDES ALL FUNCTION TICKETS**

ADDITIONAL FUNCTION TICKETS	PRICE (INC GST)	SUBTOTAL
<b>WELCOME FUNCTION</b> Te Papa Museum, Cable Street, Wellington Sunday 16th November	<b>NZ \$110</b>	
<b>GALA DINNER</b> Duxton Hotel, 170 Wakefield Street, Wellington Tuesday 18th November	<b>NZ \$130</b>	
<b>FAREWELL FUNCTION</b> Wellington Town Hall, 111 Wakefield Street, Wellington Wednesday 19th November	<b>NZ \$40</b>	

## PART 5 - ACCOMMODATION BOOKINGS

Rates are in NZ\$ and are per room per night. Convention Management will take one nights deposit, with the remainder being payable directly to the hotel on departure. Prices include GST

			PLEASE NUMBER 1 - 4 IN ORDER OF PREFERENCE
Duxton Hotel	www.duxtonhotelwellington.com	\$220 per night	
Novotel Capital	www.accorhotels.co.nz	\$195 per night	
West Plaza Hotel	www.westplaza.co.nz	\$168.75 per night	
Just Hotel	www.justhotel.co.nz	\$135 per night	
Check In Date:		Check Out Date:	
I am sharing with:			
Smoking <input type="checkbox"/>	Non Smoking <input type="checkbox"/>	DEPOSIT	\$

## PART 6 - DISCOUNTS

DISCOUNTS APPLY TO FULL REGISTRATIONS ONLY & INCLUDE GST		
EARLY BIRD PAYMENT (BEFORE 31ST AUGUST 2008)	-NZ \$100	
ACA MEMBERSHIP DISCOUNT	-NZ \$100	
TECHNICAL PAPER PRESENTER	-NZ \$100	
	<b>TOTAL</b>	\$

## PART 7 - TOTAL

<b>TOTAL INCLUDING ALL DISCOUNTS:</b>	<b>NZ\$.....</b>
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## PART 8 - PAYMENT DETAILS

[ ] Enclosed is my cheque / bank draft / purchase order made out in New Zealand dollars to "Corrosion & Prevention 2008" OR [ ] Please debit my [ ] MasterCard [ ] Visa [ ] Diners [ ] Amex Card Number..... Name on Card..... Expiry Date..... Amount to debit NZ\$.....Signature.....
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**Terms & Conditions:** Payments must be made prior to the conference unless approved by the ACA. ACA assumes no liability to participants, their employees or agent for any claim, loss, damage or expense arising from the conference. Registration cancellations will incur a NZ\$35 administration fee if made in writing 2 weeks prior to the seminar. Registration cancellations after this date will not be refunded. Name changes are allowable. Accommodation deposits are only refundable at the discretion of the venue.



# Sponsors

**Major Sponsor: International Protective Coatings**



## Supporting Sponsors

**Building Research**

**Cormon Limited**

**Metal Spray Suppliers (NZ) Ltd**

**New Zealand Refining Company**

## Event Sponsors

**Incospec & Associates**

**Denso Australia**

**The Galvanizers Association of Australia**



# Exhibitors

**Allblast Sales / Blastquip**

**Alphablast**

**Altex Coatings**

**Anode Engineering**

**Atlas Speciality Metals / Durinox**

**Construction Techniques Ltd**

**Cormon**

**Denso Australia**

**Dulux Protective Coatings**

**Incospec & Associates**

**International Protective Coatings**

**Metal Spray Suppliers (NZ) Ltd**

**METZ**

**Peerless Industrial Systems**

**PPG Industries New Zealand Limited**

**ProDigital Pty Limited**

**Quest Reliability Ltd**

**Rustoleum Industrial Coatings**

**Visiscope Limited**

**Wattyl Australia**

## Technical, Sponsorship & Exhibitor Enquiries

ACA Centre  
PO Box 112, Kerrimuir, Victoria, 3129, Australia  
Phone: +61 3 9890 4833  
Fax: +61 3 9890 7866  
Email: [conference@corrosion.com.au](mailto:conference@corrosion.com.au)

## Registration & Accommodation Enquiries

Please register online at [www.cmsl.co.nz/go/corrosion](http://www.cmsl.co.nz/go/corrosion) or contact:  
Dean Bradley at Convention Management Services Ltd,  
PO Box 121050, Henderson, Auckland, 0650, New Zealand  
Ph: +64 4 479 4162, Fax: +64 9 835 1539, email: [dean@cmsl.co.nz](mailto:dean@cmsl.co.nz)

**ALL SPONSORS & EXHIBITORS LISTED AS OF 1ST APRIL 2008**