The ACA reserve the right to exclude any paper and to alter without notice any of the arrangements, timetables and programs relating to the conference. Issued – 11 November 2019.

Sunday 24 November 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>1:00pm -</td>
<td>Registration Desk Opens</td>
<td>Level 1 Foyer, Crown Promenade Hotel</td>
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<td>6:30pm</td>
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<tr>
<td>5.30pm -</td>
<td>First Time Delegates Function</td>
<td>Crown Promenade Exhibition Hall P1, 2 &amp; 3</td>
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<tr>
<td>6.30pm -</td>
<td>Welcome Reception &amp; Exhibition Opening</td>
<td>Crown Promenade Exhibition Hall P1, 2 &amp; 3</td>
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<tr>
<td>9.30pm</td>
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Monday 25 November 2019

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<thead>
<tr>
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<tbody>
<tr>
<td>7:00am</td>
<td>Registration Desk Opens</td>
<td>Level 1 Foyer, Crown Promenade Hotel</td>
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<tr>
<td>8.30am</td>
<td>Conference Opening by the Hon. Martin Pakula Minister for Jobs, Innovation &amp; Trade Acknowledgement of Country, Starting of Ed Potter Corrosion Clock</td>
<td>Crown Conference Centre, Level 2 Room CCH1</td>
</tr>
<tr>
<td>9.00am</td>
<td>Plenary 1 – Dudley Primeaux</td>
<td>Crown Conference Centre, Level 2 Room CCH1</td>
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<tr>
<td>9.45am</td>
<td>Plenary 2 – Carmen Andrade</td>
<td>Crown Conference Centre, Level 2 Room CCH1</td>
</tr>
<tr>
<td>10.30am –</td>
<td>Morning Tea – Exhibition Hall</td>
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<tr>
<td>11.00am</td>
<td>Concurrent Session 1A</td>
<td>Room M1, Microbiologically Influenced Corrosion (MIC), Chair: Brian Kinsella</td>
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<tr>
<td></td>
<td>Coatings of Steel Structures</td>
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<td></td>
<td>Chair: Ted Riding</td>
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<tr>
<td></td>
<td>When Colour Matters: Photodegradation of Coatings and an Approach to Achieving Long Lasting Colour</td>
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<td></td>
<td>Robert Francis</td>
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<td>Daniel McKeown</td>
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<td>RA Francis Consulting</td>
<td>Dulux</td>
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<tr>
<td>11.30am</td>
<td>Saving our Heritage from Corrosion – Ulladulla Lighthouse Refurbishment</td>
<td>Justin Rigby, Remedy Asset Inspection Consultants Pty Ltd</td>
</tr>
<tr>
<td>12:00pm</td>
<td>Controlling Steel Roughness to Achieve Desired Coating Thickness</td>
<td>Peter Golding, Industrial Galvanisers</td>
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<tr>
<td>12:30pm –</td>
<td>Lunch – Exhibition Hall</td>
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<tr>
<td>12.45pm</td>
<td>ACA Foundation AGM – Room M9</td>
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<tr>
<td>Concurrent Session 2A</td>
<td>Concurrent Session 2B</td>
<td>Concurrent Session 2C</td>
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<tr>
<td>Plenary Room CCH1</td>
<td>Room M1</td>
<td>Room M3</td>
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<tr>
<td>Coatings of Steel Structures</td>
<td>Cathodic Protection of Reinforcement</td>
<td>Non-Ferrous Metal Corrosion</td>
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<tr>
<td>Chair: Peter Dove</td>
<td>Chair: Phil Vimpan</td>
<td>Chair: Wayne Neill</td>
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### 1.30pm
- **Coating Ageing & its Impact on CP Conduction**
  - Mauricio Latino
  - Deakin University
  - 83

- **Corrosion prevention of defence stocks with Desiccant dryers**
  - Gordon Lacey
  - DST Dryer
  - 84

### 2.00pm
- **Cathodic Prevention as a Long-Term Corrosion Mitigation Solution for New Reinforced Concrete Structures**
  - Jack McLean
  - Freyssinet
  - 34

### 3.30pm
- **New Innovation for ICCP Current Delivery to Concrete Structures**
  - Martin Chetnani
  - Remedial Technology
  - 101

### 3.00pm - 3.30pm **Afternoon Tea – Exhibition Hall**

### 3.30pm
- **Chloride-Induced Reinforcement Corrosion in Potable Water Assets**
  - Andrew Peek
  - GHD
  - 15

### 4.00pm
- **Designing Durable Piles in Potential Acid Sulfate Soils**
  - Lucy Caine
  - ARUP
  - 97

### 4.30pm
- **Waterproofing Black Hill Reservoir, New South Wales**
  - David Johnston
  - AkoNobel
  - 27

### 5:00pm - 5:30pm
- **When Young Meets Old: Combined Cathodic Protection Cathodic Prevention Refurbishment of Melbourne’s Botle Precinct Promenade**
  - Dominique Veloso
  - Marine & Civil Maintenance
  - 57

### 8:00pm
- **Coatings of Steel Structures**
  - Chair: Peter Dove

### 9:00pm
- **Cathodic Protection of Reinforcement**
  - Chair: Phil Vimpan

### 10:00pm
- **Non-Ferrous Metal Corrosion**
  - Chair: Wayne Neill

### 11:00pm
- **Asset Management**
  - Chair: Willie Mandeno

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**Additional Sessions**

- **Water Forum**
  - Chair: Paul Vince (Aurecon)

- **Product Performance Specification for Cast In Place Structural Pipe Lining**
  - Sarah Furman (AECOM)

- **Top 5 Critical Factors Impacting Concrete Asset Durability in the Water Industry (New Structures)**
  - Warren Green (Vinci Partners) & Peter Dave (GHD)

- **Summary and call for committee volunteers**
  - Paul Vince (Aurecon)
Tuesday 26 November 2019

7.00am Women in Corrosion Breakfast
Eureka 89 - Level 89, Eureka Tower, 7 Riverside Quay, Southbank, Melbourne
Open to all Delegates. Please come and support our successful women in Corrosion! Tickets available on the conference website!

7.30am Registration Desk Opens

9.00am Plenary 3 - Willie Mandeno PF Thompson Lecture
Chair: Dean Wall
Crown Conference Centre, Level 2 Room CCH1

9.45am Plenary 4 - Klaas van Alphen
Chair: Dean Wall
Crown Conference Centre, Level 2 Room CCH1

10.30am Morning Tea - Exhibition Hall

11.00am Concurrent Session 4A
Room CCH1
Pipe Corrosion and Condition Assessment
Chair: Sarah Furman

11.00am Concurrent Session 4B
Room M3
Asset Management - Power Industry
Chair: Richard Brodribb

11.00am Concurrent Session 4C
Room M7
Steel Corrosion
Chair: Phil Fleming

11.00am Concurrent Session 4D
Room M9
Cathodic Protection of Steel Structures
Chair: Bruce Ackland

11.00am Concurrent Session 4E
Room M9
Cathodic Protection of Steel Structures
Chair: Bruce Ackland

11.30am Case Study: Failure Mechanism of a Buried DN450mm Cast Iron Pipe
Zohreh Soltani Asadi
SMEC

11.30am Transmission Power Line Corrosion
Darren Cram
ATTAR

11.30am The Current State of Electrical Transmission Structure Assets: Does Steel Last Forever? Should we be worried?
John Kile
Logsys

11.30am Nestor Seguera
Comparison of Natural and Artificial Corrosion Behaviour of Mortar Embedded Wall-Ties
Barbara Jardim do Nascimento
The University of Newcastle

11.30am Concurrent Session 5a
Room CCH1
Refinery Issues
Chair: David Lake

11.30am Concurrent Session 5b
Room M1
Asset Management
Chair: Daniel Fosdike

11.30am Concurrent Session 5c
Room M3
Oil & Gas Forum
Chair: Phil Fleming

11.30am Concurrent Session 5d
Room M7
Steel Corrosion
Chair: Oscar Duyvestyn

11.30am Concurrent Session 5e
Room M9
Cathodic Protection of Steel Structures
Chair: Bruce Ackland

12.00pm Trade Exhibition Only
This is a technical presentation free period – visit our Exhibition Hall. Delegates will have the opportunity to explore the exhibition, book meetings with exhibitors, watch product demonstrations and engage in the activities taking place throughout the hall.

12.00pm Lunch - Exhibition Hall

1.30pm Assessing Inhibitive Effects of Leachable Silicate on Corrosion Under Insulation of Carbon and Stainless Steel.
Thunya Lekal
Pojtanabuntoeng
Western Australia School of Mines

1.30pm Examples of Durability Deficiencies Found in Buildings
Stewart Hobs
Pro Consult NZ

1.30pm Recent Offshore CP Life Extension Projects
David Flanery
Deepwater Australasia Pty Ltd

1.30pm In Mortar Performance of a Zinc, Aluminium, Magnesium Coated Steel Compared to Galvanized Steel.
Wayne D Ganther
CSIRO

1.30pm Towards a Unified Engineering Theory of CP Systems
Rajko Vukcevic
Infoware Consulting Pty Ltd

2.00pm The Effect of Flowing Fluid on the Resistance of Engineering Materials to Stress Corrosion Cracking
Rihan Rihan
Kuwait Institute for Scientific Research

2.00pm CP and ‘Big Data’ - Challenges and Opportunities
David Celine
Omniflex

2.00pm Simulated CUI Environment Test for CUI Coating Systems
Cheng-Yang Tsai
Industrial Technology Research Institute

2.00pm Effects of Sulfate Ions on the Corrosion Behavior of Carbon Steel in Simulated Concrete pore solution
Kaiqiang Li
Dalian University of Technology

2.00pm Progresses in Understanding Cathodic Disbondment and Corrosion Under Disbonded Coatings
Mike TJ Tan
Deakin University

This is a technical presentation free period – visit our Exhibition Hall. Delegates will have the opportunity to explore the exhibition, book meetings with exhibitors, watch product demonstrations and engage in the activities taking place throughout the hall.
2.30pm

Concurrent Session 6A
Plenary Room CCH1
Steel Corrosion – Marine
Chair: Erica Suarez

Concurrent Session 6B
Room M1
Coatings Forum
Chair: Justin Rigby

Concurrent Session 6C
Room M3
Oil & Gas
Chair: Fryky Barouky

Concurrent Session 6D
Room M7
Steel Corrosion
Chair: Wayne Thomson

Concurrent Session 6E
Room M9
CP Forum
Chair: Bruce Ackland

3.00pm

Learning Centre Stage. ‘How to write a Paper for a conference’ Ian MacLeod

3.00pm - 3.30pm Afternoon Tea – Exhibition Hall

3.30pm

LCS with High
Coatings Forum
Chair: Justin Rigby
(Remedy Asset Protection)

Justin Rigby (Remedy Asset Protection)

Rob Francis (RAF Consultants)
Victor

Nightingail Award

Terry Greenfield (NACE)
Proposed changes within NACE: A discussion of current changes being proposed by NACE and the CIP program.

Dudley Primeaux (Primeaux Associates)
What is Poly Urea?

Geoff White (AkzoNobel)
Innovations in Application

Material Selection of 13%Cr Martensitic Stainless Steels in Oil and Gas Environments Containing CO2 and HS

Shuji Hashizume

TenarisNKKTubes

14

Pipeline Integrity Threats – a Case Study

Vahid Afshari

GHD Pty Ltd

76

7.00pm - midnight

ACA Annual Awards Dinner

The Aviary, Crown Casino
Tuesday 26 November 2019

Wednesday 27 November 2019

8.30am

Concurrent Session 7A
Plenary Room CCH1
Steel Corrosion – Marine
Chair: John Duncan

Concurrent Session 7B
Room M1
Catholic Protection of Pipelines
Chair: Wayne Burns

Concurrent Session 7C
Room M3
Oil & Gas
Chair: Phil Fleming

Concurrent Session 7D
Room CCH3
Research Forum
Chair: Katerina Lepkova

Concurrent Session 7E
Learning Centre Stage
Applicator Forum
Chair: Mike Rutherford

9.30am

Measuring Corrosivity in Immersion Conditions

Robert Jeffrey
The University of Newcastle

11

A Review of Control Methods for Impressed Current Cathodic Protection Systems

Bob Varela
Deakin University

100

The Use of Integrity Operating Windows to Manage the Safety and Reliability of Oil & Gas Plant

Peter Wilson
Nuffield Group

75

Evaluation of High Performance Corrosion Inhibitor With Autoclave

Susumu Hirano
INPEX Corporation

46

Research Forum
Chair: Katerina Lepkova
(Curtin University)

9.30 - 9.40

Introduction

9.40 - 10.00
Majidolah (Deakin University) talks about CIP manufacturing of steels: An overview

10.00 - 10.20
Krisna Venkidusamy (Curtin University): Electrical microbial influenced corrosion: Perspectives on metal respiring microorganisms and their role in pipeline corrosion

10.20 - 10.40
Jan Wood (Swinburne University of Technology): Monitoring Microbial corrosion in ship bilges: challenges from a microbial perspective

10.40 - 11.00
Rob Melchers (University of Newcastle): New perspectives on chloride-induced corrosion of reinforcement

10:00am

The Corrosion of Mild Steel in Contact with Seawater and Sand Particles Under Different Burial Configurations

Robert Petersen
The University of Newcastle

23

Aging Pipelines – Linear Anode CP Systems in Lieu of or in Conjunction with Recoating

Jeffrey Didas
Matcor, Inc.

65

Evaluation of High Performance Corrosion Inhibitor With Autoclave

Susumu Hirano
INPEX Corporation

46

Advancements in Epoxy Intumescent Passive Fire Protection (PFP)

Richard Holliday
PPG

33 (Presentation Only)

10.30am

Observations of Mild Steel Corrosion During ANZAC Class Ship Trials

Steven Knight
Swinburne University of Technology

72

CPCAI-ILI Results

Validation through Direct Examination

Muhammad A. Sherwani
Saudi Aramco

30

Reducing the Cost of Corrosion Under Insulation (CUI)

Geoff White
AkzoNobel

88

Waste Management of Project Materials Who Pays?

Craig Reynolds
BlastOne

60

Efficiency of Cathodic Protection on Buried LPG Tanks

Xavier Hallepeau
Freyssinet

26

Performance Corrosion

Corrosion Resistance to Sulphuric Acid

Stainless Steels in Oil and Gas Environments Containing CO2 and HS

Shuji Hashizume

TenarisNKKTubes

14

Understanding the Corrosion Behaviour of Additively Manufactured Type 316L Stainless Steel

Majidolah (Deakin University)

111

Ying Huo (Deakin University): Assessing local coating defects on ADO pipelines and protection using local CP

Peter Wode (Energy Safe Victoria): How do Victoria’s revised CP regulations affect you?

Jim Hickey (Auszgrid): An update on the Rail projects in NSW

General discussion and AGM
11am - 11.30am  Morning Tea - Exhibition Hall

11.30am  Plenary 5 - Stuart Lyon
Chair: Peter Dove
Crown Conference Centre, Level 2 Room CCH1

12.15pm  Plenary 6 - Alan Bryson
Chair: Peter Dove
Crown Conference Centre, Level 2 Room CCH1

1:00pm  Lunch - Exhibition Hall

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<th>Concurrent Session 8C</th>
<th>Concurrent Session 8D</th>
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<td>Room M7</td>
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<td>Steel Corrosion - Marine</td>
<td>Concrete Forum</td>
<td>Defence Forum</td>
<td>Research Forum</td>
</tr>
<tr>
<td>Chair: Les Boulton</td>
<td>Chair: Jack Katen</td>
<td>Chair: Wayne Neil</td>
<td>Chair: Katerina Lepkova</td>
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</table>

2:00pm  Observations of Atmospheric Corrosion in an Aggressive Marine Environment
Annette Zeman
The University of Newcastle
25

2.30pm  Corrosion of Welded High Strength Steels Immersed in Seawater and Implications for Vessel Strength
Jeremy Rosen
The University of Newcastle
44

3:00pm  Marine Corrosion of Mild Steel in Particulate Media
MD Maruf Hossain
The University of Newcastle
69

3.30pm  Long-Term Development of Pitting Corrosion for Steels in Water Injection and Production Pipelines
Robert E Melchers
The University of Newcastle
24

4.00pm - 4.30pm  Closing Session
Room CCH1

4.30pm - 6.30pm  Farewell Drinks
Tonic Bar, Crown Promenade

6.30pm - 9.30pm  Applicator Day Wrap Party, Entertainment: Comedian Dave Callan.
Tonic Bar, Crown Promenade

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