ACA BRANCH NEW ZEALAND BRANCH

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ACA APPLICATOR & COATINGS ROADSHOW

from NZ Branch Committee member Philip La Trobe

On Monday the 21st of July, the ACA 2025 Applicator and Coatings Roadshow came to the Waipuna Conference Centre in Auckland. This was a full day event starting with some very thought-provoking speakers in the morning followed by several outdoor demonstrations in the afternoon.

With over 90 people attending, the day was introduced by industry legend AJ Russell as the MC of the event with the first talk provided by the major sponsor MCU. All speakers were well received, with topics covering an array of new and exciting products and technologies as well as some good refreshers of best practices for all of us.

No doubt this led to the array of engaging conversations over the breaks to dive deeper into the presentations alongside the hot topic of when is the market going to bounce back so we can put it all into practice.

After lunch we all moved outside to see the action as MCU, UCC and Syntech demonstrated several products and equipment. For many of us who are used to abrasive mechanisms for surface preparation, seeing the chemical prep alternative was very insightful and a viable alternative when you can't get access with traditional methodologies.

It has been a long time since the local corrosion industry came together, so this was a great day being able to not only learn some new things but also catch up with familiar faces. A big thank you to ACA for putting it on alongside the sponsors both from NZ and Australia who made it happen. No doubt a few of us will be reaching out to make some purchases in the future.

ACANZ would like to gratefully acknowledge this month's sponsor…

GLOBAL CORROSION NEWS

Global corrosion is a significant issue, costing the world economy trillions of dollars annually and posing risks to human health and safety. Corrosion-related failures have resulted in accidents like bridge collapses and pipeline explosions. Implementing effective corrosion control strategies can mitigate these costs and enhance the lifespan of infrastructure.

Key aspects of global corrosion:

- ### Economic Impact:

The annual global cost of corrosion is estimated to be around $2.5 trillion, with some estimates reaching $3 trillion, according to reports from AMPP and the Financial Times. This represents a substantial percentage of global GDP.

- ### Risk to Infrastructure:

Corrosion poses a serious threat to various types of infrastructure, including bridges, pipelines, ships, and offshore platforms.

- ### Safety Concerns:

Corrosion-related failures have been linked to accidents like pipeline explosions, bridge collapses, and even amusement park ride malfunctions.

- ### Environmental Impact:

Corrosion can lead to environmental damage through leaks, spills, and the release of harmful substances. It also contributes to greenhouse gas emissions from the production of replacement materials.

- ### Corrosion Prevention Strategies:

Coatings: Protective coatings are crucial for extending the lifespan of structures and reducing corrosion.

Inhibitors: Corrosion inhibitors are widely used in industries like automotive and oil & gas to protect metal structures.

Advanced Materials: Research into nanotechnology and smart coatings is leading to the development of more effective and durable corrosion solutions.

Specific Industries:

Corrosion affects various industries, including oil and gas, maritime, automotive, and construction.

Marine Industry: The harsh marine environment accelerates corrosion, costing the industry billions annually.

Infrastructure: Corrosion affects bridges, pipelines, and other critical infrastructure, requiring ongoing maintenance and repairs.

- ### Corrosion Control & Prevention:

Effective corrosion control measures, such as using corrosion inhibitors, applying protective coatings, and implementing proper maintenance practices, can significantly reduce the impact of corrosion.

- ### Technological Advancements:

Smart corrosion monitoring and the development of advanced materials are playing an increasingly important role in combating corrosion.

- ### Environmental Concerns:

The drive for sustainability is pushing the development of eco-friendly corrosion inhibitors and practices that minimise environmental impact.

Q & A CORNER

Older ACA NZ members have probably seen a number of situations that may never have made it to a textbook.

If you have a question you'd like clarification on, email it to the Editor at lesboultonrust@gmail.com. We'll pose it to our panel of experts who will answer it in another Bulletin, so everyone can improve their knowledge.

Q: *What happened about the Flint, Michigan, USA, water crisis due to corroding lead water pipes?*

Flint's water supply is now considered safe after years of crisis and costly infrastructure upgrades.

Flint has now replaced most of its corroded lead water pipes with new copper piping more than 10 years after lead-contaminated drinking water was found in its drinking water delivery network, prompting national outrage, public health concerns, and 79 law suits.

By 2020 the victims of the water crisis were awarded a combined legal settlement of nearly $US640 million, with 80 percent going to the families of children affected by the contaminated drinking water. More than 28,000 properties in Flint were affected.

A decision to not add a corrosion inhibitor to the city's treated water appears to have been a key factor in the subsequent chain of events that resulted in the public health hazard.

In 2013 State officials had stopped buying water from Detroit Water and started to build a new water supply pipeline to Lake Huron, in order to cut costs. Until the pipeline's completion, the city's primary water source came from the Flint River during 2014. Quickly residents reported tainted and murky water coming from their drinking water pipes, but officials said it was still safe for human consumption.

It was not until 2015 that Flint city switched back from the corrosive Flint River water to the fully treated Detroit Water supply.

Meanwhile it was estimated that the water crisis exposed nearly 100,000 residents of Flint city to lead contamination and possibly Legionella disease. At least 12 people died.

Criminal charges that were brought in connection with several deaths related to the contamination were later dismissed. However, four officials resigned, four were dismissed, five were suspended, 15 were indicted, and one was found guilty.

About $US400 million has been spent in state and federal funding to restore a safe water supply in Flint. A book has been written on the Flint water crisis, and in 2024 a documentary was produced on the lingering aftermath of the water crisis called "Failure in Flint: 10 Years Later".

Source: NBC News, USA, July 2025

Research project underway

to assess atmospheric corrosion performance of stainless steels used in handrail applications

Stainless steel is widely used in New Zealand for handrail applications.

One objective of the project is to assess the implications of atmospheric corrosion on handrail components when they are not properly specified.

A joint study co-ordinated by the NZ Stainless Steel Development Association (NZSSDA) in partnership with BRANZ will commence soon. The study aims to evaluate the atmospheric corrosion performance of standard architectural surface finishes of stainless steel handrail tube options.

This will include typical secondary finishing processes after fabrication, such as bead blasting and electro-polishing, intended to enhance the durability of marine and architectural stainless steel (SS) components over their service life. The grade 304L SS and 316L SS tube samples will be exposed to a severe NZ marine environment in the sea spray zone.

One objective of the project is to assess the implications of atmospheric corrosion on handrail components when they are not properly specified. In parallel with the handrail component testing, there will be samples of architectural wire mesh (316L SS and 2205 SS) installed to determine the staining and corrosion effects on them in the severe marine environment.

The collaborative project with NZSSDA aligns with an ongoing BRANZ project on “Materials under the changing climate.” This overarching project looks at performance and durability of new materials, including stainless steels, employed in the New Zealand built environment.

ACA FOUNDATION SCHOLARSHIP APPLICATIONS NOW OPEN

Each year the ACA Foundation awards scholarships to attend the annual ACA Conference or one of the many ACA training programmes. Details and application forms are available at https://www.corrosion.com.au/foundation/scholarships/2025-sponsorship-forms/

This year there are two new scholarships being offered exclusively to ACANZ members.

1. The Ray Osborne Memorial Scholarship sponsored by Universal Corrosion Coatings for a YCG member to attend Corrosion and Prevention 25 in Melbourne.

2. A scholarship sponsored by Metspray for a member in the protective coatings industry to attend a training course or the conference.

Members should note that the **closing date for applications is 15th August** and the ACA Foundation thanks Centurion Members and the following Corporate Members who have funded the other nine scholarships; ie. Carboline, CPT, CRL, Denso, Freyssinet, Infracorr, and MCM.

Submitted by Willie Mandeno, ACAF Director

Corrosion tells the story of war and time in Gallipoli

from an article by Ian MacLeod, ACA Life Member, WA Branch

When excavations are taking place in modern times in and around Gallipoli, many live rounds are found.

Since the mercury fulminate detonators become increasingly sensitive to shock as the years pass, they discharge the bullets. Turkish-made munitions typically give off smoke, but British bullets explode without smoke. This is due to differences in the composition of the propellants, and this lack of smoke gave the Allied defence teams a real advantage. Early studies on buried glass show systematic differences in the composition of typical materials used for gun sights, and the layering of the dissolving silica network provides an insight into the manner in which the seasonal variations in ground water and temperature have varied since the ill-fated campaign.

At present the Australia submarine AE2 (A for Australia, E for the class of submarine and 2 for the number in the fleet of two WWI submarines) lies in the still waters of the Sea of Marmara at a depth of 73 metres.

The hull is half buried at the natural water line associated with a floating steel hull. It is being actively cathodically protected by ten tonnes of zinc anodes, and so it is the largest CP protected historic shipwreck site in the world. Detailed inspections are planned for 2027 to assess when the original anodes need to be replaced.

HMVS Cerberus was equipped with four ten-inch Armstrong rifled guns capable of launching 650 kg shells over the horizon.

For the full story, see https://www.corrosion.com.au/from-gallipoli-trenches-to-sunken-ships-how-corrosion-tells-the-story-of-war-and-time

Conference registrations now open!

Early bird registration is now open to attend the premier event for corrosion and asset management professionals across Australasia.

Join us for five unmissable days of world-class speakers, cutting-edge research, hands-on learning, and powerful networking opportunities. And now's your chance to save — **early bird pricing is available until 22 August 2025**. Book now - https://auscorrosion.eventsair.com/corrosion-prevention-2025/registrations

See you at the Marvel Stadium between 9-13 November.

Ask ICS when you need great inspection and consultancy work

Advertorial

ICS is a company that primarily provides coating inspections and consultancy services including third party inspections, condition assessments, specification and ITP writing, peer reviews, defect analysis inspections to all sectors of the industrial coatings industry, including residential/commercial buildings and intumescent coatings.

Training can be tailored to the needs of clients, and can be put together and delivered for applicators.

ICS concentrates significantly on coating aspects within the high voltage electricity sector, encompassing generation (hydro penstocks and dams, wind farm structures, thermal piping, gas facilities, etc.), and transmission including tower structures, substation gantries, transformers, etc.

ICS has one person with NACE Certified Coating Inspector – Level 3 / AMPP Senior Certified Coatings inspector, currently two with NACE Certified Coating Inspector – Level 2/AMPP Certified Coatings

Inspector, one with AMPP Basic Coatings Inspector certification, and another in the process of AMPP Basic Coatings Inspector certification.

To add to the inspection roles we also carry out Electrical Test & Tag, ladder WOF inspections, smaller project site supervision and Project Management, and willing to adapt to any client needs.

While we are domiciled in the Taranaki region, we work extensively and effectively throughout New Zealand.

If you are looking for anything coating related that we can help with, just ask.

ICS inspection & consultancy services ltd

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