ACA BRANCH NEW ZEALAND BRANCH

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ACA SYMPOSIUM SERIES

ACA Symposium Series 2026 in Christchurch and Auckland

The ACA Symposium Series commenced in Christchurch over the 8-9 October. The venue was the Majestic on Durham event centre which was ideal for a smaller ACA conference held this year. There was one stream of papers and on the second day the Australian Electrolysis Committee (AEC) held its 99th meeting in conjunction with the NZ Electrolysis Committee (NZEC), which ran as a second stream. There were a good number of overseas speakers present as well as many speakers from NZ and Australia.

The symposium was opened by the ACA Board Chair Patricia Shaw and the ACA NZ Branch President Rene Hill. The P F Thompson Plenary address was presented by Professor David Williams from Auckland University. His presentation was entitled “Unlocking Secrets of Corrosion Science”. Mark Sigley from First Gas, presented the Brian Martin Memorial Lecture, entitled “Assessing Cathodic Protection Levels”.

The ACA Awards dinner in Christchurch was held on the evening of the first day at the ‘Original Sin’ in the city. The dinner was a different format from the usual ACA conference and it proved to be quite successful. At the Awards presentations Professor David Williams was the recipient of the prestigious Corrosion Medal. Other ACA members received awards for the best conference papers (2025) and awards in recognition of services to the ACA.

The Christchurch symposium concluded on the Friday afternoon with farewell drinks and a social gathering where the attendees mingled with fellow corrosionists and newly made friends.

The Auckland Symposium commenced Tuesday 13 October 2026 with a site visit to the Auckland Harbour Bridge via a ferry on the Waitemata Harbour. About 25 people attended the bridge visit. This was followed by a site visit to explore industrial surface preparation, coatings and corrosion protection at Metspray in Drury, South Auckland.

The Auckland Symposium continued at the AUT University Event Centre on 14 October, with a re-run of the PF Thompson Lecture and then a paper session. On that evening the ACA Awards Dinner for Auckland was held at the ‘Oakroom,’ adjacent to Victoria Park. Many people attended the dinner where the awards ceremony took place for a second time.

The third day of the symposium was another full day of paper presentations which concluded with the symposium closing remarks by ACA Board Chair Patricia Shaw. Over 200 registrants had attended the two ACA symposia held in New Zealand.

The ACA Symposium Series 2026 now moves on for the third event in Melbourne over 16-17 November.

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

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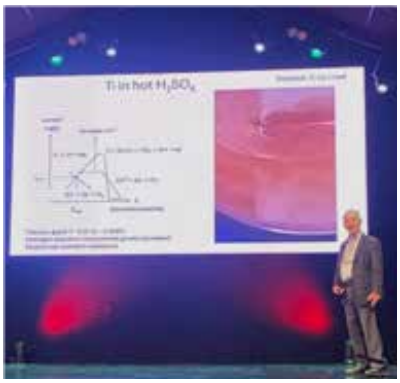
Mon-Sat 0900 - 1800 grant @cpnz.kiwi www.cpnz.kiwi

Selected images from the NZ symposia...



















99TH AEC AGM, INCLUDING THE NZEC MEETING, 9TH OCTOBER 2026

HELD IN CONJUNCTION WITH ACA'S CHRISTCHURCH SYMPOSIUM



The meeting, as normal, was a breakout from the ACA annual conference; this year it was from the symposium held in Christchurch, NZ.

L-R: Alireza Kouklan, Alan O'Connor, Bruce Ackland, Rodney Urban and Grant Chamberlain

There were several topics discussed:

Bruce Ackland (retired) gave us an update on AS2312.1 and .5, as they are due for public submissions soon. Bruce encouraged everyone to read the draft and make submissions where required.

Rodney Urban (Urban Electromagnetics) gave a very interesting talk about the problems he has encountered and solved over many years in the electrical hazard prevention field. Rodney obviously has huge expertise in the field and offered practical advice.

Alan O'Connor CCE, gave an interesting presentation about the challenges faced by asset owners from the DC rail system in Wellington. It was great to see KiwiRail representatives there. Alan and other audience members promoted the idea that interference should be proactively monitored in NZ, like it is in Australia.

We also learned that the railway must meet a standard that apparently specifies the amount of rail to earth resistance.

Grant Chamberlain, CPNZ, spoke about issues he felt needed highlighting.

- Surge diverters: these should be one per FIK; the consensus of the room agreed.
- FIK steel washers on three separate jobs were not the correct size, with too much difference between the ID of the steel washer and the stud bolt, allowing the steel washer to touch the neck of the flanges.
- FIKs should be installed with a non-conductive compound between FIK flange gaps. This is an AS2832.2 requirement, and the compound would provide weatherproofing.
- Weather: Recommend type E or type F gaskets; type E reduce the risk of spillage between flanges but makes coating maintenance difficult; type F gives more access for coating maintenance.
- Photos of poorly coated FIK's and Surge protection mounting options were shown

The AGM formalities concluded the meeting.

THE COST OF CORROSION IN AUSTRALIA

by Nick Birbilis et al

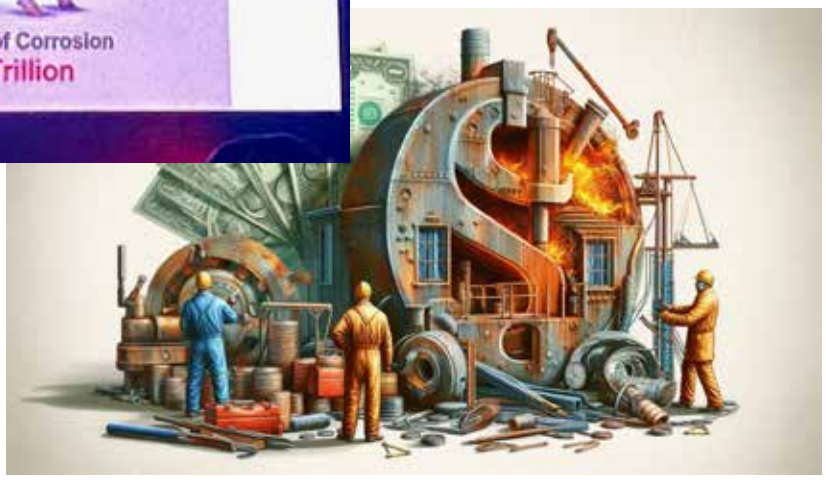
A recent paper published in the journal “Corrosion” presents a critical assessment of available evidence on the cost and impact of corrosion in Australia.

The paper summary of sector-level data indicates that corrosion imposes an annual economic burden that is conservatively of the order of tens of billions of dollars, with oil and gas, water and wastewater, transport infrastructure, and defence being the dominant contributors. Importantly, sectors that account for a substantial portion of Australia’s gross domestic product, such as the mining, mineral processing, and construction industries, have not been included in past studies, leading to the true cost of corrosion being underestimated.

Across seven decades of national assessments, corrosion has imposed a stable economic burden of a few percent of GDP while simultaneously driving substantial material throughput and associated emissions, demonstrating that technical progress has primarily been used to stabilise risk within an expanding, ageing, and increasingly long-lived built environment rather than to reduce aggregate impact. In the study, the authors discuss the cost of corrosion dynamics.

In Australia, national estimates have risen from roughly one percent to two percent of GDP in the early 1980s to approximately three to four percent today, despite mature corrosion capability, underscoring that meaningful reduction in economic and embodied carbon intensity will only occur through system-level intervention in asset planning, durability standards, governance, and skills retention, not incremental technical improvements alone.





Source: Corrosion, Vol.8, no.8, August 2026, pp 713-725. https://doi.org/10.5006/4966

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 was the "Rusty Treasure" recently found in the Danube?

& A:

More than two millennia ago, a ship carrying a wealth of iron sank in the Danube River in what is now Austria. Archaeologists have identified the "rusty treasure" as a collection of 500 iron bars, the largest cache of ancient iron ever discovered in Europe and enough metal to equip an entire army with weapons.

The assortment was discovered in 2019, when workers who were extracting gravel from the river near the village of Deinham, spotted a few unusual double-pointed iron objects and reported them to the Austrian monument authority. "It is nothing short of a minor miracle that the largest mass find of prehistoric iron bars in Europe did not end up at scrap dealers," archaeologists at the University of Innsbruck in Austria, said in a statement.

In a study, recently published in the journal Antiquity, archaeologists at the University of Technology of Belfort-Montbéliard, France, detailed their analysis of the extraordinary collection of ancient iron, which dates to the third and second centuries BC. From the hundreds of iron fragments recovered from gravel heaps, the archaeologists identified 193 complete iron bars and 307 partial bars, for a total of at least 500 bars that were lost many centuries ago in the waters of the Danube. On average, the complete bars were 28.5 centimetres long and around 2 kilograms. Combined, the iron bar collection weighed around 1 tonne.

However, the Deinham iron bars did not represent finished products. Rather, the double-pointed, semi-finished bars, sometimes called ingots, were rough-shaped, intermediate goods that a blacksmith eventually would have forged into other objects. The semi-finished iron bars would have been enough to forge approximately 500 swords, sufficient to equip a large group of warriors with weapons, or to produce up to 8,000 iron nails.

If the iron bars were indeed lost in a shipwreck, they were probably produced somewhere upstream of the archaeological site, the researchers noted. Similar iron bars had been found in Manching, Germany about 200 kilometers away, so it is plausible that the Deinham bars were forged in Bavaria, the team wrote in the study. The researchers are currently analysing traces of elements in the bars, which may help to clarify their geographical origin.

"It is incredible that such a large quantity of iron was transported at once and was available in a single exchange transaction in the late Iron Age, This finding demonstrates the increased capacities of iron production that were reached in the third and second centuries BC in the Danube region," the researchers stated.



Archaeologists studied 500 rusty iron bars from an ancient shipwreck in the Danube

Source: Live Science News, September 2026

Fourth edition of the NZSSDA Blue Book released

The New Zealand Stainless Steel Development Association (NZSSDA) is pleased to announce the release of the Fourth Edition (2026) of the Code of Practice for the Fabrication of Stainless Steel Plant & Equipment, widely known as the Blue Book.

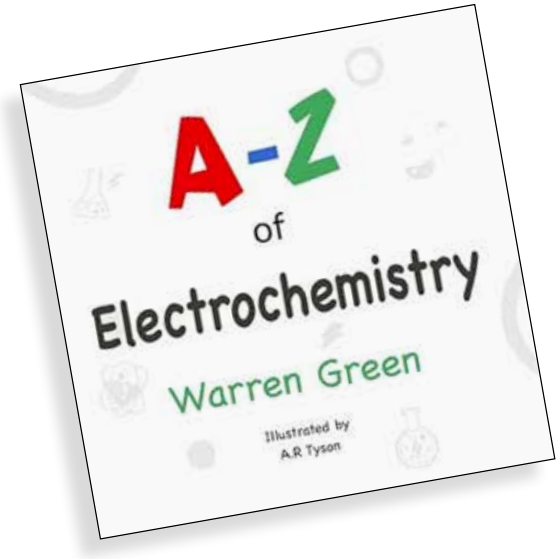
Officially launched on 5 August 2026, this latest edition has been comprehensively reviewed and updated to reflect current industry standards, best practice and technical guidance. New content includes two additional chapters covering Maintenance and Structural Stainless Steel, a new appendix mapping relevant codes and standards, and expanded guidance on quality assurance, welding, inspection, tanks and process equipment.

The Blue Book remains an important technical reference for fabricators, designers, engineers, specifiers and asset owners working across New Zealand's stainless steel industry.

Copies are available from NZSSDA at a cost of $75 + GST for members ands $150 +GST for non-members. An electronic version will be available through the new website when it launches later this month (November 2026), at which time prices will be released for this option.



For further information or to order a copy or copies, please contact NZSSDA at https://www.nzssda.org.nz/publications/.



Warren Green is a Life Member of the Australasian Corrosion Association, who lives in Texas, USA. He is the grandfather of three children. Being an educator is in his blood and he is making time now to give back some science education in his areas of expertise, namely corrosion, reinforced concrete, and electrochemistry.

A – Z of Electrochemistry

The second booklet of a series of A-Z Children's Science Books, namely the "A-Z of Electrochemistry", has recently been published by author Warren Green. It is available (on-line) at Amazon. The book is well illustrated by Ms A. R. Tyson.

You and your children, or grandchildren, can learn the terminology and key fundamentals of the wonderful world of electrochemistry. Electrochemistry is very important to many things we do in our lives. Learn also of some of the famous scientists that contributed to the field of electrochemistry including Michael Faraday, John Daniell and J.J. Thompson. Faraday was an English chemist and physicist who together with John Daniell, are credited as the founders of electrochemistry.

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Advertorial

Cathodic Protection (NZ) Limited was founded in 1989 by Bob James, who introduced Cathodic Protection (CP) to New Zealand. Known as "Mr CP of NZ," Bob played a pivotal role in designing, installing, and maintaining CP systems across numerous wharves and pipelines throughout New Zealand and the Pacific Islands.

In 2021, Grant Chamberlain took over CPNZ. As an ACA Corrosion Technologist, he is certified to approve CP design, commissioning, and survey work in accordance with the AS2832 suite of standards. These standards cover:

- Pipelines (pipes and cables)
- Compact buried structures (e.g., LPG tanks)
- Fixed immersed structures (wharf and bridge piles)
- Internal surfaces (e.g., water tank internals)
- Steel in concrete structures (e.g., concrete bridges)

With over 32 years' experience in corrosion prevention—first as a coating inspector and later specialising in CP—Grant has worked extensively in the industry. CPNZ has successfully installed CP on wharves, penstocks, clarifiers, LPG tanks, water tanks, tidal gates, sheet piles, airports, and even historic buildings. CPNZ works throughout NZ, but specialises in South Island assets as the company is based in Christchurch.

Grant brings a holistic approach to corrosion prevention, recognising the risks of assuming corrosion is under control, especially under insulation.

CPNZ also specialises in DCVG surveys. DCVG surveys identify bare steel in contact with the soil. Excavating bare steel and finding that it's not corroding is the ultimate proof of the CP's effectiveness. The DCVG also identifies coating defects caused by third-party damage.

If you'd like to discuss your asset's integrity, Grant is always happy to chat and offer expert advice.

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