

Industry Insights

The Australasian Institute of Surface Finishing

President's message



To All AISF Members and Industry Stakeholders,

We know it has been a difficult COVID year for all, and with rules and regulations constantly changing, it has been a major distraction for businesses. The AISF has done its best to get on with business, and despite the difficulties a lot has been accomplished.

With the resources and connections through the much larger AGWA, our AISF Secretariat, Natalie Miles, has been well supported. While mostly working from home, some great progress has been made in rebuilding many aspects of the AISF.

AGM & Forum: The AISF would like to announce that we will be holding our Annual General Meeting on the 17th November 2021. This year we have many new/returned Members, we thought it would be useful to use Zoom to make the meeting accessible to all members, and provide Members with an update and an opportunity for a Q&A style forum. We will be proposing a series of 5-minute presentations on some of the major projects that are underway during 2021 at the AISF.

These will include an update on our Training - *Online & On-site*, Australian Standards - AS 3715, AS 4503 & AS 1231, Audit & Accreditation, Website development, Industry representation with WorkSafe and the Environmental Protection Authority.

Following the AGM, we will hold an open Forum for members to table any questions they may have about the presentations and the Institutes operations and plans. We expect a time of about one hour for the whole process. Natalie will send details of the format and how it will be facilitated. If anyone has any specific questions for to be answered at the Forum, please pre-submit to Natalie so we can ensure we have sufficient notice to prepare a response.

An official AGM notice will be issued shortly including a summary of our Financial Accounts, President & Treasurers reports and Nomination forms will also be attached.

New nominations for Board Members: We would like to thank the following people for their nomination for the Board of Directors to assist the AISF with our future growth.

Nigel Chalk: Nigel is the Managing Director of DFV Australia.

Simon Skocajic: Simon is the Sales Manager for Australia & New Zealand at Interpon Powder Coatings.

We are welcoming new nominations for positions on the Board of Directors, particularly to further represent the Electroplaters and Anodising members. Further member involvement will assist us with allocating resources and guidance to help us to further our industry. We welcome all new Members registered and paid prior to 31st October to attend our AGM & Forum, so if you have not joined yet, Natalie has made as easy as possible via the AISF website. Your Membership is most welcome as the industry need representation. Nominating for roles at the AGM is also very welcome, but by Membership alone you are contributing to the growth and well-being of the industry in which you are involved.

Look forward to seeing you in November 2021.

Bill Wyllie

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Audit update

by Natalie Miles, Secretariat



Over the last 20 or so years, the AISF have held the Master License in Australia for the European Qualicoat Audit system. Due to some challenge's we faced we decided to sever this relationship in favor of developing our own Australian based quality audit system.

We are envisioning our new Australian system to be all inclusive of all of the aspects of Powder Coating, both for architectural and general applications.

During our recent meeting of the Board of Directors, the decision was made to appoint Craig Brennan to assist the AISF develop our new audit system framework. By appointing Craig, he is independent of any single applicator or supplier and can assist us with producing an unbiased audit system which will assist both applicators and suppliers meet the requirements of the Australian Standards. Once the specifications for the Audit program has been finalised, we will be contacting our members to commence participation in the program.

The benefits of participating in an Audit of your operational processes:

Although some people are wary of participating in an operational audit, there are many benefits to undergoing this process:

- Maximize efficiency: Gain a greater understanding of how fine tuning your processes can boost effectiveness.
- Understand risks: Businesses run many operational risks, ranging from health and safety issues to operational incompetencies. A full operational audit identifies risks like these, as well as potential problems which could negatively impact your brand and assist you with improving your produced services to your client.
- Finetune internal controls: By examining each step of the operational process, an audit can dive deeper into the impact of any changes to internal controls.
- Improved customer satisfaction: If your work processes and quality are improved, this will result in improved customer satisfaction and could result in a higher return customer rate.

Operational Audits will be an exclusive service for our members and will incur a nominal fee to cover the costs associated with running the audit. We will contact our members when we have further information with this program.

We are always welcoming of members enquiries and their input to how we can make our Institute work for and with you, so please feel free to reach out to me if you have any questions.

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Understanding the new EPA Victoria Legislative changes

Online Training

In this online learning course you will learn what new obligations are applicable to Victorian Businesses under the new EPA Victoria legislation.

WHO SHOULD ATTEND

All businesses with a presence in Victoria or who have an interest in how the Environmental legislation is evolving.

COSTS

AISF members: Free

Non- Members: \$100 (plus GST) per attendee - please note the EPA Victoria will be subsidising training for Victorian businesses by 50%

Contact us today if you would like more information on becoming an AISF member

WWW.AISF.ORG.AU

02 9160 4744

Course outline

Topics Covered:

- The New Environmental Protection Act
- The General Environmental Duty
- Reasonably Practicable
- Introduction to Remedial Powers (EPA powers)
- The Permissions Framework
- Waste Duties
- Waste Classification
- Lawful Place

Course outcomes:

- Understand your new obligations as a business operating in Victoria
- Understanding what is your "Reasonably Practicable" duty of care for the protection of Human health and the Environment.
- Understanding the EPA's powers and how they plan to exercise their obligations
- Understanding how to legally dispose of waste in meeting the EPA Victoria's classifications as a Lawful place
- Upon completion you will receive a certificate of completion. *Please note the AISF recommend you keep file of this certificate to provide to the EPA in the event of an inspection .*

Contact us today

to register for training: www.aisf.org.au

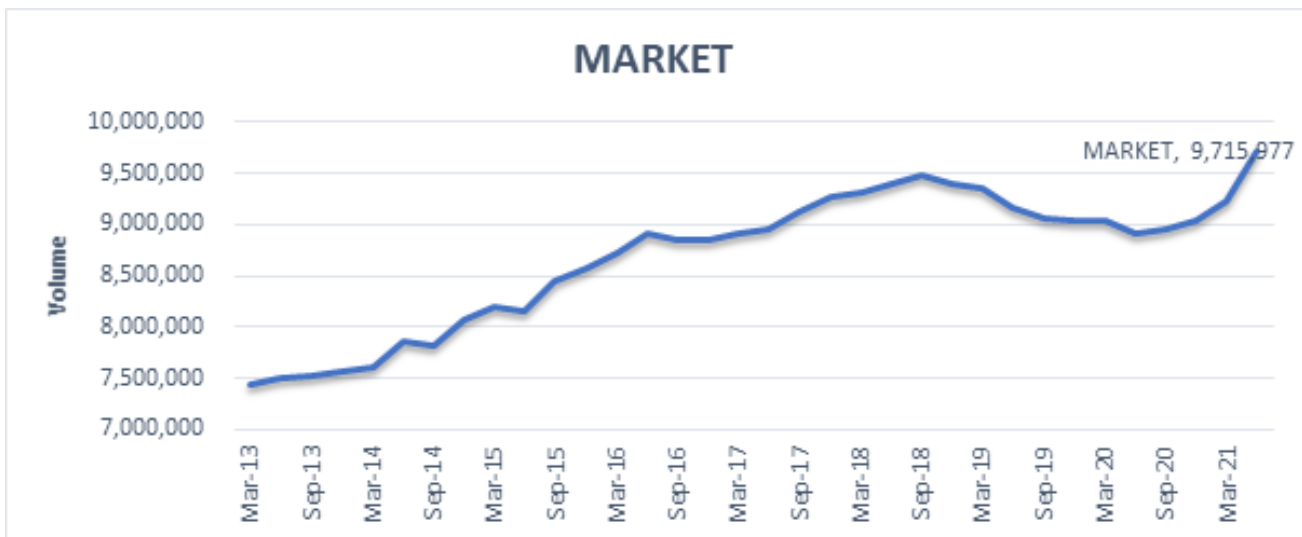


Powder Coating market update

Market as at June 30, 2021

General Commentary

The Powder Coating market powered forward strongly in the second half of the year to finish a full 12mths 9% ahead of the previous year at 9,715T.



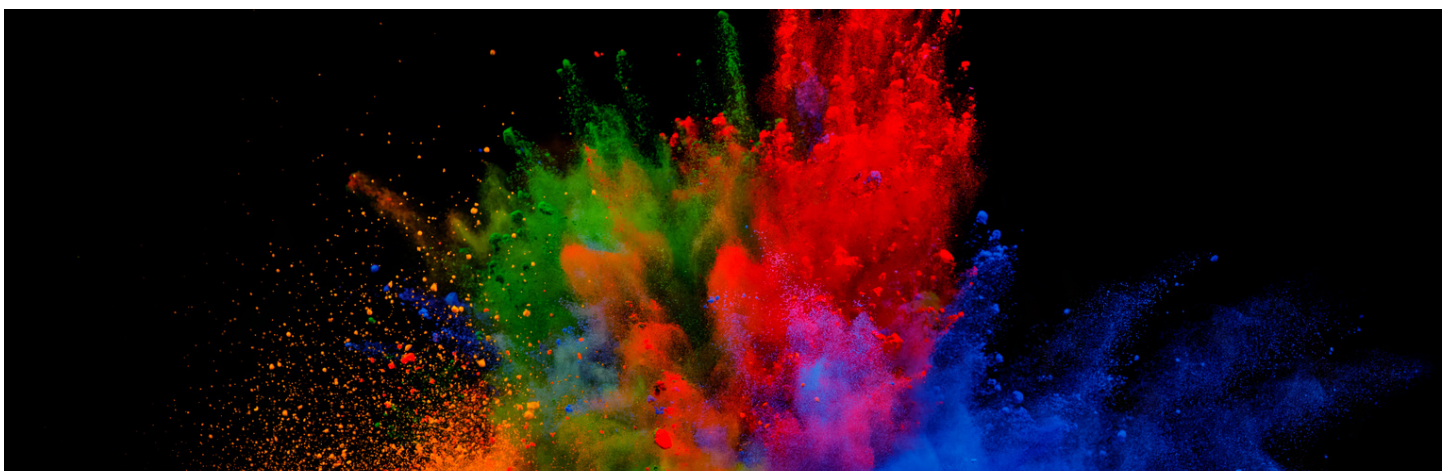
To our understanding, there are a number of factors that may have contributed to the higher volumes, being:

- government financial stimulus in 2020,
- home-owners reinvesting in their homes
- higher real estate prices for established dwellings,
- uncertainty in offshore supply chains.

By State, Queensland outperformed the market by rebounding off its lows to grow by 17.2%, WA and SA were mid range at ~4% while the two big States, by consumption, were either flat, NSW at 1.5%, or declining Vic -4.% as a rolling 12-months. In all circumstances you can make a case relating to Covid-19 restrictions as to the performance of each State and the effect on both demand and supply in the first half of the year. Since June 30 2021 we have entered into another series of restrictions which are thought will have an effect on the current quarter.

Source:

Data compiled independently by the APMF; General Commentary; Dulux Powder Coating Australia.





safe work australia

H₂SO₄ Sulfuric Acid Emissions

The AISF logged a submission with Safe Work Australia on behalf of our Anodising members regarding the proposed new changes which could impact businesses working with Sulfuric Acid. Upon writing this submission we liaised with our Anodising members as if these proposed new levels are enforced they could have an impact on their business operations. Within our submission, we have requested additional time to collate accurate data to determine the impact to local businesses. Due to COVID, there has been limitations in undertaking the required testing during the requested timeframes. If you are a member of the AISF and would like to review our submission, please contact

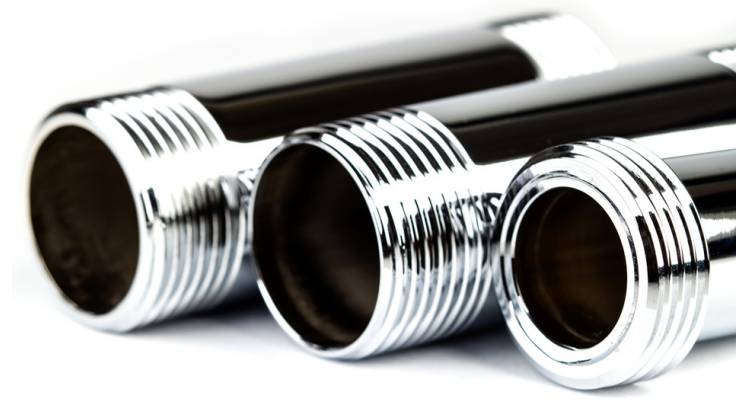
If you are a business who works with Sulfuric Acid and would like to participate in a review of your exposure limits, please contact us and we can put you in touch with our testing companies. Members can access our member rate via contacting our Secretariat, non-members are able to contact the recommended agencies directly:

- Healthy Building International - for an inhouse review of your chemical exposure limits - www.hbi.com.au or 02 9659 5433
- Airmet - for access to rental equipment and technical advice on reviewing your own chemical exposure limits. - www.airmet.com.au or 1300 137 067
- WorkPlace Environment Consultants - Phillip Turner - Sydney based independent Environmental Consultant - 02 9550 6500

If you are not currently a member of the AISF and would like to access our member exclusive services, please contact our Secretariat today on admin@aisf.org.au or 02 9160 4744



Multilayer Nickel in Decorative Chrome Plating

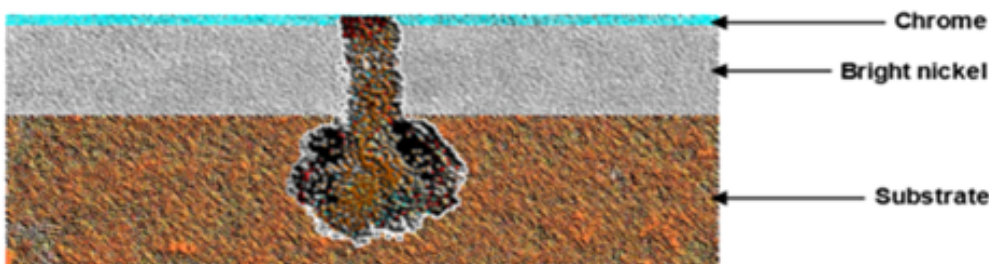


Most people refer to plated decorative parts as “chromed”. What you really see is actually a very thin layer of chrome over nickel. The nickel deposit on a part can be 100X thicker than the chrome layer. The chrome layer is about 0.3 to 0.5 microns, OEM minimum nickel thickness can be as high as 40 microns, such as for SC 5 (extended very severe) applications.

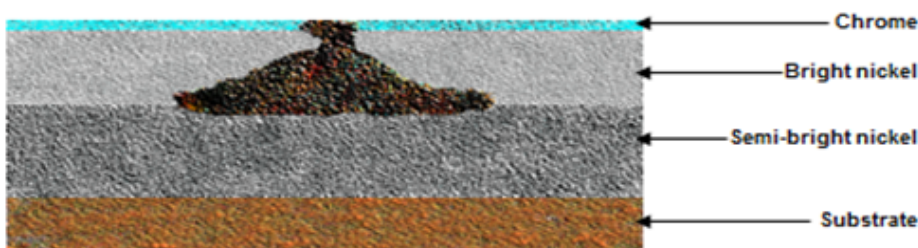
Many exterior grade aftermarket plated metal parts have only one nickel layer. Most OEMs specify two or three layers. Multi-layer coatings give dramatically improved corrosion performance, both in substrate protection and in maintaining part appearance over time. Cost is not significantly increased because the total nickel thickness applied is the same.

The different nickel layers are designed to have different properties. Specifically, each layer has a different electrochemical potential with differences in electrochemical potentials being the main factor in the corrosion performance of the part.

To understand how these coatings provide increased corrosion resistance, it is necessary to briefly examine the mechanism of corrosion. Under the effects of moisture and atmospheric contaminants, corrosion initiates in cracks or pores in the chromium topcoat. As the chromium is electrochemically more noble than the nickel, corrosive attack takes place in the bright nickel with the formation of pits. As corrosion continues, the pitting becomes deeper and eventually reaches the substrate, resulting in rusting or other base metal corrosion. At the same time the thin chromium layer may become partly dislodged through undercutting. Because bright nickel is relatively electrochemically active, the rate of attack can be quite rapid under corrosive conditions.



With dual-layer or “duplex” nickel, the bottom layer of semi-bright nickel is electrochemically noble compared with the bright nickel. Therefore, corrosion will take place preferentially in the bright nickel layer. The result is that, when the attack reaches the interface, corrosion will tend to spread laterally in the top layer rather than penetrate into the semi-bright coating. Microscopic examination shows typically flat-bottomed pits in the bright nickel. This effectively retards the pitting attack because, before the pit can penetrate further, a considerable portion of the bright nickel layer must be removed.



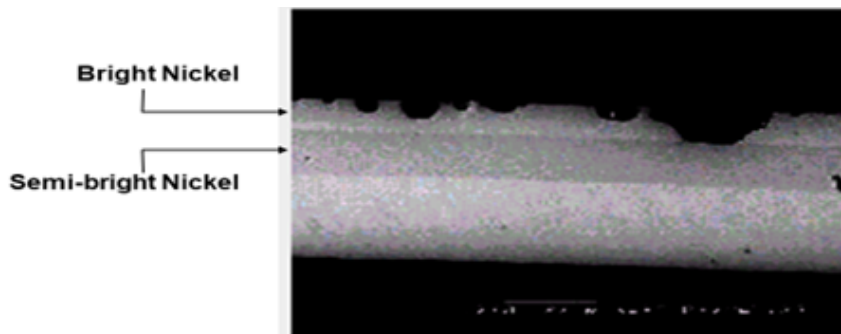
Dual-layer nickel coatings show a marked improvement in corrosion performance compared with single layer coatings. They are therefore specified for severe service conditions: -

ASTM Standard Specification B 456

Table 6 – Decorative nickel plus chromium on steel

Service Condition Number (Typical Applications)	Classification Number ^{1,2,3}	Minimum Nickel Thickness μm
SC 5 – Extended very severe (exterior automotive where long-time corrosion protection is a requirement).	Fe/Ni35d Cr mc	35 μm – but Micro-cracked or Microporous Chrome must be used.
SC 4 – Very severe (exterior automotive, boat fittings).	Fe/Ni40d Cr r	40 μm with standard chrome
SC 3 – Severe (patio and lawn furniture, bicycles, hospital furniture and cabinets)	Fe/Ni30d Cr r	30 μm with standard chrome
SC 2 – Moderate service (stove tops, oven liners, office furniture, golf club shafts, plumbing fixtures, and bathroom accessories)	Fe/Ni20b Cr r	20 μm with standard chrome
SC 1 – Mild (toaster bodies, interior automotive accessories, trim for major appliances, fans, light fixtures)	Fe/Ni10b Cr r	10 μm with standard chrome

Note – the **d** after the Ni stands for duplex nickel and the **b** after Ni stands for bright.



Microscopic photo of cross-section duplex nickel on steel after some time in service

In summary, for maximum performance in product appearance and corrosion protection duplex nickel coatings provide a vastly superior coating to a simple bright nickel coating in SC 3, SC 4 and SC 5 conditions.

by

Tim Elley

Director of AISF

