

**NEWS**

CHAIRMAN'S REFLECTIONS

BENEFITS OF BEING A  
MEMBER OF NZSSDA

LES BOULTON

NEWS FROM AROUND THE  
WORLD

ASK THE EXPERT

**NOMINATION FORMS**

The Nomination forms along with Membership packs will be posted out in the first week of August. The completed Nomination forms need to be returned, via post, within in two weeks.

**MEETINGS**

The AGM is on the 26th August 2020 from 2.00 pm to 2.30 pm. Attendance can be via Zoom, details will be provided closer to the date.

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**CHAIRMAN'S REFLECTIONS**

When we take a moment to review the past four months, already it seems unreal that we were in lockdown for... 6 weeks? Or was it longer, or shorter? Already details become unclear, and this is largely due to our need and desire to look and plan forward. Our situation here in New Zealand has been largely positive compared with that of our trading partners, and in particular my recent conversations with those involved in our industry – the use of stainless steel – suggest that we have rebounded faster and more positively than most other sectors of our economy.

Which is not to say that we can be completely confident about our immediate or even mid term future. But opportunities exist to capitalise on our better fortune. So often, conversations about infrastructure spend neglect or overlook the contribution that our stainless steel products can make. But with a reasonable proportion of proposed projects involving water and hospital infrastructure investment in particular, the potential for stainless steel to contribute and benefit is present.

Specifically for water infrastructure, there appears to be a growing awareness that the use of stainless steel can be economically justified using “whole of life” costing rather than simply initial cost impacts. For those of us involved in the business of stainless steel for “decades”, this comes as no revelation but rather as an encouraging surprise that others are starting to understand this fact.

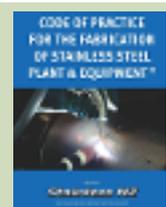
Lock-down time had some positive benefits for your committee members – use of Zoom and other platforms allowed discussions and sharing of knowledge both locally and internationally. We are actively part of the Sustainable Steel Council’s drive to register companies, having one of the highest number of members registered. We are also actively part of the HERA initiative to develop a Carbon Offset scheme that could benefit our members in the coming years.

As volunteers with limited time (and resources) to devote to NZSSDA matters under normal business, we were also able to commit sustained time and energy into projects such as revamping our web site and re-branding our organisation.

Many of you are not aware of the work being done by your committee, and we accept responsibility for that communication divide. So we look forward during the coming financial year to providing you, our members, with better information, and value-for-money for your membership. We appreciate your past support, and look forward to your continued membership.

**Paul Gapper****What is the Blue Book?**

On joining NZSSDA a free copy of the NZSSDA Code of Practice for the Fabrication of Stainless Steel Plant & Equipment is available. Make sure you have received your copy.



## BENEFITS OF BEING A MEMBER OF NZSSDA

We live in very unusual times and have to deal with an incredible rate of change and volatility in our businesses. An NZSSDA membership gives you access to resources and connections which will support your efforts and initiatives.

### WHY SHOULD I BE PART OF NZSSDA?

All members and sponsors whether local or overseas have a vested interest in the quality, capability, growth and sustainability of the New Zealand stainless steel market.

By supporting NZSSDA you will be contributing to the future success of our industry in general, along with your own successes.

### TECHNICAL

- Assisting Members by providing a Technical Advisory Service on stainless steels applications
- Promoting technical excellence in the engineering uses, design, fabrication and application of stainless steels in New Zealand, in particular through publication of The Blue Book.
- Involvement with reviews or development of international standards - such as the recent AS1528 standard review.

### EDUCATION

- Promoting the benefits of using stainless steel when compared with other materials e.g. Life Cycle Costing, Fire Resistance, Corrosion Resistance, Hygiene, Environmental Benefits etc.
- Providing educational seminars on stainless steel, including access to international experts through webinars.
- Aiding in research related to the successful application of stainless steels e.g. seismic testing, corrosion testing etc.

### NETWORKING

- Connect all participants in the supply chain through networking events.
- Part of an international group of Stainless Steel Development Associations.
- Representation at a government level through our active membership of and association with HERA, Metals NZ and the Sustainable Steel Council.

## LES BOULTON - THANK YOU FROM NZSSDA

Les is well known to many of us and sadly has decided to retire. He will be spending more time with family and generally enjoying life. You probably are not aware of the amazing contribution Les has made in many areas over the years.

He started his career with an MSC [Honours] from Auckland Uni and has been a Fellow or Member of various international corrosion or chemistry associations.

He began his working career teaching at Mt Roskill Grammar and then Lecturing at Auckland Institute of Technology as it was known then. He worked as a Scientist and Consultant for DSIR and other companies prior to setting up his own consulting business.

He has been known to many of us as the go to expert in NZ for materials and corrosion issues and his experience and advice will be greatly missed. The background, international connections and knowledge Les has is very hard to find.

We wish you well Les and thank you for being a key mover in founding the NZSSDA and for your extensive contribution to its success. See below details of what Les has contributed to for the benefit of our industry.

He was the Chairman of NZSSDA 2001-2002 and again in 2004-2005 and was also on the editorial committee for three editions of Code of Practice for the Fabrication of Stainless Steel Plant and Equipment, NZ Stainless Steel Development Association; 1990 (1st Edition), 2001 (2nd Ed) and in 2015 (3rd Ed).

He has also produced about 80 publications over a period of 47 years. The publications include Australian Corrosion Association conference papers, Journal publications (peer reviewed) and four booklets. Along with a large number of commercial corrosion projects, metallurgical investigations and industrial research projects having been completed for New Zealand and Australian industries. Les has also been involved with more than 2500 industrial projects that have been carried out over a period of 47 years. Thanks Les for your services and contribution to NZSSDA and the wider metals community, enjoy your retirement.

### NICKEL MEMBER



[www.wakefieldmetals.co.nz](http://www.wakefieldmetals.co.nz)

### CHROMIUM MEMBER



[www.steelandtube.co.nz](http://www.steelandtube.co.nz)



[www.vulcan.co](http://www.vulcan.co)

### GOLD MEMBER

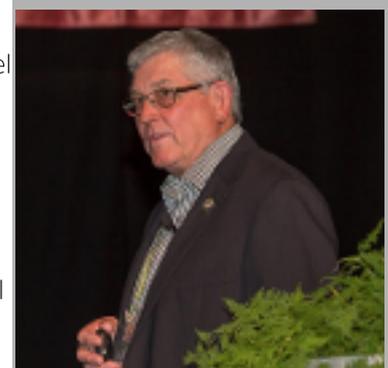
**STAINLESS Products Ltd**

**STAINLESS Products (S.I.) Ltd**

[www.stainlessproducts.co.nz](http://www.stainlessproducts.co.nz)



[www.nickelinstitute.org](http://www.nickelinstitute.org)



Thank you to ISSF and the Nickel Institute for permitting NZSSDA to link to the articles on their websites.

**ISSF- STAINLESS STEEL IN BRIDGES**

ISSF recently published an article on bridges being built using stainless steel. There are hundreds of thousands of bridges in the world, with over 600,000 are in the USA alone.



The costs of maintenance or/and replacement amount to huge figures over time. This was followed up with a Webinar that ISSF held called: Building Bridges for Generations. The webinar focused on why stainless steels are a key material choice in bridge construction, not just considering stainless steel reinforcing bar products, but also flat products, their key properties, their low maintenance needs and life-cycle costing. [Read more.](#)

**ISSF- WHAT IS HAPPENING WITH WORLD STEEL PRODUCTION**

The International Stainless Steel Forum has released figures for the first three month of 2020.

Stainless steel production decreases by 8% to 11.7 million tons in the first three month of 2020. [Read more .](#)

Region	Quarter			+/- %	
	1/2019	4/2019	1/2020	q-o-q	y-o-y
Europe	1,899	1,572	1,779	13.1%	-6.3%
USA	704	574	627	9.1%	-10.9%
China	6,684	6,910	6,080	-12.0%	-9.0%
Asia w/o China and S. Korea	1,961	2,023	1,886	-6.8%	-3.8%
Others	1,464	1,339	1,323	-1.2%	-9.7%
<b>Total</b>	<b>12,711</b>	<b>12,418</b>	<b>11,693</b>	<b>-5.8%</b>	<b>-8.0%</b>

Others: Brazil, Russia, S. Africa, S. Korea, Indonesia  
Source: International Stainless Steel Forum (ISSF)

**NICKEL INSTITUTE - FOOD SAFETY**



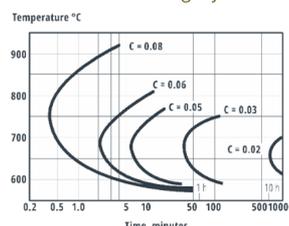
Food safety starts with rigorous hygiene, and nickel-containing stainless steels are the superior, reliable standard at every link of the food chain. [Read more.](#)

**ISSF - ASK AN EXPERT. FAQ FROM THE NICKEL INSTITUTE TECHNICAL ADVICE HELP LINE**

Q: Does the low carbon present in "L" grade austenitic stainless steels, such as 304L or 316L, improve weldability?

A: No, the low carbon in "L" grade (<math>\leq 0.03\%</math>) is to prevent the formation of a detrimental amount of chromium carbides during welding. These carbides can bind considerable quantities of chromium, thereby depleting chromium along the grain boundaries, potentially impairing corrosion resistance, which can result in inter-granular corrosion (IGC), as indicated in Figure 1. Low carbon contents are typical of all stainless steels for corrosion service and thus IGC of stainless steel, due to welding, is rarely observed. Whether the carbon content is above or below 0.03% has no impact on weldability. In contrast, carbon steel weldability is influenced by carbon content. Carbon steel experiences a microstructural change with temperature. At temperatures above  $\sim 727\text{ }^{\circ}\text{C}$  ( $1340\text{ }^{\circ}\text{F}$ ) the equilibrium microstructure is austenite, while below this temperature the equilibrium microstructure is ferrite. However, if austenite is cooled rapidly a less ductile microstructure called martensite is created. Carbon content  $\geq 0.30\%$  in carbon steels are especially problematic requiring preheat to lower the cooling rate to mitigate martensite formation. It is this concern with carbon steel welding that leads to the assumption that the low carbon of "L" grade also influences the weldability of nickel-containing austenitic stainless steel. The nickel in austenitic stainless steels stabilises the microstructure at all temperatures, thus there is no microstructural change in the weld area as a result of welding

Figure 1: The time needed to form detrimental amounts of chromium carbides is much longer for the "L" grades, which contain 0.03% C.



AVESTA SHEFFIELD CORROSION HANDBOOK, 8TH EDITION)

Technical Inquiry Service

Geir Moe P.Eng. is the Technical Inquiry Service Coordinator at the Nickel Institute. Along with other material specialists situated around the world, Geir helps end-users and specifiers of nickel-containing materials seeking technical support. The team is on hand to provide technical advice free of charge on a wide range of applications such as stainless steel, nickel alloys and nickel plating to enable nickel to be used with confidence.

Visit: [inquiries.nickelinstitute.org](http://inquiries.nickelinstitute.org)