

STEEL FUTURES



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SEARCH BEGINS FOR THE SCNZ APPRENTICE OF THE YEAR

We were proud to cast a spotlight on careers at our 10th Anniversary Members' Forum & Social in Queenstown, with the launch of a new industry award which celebrates excellence amongst apprentice fabricators.



The SCNZ Apprentice of the Year Award, in association with Weldwell, acknowledges people whose skills, drive, and willingness to learn and work hard has helped them to achieve outstanding outcomes. It recognises well-rounded apprentices who demonstrate not only talent in steel fabrication, but display traits important to the industry – commitment, innovation and agility.

Our Excellence in Steel Awards have proved to be hugely successful in showcasing the exceptional design and execution that is possible when steel is used as the principal construction material in buildings and infrastructure projects.

However, we recognise that the future of the structural steel sector in New Zealand relies heavily on people entering the industry who have the right expertise, commitment and passion to develop a world class industry that adds value to its clients.

As such, this Award is part of our work to promote careers and training in the structural steel sector and will sit alongside another new people-focussed industry award – the SCNZ Emerging Leader – which is in the pipeline. Together these two awards will honour upcoming talent and signal the strength and commitment of our industry to investing in the future.

We are very excited about this Award, so please do help us spread the word. You can download posters from our website to display in your workshop and if you know of someone with the potential to be the SCNZ Apprentice of the Year, encourage them to enter!

Alistair Fussell
SCNZ Manager

Entries for the SCNZ Apprentice of the Year Award must be submitted by 30 June 2016 and the winner will be presented with a trophy and \$1000 in prize money at SCNZ's AGM in September.

The judging panel will comprise of a fabricator; and representatives of award sponsor Weldwell, our industry training partner Competenz and the Heavy Engineering Research Association NZ Welding Centre.

For more information on our new Award, including details on how to enter, please click [here](#).

SCNZ CELEBRATES 10TH ANNIVERSARY IN STYLE!

On 1st April 2016, over 110 SCNZ members and their partners and clients, descended on Queenstown for the 10th Anniversary Members' Forum & Social.

The event gave members the opportunity to engage in an informative program presented by knowledgeable and inspirational professionals, whilst enjoying new experiences and socialising with industry peers.



The event got off to an exhilarating start as delegates took to the water in the morning aboard Kjets for an unforgettable Queenstown jet boating experience. Everyone made it back to the Crowne Plaza hotel in one piece for an enjoyable networking buffet lunch at one of Queenstown's top restaurants.

Following lunch, the All-Region Fabricator Forum kicked off with a welcome from Bob Hawley, SCNZ Chairman, who took the opportunity to draw attention to the fact that 18,500 tonnes were lost to overseas fabricators in the last twelve months. See "[Queenstown All-Region Fabricator Forum](#)" for full details of the Forum.

Following a short break in the afternoon, the conference room was quickly filled as delegates arrived eager for the start of the General Forum. Alistair Fussell, SCNZ Manager, opened the session with a recap of the history of SCNZ and the remarkable people who have contributed to the huge success of the organisation. Alistair also took the opportunity to consider the future of the industry and of SCNZ, identifying new challenges and laying down the establishment of a world class compliance regime as a key goal for the organisation.



Marcus Nalter from Worksafe NZ was next up and challenged delegates to adopt a new way of thinking as he talked through the effects of the recent Health & Safety Reform Bill and emphasised how important the bill is in terms of ensuring that all workers get home healthy and safe.

Stuart Oliver, Holmes Consulting, and David Moore, Grayson Engineering, then gave an interesting look behind the scenes at the work that has gone into The Christchurch Justice and Emergency Services Precinct, one of the anchor projects in the city's recovery plan.



"And now for something completely different" aptly sums up the next speaker – John Anderson. Creator of the international business, Contiki Holidays, John held the audience captive with his moving and inspiring story of how his overwhelming desire to see Europe as a young man led him to not only travel but to also start what is now a hugely successful business and world-renowned brand with just 25 pounds!

Craig Foss MP had a hard act to follow, but expertly met the challenge with an interesting talk on the contribution SMEs make to the NZ economy and the importance for SMEs to innovate.

The afternoon was wrapped up with the industry-led Steel Fabricator Certification scheme, an excellent example of innovation which gives local fabricators a powerful point of difference. See "Five New SFC Certified Fabricators Celebrated at Queenstown" for more information.

Following the General Forum, delegates moved to the bar for networking drinks and then into the hotel restaurant for the climax of the day, the highly enjoyable and relaxed evening dinner. Everyone was kept entertained by the colourful and controversial Tim Shadbolt, Mayor of Invercargill, who took on the job of post-dinner speaker.



Tim Shadbolt, Mayor of Invercargill, entertaining delegates after dinner

Many thanks to everyone who attended and to our sponsors for enabling us to make this event so successful and enjoyable. Don't forget to rate your experience on the infamous SCNZ 10th Anniversary app!

Presentations from the event are available on the 10th Anniversary App. If you have any questions or feedback, please contact Chris Burns, Senior Structural Engineer – Industry (email: chris.burns@scnz.org or phone: 09 262 6684).

Event sponsors:



QUEENSTOWN ALL-REGION FABRICATOR FORUM

An All-Region Fabricator Forum formed a central part of our 10th Anniversary event in Queenstown and proved highly popular with approximately 90 attendees taking time out of their busy schedules to network and discuss pressing industry issues.

The first speaker of the afternoon, Dean Pouwhare from D&H Steel Construction gave an informative overview of the new qualifications for rigging, which he has been instrumental in developing.



Dean was followed by Chris Burns, Senior Structural Engineer (Industry), who presented the findings of a recent SCNZ study on fabricator charge out rates (see [New Guidance Report on Fabricator Charge Out Rates](#) for more information). Chris also introduced an estimating software tool that can help small to medium sized fabricators in estimating structural steelwork on the basis of man hours.

An open session prompted many interesting questions and a lengthy discussion on the threat of offshore fabrication, a pressing issue that is of great concern to members.

Minutes of the All-Region Forum, incorporating discussion points, have been distributed to all our fabricator members. **Please contact Chris Burns, Senior Structural Engineer – Industry (email: chris.burns@scnz.org or phone: 09 262 6684) if you have any questions or would like to suggest a topic that we should cover at future events.**

The next Regional Fabricator Forums – covering the Northern, Central and Southern regions of the country will take place in June/July.

Northern Chapter Forum

5pm-7pm on Wednesday 22 June at HERA House, Manukau (Auckland).

Central Chapter Forum

5pm-7pm on Wednesday 29 June at the Coachman Hotel in Palmerston North.

Southern Chapter Forum

5pm-7pm on Wednesday 6 July at the City Park Hotel in Christchurch.

Full details are available on the SCNZ 10th Anniversary app, which will now also be used for 2016 SCNZ Forums. **To register for your local event, please contact Rebecca Symonds, Marketing Administrator (email: rebecca.symonds@scnz.org or phone: 09 263 5638).**

FIVE NEW SFC CERTIFIED FABRICATORS CELEBRATED AT QUEENSTOWN

The Steel Fabricator Certification (SFC) scheme continues to go from strength to strength with the latest group of structural steel fabricators to achieve certification recognised at our recent 10th anniversary event in Queenstown.

SCNZ and HERA, together with Craig Foss MP, Minister for Small Business, presented SFC certificates to Patton Engineering, Cambridge Steel Fabricators & Engineers, Weldlok (NZ), Action



Engineering and Modern Construction.

Developed jointly by SCNZ and HERA, the SFC scheme provides procurers and specifiers with significantly reduced compliance risk. The launch of the independent quality assurance scheme marked a major milestone for our industry, creating an important point of difference for locally fabricated steel compared with imported prefabricated steelwork.

Chris Burns, Senior Engineer (Structural), commented “We are thrilled that nearly a quarter of our fabricator

members have now achieved certification under this scheme, ensuring that 70% of the local industry output is meeting international best practice.

“Although the initial focus of the SFC scheme was on fabrication, we are currently working on extending the scheme to include erection and coatings so that the scheme encompasses more procedures associated with our industry and extends these levels of excellence to those areas.”



Five more fabricators celebrating attaining SFC certification in Queenstown

The next SFC presentation ceremony will be held in September 2016 as part of our AGM. If you are interested in becoming certified then get in touch now to have an informal discussion about what the process will involve.

For more information about the scheme and to express an interest in becoming certified, please contact Chris Burns, Senior Structural Engineer – Industry (email: chris.burns@scnz.org or phone: 09 262 6684).

Newly certified fabricators:



DATE FOR YOUR DIARY: SCNZ SEPTEMBER AGM CONFIRMED

Following hot on the heels of the huge success of Queenstown, the next major SCNZ event will be the AGM, which will be held in Napier, the art deco capital of New Zealand on Friday 16 September.

Please diary this date and plan to book your travel and accommodation without delay to save \$\$.

Delegates will stay at the Scenic Hotel Te Pania (Marine Parade), which boasts a remarkable location on the edge of Hawke's Bay. Why not bring your partner and take the opportunity to extend your stay in "wine country" into a weekend break?



Watch this space for further details (including confirmation of the event venue).

NEW REPORT ON FABRICATOR CHARGE OUT RATES

SCNZ has launched a new *Steel Guidance Report on Fabricator Charge Out Rates and Variation Management*, which is intended to help fabricators accurately assess and calculate their charge out rate to boost industry confidence in the figures.

The Report is an output of the Understanding the Value of Steel (UtVoS) initiative, which SCNZ launched early in 2015 to provide support for industry and professional quantity surveyors in pricing structural steelwork accurately and efficiently.

Assessment of data collated from our member fabricators by an independent quantity surveyor revealed a lot of deviation in how fabricators are calculating their charge out rate, which in turn is having a significant effect on company pricing strategies.

The new Report includes suggestions based on best practice found in the fabricator study; as well as recommendations on labour costs, ways of calculating charge out rates and variations that should be taken into consideration.

Chris Burns, Senior Structural Engineer (Industry), says "Although it is up to every individual fabricator as to what tools and processes they use, we have tried to provide a comprehensive menu of suggestions and recommendations, to help fabricators adopt best practice and develop coherence in pricing strategies."

If you are interested in making sure your pricing is accurate and efficient, please contact Chris Burns, Senior Structural Engineer – Industry (email: chris.burns@scnz.org or phone: 09 262 6684).

IT'S HERE!

We are delighted to announce the launch of the new SCNZ website (www.scnz.org) which offers quick and easy access to essential information about steel construction and is part of SCNZ's ongoing efforts to enhance the quality and availability of information to industry and our members.



We hope that you enjoy discovering the new website and find it easy to navigate. It has been designed as a user-friendly guide for engineers, fabricators, architects, builders and quantity surveyors. Areas specifically tailored to meet the needs of each of these groups are clearly accessible from the home page, so you'll always be able to easily find helpful and informative resources relevant to you.

We've included sections on the home page which focus on upcoming events and industry news to help you stay abreast of the latest developments and opportunities for professional development. There are also handy links from the home page for you to contact our technical help desk and access a comprehensive set of invaluable resources (e.g. industry reports and online tools).

Alistair Fussell, SCNZ Manager, comments: ““Estimates suggest that we are on the brink of the largest construction boom in New Zealand for 40 years. Alongside the opportunities this upturn presents come risks and challenges, including increased competition from imported fabricated products and demand from clients for better solutions and reduced costs. This makes it really important that we focus our minds on what we can do to assist construction markets to work well throughout the country.

“The aim of our new website is to be a ‘one-stop shop’ for busy people and to promote business excellence in the steel construction sector. We have packed it with resources designed to support our members to develop outstanding practices and strengthen performance.”

Emails have been sent out with new log in details to website users and all members. **Please ask your representative to take the opportunity to go in and update your company profile, which appears in our Member Directory and is a valuable marketing tool.**

We would love to know what you think. Please do get in touch to let us know what your first impressions are. Hopefully you will find the site easy to use, clean and efficient. However, it's only to be expected that one or two things won't work quite as expected! **Please let Rebecca Symonds, Marketing Administrator, (rebecca.symonds@scnz.org) know if you spot any glaring typos,**

bugs or something that doesn't work on your system.

SCNZ MEMBERSHIP PACKAGE ENHANCED

At the March 2016 SCNZ Executive Council meeting it was agreed that all SCNZ members will be given access to SCNZ's highly valued and well-used online resources, such as the Online Connections Guide, at no extra charge.

Hard copy resources will be charged on a cost recovery basis for printing and postage expenses.

In recognition of this increased membership benefit and also of the fact that the annual membership fee has remained unchanged for the past 10 years, **the annual SCNZ membership fee will increase to \$200 per annum.**

This change will be effective as of now for new membership applications and for existing members in September, when the membership renewals are due.

To access the online tools, use your company details to log-in and visit the Design Tools and Resources sections of our new website www.scnz.org.



If you have any difficulties or questions, please contact Rebecca Symonds, Marketing Administrator (email: rebecca.symonds@scnz.org or phone: 09 263 5638).

STANDARDS UPDATE

SCNZ structural engineers and HERA staff are involved in a number of Standards Australia technical committees, responsible for either revising or developing new joint AS/NZS Standards. These include BD 001 Steel Structures; BD 0023 Structural Steels; BD 0032 Composite Construction and ME-029 Fasteners.

Several of these projects have reached important milestones and are now either available for public comment or have been recently published.

Draft Standards Available for Public Comment

BD 001 Steel Structures: AS/NZS 5131 Structural Steelwork – Fabrication and Erection

This draft Standard, developed by a joint Australian and New Zealand technical committee, sets out the minimum requirements for the construction of structural steelwork involving:

- Fabrication including bolting and welding
- Preparation of steel structures for corrosion protection
- Corrosion protection comprising painting and galvanising
- Erection and modification of steelwork
- Enhanced product conformity requirements including quality assurance measures (personnel and procedures); and inspection and test plans.

It applies to complete structures, individual members and components, and manufactured components pre-fabricated for inclusion in steel structures. AS/NZS harmonises existing sections of other standards to provide a dedicated document on fabrication and erection requirements.

The draft Standard also introduces the fundamental concept of a 'construction category'. This is risk-based, fit for purpose categorisation of a structure or parts.

The closing date for public comments is Wednesday 25 May 2016 and the draft Standards document can be downloaded from the [Standards Australia website](#)

SCNZ and HERA have produced a Steel Advisor article GEN2003, which discusses the rationale for the development of this Standard and some thoughts on how this draft steelwork execution Standard might fit in with future structural steel standards development work. **Members can download this article from the Resources section of the SCNZ website (www.scnz.org) and non-members can request a copy of this article by emailing info@scnz.org.**

If you have any queries on this Standard, please contact Alistair Fussell, SCNZ Manager (email: alistair.fussell@scnz.org or phone: 09 262 6683).

ME-029 Fasteners: AS/NZS 1252 High-Strength Steel Bolt Assemblies Comprising Bolts, Nuts and Washers for Structural Engineering

The drafts DR AS/NZS 1252.1 and DR AS/NZS 1252.2 have been published for public comment by Standards New Zealand.

The objective of AS/NZS 1252.1 is to provide manufacturers of high-strength steel bolt assemblies with requirements and tests to ensure that such assemblies are suitable for bolted connections in steelwork construction, consistent with the steel design Standards AS 4100 and NZS 3404.

The objective of AS/NZS 1252.2 is to give provisions around verification testing of high-strength steel bolt assemblies for structural engineering for suppliers, specifiers (e.g. designers, procurement agencies and purchasers) and third-party certification bodies, to provide confidence in the product's conformity with the requirements of AS/NZS 1252.1.

Of particular interest to designers is the nomination of bolt assemblies to EN 14399-3 Type HR property class 8.8 as an alternative assembly type, which is deemed to satisfy the requirements of AS/NZS 1252. Furthermore, it is the intention of the committee responsible (ME-029) to replace AS/NZS 1252 with the EN 14399 series, which will require further amendment of NZS 3404 and AS 4100 in the future.

The closing date for public comments is Wednesday 18 May 2016 and the drafts can be downloaded free of charge from the [Standards New Zealand website](#)

If you have any queries on these drafts, please contact Kevin Cowie, Senior Structural

Newly Published Standards

BD 0023 Structural Steel: AS/NZS 1163; AS/NZS 3678; AS/NZS 3679.1; AS/NZS 3679.2

The suite of AS/NZS Structural Steel Standards referenced in NZS 3404 have been published recently. These include:

- AS/NZS 1163: 2016 Cold formed hollow sections
- AS/NZS 3678: 2016 Structural steel – hot rolled plates, floor plates and slabs
- AS/NZS 3679.1: 2016 Hot rolled bars and sections
- AS/NZS 3679.2: 2016 Welded I sections.

Key additions to all of these Standards include the mandating of product conformity requirements and provisions relating to boron content.

Copies of these new standards can be obtained from the [SAI Global website](#).

If you have any queries on these Standards, please contact Alistair Fussell, SCNZ Manager (email: alistair.fussell@scnz.org or phone: 09 262 6683).

45% SPARE CAPACITY REVEALED BY INDUSTRY SNAPSHOT REPORT

SCNZ's first *Structural Steel Industry Snapshot* has highlighted that there is significant spare industry capacity for the final two quarters of 2016 – estimated at 40,000 tonnes, based on a current estimated total capacity 110,000 tonnes per annum.

The capacity of the structural steel industry – in particular, our fabricators - remains a topical issue as the construction sector experiences the biggest building boom in 40 years.

This half-yearly report contains solid data on industry capacity, lead times, market share etc. and is a key tool in SCNZ's drive to convince the market that our industry has the capacity to satisfy demand.

Alistair Fussell, SCNZ Manager, comments: "Our industry has shown great foresight by embracing new technology and investing substantially in new plants to increase capacity and improve technology, meaning our fabricators have more than enough capacity to satisfy projected volumes.

"However, a widespread view persists that fabricators nationwide will struggle to meet the demand for structural steel as the rebuild in Christchurch continues, and as building activity in other centres gathers momentum. This misconception is very concerning to us because with a number of large projects coming on stream, it is important that



we don't give the market a reason to look overseas to get work done.

“That's why as an industry it's important that we have better visibility of projected demand and communicate this to our clients. Accordingly, our new *Structural Steel Industry Snapshot* is a regular update that aims to assure industry players that our fabricators are well-placed to meet demand.”

Please take a moment to look at the [Structural Steel Industry Snapshot](#) and share it with your networks: include a link on your website, post on your LinkedIn profile, and refer to it in any direct communications you have with your customers, industry contacts and local MPS.

SUBSTITUTING GRADES OF STEEL – USE OF ALTERNATIVE STEELS

HERA and SCNZ are currently working on a project that will provide guidance for structural engineers on the impact of alternative materials on the capacity factor (f).

While many of the same issues around ensuring and demonstrating compliance of structural steelwork apply, regardless of origin, there are additional challenges that need to be understood and addressed when structural steelwork is sourced internationally.

A consideration often associated with imported fabricated steelwork is the use of alternative steels not recognised in the Steel Structures Standard.

If steel products outside those recognised in NZS 3404 are to be used, expert assessment is required to demonstrate that the materials are equivalent to a recognised steel. This includes ensuring that the use of this steel will not erode the margin of safety assumed in the reliability analyses used to establish the strength reduction factors in the Standard. Such an assessment is outside the scope of a verification method (VM/B1) – i.e. is an alternative solution and will require expert peer review.

Addressing the technical issues associated with the use of alternative steels is outside the scope of consulting engineering services historically offered for New Zealand structural steel projects. Therefore, the consulting fee charged will need to reflect the additional time and the contracting of specialist expertise (structural reliability and metallurgical).

In addition, a peer review of the alternative solution will be required and there will also potentially be consenting delays as an amendment to the Building Consent will be required if a decision is made to substitute steel grades after the Building Consent has been issued for the project.

Until guidance is published, structural engineers needing technical assistance on the use of alternative steels can contact SCNZ (Alistair Fussell on 9 262 6684) or HERA (Dr Stephen Hicks on 9 262 4841).

Watch out for an article by SCNZ and HERA, which discusses this issue in greater detail in the upcoming issue of the [SESOC Journal](#).

ENSURING INTEGRITY WHEN WELDING IMPORTED STEEL CONTAINING BORON

Recent reports indicate that some imported steel may show elevated levels of boron, raising

concerns about the integrity of steel fabrication work undertaken when welding structural steel containing boron.

Traditionally, boron has not been intentionally added to structural steel manufactured in New Zealand or Australia to AS or AS/NZS Standards. However some overseas steelmakers add boron to structural steel to take advantage of export subsidies or for other reasons.

Boron alloyed steel can be designated to AS or AS/NZS Standards such as AS.NZS 1163, but boron is not always listed on the material certificate (the “mill cert”).

Although the mechanical properties of the boron alloyed steels can be expected to comply with the Steel Standard e.g. AS/NZS 1163 (provided the steel is supplied by a “trusted” supplier), the welding requirements of the steel standard were established without consideration of the effect of boron as an alloying element.

Only minor percentages of boron may greatly increase the hardenability of steels and this is a consideration for welding. The boron content has also been found to significantly influence microstructure, notch sensitivity and impact properties of welded carbon steel.

Fabricators should advise their steel supplier to declare the boron content, as additional butt weld testing to verify properties of the heat affected zone is required to qualify welding procedures for steel containing total boron equal to or exceeding 0.0008%.

Click [here](#) to read the full HERA article, which discusses the steps that fabricators should take to ensure the integrity of their steel fabrication work when welding structural steel containing boron.

SCNZ PUBLISHES FABRICATOR GUIDANCE ON WARRANTIES AND GUARANTEES

SCNZ has issued a *Guidance Note on Warranties and Guarantees*, in response to the burgeoning risk faced by fabricator members who are increasingly being asked to provide warranties and/or guarantees and/or continuity guarantees when entering into contracts.

Although contractors often use the terms “warranty” and “guarantee” interchangeably, there are different legal meanings and derivations of each. Ultimately both warranties and guarantees create obligations that are enforceable and which can result in claims for damages against the person giving the obligation.

The standard form construction contract NZS3910:2014 introduced a new 13th Schedule which is a form of warranty between the Principal and a subcontractor. In addition, the collapse of Mainzeal has seen Principals requesting onerous continuity guaranteed from subcontractors.

SCNZ’s Guidance Note covers warranties, collateral warranties, guarantees and continuity guarantees; as well as specific warranties relating to coating and paint, steel material and workmanship. It also includes example ‘general tender tags’ that can be adapted to suit a particular contract if you are concerned that documents have insufficient information about the warranties or guarantees that you are being asked to provide; and ‘specific tender tags’ that can be adapted if you are concerned that the warranties being requested are unreasonable.

If you are in any doubt about the significance or implications of the warranties or guaranteed you are being asked to sign, then you should seek professional advice.

For further information, or to request a copy of the **Guidance Note**, please contact **Chris Burns, Senior Structural Engineer – Industry** (email: chris.burns@scnz.org or phone: 09 262 6684).

Steel Construction New Zealand

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