

STRUCTURAL STEEL

Market update – 31% spare capacity

Tackle supply issues head-on with planning and local collaboration

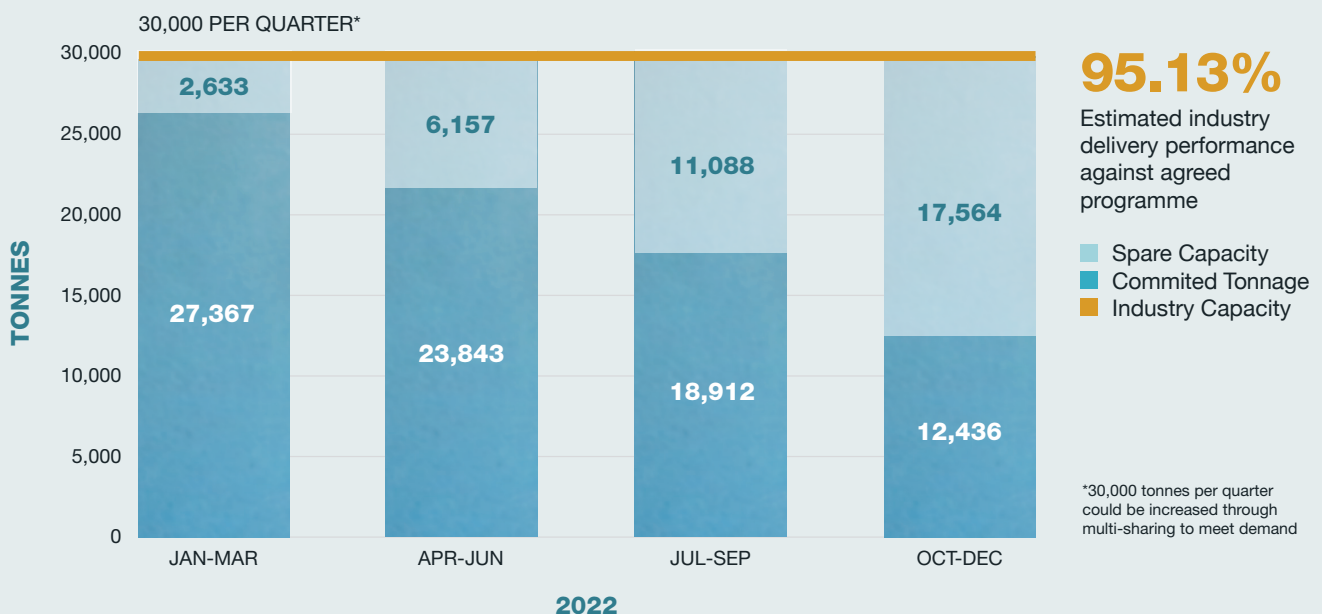
It's no secret that our buoyant construction market is being fettered by COVID-related supply constraints. According to a recent survey into supply chain issues commissioned by the Construction Sector Accord, construction businesses most frequently identified structural wood (36 percent) and non-structural wood products (21 percent) as the products in short supply – only 10 percent identified steel. *(Continued on page 2)*

The '5Cs' – the steel advantage

CAPACITY: Our local structural steel industry is well equipped to cope with a spike in demand brought on by the Government's continued focus on firing up the construction sector to support New Zealand's economic recovery. The industry has proven capacity to deliver on all projects – there is no need for procurers to go offshore to satisfy demand.

In the past 12 months the New Zealand structural steel sector turned approximately 100,000 tonnes of structural steel into buildings and bridges through its network of steel distributors, fabricators and erectors. SCNZ's latest quarterly fabricator forward-workload survey indicates there is significant spare industry capacity for the year ending December 2022 – estimated at 31 percent, based on a current estimated total capacity of 120,000 tonnes per annum.

SCNZ Estimated Fabrication Tonnages (per quarter)



CAPABILITY: Our structural steel industry has proven capability to handle a range of construction projects. Thanks to our industry's investment in R&D and innovation, local structural steel fabrication capacity has increased from 20,000 to 120,000 tonnes over the past 20 years and led to world-first advances in seismic load-resisting systems and performance-based fire design. Our industry is also committed to developing the skills of our people: 9.1 percent of the total workforce employed by local structural steel contractors are in a training programme, and 69 percent of structural steel contractors employ an average of four apprentices.

COLLABORATION: Our highly collaborative network of 127 fabricator companies has proven ability to meet demand, regularly partnering with each other nationwide – and with the head contractor and lead consultants as part of the Early Contractor Involvement (ECI) procurement model – to ensure a project is delivered to a high standard, on time and on budget. From the get-go, ECI allows our fabricators to add value to the design team by helping to explore buildability, timeframes and risk. The approach delivers projects that carry much less risk, enjoy fewer variations and are typically better planned.

COMPLIANCE: Quality and compliance are at the core of SCNZ activities and vital at a time when we cannot rely on the performance of imported prefabricated product from low-cost economies. SCNZ's industry-led quality scheme Steel Fabrication Certification (SFC) ensures that participating structural steel contractors have international best-practice personnel and quality management systems in place. 90 percent of the sector's annual output is now delivered by SFC-qualified fabricators. SCNZ's Structural Steel Distributor Charter complements SFC by ensuring that structural steel is sourced using best-practice procurement. All seven SCNZ Distributor members have been independently audited to satisfy the requirements of the Charter.

COMPETITIVE: Structural steel is a cost-effective building solution. Investment in fabrication technology and workshops, and the modern approach of simple bolted connections, has improved productivity in New Zealand's structural steel industry. Overall construction programmes for multi-level commercial projects using structural steel are generally 10-15 percent shorter compared to other materials, thanks to the efficiency of off-site manufacturing and fabrication.

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That said, today's extended lead times mean that planning is ultra-critical. Clients need to place their order for structural steel six months ahead of when it's due on site to ensure it arrives in time. Prices are shifting too, with another hike expected in January. So, an added benefit of getting in early is to beat price rises.

Procuring fabricated steel from offshore has never been riskier – variables include the high cost of shipping fabricated steel, (which takes up more volume than the raw material), the risk of damage to finishes like fire-rated coatings and changes in the design. Conversely, there are multiple benefits to engaging a local structural steel contractor, including their accessibility, flexibility and compliance. They proactively work alongside clients to manage supply issues and mitigate risk.

The present landscape stresses the importance of increased collaboration throughout the construction industry. Everyone – from developers, architects and engineers to quantity surveyors, builders and subcontractors – has a part to play. Early Contractor Involvement (ECI) is vital. It allows structural steel contractors to offer insights into buildability, programmes and risk, and identify cost- and time-saving solutions.

Ultimately, to help overcome the supply issues facing the construction industry, more manufacturing and processing needs to happen in New Zealand. It requires both public and private ventures to consider the broader outcomes of any procurement decision and support local providers where possible.

Key industry facts

In the past two decades demand for structural steel solutions has grown substantially. Today, structural steel's share of the multi-level construction market is more than 50 percent nationwide. In Christchurch, due to structural steel's strong seismic performance, its market share is over 80 percent – up from virtually nil before the Canterbury earthquakes.

Market share: 50 percent nationally and >80 percent in Christchurch

Annual output: circa 100,000 tonnes in the past 12 months

Structural steel fabrication companies: 127 nationwide

Current annual capacity: estimated at 120,000 tonnes, which could be increased by multi-shifting to meet demand

Employment: approximately 5,000 workers

Industry investment: significant investment in several new state-of-the-art workshops since 2007

Fabrication certification: 50 structural steel fabrication companies representing 90 percent of the sector's annual output participate in independent quality assurance scheme SFC.

Industry who's who

Manufacturers (steel mills) produce structural steel products, including hot-rolled elements (I beams and columns, channels, plate and angles) and hollow sections (circular, rectangular and square).

Merchants / distributors import steel for use in the construction industry. Such companies have extensive warehousing facilities to carry a large inventory required to service market needs and provide limited pre-processing of structural material prior to fabrication.

Structural steel fabrication companies physically prepare the structural steel for a building or bridge through a process of developing detailed drawings (the work of a detailer) based on the construction drawings provided by a structural engineer. They are responsible for material management, cutting, drilling, shop fitting (bolting or welding), painting and galvanising (when required), and shipping.

Erectors assemble the structural steel members into a structural frame on the project site by bolting and field welding structural steel components together according to the construction documents. In New Zealand the fabricator will typically manage the erection process of its steelwork either through the use of its own rigging crews or subcontracted resource.

For more information about who's who in structural steel, visit scnz.org and steelfabcert.co.nz



For information about becoming a member, contact:

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