NZS 3404 REVIEW

In use since 1989, the steel structures standard is currently being revised and will be divided into seven parts to help users.

By Rosalie Chamberlain, Standards New Zealand

NZS 3404, Steel structures standard, has been used for steel design and construction since its first edition in 1989. It is now in its third edition, which was published in 1997.

Seven parts for new standard

As a result of the increasing use of steel structures and changes to the regulatory framework, there is a need to ensure more reliable, durable and consistent quality of steel work in New Zealand, according to Debbie Chin, Chief Executive of Standards New Zealand. ‘Dividing the standard into seven inter-related parts will ensure the provisions, and the knowledge that underpins them, can be more easily accessed by the relevant end-users.’

The seven parts will cover materials, fabrication and construction; structural analysis; general design of members and connections; design of composite members; design for fire; design for fatigue and design for earthquakes.

Wide involvement

The Department of Building and Housing sponsored NZS 3404’s revision, in combination with voluntary committee support from industry. Standards New Zealand formed an expert development committee, including representatives from architectural, engineering, fabrication, precast concrete and building companies, as well as from Steel Construction New Zealand Inc. and the New Zealand Heavy Engineering Research Association.

Part 1 out in 2009

The first part, NZS 3404.1:2009 Steel structures – Part 1: Materials, fabrication, and construction, is expected to be published in the first half of 2009.

Part 1 brings all the construction and fabrication material into a stand-alone document. ‘There was a need to incorporate feedback from users, clarify good practice and provide a body of commonly accepted knowledge,’ says Clark Hyland, Part 1 Development Committee Chair.

Part 1 sets out minimum requirements for the selection of materials, corrosion protection systems and the fabrication, erection and construction of steel structures. It applies to building structures; crane support girders; highway, railway and pedestrian bridges; and composite steel and concrete beams and columns. Users include architects, builders, Building Control Authorities, building inspectors, coatings applicators, fabricators, regulators, steel distributors, steel constructors and structural engineers.

Significant new provisions added include:

- selection of protective coatings for the New Zealand environment
- a means of categorising the finishing requirements of architecturally exposed steelwork
- inspection of welding for earthquake-resistant joints
- clarification of requirements for seismic grades of steel, for earthquake applications
- clarification and expansion of tolerances, which are up-to-date with international standards
- composite construction provisions
- special provisions for highway/ railway bridges
- some advisory recommendations for fabrication quality management systems.


To be notified when revised parts of NZS 3404 are published, visit www.standards.co.nz, click on Services, then select ‘Keep me up to date’ or phone 0800 782 632.