



Safety Lines



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WorkSafe Week 2000 is “On the Job”

This year's WorkSafe Week is targeting the main causes of accidents and injury in the workplace.

The theme is “A Safe Workplace is no Accident”.

The week will run from 1-7 October and focus on the traditional “black spot” industries of agriculture, construction and forestry as well as the across-industry issue of hearing loss.

“The aim of WorkSafe Week is to bring home the appalling toll of accident, injury and illness as a step in improving health and safety standards,” says OSH's General Manager, Bob Hill.

“With the theme ‘A Safe Workplace is no Accident’, we hope people will think about the two messages contained in it. The first is to encourage employers and employees to be a part of the drive to lower accidents, injury and illness in the workplace.”

“The second message is that a safe workplace is the product of a planned and systematic approach to health and safety.”



OSH has launched a dedicated WorkSafe Week website to help deliver the message and support businesses to improve their health and safety standards. The address for the website is:

www.worksafeweek.org.nz

The site not only has information on health and safety and WorkSafe Week, it also focuses on how businesses can get involved in the Week. This includes events being run by OSH, and importantly, ideas and support on how businesses can run their own in-house events.

“Past WorkSafe Weeks have shown a huge number of businesses see the benefit of using WorkSafe Week to make health and safety part of the way they work.”

“This year we really want to see as many people getting the benefits of getting involved in the week as possible.”



Adding Value Through Accreditation of Inspection Bodies

Inspection body accreditation in New Zealand has been stimulated by regulatory requirements such as those in the Health and Safety in Employment (Pressure Equipment, Cranes and Passenger Ropeways) Regulations 1999 (PECPR Regulations) and by agreements aimed at reducing barriers to trade.

These factors have become drivers for the local accreditation authority, International Accreditation New Zealand (IANZ) to pursue international acceptance of inspection and test data and mutual recognition agreements between accreditation authorities.

Accreditation of inspection bodies is now becoming the mechanism for regulatory recognition in New Zealand and many overseas jurisdictions. It is also being recognised by third parties as an indicator of competence and ability of an inspection body to provide services.

This wider recognition is leading to a greater focus on the economic and commercial consequences of accreditation.

Improving performance

Accreditation adds value by motivating an inspection body to improve its quality system as well as evaluate and maintain its technical competence.

Following initial certification these improvement processes are encouraged by regular surveillance audits. These are performed, on inspection bodies

operating under the PECPR Regulations, by teams comprised of an auditor from the accreditation authority and a technical assessor from OSH.

Accreditation gives users of inspection services and other stakeholders assurance that inspection body quality systems and staff competencies are being regularly assessed to ensure:

- The quality of inspection services is satisfactory; and
- Continuous improvement in performance is maintained.

Confidence for inspection body customers

Customers benefit from inspection body accreditation because the rigorous assessment of inspection bodies by independent technical assessors engenders confidence.

Controllers are required to ensure the safety of equipment under the HSE Act. They engage an accredited inspection body to help them meet these obligations, and to comply with the PECPR Regulations.

There are currently eight accredited inspection bodies in New Zealand recognised under the PECPR Regulations. These vary from sole operators to a large company of over 70 employees. They have scopes of accreditation ranging from equipment/inspection specialisation to full design verification and inspection services for all equipment covered by the PECPR Regulations. Up-to-date information on the capability and the scope of accreditation of these organisations is available from IANZ. Using this data when selecting an inspection body will assure users that they are engaging

Continued on page 3 ...

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Continued from page 2 ...

competent organisations knowledgeable about regulatory requirements for pressure equipment, cranes or passenger ropeways.

Accreditation provides a tangible measure of an organisations impartiality and competence.

When considering the merits of accreditation it is useful to look beyond accredited inspection bodies. The recent publicity about incorrect results from testing organisations, in all instances, concerns non-accredited organisations. This is not to say that accreditation ensures immunity from errors but should an error occur, an accredited authority would have systems to detect and rectify them.

Contribution of inspection body accreditation to trade

Inspection body accreditation is facilitating international acceptance of test and inspection reports and “once only” inspection and testing.

This is assisted by recognition arrangements between accreditation authorities and a consequential flow on of acceptance of the services of accredited inspection bodies by regulatory agencies.

IANZ has a mutual recognition agreement with the Australian accreditation authority (NATA) and has negotiations at an advanced stage in other jurisdictions. As a result of this work and the provision made for accreditation in the PECPR Regulations, OSH has been able to recognise a wide range of accredited overseas inspection bodies. These organisations may be used for “once only” design verification and/or fabrication inspection of equipment imported to New Zealand.

For more information on accreditation refer to:

- IANZ website:** www.ianz.govt.nz
IANZ publication: *Procedures and Conditions of Accreditation*
IANZ publication: *New Zealand Code of Inspection Management Practice*

or,

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Inspection of Hot Water Boilers

Hot water boilers come within the scope of the Health and Safety in Employment (Pressure Equipment, Cranes and Passenger Ropeways) Regulations 1999. They are defined in these regulations as follows:

“Hot water boiler

- a) Means a device:
 - i) Most of which is an arrangement of pressure containment parts; and
 - ii) That does not produce or contain steam; and
 - iii) The purpose of which is to heat water at pressures exceeding 200 kPag and temperatures exceeding 100C—
 - A) By use of a directly applied combustion process; or
 - B) By the application of heated gases; and
- b) Includes any of the following that is necessary to ensure the pressure integrity of the device or its safe operation:
 - i) Boiler piping:
 - ii) Combustion equipment:
 - iii) Combustion management systems:
 - iv) Controls:
 - v) Controls for water temperature and flow:
 - vi) Fans:
 - vii) Pressure fittings:
 - viii) Pumps:
 - ix) Supports; but
- c) Does not include a device of a kind that could reasonably be expected to be used only for domestic water heating”

Boilers falling within this definition, which enter(ed) service subsequent to the Regulations coming into effect, must be designed and manufactured in accordance with a recognised standard from the OSH *Approved Code of Practice for the Design, Operation, Maintenance and Servicing of Boilers* and the other requirements of this code. This includes design verification, fabrication inspection and in-service inspection and certification by a recognised inspection body.

Boilers falling within the above definition, which entered service prior to the regulations coming into effect also require in-service inspection and certification by an

inspection body. The following process may be applied when bringing this group of hot water boilers under survey:

- Where a manufacturer's statement is available, certifying that the boiler was manufactured in accordance with a standard noted in the boiler code of practice, an exemption will be issued covering design verification and fabrication inspection. (This will be subject to a functional test and survey of the boiler by an inspection body and the inspector recommending the issue of a certificate of inspection.) A certificate may then be issued with an inspection period determined in accordance with AS/NZS 3788.
- Where a manufacturer's certificate is not available and the boiler is rated hazard level C or lower by AS 3920.1/AS 4343, an exemption will be issued covering design verification and fabrication inspection. (This will be subject to a functional test and inspection of the boiler by an inspection body and its inspector recommending the issue of a certificate of inspection.) A certificate may then be issued with an inspection period determined in accordance with AS/NZS 3788.
- Where a manufacturer's certificate is not available and the boiler is rated hazard level B or higher by AS 3920.1/AS 4343, the boiler controller shall arrange for upgrading of the boiler in accordance with a recognised standard or, refer the boiler to OSH for review. Where appropriate, an exemption will be issued covering design verification and fabrication inspection. (This will be subject to a functional test and inspection of the boiler by an inspection body and its inspector recommending the issue of a certificate of inspection.) A certificate may then be issued with an inspection period determined in accordance with AS/NZS 3788.

Where a hot water boiler, which has been given an exemption from design verification and fabrication inspection, is relocated or altered it shall be upgraded to comply with the full requirements of the *Approved Code of Practice for the Design, Operation, Maintenance and Servicing of Boilers*. This shall include design verification and sufficient NDE to demonstrate compliance with a recognised standard and the code of practice.

When calculating hazard levels for hot water boilers allowance should be made for the notes to Table 1, AS 4343.

Crane Hook Failure



The photograph shows a hook from a 3-tonne overhead travelling crane. The hook parted company with its nut and dropped a load during a lifting operation. Fortunately there was no injury or damage.

Inspection of the failed hook showed that the threads were almost completely corroded. As a result, the load was being carried by the nut-locking pin, which eventually failed. Externally there was no visual evidence of this deterioration in condition.

During operation the hook assembly was frequently immersed in a hot water bath when placing and removing product.

It appears that due to this regular immersion the anti seize compounds used during assembly had washed away and the thread corroded until it failed.

A new hook was fitted and assembled with a non water-soluble compound.

In addition, the method of slinging and lifting the product has been changed to avoid immersion of the hook in the hot water bath.

During its last inspection the hook was removed to gauge the effectiveness of the remedial action. All was found in order with no deterioration having taken place in the previous 6 months.

Controllers of cranes operating in similar environments should take appropriate action to inspect for this condition.

The above article was prepared by Graham Dart, District Manager of M&I Safety Inspection Services Ltd., Christchurch.

Code of Practice for Pressure Equipment

The final draft of the *Code of Practice for Pressure Equipment* is almost complete.

The process to get to this stage included:

- The appointment of a technical committee and independent chairman comprised of representatives from a wide range of pressure equipment industry participants.
- Several meetings and preparation of a draft by the technical committee.
- A “Gazette” notice advising interested parties of the availability of a public consultation document.
- Public consultation following distribution of over 172 copies of the draft to organisations and individuals. (Drafts were sent to industry participants and to others who responded to notices in the *Gazette* or *Safety Lines*.)
- Review of all comments received from the public consultation process and, where appropriate, amendment of the draft to reflect these comments. (Forty-one formal and many informal submissions were received.)

Copies of the final draft and a covering report should be available from the end of October. These will be distributed to organizations and individuals that made a formal submission on the draft.

The draft and report will also be available from Engineering Safety or, from the OSH website at:

<http://www.osh.dol.govt.nz/order/catalogue/draft.shtml>

Boilers and Pressure Vessels: International Harmonisation of Codes and Standards

Technical Committee ISO/TC 11 of the International Organization for Standardization has prepared a draft ISO Standard ISO/DIS 16528 *Boilers and pressure vessels – International harmonization of codes and standards*. This draft provides for the harmonising of national and regional boiler and pressure vessel codes and standards with the objective of promoting safety and facilitating trade.

Harmonisation would be achieved through a registration process, which requires submitted codes and standards to meet specific criteria contained in the draft standard. These criteria are required by ISO for a functional

document and should ensure that there is provision for the following components in any registered standard:

- *Scope*
- *Normative references*
- *Terms, definitions and symbols*
- *Language and units of measurement*
- *Duties and responsibilities*
- *Classification of boilers and pressure vessels*
- *Technical requirements*
- *Conformity assessment*
- *Marking*
- *Certification of conformity*
- *Records*

While registration of a code or standard would mean that it satisfies ISO criteria for these components it would not guarantee that the code or standard is technically adequate.

The draft standard also includes an objection process, which would allow members to object to codes and standards that have been registered. These objections must be limited to matters involving the adequacy of coverage of the registration criteria. Concerns relating to the technical adequacy of a code are specifically excluded from the objection process and must be addressed by a submission to the organisation promulgating the code or standard.

Compliance with a harmonised standard would not relieve the parties from obligations under local, national or international laws or regulations.

If the draft ISO document is voted into effect, New Zealand could then register its own standard. This could be a document, which has all technical content developed in New Zealand, or more likely, a standard incorporating a range of overseas boiler and pressure vessel standards plus any additional features required for New Zealand.

The Standards New Zealand representative on ISO/TC 11 committee has advised that New Zealand is expected to support the introduction of the ISO standard. Also, it is expected that the implications for the medium to long term, if an international standard is adopted and a New Zealand standard is registered, are as follows:

- New Zealand pressure equipment manufacturers should be able to more readily export pressure equipment overseas.

- It would assist New Zealand manufacturers in undertaking contracts for equipment for local use where specifications call up the international standard.
- It should assist in breaking down technical barriers to trade. (This would require some overseas jurisdictions to amend their regulatory requirements for pressure equipment)
- New Zealand pressure equipment manufacturers could be exposed to more competition from overseas. (This is expected, if the ISO standard is introduced, regardless of whether a New Zealand standard is registered.)

Standards New Zealand is seeking input from interested parties on the content of a possible New Zealand pressure equipment standard. For more information on the draft standard or, to comment on its introduction please contact:

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New Zealand Standards: Designation

To the uninitiated, the various forms of standard designation can be perplexing, but a review of the following paragraphs will clarify the situation.

New Zealand standards, which have been developed in New Zealand for New Zealand use, bear the prefix NZS. All approved standards, whether developed in New Zealand or not, include NZS in their prefix. The Standards Act 1988 stipulates that only standards approved by the Standards Council are permitted to be called New Zealand standards (and have NZS in their designation).

The most frequently confused distinction is that between AS/NZS and NZS/AS. The prefix AS/NZS designates a joint Australian/New Zealand standard. This is a standard which has been developed by a joint Australian/New Zealand technical committee. NZS/AS designates an adopted Australian standard. This is an Australian standard which has been approved for use in New Zealand. Adopted Australian standards have been singled out from other adopted standards as they are expected to be revised as full joint standards in due

course. There will be fewer adopted Australian standards over time as the current trend is to produce joint standards from the outset.

Adopted standards begin with NZS/xxx, where xxx is the prefix of any overseas or international standard, such as NZS/BS which indicates an adopted British standard. Adopted standards bear a label on the original cover and are frequently approved subject to an amendment. Just to confuse things a little, in previous years, some adopted standards were given an NZS prefix and a number different from that of the parent.

A few examples:

NZS 4781	New Zealand standard
AS/NZS 1200	Joint Australian/New Zealand standard
NZS/AS 3725	Adopted Australian standard
NZS/API 650	Adopted standard
NZS 5855	Adopted standard with different number from parent standard

One last but important element of a standard's specification, apart from the title, is the date. In some circumstances this could have legal or contractual significance. It is usual to specify the standard by including its date of issue (or revision) after the number and separated by a colon (or in some instances by a hyphen) - e.g. NZS 4711 :1984.

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Contents

WorkSafe Week 2000 is "On the Job"	1
Adding Value Through Accreditation of Inspection Bodies	2
Engineering Safety Staff Contact Details	2
Inspection of Hot Water Boilers	3
Crane Hook Failure	4
Code of Practice for Pressure Equipment	5
Boilers and Pressure Vessels: International Harmonisation of Codes and Standards	5
New Zealand Standards: Designation	6