

# CRANES, HOISTS AND WINCHES

## GUIDANCE FOR THE PROVISIONS OF CRANES, HOISTS AND WINCHES UNDER OH&S LEGISLATION IN NSW

### 1. INTRODUCTION

The *Occupational Health and Safety Act 2000* (the Act) and the *Occupational Health and Safety Regulation 2001* (the Regulation) places obligations on designers, manufacturers and suppliers of plant, and any person responsible for its use, to ensure that it is safe and does not present a risk to persons using it or who may otherwise be exposed to its use. Chapter 5 of the Regulation specifies the provisions that apply for types of plant considered to be of a high risk, with most types of cranes, hoists and winches included in this category.

This Guide is intended to summarise the specific requirements regarding their design, manufacture, supply and use in NSW.

Notes:

1. The Regulation does not identify the position of “importer”. However, it states that a person who imports cranes, hoists or winches designed or manufactured outside NSW, or manufactures any designed outside NSW, must ensure that the responsibilities of the designer and manufacturer under the Regulation have been met.
2. The Regulation requires particular aspects of certain plant must comply with the relevant Australian Standard, and reference is made to those in this guide. However, for the purposes of compliance with the Regulation, other standards may be used providing they have been verified as providing an equivalent standard of safety as the Australian Standard.

### 2. DESIGNERS

All cranes, hoists and winches designed after the commencement of the Regulation on 1 September 2001 must have been designed in accordance with the relevant part of the Australian Standard AS 1418 *Cranes, hoists and winches* (Appendix A).

### 3. MANUFACTURERS

(a) After the Regulation

All cranes, hoists and winches designed *after* the commencement of the Regulation must be manufactured and inspected, and tested (if required), according to the relevant part of the Australian Standard AS 1418 (Appendix A).

(b) Before the Regulation

As far as reasonably practicable, all cranes, hoists and winches designed *before* the commencement of the Regulation should be manufactured and inspected, and tested (if required), according to the relevant part of the Australian Standard AS 1418 (Appendix A), having regard to the designer's specifications.

#### 4. SUPPLIERS

(a) Sellers and transferrers

A person selling or transferring a crane, hoist or winch designed after the commencement of the Regulation on 1 September 2001 must ensure its design complies with the relevant part of the Australian Standard AS 1418 (Appendix A).

Note: Cranes, hoists and winches that were designed and manufactured prior to the commencement of the Regulation should also comply with the relevant part of AS 1418 in accordance with previous legislation.

(b) Hirers and lessors

A person hiring or leasing a crane, hoist or winch designed after the commencement of the Regulation on 1 September 2001 must ensure that it has been designed and manufactured in accordance with the relevant part of the Australian Standard AS 1418 (Appendix A).

Note: Cranes, hoists and winches that were designed and manufactured prior to the commencement of the Regulation should also comply with the relevant part of AS 1418 in accordance with previous legislation.

In addition, if the crane, hoist or winch requires registration, it must not be hired or leased without a current registration number (Item 6).

Where hirers or lessors retain the maintenance, repair, testing and cleaning responsibilities for the cranes, hoists or winches, in addition to the provisions of the Regulation, they should carry out these tasks in accordance with the relevant part of the AS 2550 series of Australian Standards, *Cranes, hoist and winches – Safe use*, which is called in the deemed-to-comply code of practice *Technical Guidance* in accordance with the Act (Appendix B).

#### 5. USERS

All cranes, hoists and winches must be used in accordance with the general provisions of Chapter 5 of the Regulation. In addition, they should be used in accordance with the relevant part of the AS 2550 series of Australian Standards, *Cranes, hoist and winches – Safe use* (Appendix B).

A crane, hoist or winch that requires registration must not be used unless it has a current registration number (Item 6).

#### 6. REGISTRATION

(a) Design Registration

Certain types of cranes, hoists and winches must be design registered with WorkCover if they were designed and manufactured after 1 September 2001 (Appendix A). A crane, hoist or winch that requires design registration must not be leased, hired or used unless it has a current certificate of design registration, evidence of which must be readily accessible.

As part of the design registration process, the applicant must ensure that a competent person verifies and records in writing that the design complies with the relevant part of AS 1418, or a Standard that has been assessed against AS 1418 and has produced a crane, hoist or winch that provides at least an equivalent standard of safety as would AS 1418. (Refer to the WorkCover document *Acceptance of Overseas Standards for plant registration under the OH&S Regulation 2001.*)

The design verifier must not have any involvement in the design being verified. They must not even be employed by the same person as the designer unless that person uses a quality system that meets the requirements of AS/NZS/ISO 9001:1994 *Quality systems---Model for quality assurance in design, development, production, installation and servicing*. The system must also have been certified by a body accredited or approved by the Joint Accreditation System of Australia and New Zealand.

Design registration is required for the design and is applicable to every crane, hoist or winch manufactured to that design. Upon registration, a certificate of design registration is issued by WorkCover, and remains current for the life of the crane, hoist or winch providing it is not altered. However, if one is altered in such a way that may affect health or safety, but not including routine maintenance, repair or replacement, then it is deemed to be a new design and it must be design registered. In applying to register an altered crane, hoist or winch, the alteration must comply with the relevant part of AS 1418 and not adversely affect its safe operation. (Refer to the WorkCover document *Design registration as a result of altering an item of plant* for more information.)

Under the Regulation, WorkCover NSW will accept a design registration from other statutory authorities if it has been issued under a law that imposes reasonably equivalent requirements as the Regulation.

However, currently, WorkCover NSW will not automatically accept design registrations from Victoria, Queensland or Tasmania. For more information, refer to the WorkCover document *Acceptance of plant registration from other States and Territories*.

## **(b) Item Registration**

Certain types of cranes, hoists and winches must be item registered with WorkCover regardless of their date of design or manufacture (Appendix A). A crane, hoist or winch that requires item registration must not be leased, hired or used unless it has a current certificate of item registration, evidence of which must be displayed on or near it.

Item registration is required under the following circumstances:

### **(i) Initial registration**

Every individual crane, hoist or winch of the type that requires item registration must be registered with WorkCover NSW. As part of the item registration process, the applicant must provide a statement that the crane, hoist or winch has been inspected by a competent person, and is safe to operate.

### **(ii) Renewal**

Item registration must be renewed annually. In renewing the registration, the person in control of the crane, hoist or winch must provide a statement that it was maintained and is safe to operate.

### **(iii) Automatic cancellation of registration**

An item registration is automatically cancelled where a crane, hoist or winch is altered as outlined in (a) above; where the person in control of the crane, hoist or winch changes; or where a crane that is normally fixed in position, such as a tower crane, is relocated. In these circumstances, a new item registration must be provided before the crane, hoist or winch can be used, leased or hired.

For the purposes of the initial item registration and subsequent renewal, WorkCover NSW expects that the necessary inspection and maintenance is carried out in accordance with the relevant part of AS 2550 (Appendix B).

Under the Regulation, WorkCover NSW will accept an item registration from other statutory authorities for plant not normally fixed in position if it has been issued under a law that imposes reasonably equivalent requirements as the Regulation. However, currently, WorkCover NSW will not automatically accept item registrations from Victoria or Queensland. For more information, refer to the WorkCover document *Acceptance of plant registration from other States and Territories*.

## **7. COMPLIANCE**

Penalties apply for failing to comply the provisions of the Regulation and the Act. A WorkCover Inspector attending a workplace that supplies a crane, hoist or winch, or where one is being used, may seek verification that the provisions of the legislation are being observed, and may take compliance action.

For further information, contact WorkCover on 13 10 50, or visit the website at [www.workcover.nsw.gov.au](http://www.workcover.nsw.gov.au)

# APPENDIX A

## SUMMARY OF STANDARDS FOR CRANES, HOISTS AND WINCHES, AND THEIR REGISTRATION REQUIREMENTS UNDER THE REGULATION

TYPE OF CRANE, HOIST OR WINCH	STANDARD		REGISTRATION REQUIREMENTS	
	Design	Safe use	Design	Item
General for all cranes, hoists and winches	AS 1418.1	AS 2550.1	N/A	N/A
Serial hoists and winches	AS 1418.2		None	None
Bridge cranes	AS 1418.3	AS 2550.3	$rc^3 > 10$ tonnes	None
Gantry cranes	AS 1418.3	AS 2550.3	$rc^3 > 5$ tonnes	None
Tower cranes	AS 1418.4	AS 2550.4	All	All
Mobile cranes	AS 1418.5	AS 2550.5	$rc^3 > 10$ tonnes	$rc^3 > 10$ tonnes
Guided storage and retrieving devices	AS 1418.6	AS 2550.6	Platform movement > 2.4 m	None
Builders' hoists – material	AS 1418.7	AS 2550.7	None	None
Builders' hoists – personnel and material	AS 1418.7	AS 2550.7	Platform movement > 2.4 m	None
Special purpose appliances	AS 1418.8	AS 2550.1	Platform movement > 2.4 m	None
Vehicle hoists	AS/NZS 1418.9	AS/NZS 2550.9	All	None
Boom-type elevating work platforms	AS 1418.10	AS 2550.10	All	None
Other elevating work platforms, eg scissors lifts	AS 1418.10	AS 2550.10	Platform movement > 2.4 m	None
Vehicle loading cranes <sup>1</sup>	AS 1418.5 AS 1418.11	AS 2550.5 AS 1418.11	$rc^3 > 10$ tonnes	$rc^3 > 10$ tonnes
Building maintenance units	AS 1418.13	AS 2550.13	All	All

Cranes subject to arduous working conditions	AS 1418.3 AS 1418.14	AS 2550.1 AS 2550.3	All	None
Truck-mounted concrete placing unit with boom	AS 1418.15	AS 2550.15	None	All
Mast climbing work platforms	AS 1418.16	AS 2550.16	All	None
Workboxes	AS 1418.17	AS 2550.1	All	None
Self erecting tower cranes <sup>2</sup>	AS 1418.4 AS 1418.20	AS 2550.4 AS 2550.20	All	All

Notes:

1. The standards for vehicle loading cranes are currently being developed. Until they have been published, vehicle loading cranes are covered by the mobile crane standards.
2. The standards for self-erecting tower cranes are currently being developed. Until they have been published, self erecting tower cranes are covered by the tower crane standards.
3. rc = rated capacity

# APPENDIX B

## THE AS 2550 SERIES OF AUSTRALIAN STANDARDS

The AS 2550 series of Australian Standards has been called up as part of a "deemed-to-comply" industry code of practice, titled *Technical Guidance*, under Section 43 of the Act. This means that the requirements in the Australian Standards should be followed unless procedures are implemented that achieve at least the same level of safety as would compliance with the Australian Standard. If necessary, a person may have to demonstrate equivalence between the procedures they have developed and the Australian Standard. A list of the Australian Standards in the AS 2550 series is given in Appendix A.

The Australian Standards specify measures to be taken to ensure the safe use of cranes, hoists and winches, with Part 1 applying to all types and the other Parts applying to a particular type. They are typically arranged in the following format:

Section 1 *Scope and General* – sets out the scope and application.

Section 2 *Planning* – specifies issues that should be considered to ensure that the proposed operation is properly planned.

Section 3 *Selection* – contains items that should be considered to ensure that the appropriate crane, hoist or winch is used for the proposed application.

Section 4 *Siting* – provides specific information to be taken into consideration when determining the position of the crane, hoist or winch at the workplace.

Section 5 *Erection, Commissioning and Dismantling* – gives advice for preparing the crane, hoist or winch for operation and its subsequent removal.

Section 6 *Operation* – specifies procedures and precautions to be observed in operating the crane, hoist or winch.

Section 7 *Maintenance, Inspection and Repair* – outlines the regime that is necessary to ensure the continuing safe use of the crane, hoist or winch, and establishes a series of inspections and tests that are required throughout its operational life. This is:

A pre-operational inspection prior to using the crane, hoist or winch at the start of a shift.

Routine inspection and maintenance, usually at three-monthly intervals but dependant on the actual usage.

Periodic inspections that have to be done at a maximum of twelve-monthly intervals.

A major inspection to assess the crane, hoist or winch's suitability for continued safe operation at the end of their design life or at other times, such as when commissioning a crane designed to indeterminate standards or without service records, or if it is intended to change their operation.

Appropriate appendices.