NATIONAL STANDARD FOR PLANT [NOHSC:1010(1994)]

JULY 1994

The National Occupational Health and Safety Commission has declared a *National Standard for Plant.*

National Standards declared by the National Commission under s.38(1) of the *National Occupational Health and Safety Commission Act 1985* (Cwlth) are documents which prescribe preventive action to avert occupational deaths, injuries and diseases. Most national standards deal with the elimination/reduction or management of specific workplace hazards. In appropriate circumstances, national standards may take the form of national regulatory models.

The expectation of the Commonwealth Government and the National Commission is that national standards will be suitable for adoption by Commonwealth, State and Territory governments. Such action will increase uniformity in the regulation of occupational health and safety throughout Australia and contribute to the enhanced efficiency of the Australian economy.

It should be noted that National Commission documents are instruments of an adivisory character, except where a law, other than the National Occupational Health and Safety Commission Act, or an instrument made under such a law, makes them mandatory. The application of any National Commission document in any particular State or Territory is the prerogative of that State or Territory.

National Occupational Health and Safety Commission

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JULY 1994

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FOREWORD

The National Occupational Health and Safety Commission is a tripartite body established by the Commonwealth Government to develop, facilitate and implement a national occupational health and safety strategy.

This strategy includes standards development the development of hazard-specific and industry-based preventive strategies, research, training, information collection and dissemination and the development of common approaches to occupational health and safety legislation.

The National Commission comprises representative of the peak employee and employer bodies-the Australian Council of Trade Unions and the Australian Chamber of Commerce and Industry-as well as the Commonwealth, State and Territory governments.

Consistent with the National Commission's philosophy of consultation, tripartite standing committees have been established to deal with issues relating to standards development, research and the mining industry. Expert groups and reference groups may be established to provide advice to the standing committees on those issues with which the National Commission is concerned.

PREFACE

Plant is a major cause of workplace accidents in Australia. At present, there are between 65,000 and 70,000 plant-related workers' compensation claims costing some $550 million in workers' compensation payments each year. In addition, there are over 200 plant-related fatalities every year. Because of the risk of injury associated with the use of plant, State and Territory jurisdictions have enacted many measures over the years in order to reduce both the incidence and severity of accidents.

Uniformity in occupational health and safety standards between the States and Territories is a priority for the National Commission. This standard is a key element of the National Commission's strategy for achieving a uniform approach to agreed key areas of occupational health and safety standards.

This national standard marks a significant change in approach from prescriptive regulation of plant towards a performance-based approach. This standard establishes hazard identification, risk assessment and risk control processes for all types of plant.

The provisions of this national standard apply to the design, manufacture and supply of plant, and the use of plant in the workplace. Performance requirements are also specified with respect to the testing, installation, commissioning, repair, alteration, dismantling, storage and disposal of plant. Corresponding duties have been placed on relevant persons with responsibilities in relation to plant and associated systems of work in a workplace or to plant intended to be used in a workplace.

For the purposes of this document, plant includes any machinery, equipment (including scaffolding), appliance, implement or tool and any component or fitting thereof or accessory thereto.

The National Commission believes that it is of assistance in achieving a uniform approach to the regulation of plant to recommend common essential requirements which may be adopted in Commonwealth and State and Territory legislation. This document essentially provides the drafting instructions for Parliamentary Counsel in the Commonwealth and various State and Territory jurisdictions. Each jurisdiction will seek to give effect to the requirements of the national standard in a manner which achieves consistency with definitions used in their principal occupational health and safety legislation and conforms to requirements set down in statute for making of subordinate legislation.

The format of the national standard includes margin notes. These notes are not formal requirements, but rather provide information to more clearly explain the intent of a provision or provide guidance relating to implementation.

When adopted, the requirements of this national standard will replace significant portions of existing Commonwealth and State and Territory legislation, and will consolidate plant provisions under principal occupational health and safety legislation.

DEVELOPMENT PROCESS

In July 1992 the National Commission convened a tripartite expert working group to develop a national standard on plant incorporating the common essential requirements. The draft national standard was released for public comment in December 1992 and a series of public consultation meetings was held in each capital city. All comments received were reviewed by a tripartite expert review group. On completion of an economic impact analysis, the *National Standard for Plant* [NOHSC:1010(1994)] was declared by the National Commission in June 1994.

PART 1 - PRELIMINARY

TITLE

1. This document may be cited as the *National Standard for Plant* and will be referred to as the "national standard" for the purposes of this document.

DECLARATION

2. This national standard was declared by the National Occupational Health and Safety Commission on 16 June 1994.

OBJECTIVES

3. The objective of this national standard is to protect the health and safety of persons from hazards arising from *plant* and systems of work associated with *plant* by;

   (a) ensuring that hazards associated with the *use* of *plant* in the workplace are identified and *risks* to health and safety are assessed and controlled;

   (b) eliminating, or where this is not practicable, *minimising risks* to health and safety arising from *plant*;

   (c) specifying requirements with respect to the design, manufacture, testing, installation, *commissioning*, *use*, *repair*, *alteration*, dismantling, storage and disposal of *plant*;

   (d) requiring the provision of relevant information and training; and

   (e) requiring the registration of certain *plant* designs and items of *plant*.

Note: For the purposes of this national standard, 'use' when italicised means work from, operate, maintain, inspect and clean.

INTERPRETATIONS

4. Unless inconsistent with the context of the subject matter, expressions used in this national standard (or in a particular provision of this national standard) have the meanings set out in this clause.

   Interpretations are shown in italics throughout this national standard.

'*Alter*' in relation to any *plant* means to change the design of, add to or take away from the *plant* where the change may affect health or safety, but does not include routine maintenance, *repairs* or replacements.

'*Amusement structure*' means equipment operated for hire or reward which provides entertainment or amusement through movement of the equipment, or part of the equipment, or when passengers travel on, around or along the equipment. An *amusement structure* may be either an:

a) ***'amusement ride'***, an arrangement of structural or mechanical elements (or both) which has as its prime function the provision of movement of a passenger or passengers who are not necessarily required to move themselves to obtain the desired effect; or

b) ***'amusement device'***, any arrangement of equipment through or on which a rider moves, where the desired effect (thrill) is primarily achieved by virtue of the rider's self-powered motion or any other system which is not covered by amusement rides.

'*AS*' followed by a designation means the Australian Standard to which that designation relates as issued by Standards Australia.

'*Authority*' means any Commonwealth, State or Territory regulatory authority with the responsibility for *plant* safety and includes an officer of that *Authority* with delegated responsibility by that authority.

'*Boiler*' means a vessel or an arrangement of vessels and interconnecting parts, wherein steam or other vapour is generated, or water or other liquid is heated at a pressure above that of the atmosphere by the application of fire, the products of combustion, electrical power, or similar high temperature means. It also includes, superheaters, reheaters, economisers, boiler piping, supports, mountings, valves, gauges, fittings, controls, the boiler setting and directly associated equipment. It does not include a fully flooded or pressurised system where water or other liquid is heated to a temperature lower than the normal atmospheric boiling temperature of the liquid.

'*Boom-type elevating work platform*' means a telescoping device, hinged device, or articulated device or any combination of these used to support a platform on which personnel, equipment and materials may be elevated.

'*Bracket scaffold*' means a *scaffold*, the platform of which is carried on frames attached to or supported by permanent or temporary construction.

*'**Bridge Crane**'* means a *crane* comprising a bridge beam mounted at each end to an end carriage, capable of travelling along elevated runways and having one or more hoisting mechanisms arranged to traverse across the bridge.

'***BS***' followed by a designation means the British Standard to which that designation relates as issued by The British Standards Institution.

'***Building maintenance equipment***' means a suspended platform and associated equipment, including a *building maintenance unit* or a swing stage, which incorporates permanently installed overhead supports to provide access to the faces of a building for maintenance, but does not include a *suspended scaffold*.

'***Building maintenance unit***' means a power operated suspended platform and associated equipment on a building specifically designed to provide permanent access to the faces of the building for maintenance.

'***Cantilevered scaffold***' means a *scaffold* which is supported by cantilevered load-bearing members, but does not include a *bracket scaffold*.

'***Commissioning***' means performing the necessary adjustments, tests and inspections to ensure *plant* is in full working order to specified requirements before the *plant* is used. *Commissioning* includes re-commissioning.

'***Competent person***' means a person who has acquired through training, qualification, or experience, or a combination of these, the knowledge and skills enabling that person to perform the task required by this national standard.

'***Concrete placing unit (truck-mounted with boom)***' means *plant* used to place concrete by way of pumping concrete through a pipeline attached to or forming part of the boom, and capable of travelling over a supporting surface without the need for fixed runways (including railway tracks) and relying on gravity for stability, that is, with no vertical restraining connection between itself and the supporting surface and no horizontal restraining connection (other than frictional forces at supporting surface level) which may act as an aid to stability.

'***Conveyor***' means an apparatus or equipment worked by any power other than manual, by which loads are raised, lowered or transported or capable of being raised, lowered, transported, or continuously driven by -

(a) an endless belt, rope or chain or other similar means;

(b) buckets, trays or other containers or fittings moved by an endless belt, rope, chain or other similar means;

(c) a rotating screw;

(d) a vibration or walking beam; or

(e) a powered roller conveyor where the rolls are driven by an endless belt, rope, or chain;

and including the supporting structure, auxiliary equipment and gear used in connection with the conveyor.

'***Crane***' means an appliance intended for raising or lowering a load and moving it horizontally and includes the supporting structure of the *crane* and its foundations, but does not include - *industrial lift trucks, earthmoving machinery, amusement structures, tractors, industrial robots, conveyors, building maintenance equipment, suspended scaffolds* or *lifts*.

'***Designer***' means a person who designs *plant* for use in a workplace or *plant* intended to be used in a workplace or is responsible for the design.

'***Earthmoving machinery***' means an operator controlled item of *plant* used to excavate, load, transport, compact or spread earth, overburden, rubble, spoil, aggregate or similar material. It does not include a tractor or industrial lift truck.

'***Electrical installation***' means all the electrical wiring, accessories, fittings, consuming devices, control and protective gear and other equipment associated with the installation situated in or on workplaces.

'***Electrical plant***' means *plant* which consumes, converts or generates electricity.

'***Elevating work platform***' means a telescoping device, scissor device or articulating device or any combination thereof used to position personnel, equipment and materials to and from work locations above the support surface.

'***Erector***' means a person who erects, dismantles or *alters* the structure of *plant* in a workplace.

'***Ergonomic***' means to optimise the functioning of the *plant* and systems of work associated with the *plant* by adapting them to human capacity or need.

'***Fault***' means a break or defect which may cause the *plant* to present an increased *risk* to health and safety. In the case of a *fault* in the design, this means an aspect of the *plant* design which may cause the *plant* to be a *risk* to health and safety if manufactured in accordance with the design specifications.

'***Fired Heater***' means a *pressure vessel* in which a liquid is heated below its atmospheric boiling temperature or a process fluid is heated in tubes above or below its atmospheric boiling temperature by the application of fire, the products of combustion or electric power or similar high temperature means.

'***Gantry crane***' means a *crane* comprising a bridge beam, supported at each end by legs mounted on end carriages, capable of travelling on supporting surfaces or deck levels, whether fixed or not and which has a crab with one or more hoisting units arranged to travel across the bridge.

'***Gas cylinder***' means a particular rigid *pressure vessel* not exceeding 3000 litres water capacity and without openings or integral attachments on the shell other than at the ends, designed for the storage and transport of gas under pressure and which is covered by *AS* 2030.

'***Guard***' means a device that prevents or reduces access to a danger point or area.

'***Hazard***' means the potential to cause injury or illness.

'***Hoist***' means an appliance intended for raising or lowering a load and/or persons, and includes *elevating work platform*, *mast-climbing work platform*, people and materials *hoist*, scaffolding *hoist* and serial *hoist* but does not include a *lift* or *building maintenance equipment*.

'***Hung scaffold***' means a *scaffold* which is hung from another structure and which is not capable of being raised or lowered when in *use*.

'***Importer***' means a person who imports *plant* for use in a workplace or *plant* intended to be used in a workplace.

Implementation Issue: In regards to the interpretations for 'importer', 'manufacturer' and 'owner', some jurisdictions currently cover public safety by the inclusion of amusement rides, scaffolding, lifts, etc. which may not be in a workplace.

'***Industrial lift truck***' means powered mobile *plant*, designed to move goods, materials or equipment, equipped with an elevating load carriage and, normally, a load-holding attachment. It does not include a *mobile crane*, or *earthmoving machinery*.

'***Industrial robot***' means a multifunctional manipulator and its controllers, capable of handling materials, parts, tools, or specialised devices, through variable programmed motions for the performance of a variety of tasks.

'***Installer***' means a person who installs *plant* in a workplace.

'***Interlocked***' means the connection between a *guard* or machine element with the control system or the power system of the *plant*. This connection allows access to the moving parts of the *plant* at the times when those parts are not moving and prevents moving parts from starting up or operating when access is available to those moving parts.

'***Laser***' means any device that can produce or amplify electromagnetic radiation in the wave length range from 100 manometers to 1 millimetre by the process of controlled stimulated emission but does not include electric light globes, fluorescent light tubes, electric radiators used for heating, radio or video communication equipment, domestic cooking appliances using high powered lamps and navigation and search lights.

'***Laser product***' means any product or assembly of components which constitutes, incorporates or is intended to incorporate a *laser*. The classification of a *laser product* may be different to that of the *laser*.

'***Lift***' means any permanent *plant* (or *plant* intended to be permanent) which is in or attached to a building or structure and by means of which persons, goods or materials may be raised or lowered within or on a car cage, or platform and the movement of which is restricted by a guide or guides and includes an apparatus in the nature of a chair *lift*, escalator, moving walk or stairway *lift*, and any supporting structure, machinery, equipment, gear, *lift* well, enclosures and entrances.

'***Manufacturer***' means a person who manufactures *plant* for use in a workplace or *plant* intended to be used in a workplace.

'***Mast climbing workplatform***' means a *hoist* having a working platform used for temporary purposes to raise personnel and materials to the working position by means of a drive system mounted on an extendable mast which may be tied to a building.

Note: Each jurisdiction will need to use the relevant interpretation of 'practicable'.

'***Minimise***' means to reduce to the lowest practicable level.

'***Mobile crane***' means a *crane* capable of travelling over a supporting surface without the need for fixed runways (including railway tracks) and relying only on gravity for stability, that is, with no vertical restraining connection between itself and the supporting surface and no horizontal restraining connection (other than frictional forces at supporting-surface level) which may act as an aid to stability.

'***Operator protective devices***' include roll-over protective structures, falling object protective structures, operator restraining devices and seat belts.

'***Owner***' means a person who has right of title to, and management of, or control over the *plant* for use in a workplace or *plant* intended to be used in a workplace, and includes a person exercising such management or control as agent of the *owner*.

'***Plant***' includes any machinery, equipment (including scaffolding), appliance, implement or tool and any component or fitting thereof or accessory thereto.

'***Prefabricated scaffolding***' means an integrated system of prefabricated components manufactured in such a way that the geometry of assembled *scaffolds* is pre-determined.

'***Presence sensing safeguarding system***' includes:

a) a sensing system that employs one or more forms of radiation either self-generated or otherwise generated by pressure;

b) the interface between the final switching devices of the sensing system and the machine primary control elements; and

c) the machine stopping capabilities, whereby the presence of a person or part of a person within the sensing field will cause the dangerous parts of a machine to be brought to a safe state.

'***Pressures***' expressed are gauge pressures relative to atmospheric pressure, unless otherwise identified.

'***Pressure equipment***' means *boilers*, *pressure vessels* and *pressure piping*. For the purposes of this national standard *pressure equipment* are those specifically covered by *AS* 1200 and having hazard level A, B, C or D according to the criteria identified in *AS* 3920 Part 1, Pressure Equipment Manufacture - Assurance of Product Quality.

'***Pressure piping***' means an assembly of pipes, pipe fittings, valves and pipe accessories subject to internal or external pressure and used to contain or convey fluid or to transmit fluid pressure. It includes distribution headers, bolting, gaskets, pipe supports and pressure retaining accessories. It does not include any vessel that falls within the definition of a *boiler* or *pressure vessel* in this national standard nor any pipeline covered by any other legislation.

'***Pressure vessel***' means a vessel subject to internal or external pressure. It includes interconnected parts and components, valves, gauges and other fittings up to the first point of connection to connecting piping. It also includes fired heaters and gas cylinders, but excludes any vessel that falls within the definition of a *boiler* or *pressure piping* in this national standard.

'***Repair***' means to restore *plant* to an operating condition, but does not include routine maintenance, replacement or alteration.

'***Risk***' means the probability and consequences of occurrences of injury or illness.

'***Risk Assessment***' means the process of evaluating the probability and consequences of injury or illness arising from exposure to identified *hazards* associated with *plant*.

'***Scaffold***' means a temporary structure, specifically erected to support access or working platforms.

'***Scaffolding equipment***' means any component, assembly or machine used or intended to be used in the construction of a *scaffold*.

'***Self-employed person***' means a person who works for gain or reward otherwise than under a contract of employment or apprenticeship, whether or not that person employs one or more other persons.

'***Spur scaffold***' means a *scaffold* which is partially supported by inclined load bearing members.

'***Supplier***' includes a person who supplies *plant* for use in a workplace or *plant* intended to be used in a workplace, by way of sale, lease, exchange or hire, whether as a principal or agent for another.

'***Suspended scaffold***' means a *scaffold* incorporating a suspended platform which is capable of being raised or lowered when in *use* and includes a boatswain's chair.

'***Tower crane***' means a boom or jib crane mounted on a tower structure.

'***Tractor***' means a motor vehicle whether wheeled or track mounted, designed to provide power and movement of any attached machine or implement by a transmission shaft, belt or linkage system. *Tractor* does not include *earthmoving machinery*.

'***Use***' means work from, operate, maintain, inspect and clean.

'***Vehicle hoist***' means a vehicle-hoisting device, the purpose of which is to provide accessibility for convenient under-chassis examination or service.

'***Vicinity***' means the area in or around the *plant* within which persons may be exposed to a *risk* to health or safety arising from that *plant*.

'***Work Box***' means a personnel carrying device, designed to be suspended from a *crane*, to provide a working area for persons elevated by and working from the box.

'***Workpiece***' means material, offcut or scrap (in any form) on which an item of *plant* is doing work, or any material, offcut or scrap (in any form) produced by an item of *plant* but does not include a load being lifted or moved by the *plant*.

APPLICATION

5. (1) The provisions of this national standard apply to *designers*, *manufacturers*, *importers*, *suppliers*, *erectors*, *installers*, employers, *self employed persons*, and employees with respect to all *plant* and systems of work associated with *plant*, and apply to *owners* with respect to particular *plant* and systems of work associated with those *plant*, for *plant* in a workplace or *plant* intended to be used in a workplace.

Implementation Issue: Transitional arrangements will be required, particularly for manufacturing to old designs, imported used plant, alterations and risk assessment.

(2) Unless otherwise specified, design requirements and registration of *plant* design apply to *plant* designs which are commenced after the date on which this national standard takes effect.

(3) Unless otherwise specified, manufacturing requirements apply to *plant* manufactured after the date on which this national standard takes effect.

(4) Unless otherwise specified, the requirements for imported *plant* apply to new *plant* manufactured and ordered after the date on which this national standard takes effect, and to used *plant* ordered after the date of effect of this national standard.

(5) Unless otherwise specified, the supply requirements apply to new *plant* and, as far as practicable, to *plant* manufactured prior to the date on which this national standard takes effect.

(6) Unless otherwise specified, installation and *commissioning* requirements apply to *plant* installed and *commissioned* after the date on which this national standard takes effect, and as far as practicable, for the re-installation and re-commissioning of *plant* which was manufactured prior to the date of effect of this national standard.

(7) Requirements relating to *use*, *repair*, *alteration*, dismantling and disposal specified in this national standard, including the requirements for *hazard* identification, *risk assessment* and control of *risk*, apply to all *plant* irrespective of the date on which the *plant* was manufactured.

INCORPORATION OF REFERENCES

6. (1) Where this national standard incorporates any document which:

(a) contains provisions requiring approval from an *Authority* in relation to *plant* or its components, or

(b) permits a departure from the requirements of a referenced document at the sole discretion of the employer, *designer*, *manufacturer*, *supplier*, *importer* or *owner*;

those provisions are excluded unless this national standard specifies that they be included.

(2) A reference in this national standard to a document prepared or published by any body or *Authority* will be taken as a reference to that document as in force from time to time, and if that document is revoked and remade (with or without modifications) includes a reference to the new document in force from time to time.

(3) Where this national standard incorporates a standard, other comparable standards which are deemed acceptable by an *Authority* may be used in lieu of the referenced standard.

(4) Where there is any inconsistency between this national standard and any reference, this national standard will prevail.

Implementation Issue: In some States and Territories, the principal Act does not accommodate for 'AS' or 'BS' to be amended from time to time.

Implementation Issue:
. An administrative system will need to be established for Authorities to agree on acceptable comparable standards (including overseas standards) on a national basis.
. Issue of acceptable overseas certified testing organisations also needs to be addressed.

PART 2 - DUTIES

GENERAL

Principle for implementation of this national standard

7. (1) A person in applying a duty under this national standard must apply the principle that *risks* to health and safety arising from *plant* and systems of work associated with *plant* are, as far as practicable, eliminated, or where this is not practicable, *minimised*.

Obligations on more than one person

(2) In this national standard, if more than one person is under an obligation to comply with a clause, each person must comply with the clause without regard to the fact that others may also be responsible for performing the obligation, unless the clause makes express provision to the contrary.

Defence

(3) Notwithstanding Clause 7 (2), in the event that an allegation is made that a person did not comply with a clause, that person would have a defence against that allegation if that person can prove that it relates to a matter over which they did not have control and could not reasonably be expected to have had control.

DUTIES OF DESIGNERS

Hazard Identification

8. A *designer* must ensure that *hazards* are identified in accordance with Clause 65 during the design process, for *plant* intended for use at a workplace.

Risk Assessment

9. (1) Where a *hazard* is identified under Clause 8, a *designer* must ensure that an assessment is made of *risks* associated with the *hazard* in accordance with Clause 66.

(2) In carrying out the *risk assessment* under Clause 9 (1), the *designer* must ensure that the following are assessed -

(i) impact of the *plant* on the work environment in which it is designed to operate;

(ii) range of environmental and operational conditions in which the *plant* is intended to be manufactured, transported, installed and used;

Note: The OHS Acts in each jurisdiction place duties on a range of persons; in this national standard a person may find they have duties under several headings; eg an employer may also be an owner and an erector of plant; where the duties are identical, the person need only carry them out once.

In other situations a person may find they have a duty under this national standard, but that person is not in a position to exercise control over the work; eg a certificated scaffolder has a duty as an erector of plant, but may be employed as one of many scaffolders under direction to erect a large structure; in this case, the person with control over the job would have more extensive duty of an employer and an erector; each duty is intended to be carried out to the extent of that person's control over the work.

Note: If a person with a duty under this national standard alters a plant design to control the risks, that person must comply with the requirements of this national standard in relation to that alteration.

(iii) *ergonomic* needs of persons who may *use* the *plant*; and

(iv) the need for safe access and egress for persons who install, erect, *use* and dismantle the *plant*.

Control of Risk

10. (1) Where an assessment under Clause 10, identifies a *risk* to health or safety, the *designer* must control the *risk* by eliminating, or where this is not practicable, minimising the risk, in accordance with this clause and Clause 67.

(2) Without limiting the generality of Clause 10 (1), the *designer* must ensure that -

(a) appropriate measures are incorporated into the design of the *plant* to *minimise* associated *risks* assessed under Clause 9;

(b) *plant* is designed so as to *minimise* the *risks* to health and safety associated with the manufacture, installation, erection and *use* of the *plant*;

(c) *plant* is designed according to the relevant Standards in Schedule 2;

Note: See Clause 6(3)

(d) *plant* is designed to enable the various components to be accessed for maintenance, adjustment, *repair* and cleaning purposes to *minimise risks* to health and safety.

(e) *plant* is designed having regard to *ergonomic* principles;

(f) where particular systems of work or operators' competencies are factors in the control of *risks*, they are specified;

(g) any powered mobile *plant* is designed to *minimise* the *risk* of accidental overturning or of a falling object coming into contact with the operator;

(h) where there remains a *risk* of -

(i) a powered *mobile plant* overturning,

(ii) objects falling on the operator, or

(iii) an operator being ejected from the seat,

and the *risk* needs to be controlled, an appropriate combination of *operator protective devices* is provided.

(i) where a *risk assessment* identifies an increased *risk* due to build up of unwanted substances or materials, the *plant* is designed to *minimise* the *risk*.

Provision of Information

11. A *designer* must ensure that the *manufacturer* is provided with information for the *plant* to be manufactured in accordance with the design specifications and, as far as practicable, with information relating to:

(a) the purpose for which the *plant* is designed;

(b) testing or inspections to be carried out on the *plant*;

(c) installation, *commissioning*, operation, maintenance, cleaning, transport, storage and, where *plant* is capable of being dismantled, dismantling of the *plant*;

(d) systems of work necessary for the safe *use* of *plant*;

(e) knowledge, training or skill necessary for persons undertaking inspection and testing of the *plant*; and

(f) emergency procedures.

DUTIES OF MANUFACTURERS

Duty Where Designer is Outside Australia

12. Where the *designer* is outside Australia, a *manufacturer* must assume the responsibilities that would otherwise be the responsibilities of the *designer* by ensuring that there is compliance with Clauses 8 to 10 of this national standard.

Note: The manufacturer is also often an employer; where hazards arise from the manufacturing process which present risks to the manufacturer's employees, those hazards must be identified, assessed and controlled in accordance with relevant employer's duties.

Hazard Identification and Risk Assessment

13. Where a *hazard* arising from the design of the *plant* being manufactured is identified during the manufacturing process, a *manufacturer* must *ensure* that an assessment is made of *risks* associated with that *hazard* in accordance with Clause 66.

Control of Risk

14. (1) Where an assessment under Clause 13 identifies a *risk* to health or safety, the *manufacturer* must control the *risk* by eliminating, or where this is not practicable, *minimising* the *risk*, in accordance with this clause and Clause 67, or arrange with the *designer* to *alter* the design to control the *risk*.

(2) The manufacturer must:

(a) subject to Clause 14 (2)(b), ensure that the *plant* is manufactured, inspected, and where required, tested according to the relevant Standards in Schedule 2 and having regard to the *designer's* specifications;

Note: See Clause 6(3)

(b) ensure that if any *fault* in the design that may affect health or safety is identified during the manufacturing process, that *fault* is controlled in accordance with Clause 67 and that -

(i) the *fault* is not incorporated into the *plant*; and

(ii) as far as practicable, the *designer* of the *plant* is consulted regarding the rectification of the *fault*; and

(c) ensure that, if after supply to a workplace, any *plant* is found to have a fault that may affect health or safety, the *owner* of the *plant*, as far as practicable, is advised of the *fault* and what is required to rectify it.

Provision of Information

15. A *manufacturer* must ensure that the *supplier* is provided with -

(a) information provided by the *designer* relating to -

(i) the purpose for which the *plant* is designed,

(ii) testing or inspections to be carried out on the *plant*,

(iii) installation, *commissioning*, operation, maintenance, cleaning, transport, storage and, where *plant* is capable of being dismantled, dismantling of the *plant*,

(iv) systems of work necessary for the safe use of *plant*,

(v) knowledge, training or skill necessary for persons undertaking inspection and testing of the *plant*,

(vi) emergency procedures; and

(b) any document relating to testing.

DUTIES OF IMPORTERS

Duty Where Designer Or Manufacturer is Outside Australia

16. Where the *designer* or *manufacturer* is outside Australia, an *importer* must assume the responsibilities that would otherwise be the responsibilities of the *designer* and *manufacturer* by ensuring compliance with Clauses 8 to 15 of this national standard.

Note: If an importer supplies plant, they must also comply with the duties of a supplier.

Note: Duties of importers relate to both new and used plant.

Control of Risk

17. (1) An *importer* must ensure that *risks* to health and safety from *plant* intended to be *used* in a workplace are eliminated, or where this is not practicable, *minimised*, in accordance with Clause 67.

(2) An *importer* of *plant* for the purpose of scrap or spare parts for other *plant* must advise the purchaser or *owner* either in writing or by marking the *plant*, prior to the *plant* being supplied, of that purpose and that the *plant* in its current form is not to be placed in service but is to be used only as scrap or for spare parts.

Provision of Information

18. An *importer* must ensure that in respect of used plant, the purchaser or owner is provided with relevant health and safety information provided by the *designer* and *manufacturer* that is available, and any additional available information required to enable the *plant* to be used safely.

Note: The provision of information for new plant is covered by Clause 16.

DUTIES OF SUPPLIERS

Control of Risk

19. (1) A *supplier* must ensure that:

(a) where *plant* is under their management and control, *risks* to health and safety from *plant* intended to be *used* in a workplace are eliminated, or where this is not practicable, *minimised*, in accordance with Clause 67, or

Note: Where a supplier imports plant, they must also comply with the duties of importers.

(b) where plant is not under their management and control, as far as practicable, any *faults* are identified and the purchaser or *owner* is advised in writing, prior to the *plant* being supplied, of the *faults* and, where appropriate, that the *plant* is not to be *used* until the *faults* are rectified.

(2) A *supplier* of *plant* for the purposes of scrap or spare parts for other *plant* must advise the purchaser either in writing or by marking the *plant*, prior to the *plant* being supplied, of that purpose and that the *plant* in its current form is not to be placed in service but is to be used only as scrap or for spare parts.

(3) A person who becomes a *supplier* as a result of hiring or leasing *plant* to a workplace must:

(a) assume the duties of an *owner* as specified in Clauses 47 to 56 of this national standard;

(b) ensure that the *plant* is inspected between hirings or leasings so as to *minimise* the *risks* to health and safety;

(c) ensure that an assessment is carried out to determine the need for testing *plant* to check whether new or increased *risks* to health and safety have developed, and the frequency for such testing; and

(d) ensure that the testing identified in Clause 19 (3)(c) is carried out and recorded, and that the records are maintained for the operating life of the *plant*.

Provision of Information

20. A *supplier* must ensure that:

(a) in respect of new *plant*, the purchaser or *owner* is provided with health and safety information provided to the *supplier* by the *manufacturer*.

(b) in respect of used *plant*, the purchaser or *owner* is provided with

(i) health and safety information provided by the *designer* and *manufacturer* that is available, and

(ii) where available, any record kept by the previous *owner* of the *plant* required under this national standard.

(c) the purchaser or *owner* is provided with any available information, data or certificate specified by the relevant Standards in Schedule 2.

Note: See Clause 6(3)

DUTIES OF INSTALLERS OR ERECTORS

Hazard Identification

21. An *erector* or *installer* must ensure that *hazards* associated with the erection or installation are identified in accordance with Clause 65 before and during installation or erection of *plant* at a workplace.

Risk Assessment

22. (1) Where a *hazard* is identified under Clause 21, an *erector* or *installer* must ensure that an assessment is made of *risks* associated with the *hazard* in accordance with Clause 66.

(2) When carrying out the *risk assessment* under Clause 22 (1), an *erector* or *installer* must ensure that *risks* that may arise from the following are assessed -

(a) impact of the erection or installation process on the work environment during erection or installation; and

(b) need for safe access and egress during erection and installation and for subsequent *use* of the *plant*.

(3) A *risk assessment* undertaken under Clause 22 (1) may be carried out either on individual items of *plant* or, where multiple items of *plant* of the same design are installed and *used* under conditions which are the same for all practical purposes , the *risk assessment* may be carried out on a a representative sample subject to the qualification that where *risk* may vary from operator to operator, a separate assessment of the *risk* to each operator of the particular *plant* is carried out on each item of *plant*.

Control of Risk

23. (1) Where an assessment under Clause 22, identifies a *risk* to health or safety arising from the erection or installation of the *plant*, the *erector* or *installer* must eliminate, or where this is not practicable, *minimise* the *risk* in accordance with this clause and Clause 67.

(2) Without limiting the generality of Clause 23 (1), an *erector* or *installer* must ensure that -

(a) the *plant* is erected or installed having regard to the instructions of the *designer* and *manufacturer*, or to instructions developed by a *competent person*, in so far as they relate to health and safety;

(b) *plant* that is designed to be operated in a fixed position, is positioned on and, if necessary, fixed to, a secure base in order to prevent inadvertent movement when power is applied or while the *plant* is in operation;

(c) all *electrical installations* associated with *plant* comply with *AS* 3000 as far as it is relevant; and

(d) the erection and dismantling of:

(i) *scaffolds* is carried out to achieve compliance with *AS* 1576; and

(ii) temporarily erected structures intended or used to support sheeting, hoardings, guard-railings, means of access or egress, or entertainment equipment is carried out to achieve compliance with the appropriate design requirements of *AS* 1576.

Note: Persons involved in rigging work or the erection of scaffolding are required to be certificated under the National OHS Certification Standard.

DUTIES OF EMPLOYERS

Drafting Note: For the purpose of this national standard, in workplaces under the control of a principal contractor, any contractors, sub-contractors and their employees at the workplace are be deemed to be employees of the principal contractor. The duties of the principal contractor as an employer extend to matters over which they have control (or would have had control, but for some agreement to the contrary between the principal contractor and any other party at the workplace).

Consultation

24. An employer must, in relation to *risks* arising from *plant* and systems of work associated with *plant*, consult with employees likely to be exposed and their health and safety representatives regarding:

(a) the requirements of this national standard for *hazard* identification, *risk assessment*, control of *risk*, training and information; and

(b) any proposed changes to *plant* or systems of work associated with *plant* which may affect health and safety.

Note: In terms of this being a national standard, this provision forms a minimum requirement for each jurisdiction, some of which have more extensive general consultation provisions.

Hazard Identification

25. An employer must ensure that *hazards* are identified in accordance with Clause 65 -

(a) before and during the introduction of *plant* to a workplace;

(b) before and during any *alteration* to the *plant* or change in the way the *plant* is used or a system of work associated with the *plant*, including, where appropriate, a change in the location of the *plant*, which is likely to involve a *risk* to health or safety; and

Note: Changes include consultation in relation to Clause 31(2)(d).

(c) if new or additional health or safety information relating to the *plant* or its associated systems of work becomes available to the employer.

Changes in systems of work may include changes to the workforce which may mean hazards associated with skills and experiences of personnel may need to be reassessed.

Risk Assessment

26. (1) Where a *hazard* is identified under Clause 25, an employer must ensure that an assessment is made of *risks* associated with the *hazard* in accordance with Clause 66.

(2) In carrying out the *risk assessment* under Clause 26 (1), the employer must ensure that *risks* are assessed that may arise from:

(a) systems of work associated with the *plant*;

(b) layout and condition of the work environment where the *plant* is to be used;

(c) capability, skill and experience of the person ordinarily using the *plant*; and

(d) reasonably foreseeable abnormal conditions.

(3) In carrying out a *risk assessment* under Clause 26 (1), an employer must ensure that the following are identified:

(a) items of *plant* which require records to be kept so as to *minimise risks* to health and safety; and

(b) the type of records and the length of time records are to be kept.

(4) A *risk assessment* undertaken under Clause 26 (1) may be carried out on individual items of *plant* or, where multiple items of *plant* of the same design are installed and *used* under conditions which are the same for all practical purposes , the *risk assessment* may be carried out on a representative sample subject to the qualification that where *risk* may vary from operator to operator, a separate assessment of the *risk* to each operator of the particular *plant* is carried out on each item of *plant*.

Training, Information, Instruction and Supervision

27. Where a *hazard* related to *plant* and its associated systems of work is identified and assessed or reassessed according to Clause 26, to be a *risk* to health and safety which requires the *risk* to be controlled, an employer must ensure that -

(a) persons likely to be exposed to the *risk*, and anyone supervising these persons, are, where relevant, appropriately trained and provided with information and instruction in:

(i) the nature of the *hazard* associated with the *plant* and systems of work associated with the *plant*, and the processes used for the identification, assessment and control of *risks*;

(ii) the safety procedures associated with the *plant* at the workplace;

(iii) the need for, and proper use and maintenance of, control measures;

(iv) the *use*, fit, testing and storage of personal protective equipment; and

(iv) the availability and use of specific information relevant to the *plant*; and

(b) persons who *use plant* are provided with such information and instruction prior to use as is necessary to enable the *plant* to be used so as to *minimise risks* to health and safety;

(c) persons who *use plant*, with the exception of members of the public using *lifts* and *amusement structures*, are appropriately trained and supervised as is necessary to enable the *plant* to be used so as to *minimise risks* to health and safety;

(d) relevant health and safety information is provided to persons involved in:

(i) *commissioning* and installation of *plant*,

(ii) *use* of *plant*,

(iii) testing of *plant*, and

(iv) de-commissioning, dismantling and disposal of plant; and

(e) where relevant, information on emergency procedures relating to the *plant* is displayed in a manner that can be readily observed by persons who may be affected by the operation of the *plant*.

Control of Risk

28. (1) Where an assessment under Clause 26, identifies a *risk* to health or safety, the employer must control the *risk* by eliminating, or where this is not practicable, *minimising* the *risk* in accordance with this clause and Clause 67.

(2) Without limiting the generality of Clause 28 (1), the employer must ensure that -

(a) control measures are maintained and systems of work are implemented and effectively supervised so as to *minimise risks* to health and safety; and

(b) where personal protective equipment is required, it is provided and maintained so as to *minimise risks* to health and safety.

(c) where a hazardous situation is reported, persons are not placed at risk until the hazardous situation is rectified.

Design

29. Where an employer contracts out the design of *plant* for *use* at the workplace, the employer must ensure that the person being contracted to design the *plant* is provided with relevant information about matters in relation to the *plant* that may affect health and safety at the workplace.

Installation and Commissioning

30. (1) An employer must ensure that *risks* to health and safety arising during installation, erection and *commissioning* of *plant* are *minimised*.

(2) Without limiting the generality of Clause 30 (1), an employer must ensure that -

(a) a *competent person* undertakes installation, erection or *commissioning*, and is provided with such information as necessary to enable *plant* to be installed and *commissioned* so as to *minimise risks* to health and safety;

(b) *plant* is installed or erected in a location that is suitable for the operation being undertaken and the type of *plant* being used;

(c) there is sufficient clear space around the *plant* to allow the *plant* to be used and *repaired* so as to *minimise risks* to health and safety;

(d) proper layout of the workplace and safe access and egress is provided;

Note: Persons erecting or installing certain plant are required to be certificated in accordance with the National OHS Certification Standard

(e) during testing and start-up, where the final means of safeguarding are not in place, interim safeguards are used; and

(f) as far as can be determined by *commissioning*, the *plant* can be transferred into active service.

Use

31. (1) An employer must ensure that the *risks* to health and safety arising from *plant* in *use* and systems of work associated with the *plant* are *minimised*.

(2) Without limiting the generality of Clause 31 (1), an employer must ensure that -

(a) *plant*, with the exception of *lifts* and *amusement structures* which are operated by the members of the public, is not operated by a person unless that person has received adequate information and training, and is supervised to the extent necessary so as to *minimise* the *risks* to health and safety;

(b) *plant* is subject to appropriate checks, tests and inspections necessary to *minimise risks* to health and safety;

(c) where the function or condition of *plant* is impaired or damaged to the extent that it presents an immediate *risk* to health or safety, the *plant* is withdrawn from *use* until the *risk* is controlled in accordance with Clause 28 or the *plant* is *repaired* in accordance with Clause 32;

(d) *plant* is used only for the purpose for which it was designed unless the employer has determined, and a *competent person* assessed, that the change in use does not present an increased *risk* to health or safety;

(e) measures are provided to prevent as far as practicable, unauthorised interference, *alteration* or *use* of *plant* which is capable of making the *plant* a *risk* to health or safety;

(f) where safety features or warning devices are incorporated into *plant* they are *used* as intended;

(g) a person is not allowed to work between the fixed and traversing parts of the *plant* where there is a *risk* to health or safety.

(h) the necessary facilities and systems of work are provided and maintained so as to *minimise risks* to health and safety of persons maintaining, inspecting, or cleaning the *plant*;

(i) inspections, maintenance and cleaning are carried out having regard to procedures recommended by the *designer* and *manufacturer*, or those developed by a *competent person*;

(j) where access is required for the purpose of maintenance, cleaning or *repair*, the *plant* is stopped, and one or a combination of the following are used so as to *minimise risks* to health and safety,

(i) lockout or isolation devices,

(ii) danger tags,

(iii) permit to work systems, or

(iv) other control measures;

(k) where it is not practicable to carry out cleaning or maintenance with the *plant* stopped, operational controls which permit controlled movement of the *plant* are fitted and safe systems of work are used; and

(l) all safety features and warning devices of *plant* are maintained and tested.

Repair

32. An employer must ensure:

(a) that when *plant* has been damaged to the extent that its function or condition is impaired such that it increases the *risk* to health or safety, a *competent person* assesses the *damage* and advises the employer of -

(i) the nature of the *damage*; and

(ii) whether the *plant* is able to be *repaired* and if so, what *repairs* must be carried out to *minimise risks* to health and safety;

(b) that *repair*, inspection and, where necessary, testing is carried out by a *competent person*; and

(c) *repairs* to the *plant* are carried out so as to retain the *plant* within its design limits.

Alteration

33. An employer must ensure that for *plant* which is *altered*:

(a) the design of the alteration is assessed in accordance with Clauses 8 to 10; and

(b) the *plant* is *altered*, inspected and tested by a *competent person* having regard to the design specifications for the *altered* design prior to the *plant* being returned to service.

Dismantling, Storage and Disposal of Plant

34. (1) Where *plant* is dismantled, an employer must ensure that:

(a) dismantling is carried out by a *competent person*; and

(b) where available, any relevant information provided by the *designer* and *manufacturer* are made available to the *competent person*;

(2) Where *plant*, including *plant* which is dismantled, is to be stored, an employer must ensure that storage is carried out by a *competent person*.

(3) Where *plant* to be disposed of contains materials presenting a *risk* to health or safety, an employer must ensure that disposal is done by a *competent person*.

Specific Duties for Control of Risk

Plant under Pressure

35. With reference to *plant* under pressure, and without limiting the generality of Clause 28, -

(a) an employer must ensure that:

(i) *pressure equipment*, covered by *AS* 1200 but excluding *gas cylinders*, and which is in use, is inspected, operated and maintained in accordance with *AS* 3788, *AS* 3873 or, where applicable, *AS* 2593, or Australian Miniature Boiler Safety Committee Code; and

(ii) *gas cylinders* comply with *AS* 2030

(b) an employer who owns a *gas cylinder* must ensure that it is inspected and maintained in accordance with *AS* 2030;

(c) an employer operating a *gas cylinder* test station must ensure that when *gas cylinders* are presented for inspection and testing, they are inspected, and tested in accordance with *AS* 2030 and *AS* 2337.

(d) an employer operating a *gas cylinder* filling station must ensure that when *gas cylinders* are presented for filling -

(i) only those which bear a current inspection mark in accordance with *AS* 2030 and are in a good condition are filled;

(ii) that the filling is carried out in accordance with *AS* 2030; and

(iii) the fluid to be introduced is compatible with the *gas cylinder*.

Plant with Moving Parts

36. With reference to *plant* with moving parts, and without limiting the generality of Clause 28, where a *risk assessment* identifies a *risk* to health and safety arising from moving parts of a *plant*, an employer must ensure that -

(a) cleaning, maintenance and *repair* of *plant* with moving parts is not undertaken while that *plant* is operating, unless there is no practicable alternative approach; and

(b) where *guarding* of moving parts does not completely eliminate the *risk* of entanglement, persons do not operate or pass in close proximity to the *plant*, unless a safe system of work is introduced to *minimise* that *risk*.

Powered Mobile Plant

37. With reference to powered mobile *plant*, and without limiting the generality of Clause 28, -

(1) An employer must ensure that the *plant* is used so as to *minimise* the *risk* of overturning or of a falling object coming into contact with the operator.

(2) Where a *risk assessment* identifies a *risk* of -

(i) a powered mobile p*lant* overturning

(ii) objects falling on the operator, or

(iii) an operator being ejected from the seat,

and the *risk* needs to be controlled, an employer must ensure that, as far as practicable, an appropriate combination of *operator protective devices* are provided, maintained and as appropriate used.

(3) An employer must ensure that appropriate controls are implemented to eliminate or *minimise* the *risk* of the powered mobile *plant* colliding with pedestrians or other powered mobile plant.

Note: AS 1636 does not cover tractors less than 800 kilograms or in excess of 15 000 kilograms.

(4) An employer must ensure that a *tractor* to which the testing requirements of *AS* 1636 can be applied is, within 12 months after the commencement of this national standard, securely fitted with a roll-over protective structure except where the *tractor* is:

Note: States/Territories which have regulations in this area will need to put into place transitional requirements to cover the 12 month period.

(a) manufactured, imported or originally purchased prior to 1981, and is not operated by an employee; or

(b) installed in a fixed position, and in manner which would no longer permit it to be *used* as powered mobile *plant*.

(5) Where a *tractor* is used under a tree or in a place too low for a *tractor* to work while it is fitted with a roll-over protective structure, the structure may be lowered or removed for the period that the *tractor* is used in such a situation.

(6) An employer must ensure that a *tractor* within the scope of Clause 37 (4) is not sold, leased or hired unless it is fitted, as appropriate, with suitable and adequate protective devices to *minimise* the *risk* of injury to the operator.

(7) An employer must ensure that *earthmoving machinery* within the scope of *AS* 2294 is, within 12 months after the commencement of this national standard, securely fitted with an appropriate combination of *operator protective devices* except where the *earthmoving machinery* is manufactured, imported or originally purchased prior to 1989.

Note: The dates specified in Clauses 37(4)(a) and 37(7) applies to importation or purchase of mobile plant when the date of manufacture is unknown.

(8) An employer must ensure that any protective structure fitted to powered mobile *plant*:

Note: See Clause 6(3)

(a) complies with *AS* 1636 or *AS* 2294 or comparable standards which are deemed acceptable by an *Authority*; or

(b) where a protective structure or the associated structural attachment complying with Clause 37 (8)(a) is not available, it is designed by a suitably qualified engineer in accordance with the following parameters,

(i) the performance requirements of *AS* 2294 must be used as design criteria for all roll-over and falling object protective structures covered by this clause,

(ii) provided the suitably qualified engineer is satisfied deformation testing is not required, then calculated deformations may be substituted, and

(iii) the protective structure must be identified with the information required by *AS* 2294 as appropriate.

(9) An employer must ensure that powered mobile *plant* is fitted with appropriate seat restraints where:

(a) the *plant* is fitted with a roll-over protective structure or a falling object protective structure; and

(b) attaching points for the seat restraints have been incorporated in the original design of the *plant*.

Plant with Hot or Cold Parts

38. With reference to *plant* with hot or cold parts, and without limiting the generality of Clause 28, an employer must ensure that -

(1) where persons are exposed to hot or cold *plant*, the exposure is monitored and is appropriately managed to *minimise risks* to health and safety.

(2) where molten metal is transported, arrangements are made to prevent access to any part of the transport route during transportation.

(3) pipes and other parts of *plant* associated with hot or cold *plant* are adequately guarded or insulated so as to *minimise risks* to health and safety.

Electrical Plant and Plant Exposed to Electrical Hazards

39. With reference to electrical *plant* and *plant* exposed to electrical *hazards*, and without limiting the generality of Clause 28, an employer must ensure that -

(a) where *damage* to *plant* presents an electrical *hazard* the *plant* is disconnected from the electricity supply and is not *used* until the damaged part is *repaired* or replaced;

(b) *plant* is not *used* under conditions likely to give rise to electrical *hazards*;

(c) appropriate permit to work systems are provided to avoid inadvertent energising of *plant* which has been isolated but not physically disconnected from the electrical supply;

(d) only *competent persons* carry out electrical work on *plant*;

(e) where excavations are to be carried out, all relevant available information relating to the position of underground cables is obtained; and

(f) control options for *plant* operating near overhead electrical power lines comply with the requirements of the relevant electrical supply authorities or other regulatory authorities.

Plant Designed to Lift or Move

40. With reference to *plant* designed to lift or move people, equipment or materials, and without limiting the generality of Clause 28, an employer must ensure that -

(a) as far as practicable, no loads are suspended over, or travel over a person;

(b) persons are not lifted or suspended by any *plant* or its attachment (other than any *plant* specifically designed for the lifting or suspending of persons), unless -

(i) the use of another method is impracticable, and

(ii) a suitable and adequate personnel box or carrier, designed for the purpose, is used and securely attached to the *plant*, and

(iii) the *plant* is fitted with a means by which the personnel box or carrier may be safely lowered in the event of an emergency or the failure of the power supply, and

(iv) the *plant* is suitably stabilized at all times while the personnel box or carrier is in use,

(v) a suitable safety harness complying with *AS* 1891, securely attached to a suitable point, is provided to and worn by all persons in a suspended personnel box or carrier except where the box or carrier is fully enclosed, and

(vi) in the case of a *crane*, it has drive-up and drive-down controls on both the hoisting and luffing motions and these controls are used;

(c) where *plant* is used for lifting or moving a load which may become unstable, the load is appropriately restrained;

Note: Other methods could include the use of stairs or scaffolding.

(d) a *crane* or *hoist* is not used as an *amusement structure* with or without payment or reward;

(e) a *crane*, *hoist* and *building maintenance unit* is operated and maintained in accordance with *AS* 2550 and *AS* 1418 and having regard to the instructions of the *designer* and *manufacturer* or those developed by a *competent person*;

(f) no *plant* other than a *crane* or *hoist* is *used* to suspend a load unless the use of a *crane* or *hoist* is impracticable and -

Note: Typical machinery covered are earthmoving machines and industrial lift trucks.

(i) the load is only travelled with the lifting arm of the *plant* fully retracted,

(ii) stabilisers are provided and *used* wherever necessary in order to achieve stability of the *plant*,

(iii) no person is permitted under a suspended load,

(iv) a welded lug is provided on the *plant* as the lifting point,

(v) where buckets operated by trip-type catches are used for lifting, the catch is bolted or otherwise positively engaged,

(vi) an appropriate load chart is provided and all lifting is carried out within the safe working load limits of the *plant*; and

(vii) safe working load limits are displayed on the *plant*; and

(viii) loads are only lifted using attachments suitable to the task to be performed;

(g) as far as practicable, no load is simultaneously lifted by more than one *plant*;

(h) *industrial lift trucks* are,

(i) fitted with warning devices which are appropriate to effectively warn persons who are at *risk* from the movement of the *industrial lift truck*,

(ii) *used* in a way which *minimises* exposure of the operator to *risks* arising from work practices or systems and the particular environment in which the *industrial lift truck* is used, and

(iii) equipped with appropriate lifting attachments specifically designed for the load to be lifted or moved; and

(i) no person other than the operator is permitted to ride on an *industrial lift truck* or *tractor* unless the person is seated in a seat specifically designed for carrying a passenger, and the seat is fitted with appropriate seat restraints and is located within the zone of protection afforded by the required *operator protective devices*.

Industrial Robots and Other Remotely or Automatically Energised Equipment

41. With reference to *industrial robots* and other remotely automatically energised equipment, and without limiting the generality of Clause 28, an employer must ensure that -

(1) an employee is not permitted to work in the immediate *vicinity* of an item of *plant* which could start without warning and cause *hazards* unless appropriate controls and systems of work are put in place.

(2) where *industrial robots* can be remotely or automatically energised and that could lead to a *risk* to health and safety, the immediate area becomes a restricted space and access into it is controlled at all times by positive isolation or the provision of interlocked guards or presence sensing devices and permit to work systems; and

Lasers

42. With reference to *lasers*, and without limiting the generality of Clause 28, an employer must ensure that -

(a) a *laser* or *laser product* is not operated unless it has been classified and labelled in accordance with *AS* 2211;

(b) Class 3 B or Class 4 *lasers* or *laser products* as defined in *AS* 2211 are not *used* in building or construction operations; and

(c) the use of *laser* or *laser products* in building or construction operations is in accordance with *AS* 2397.

Scaffolds

43. With reference to *scaffolds*, and without limiting the generality of Clause 28, an employer must ensure that -

(a) no work is carried out from a *scaffold* of a type listed below unless the employer has obtained written confirmation from a *competent person* that the *scaffold*, or the relevant part or portion of the *scaffold*, is complete:

Note: Clause 43(a)(v) includes the possibility of a scaffold collapsing.

(i) a *suspended scaffold*;

(ii) a *cantilevered scaffold*;

(iii) a *spur scaffold*;

(iv) a *hung scaffold*; or

(v) any other *scaffold* from which a person or object could fall more than 4 metres.

(b) a *scaffold* of a type listed in Clause 43 (a) and its supporting structure is inspected by a *competent person* for compliance with this national standard -

(i) prior to its first use;

(ii) as soon as practicable and prior to its use following an occurrence that can reasonably be expected to affect the stability or adequacy of the *scaffold*, for example, severe storm conditions or earthquake;

(iii) prior to its use following *repairs*; and

(iv) at intervals not exceeding thirty days.

(c) where an inspection of a *scaffold* or its supporting structure indicates an unsafe condition, appropriate *repairs*, *alterations* and/or additions are carried out and re-inspected by a *competent person* prior to further *use* of the *scaffold*.

(d) where a *scaffold* is incomplete and it is left unattended, appropriate controls, including the use of danger tags or warning signs, are used to prevent unauthorised access.

Clause 43(a)(v) is also consistent with the Certification Standard, whereby, if you require a certificated scaffolder to erect the scaffold, then the requirements of Clause 43(a)(v) also apply, that is, written confirmation.

Lifts

44. With reference to *lifts*, and without limiting the generality of Clause 28, an employer must ensure that -

(a) a clearly legible notice is affixed, in a conspicuous place, on the *plant* or any lifting gear, specifying the safe working load in appropriate metric units or maximum number of people, as may be appropriate;

(b) where an assessment shows a *risk* to the health or safety of a person working in a *lift* well from the person falling, objects falling on the person or movement of the *lift* car, adequate protection of the person is provided, including -

(i) a safe working platform;

(ii) adequate protection decking; and

(iii) suitable access to the *lift* well, safe working platform and protection decking; and

(c) a *lift* is installed, inspected and tested in accordance with *AS* 1735 and having regard to the instructions of the *designer* and *manufacturer*.

Amusement Rides

45. With reference to *amusement rides*, and without limiting the generality of Clause 28, an employer must ensure that *amusement rides* are operated, maintained and records are kept in accordance with *AS* 3533 or where applicable the Code for Miniature Railways, and having regard to the instructions of the *designer* and *manufacturer*, or those developed by a *competent person*.

Record Keeping

46. (1) An employer must, in relation to any plant specified in Clause 46 (2), while the *plant* is operable and under their control, make and keep, for the period as identified by the *risk assessment* carried out in accordance with Clause 26 (3), records on any relevant tests, maintenance, inspection, *commissioning* and *alteration* of the plant, and make those records available to any employee or relevant health and safety representative.

(2) The following plant is specified:

(a) registered *plant* listed in Item 2 of Schedule 1; and

(b) any of the following items of *plant*,

(i) *concrete placing units*,

(ii) *industrial lift trucks*,

(iii) *mobile cranes*,

(iv) *hoists*, with a platform movement in excess of 2.4 metres, designed to lift people,

(v) *boom-type elevating work platforms*,

(vi) *presence sensing safeguarding systems*,

(vii) *vehicle hoists*,

(viii) *gantry cranes* greater than 5 tonnes or *bridge cranes* greater than 10 tonnes, or any *gantry crane* or *bridge crane* which is designed to handle molten metal or dangerous goods, and

(ix) *mast climbing work platforms*.

(c) *plant* requiring records as identified by the *risk assessment* carried out in accordance with 26 (3); and

(3) Where a *risk assessment* has resulted in documentation, the employer must ensure that documentation is kept for the currency of that assessment and is available to employees and their health and safety representatives.

(4) An employer must ensure that records relating to health and safety are transferred on sale of the *plant* unless the *plant* is to be sold for scrap or as spare parts for other *plant*.

DUTIES OF OWNERS

Note: Some jurisdictions will need to amend the principal Act or adopt the duties of owners under existing duties of employers, occupiers or self-employed persons.

Note: Although the duties of owners is limited to 'maintain' plant, they may also have a duty as a designer or manufacturer as appropriate.

Application

47. Clauses 48 to 56 apply to:

(1) an *owner* of any *plant* that is hired or leased;

(2) an *owner* of any of the following categories of *plant* where there is no employer or self-employed person having management or control of the *plant*:

(a) *plant* under pressure;

(b) *plant* designed to lift or move people, equipment or materials;

(c) *lifts*;

(d) *amusement structures*.

Hazard Identification

48. An *owner* of *plant* under Clause 47 must ensure that, insofar as is relevant to maintain the *plant* in a condition so as to *minimise* risks to health and safety, *hazards* are identified in accordance with Clause 65.

Risk Assessment

49. (1) Where a *hazard* is identified under Clause 48, an *owner* must ensure that an assessment is made of *risks* associated with the *hazard* in accordance with Clause 66.

(2) A *risk assessment* undertaken under Clause 49 (1) may be carried out on individual items of *plant* or, where multiple items of *plant* of the same design are installed and *used* under conditions which are the same for all practical purposes, the *risk assessment* may be carried out on a representative sample subject to the qualification that where *risk* may vary from operator to operator, a separate assessment of the *risk* to each operator of the particular *plant* is carried out on each item of *plant*.

Control of Risk

50. Where an assessment under Clause 49, identifies a *risk* to health or safety, the *owner* must control the *risk* by eliminating, or where this is not practicable, *minimising* the *risk*, in accordance with Clause 67.

Provision of Information

51. (1) An *owner* of *plant* under Clause 47 must ensure that, where available, the relevant health and safety information is provided to persons involved in the *commissioning*, installation, *use*, testing, and the de-commissioning, dismantling and disposal of the *plant*;

(2) An *owner* of *plant* under Clause 47 which is installed in a building, must ensure that, where relevant, information on emergency procedures relating to *plant* is displayed in a manner that can be readily observed by persons who may be exposed to *risks* arising from the operation of the *plant*.

Maintenance, Inspection, Repair and Cleaning

52. An *owner* of *plant* under Clause 47 must ensure that:

(a) the necessary facilities and systems of work are provided and maintained so as to *minimise* the *risks* to health and safety of persons maintaining, inspecting, *repairing* or cleaning the *plant*;

(b) inspections, maintenance and cleaning are carried out having regard to procedures recommended by the *designer* and *manufacturer*, or those developed by a *competent person*;

(c) all safety features and warning devices of *plant* are maintained and tested;

(d) that when *plant* has been damaged to the extent that its function or condition is impaired such that it increases the *risk* to health or safety, a *competent person* assesses the *damage* and advises the *owner* of -

(i) the nature of the *damage*, and

(ii) whether the *plant* is able to be *repaired* and if so, what *repairs* must be carried out to *minimise risks* to health and safety,;

(e) that *repair*, inspection and, where necessary, testing is carried out by a *competent person*; and

(f) *repairs* to the *plant* are carried out so as to retain the *plant* within its design limits.

Alteration

53. An *owner* of *plant* under Clause 47 must ensure that if the *plant* is *altered*:

(a) the design of *alteration* is assessed in accordance with Clauses 8 to 10; and

(b) *plant* is *altered*, inspected and tested by a *competent person* having regard to the design specifications for the *altered* design prior to the *plant* being returned to service.

Dismantling, Storage and Disposal of Plant

54. An *owner* of *plant* under Clause 47 must ensure that:

(a) where the plant is dismantled, dismantling is carried out by a *competent person*;

(b) where available, any relevant information provided by the *designer* and *manufacturer* relevant to dismantling are made available to the *competent person*;

(c) where the *plant*, including *plant* which is dismantled, is to be stored, that storage is carried out by a *competent person*; and

(d) where the *plant* contains materials presenting a *risk* to health or safety and the *plant* is to be disposed of, that disposal is done by a *competent person*.

Specific Duties for Control of Risk

55. Without limiting the generality of Clause 50, any *owner* of a category of *plant* under Clause 47 must comply with the duties of employers for that category of plant under Clauses 35 (a) and (b), 37, 40, 44 and 45, insofar as the duties are relevant to maintaining the *plant* in a condition so as to eliminate the *risks*, or where this is not practicable, *minimise* the *risks*.

Record Keeping

56. (1) An *owner* of any *plant* under Clause 47 (1) must ensure that records relating to health and safety are kept and transferred on sale of *plant* in accordance with Clause 46.

(2) An *owner* of a category of *plant* under Clause 47 (2) must ensure that records relating to health and safety are kept and transferred on sale of *plant* unless the *plant* is to be sold for scrap or as spare parts for other *plant*.

Note: The requirements of:
- Clause 47(1) apply to hirers
- Clause 47(2) apply to owners of any of the four specified categories of plant.

DUTIES OF SELF-EMPLOYED

Note: Some jurisdictions do not cover the health and safety of self-employed persons themselves.

Hazard Identification

57. A *self-employed person* must ensure that *hazards* are identified in accordance with Clause 65 -

    (a) before and during the introduction of *plant* to the workplace;

    (b) before and during any *alteration* to the *plant* or change in the way the *plant* or an associated system of work is used, including, where appropriate, a change in the location of the *plant*, which is likely to involve a *risk* to health or safety; and

    (c) if new or additional health or safety information relating to the *plant* or its associated systems of work becomes available to the *owner*.

Risk Assessment

58. Where a *hazard* is identified under Clause 57, a *self-employed person* must ensure that an assessment is made of *risks* associated with the *hazard* in accordance with Clause 66.

Control of Risk

59. Where an assessment under Clause 58, identifies a *risk* to health or safety, the *self-employed person* must control the *risk* by eliminating, or where this is not practicable, *minimising* the *risk* in accordance with Clause 67.

Specific duties for Control of Risk

60. Without limiting the generality of Clause 59, where *plant* is under the control of a *self-employed person*, that person must comply with the duties of employers for that category of *plant* under Clauses 35 (a) and (b), 37, 40, 44 and 45.

Provision of Information

61. Where *plant* is under the control of a *self-employed person*, that person must provide relevant health and safety information to persons involved with the installation, *commissioning*, *use*, *repair*, *alteration* or dismantling of the *plant*.

Record Keeping

62. Where *plant* is under the control of a *self-employed person*, that person must ensure that records relating to health and safety are kept and transferred on sale of *plant* unless the *plant* is to be sold for scrap or as spare parts for other *plant*.

DUTY OF EMPLOYEES

63. (1) Employees must comply, to the extent that they are capable, with all activities carried out in accordance with the provisions of this national standard.

(2) Employees must report promptly to their employer any matters of which they are aware that may affect the employer's compliance with the provisions of this national standard.

DUTIES OF ALL PERSONS

64. Persons must not -

(a) wilfully or recklessly interfere with or misuse anything provided in the interests of health and safety or welfare in pursuance of any requirement in this national standard; and

(b) wilfully place at *risk* the health and safety of any person at the workplace.

PART 3 - GENERAL REQUIREMENTS FOR HAZARD IDENTIFICATION, RISK ASSESSMENT AND CONTROL OF RISK

Note: The requirements of this part apply to persons having a duty in this national standard for hazard identification, risk assessment and the control of risk, and relate to all plant.

HAZARD IDENTIFICATION

65. (1) All reasonably foreseeable *hazards* to health and safety arising from *plant* and systems of work associated with the *plant* must be identified.

Note: Others hazards (such as emission of noise, radiation, confined spaces or hazardous substances from plant) which arise in relation to plant are subject to regulatory requirements from other national or State standards/ regulations.

(2) Without limiting the generality of Clause 65 (1), *hazards* associated with the following factors so far as they are relevant to the design, manufacture, installation, *commissioning* and *use* of the *plant*, must be identified:

(a) suitability of the type of *plant* for the particular task;

(b) actual and intended use in the workplace;

(c) environmental conditions and terrain in which *plant* is used;

(d) foreseeable abnormal situations, misuse and fluctuation of operating conditions;

Note: The Expert Review Group agreed that Clause 65 (2) contains important information and should be included in this national standard. There was significant public comment requesting information relating to hazard identification.

(e) potential for injury due to entanglement, crushing, trapping, cutting, stabbing, puncturing, shearing, abrasion, tearing and stretching;

(f) generation of hazardous conditions, due to pressurised content, electricity, noise, radiation, friction, vibration, fire, explosion, temperature, moisture, vapour, gases, dust, ice, hot or cold parts;

(g) failure of the *plant* resulting in the loss of contents, loss of load, unintended ejection of workpieces, explosion, fragmentation or collapse of parts;

(h) capability of the *plant* to lift and move people, equipment and materials and suitability of secondary back-up system to support the load;

(i) control systems, including guarding and communication systems;

(j) potential for falling objects and the *plant* to roll-over;

(k) suitability of materials used for the *plant*;

(l) suitability and conditions of all accessories;

(m) *ergonomic* needs relating to installation and *use*;

(n) carrying out the work without the *plant*;

(o) location in the workplace and the impact on workplace design and layout;

(p) suitability and stability of the *plant* and supports;

(q) presence of persons and other *plant* in the *vicinity*;

(r) potential for inadvertent movement or operation of the *plant*;

(s) systems of work associated with the *plant*;

(t) access and egress; and

(u) competency of operators.

RISK ASSESSMENT

66. (1) Where a *hazard* is identified under Clause 65, an assessment of *risks* associated with that *hazard* must be made.

(2) A person carrying out a *risk assessment* under Clause 66 (1) must, as far as practicable, determine a method of assessment which adequately addresses the *hazards* identified, and includes one, or a combination of the following -

(a) a visual inspection of the *plant* and its associated environment;

(b) auditing;

(c) testing;

(d) a technical or scientific evaluation;

(e) an analysis of injury and near-miss data;

(f) discussions with *designers*, *manufacturers*, *suppliers*, *importers*, employers, employees or any other relevant parties; and

(g) a quantitative *hazard* analysis.

Note: This does not take the place of the formal consultative process with employees.

CONTROL OF RISK

67. (1) Where an assessment under Clause 66, identifies a requirement to control a *risk* to health or safety, that *risk* must be eliminated or, where it cannot be eliminated, *minimised*.

(2) To *minimise* the *risk* to health and safety, one or a combination of the following approaches must be used:

(a) substitution of the *plant* by less hazardous *plant*;

(b) modification of the design of the *plant*;

(c) isolation of the *plant*; and/or

(d) engineering controls such as *guarding*.

(3) Where through the application of Clause 67 (2) the *risk* is not *minimised*, appropriate administrative controls and personal protective equipment must be *used*.

Access/Egress

(4) There must be sufficient access and egress to:

(a) parts of *plant* which require cleaning and maintenance; and

(b) the operators workstation for normal and emergency conditions.

(5) Where access to *plant* is required as part of normal operation, and persons may become entrapped exposing them to increased *risk* due to heat, cold or lack of oxygen, then the following must be provided:

(i) emergency lighting;

(ii) safety doors; and

(iii) alarm systems.

Dangerous Parts

(6) Where an assessment under Clause 66 identifies a *risk* of exposure to dangerous parts during operation, examination, lubrication, adjustment or maintenance, that *risk* must be eliminated or, where it cannot be eliminated, *minimised*.

Guarding

(7) Where *guarding* is used as a control measure, a person with the responsibility for the control of *risk* must ensure that any *guard* provided for the *plant* and its operation is -

(a) a permanently fixed physical barrier where no part of a person requires access to the dangerous area during normal operation, maintenance or cleaning; or

(b) an interlocked physical barrier where access to dangerous areas is required during the operating sequence; or

(c) where a *guard* in accordance with Clauses 67 (7)(a) or 67 (7)(b) is not practicable, that it is a physical barrier securely fixed in position by means of fasteners or other suitable devices, which ensures that the *guard* cannot be *altered* or detached without the aid of a tool or key; or

(d) where a *guard* in accordance with Clauses 67 (7)(a), 67 (7)(b) or 67 (7)(c) is not practicable, that *presence sensing safeguarding systems* are provided.

(8) Where *guards* are *used* in accordance with Clause 67 (7), they must be:

(a) designed and constructed to make by-passing or defeating them, whether deliberately or by accident, as difficult as is reasonably possible;

(b) of solid construction and securely mounted so as to resist impact and shock;

(c) regularly maintained; and

(d) designed so as not to cause a *risk* in themselves.

(9) Where parts are designed to move at high speed and may break or disintegrate, or *workpieces* may be ejected, the *guarding* provided must be adequate to effectively contain the fragments or *workpieces*.

(10) Where a *risk* of jamming or blockage of moving parts cannot be eliminated, specific work procedures, devices and tools must be specified to ensure the *plant* can be cleared in a way that *minimises* the *risk* to health and safety.

Operational Controls

(11) Operational controls must be:

(a) suitably identified on *plant* so as to indicate their nature and function;

(b) located so as to be readily and conveniently operated by each person using the *plant*;

(c) located or guarded to prevent unintentional activation;

(d) able to be locked into the "off" position to enable the disconnection of all motive power and forces; and

(12) Where it is not practicable to eliminate the need for *plant* to be operated during maintenance and cleaning then operational controls which permit controlled operation must be provided.

(13) Where *plant* is designed to be operated or attended by more than one person and more than one control is fitted, the multiple controls must be of the 'stop and lock-off' type so that the *plant* cannot be restarted after a stop control has been used unless each stop control is reset.

Emergency Stops and Warning Devices

(14) Emergency stop devices must:

(a) be prominent, clearly and durably marked and immediately accessible to each operator of the *plant*; and

(b) have handles, bars or push buttons which are coloured red.

(c) not be able to be affected by electrical or electronic circuit malfunction.

(15) Where a *risk assessment* identifies a need to have an emergency warning device this must be installed in such a position to fulfil its intended purpose.

PART 4 - REGISTRATION OF PLANT DESIGN AND ITEMS OF PLANT

APPLICATION

68. (1) This part deals with registration of *plant* designs, and registration of individual items of *plant*.

(2) The registration of *plant* design provisions apply to *plant* listed in item 1 of Schedule 1.

(3) The registration of individual items of *plant* provisions apply to *plant* listed in item 2 of Schedule 1.

Implementation Issue; The need to develop appropriate administrative systems, and transitional arrangements relating to registration, particularly for plant which does not currently require registration.

DEFINITION

69. (1) In this Part -

"Design verifier" in relation to the design of an item of *plant* means a *competent person* who is responsible for the verification of the design.

(2) For the purposes of this Part -

(a) a design verifier must not have had any involvement in the design of the relevant *plant*; and

(b) the *designer* and design verifier of an item of *plant* must not be employed or engaged by the same person unless the person uses a quality system to undertake the design of items of *plant* and that system has been certified by a body accredited or approved by the Joint Accreditation System of Australia and New Zealand (commonly known as "JAS-ANZ").

REGISTRATION OF PLANT DESIGN

70. (1) A person having management of the *plant* must not *use* or permit or cause to be *used* at a workplace any *plant* listed in item 1 of Schedule 1 unless the *plant* has a current design registration number issued by an *Authority*.

(2) An application for registration of *plant* design must be made to an *Authority*.

(3) A person who applies for registration of a *plant* design must ensure that -

(a) verification that the design complies with relevant Standards listed in Schedule 2 is undertaken and documented by a *design verifier*; or

Note: A person having management of plant refers to any person who has functional control of the plant. This could be an owner, employer, self-employed person or employee.

Note: Registration of plant design is only required to be with one Authority.

Note: See Clause 6(3)

(b) in the case of pressure equipment, verification that the design complies with the relevant standards listed in Schedule 2, with this verification to be carried out in accordance with *AS* 3920 Part 1 Pressure Equipment Manufacture - Assurance of Product Quality.

(4) An application for registration of a *plant* design must include the following:

(a) a compliance statement signed by the *designer* which states compliance with the *designer's* responsibilities detailed in this national standard;

(b) a verification statement in accordance with Clause 70 (3)(a), which includes the name(s), business address(es) and qualification(s) of the design verifier(s), and where applicable, the name(s) and business address(es) of the organisation(s) employing the design verifier(s); and

(c) representational drawings of the *plant* design.

(5) Upon request from an *Authority* the applicant must supply any of the following information at the time of application for design registration or any time afterwards:

(a) detailed drawings of the *plant* design;

(b) design calculations;

(c) details of operating instructions;

(d) diagrams of control systems, including the sequence of operating the controls;

(e) details of maintenance requirements; and

(f) a statement of limitations of *use*.

(6) On receipt of the application for registration of *plant* design, the *Authority* must respond in an appropriate timeframe to:

(a) register the *plant* design, with conditions if necessary, and issue a design registration number; or

(b) seek additional information; or

(c) refuse the registration of the *plant* design.

(7) Where the *Authority* refuses to register the *plant* design, the reasons for the refusal must be provided in writing.

(8) On receipt of the design registration number from the *Authority*, the person who applied for the design registration must provide the design registration number to the *manufacturer*, *importer* or *supplier* who must ensure that the design registration number is transferred to the *owner* or person having management of the *plant* manufactured to that design.

(9) Documentation relating to design information supplied to an *Authority* will, on request, be accessible to any other *Authority*. The relevant *Authority* must protect confidential information provided by the applicant. However, the *Authority* may provide any person who is authorised by the applicant with design information, and employees or their health and safety representatives with the design verification statement in accordance with Clause 70 (4)(b). Where the person who initially supplied the information no longer exists or cannot be located, an *Authority* may release to *owners* of *plant* built to that design, the minimum information necessary to ensure the continued safe operation of that *plant*.

Implementation Issue: The administrative system should address the issue of confidentiality.

(10) After a *plant* design has been registered with an *Authority*, any intended *alteration* to the design of the *plant* must involve a re-registration of the *plant* design with the *Authority* in accordance with Clauses 70 (2), 70 (3), 70 (4), 70 (5), 70 (6), 70 (7) and 70 (8).

REGISTRATION OF ITEMS OF PLANT

Note: This requirement covers plant in transit.

71. (1) Subject to Clause 71 (2), a person having management of the *plant* must not *use* or permit or cause to be *used* at a workplace any *plant* listed in item 2 of Schedule 1 unless that *plant* is currently registered with the *Authority*.

Implementation Issue: Guidance material is required on the type of plant which is considered to be normally fixed, fixed for periods and mobile.

(2) Where an item of *plant*, other than that of the normally fixed type, is currently registered with an *Authority* and the *plant* is in use in the jurisdiction of another *Authority*, the registration with the first *Authority* shall be deemed as valid.

(3) An application for registration (or renewal of registration) of an item of p*lant* must be made to the *Authority*.

(4) An application for registration (or renewal of registration) of an item of *plant* must include:

(a) sufficient information to clearly identify the item of *plant*;

(b) where the *plant* requires design registration, a notification of -

(i) the design registration number; and

(ii) the *Authority* with which the *plant* design was registered; and

(c) a statement that the *plant* has been inspected by a *competent person* and it is safe to operate.

(5) On receipt of the application for registration (or renewal of registration) of *plant*, the *Authority* must respond in an appropriate timeframe to:

(a) register the *plant*, with conditions if necessary, and supply evidence that the *plant* is currently registered; or

(b) seek additional information; or

(c) refuse the registration of the *plant*.

(6) Where the *Authority* refuses to register the *plant*, the reasons for the refusal must be provided in writing.

(7) The registration of *plant* must be renewed where,

(a) *plant* is *altered*;

(b) in the case of normally fixed *plant*, the plant is relocated; or

(c) there is a change of ownership of the *plant*.

EVIDENCE OF REGISTRATION

72. The *owner* of *plant* must ensure that the,

(i) design registration number for *plant* which requires registration of the design, which has been issued by the *Authority*, is readily accessible and within the *vicinity* of the *plant*; and

(ii) evidence of current registration of an item of *plant*, which has been issued by the *Authority*, is displayed on or near the *plant*.

Note: Under Clause 72, 'readily accessible' may include marking of the plant, displaying on or near the plant, or available on the plant site.

NOTIFICATION OF COMPLIANCE

73. (1) A person having management of an item of *plant* registered under Clause 71, must notify the *Authority* (at such intervals as are determined as part of implementation), of such information concerning compliance with requirements relating to maintenance of the *plant*, as the *Authority* may specify.

Implementation Issue: The information required under Clause 73(1) needs to be determined; whether it should include testing, inspection requirements, etc. It may be that the statement that the plant has been maintained and is safe to operate is enough.

(2) A notification under Clause 73 (1) must include:

(a) the registration number of the item of *plant*; and

(b) a statement that the *plant* has been maintained and is safe to operate.

(3) Upon receipt of a notification under Clause 73 (2), the Authority must respond in an appropriate timeframe to -

(a) issue evidence that the *plant* is currently registered; or

(b) seek additional information.

Implementation Issue: The intervals in which notification is required will be determined as part of implementation.

(4) Where a notification under Clause 73 (1) is not received by the *Authority* by the due date, or the information in the notification is not satisfactory to the *Authority*, the *Authority* may discontinue the registration of an item of *plant*. Where the *Authority* discontinues the registration of *plant*, the *Authority* must provide written advice to the person responsible for providing the notification of compliance as to the reasons for that discontinuation.

Note: The Authority will, before the due date, provide written notice informing of the date that the notification under Clause 73 (1) is due.

(5) The *Authority* may accept a late notification under Clause 73 (1).

PART 5 - EXEMPTIONS

74. (1) Where a person on whom a requirement is imposed by any provision of this national standard believes an equivalent level of health and safety can be achieved by a means other than compliance with such a requirement, that person may apply to the *Authority* in writing for an exemption, except that an exemption may not be sought for the following:

Note: In most States/ Territories the principal OHS Act includes exemption requirements which would take precedent.

(a) the principle for implementation of this national standard, Clause 7 (1); or

(b) any consultation requirements for employers.

(2) A person making an application for an exemption which is applicable to a specific workplace must cause notice of the proposed application to be given to and consult with persons directly affected and their health and safety representatives.

(3) The notice must state:

(a) that the person proposes to seek an exemption from compliance with provisions of this national standard;

(b) the effect of such an exemption;

(c) by which means an equivalent level of health and safety will be achieved;

(d) that submissions may be made to the person with respect to the proposal to apply for such an exemption; and

(e) the person to whom, and the date by which, any such submissions should be made.

(4) An application must be in writing and must include copies of the written submissions and a summary of the oral submissions made with respect to the application.

(5) On receipt of the application, the *Authority*, by writing must respond expeditiously, and either:

Implementation Issue: There will need to be a system for notification/ communication to other Authorities

(a) grant the exemption;

(b) seek additional information; or

(c) dismiss the application.

(6) Where the *Authority* refuses to grant an exemption the reason for such a refusal must be provided to the applicant in writing.

(7) An exemption may be given unconditionally or subject to such conditions as considered appropriate.

PART 6 - APPEALS

75. (1) Any person or organisation which is affected by any decision made by an *Authority* under this national standard may appeal to the *Authority* for a review of the decision.

(2) An appeal against any such decision must be in writing and made within 28 days of the date of notification of the decision.

Implementation Issue: Where an appeal to an Authority is unsuccessful a mechanism for appeal to an independent body should be considered. Currently, the States/Territories have different appeal mechanisms, whereby, some jurisdictions utilise an Appeals Tribunal and others allow for an independent body other than the Authority.

SCHEDULE 1

PLANT DESIGNS AND ITEMS OF PLANT REQUIRING REGISTRATION

1. Plant Requiring Registration of Design

. *pressure equipment*, other than *pressure piping*, and categorised as *hazard* level A, B, C or D according to the criteria identified in *AS* 3920 Part 1, *Pressure Equipment Manufacture - Assurance of Product Quality*;

. *gas cylinders* covered by *AS* 2030;

. *tower cranes*; [1]

. *lifts*; [2]

. *building maintenance units*;

. *hoists*, with a platform movement in excess of 2.4 metres, designed to lift people; [1]

. *work boxes* suspended from *cranes*;

. *amusement structures* covered by *AS* 3533, with the exception of class 1 structures;

. *prefabricated scaffolding*;

. *boom-type elevating work platforms*;

. *gantry cranes* with a safe working load greater than 5 tonnes or *bridge cranes* with a safe working load of 10 tonnes, and any *gantry crane* or *bridge crane* which is designed to handle molten metal or dangerous goods; [1]

Note: dangerous goods means dangerous goods as defined in the ADG Code;

. *vehicle hoists*; [1]

. *mast climbing work platforms*; [1]

. *mobile cranes* with a safe working load greater than 10 tonnes; [1]

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[1] For the purposes of registration, *cranes* and *hoists* in Schedule 1 exclude those that are manually powered, *elevating work platforms* and tow trucks.

[2] Registration of *lifts* includes escalators and moving walkways

SCHEDULE 1

PLANT DESIGNS AND ITEMS OF PLANT REQUIRING REGISTRATION (continued)

2. Items of Plant Requiring Registration

. *boilers* categorised as hazard level A, B or C according to the criteria identified in *AS* 3920 Part 1, *Pressure Equipment Manufacture - Assurance of Product Quality*;

. *pressure vessels* categorised as hazard level A, B or C according to the criteria identified in *AS* 3920 Part 1, with the exception of *gas cylinders* covered by *AS* 2030, LP gas fuel vessels for automotive use covered by *AS* 3509 and serial produced vessels covered by *AS* 2971;

. *tower cranes*; [1]

. *lifts*; [2]

. *building maintenance units*;

. *amusement structures* covered by *AS* 3533, with the exception of class 1 structures;

. *truck-mounted concrete placing units with booms*; [1]

. *mobile cranes* with a safe working load greater than 10 tonnes; [1]

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[1] For the purposes of registration, *cranes* and *hoists* in Schedule 1 exclude those that are manually powered.

[2] Registration of *lifts* includes escalators and moving walkways

SCHEDULE 2

STANDARDS COVERING THE DESIGN AND MANUFACTURE OF PLANT

AS 1121	Guards for agricultural tractor PTO drives
AS 1200	Boilers and pressure vessels (known as SAA Boiler Code)
AS 1219	SAA Safety code for metal working power presses
AS 1418	Cranes (including hoists and winches) (known as the SAA Crane Code)
AS 1473	Guarding and safe use of woodworking machinery
AS 1576	Scaffolding
AS 1577	Scaffold planks
AS 1636	Agricultural wheeled tractors - Roll-over protective structures criterion and tests
AS 1657	Fixed platforms, walkways, stairways and ladders - design, construction and installation
AS 1735	Lifts, escalators and moving walks (known as the SAA Lift Code)
AS 1755	Conveyors
AS 1788	Abrasive wheels (Parts 1 & 2)
AS 1891	Industrial safety belts and harnesses
AS 1892	Portable ladders
AS 1893	Code of practice for the guarding and safe use of metal and paper cutting guillotines
AS 2030	SAA Gas Cylinders Code
AS 2211	Code of practice for laser safety
AS 2294	Protective structures for earthmoving machines
AS 2359 Pt 1	Industrial trucks (known as the SAA Industrial Truck Code)
AS 2939	Industrial Robot Systems - Safe Design and Usage
AS 2971	Serially produced pressure vessels
AS 3000	Electrical installations - buildings, structures and premises (known as SAA Wiring Rules)
AS 3509	LP (liquefied petroleum) gas fuel vessels for automotive use
AS 3533	Amusement rides and devices
AS 3920 Pt 1	Pressure Equipment Manufacture - Assurance of Product Quality
AMBSC Pt 1	Australian Miniature Boiler Safety Committee Code for copper boilers
AMBSC Pt 2	Australian Miniature Boiler Safety Committee Code for steel boilers
BS 3913	Industrial safety nets
BS 5062	Self-locking safety anchorages for industrial use

Note: AS 1219, AS 1473, AS 1788 and AS 1893 have been included as an interim measure until such time as AS 4024 is revised in a suitable format for reference in regulations.

SCHEDULE 3

Note: Refer to Clause 6(3) in regards to other comparable standards

STANDARDS REFERENCED IN THIS NATIONAL STANDARD

AS 1121	Guards for agricultural tractor PTO drives
AS 1200	Boilers and pressure vessels (known as SAA Boiler Code)
AS 1219	SAA Safety code for metal working power presses
AS 1418	Cranes (including hoists and winches)(known as the SAA Crane Code)
AS 1473	Guarding and safe use of woodworking machinery
AS 1576	Scaffolding
AS 1577	Scaffold planks
AS 1636	Agricultural wheeled tractors - Roll-over protective structures criterion and tests
AS 1657	Fixed platforms, walkways, stairways and ladders - design, construction and installation
AS 1735	Lifts, escalators and moving walks (known as the SAA Lift Code)
AS 1755	Conveyors
AS 1788	Abrasive wheels (Parts 1 & 2)
AS 1891	Industrial safety belts and harnesses
AS 1892	Portable ladders
AS 1893	Code of practice for the guarding and safe use of metal and paper cutting guillotines
AS 2030	SAA Gas Cylinders Code
AS 2211	Code of practice for laser safety
AS 2294	Protective structures for earthmoving machines
AS 2337	Gas cylinder test stations
AS 2359 Pt 1	Industrial trucks (known as the SAA Industrial Truck Code)
AS 2550	Cranes - Mobile, tower and derrick - Selection and operation
AS 2593	Boilers - Unattended and limited attendance
AS 2626	Safety belts and harness - selection, use and maintenance
AS 2397	Guide to the safe use of lasers in the construction industry
AS 2939	Industrial Robot Systems - Safe Design and Usage
AS 2971	Serially produced pressure vessels
AS 3000	Electrical installation - buildings, structures and premises (known as SAA Wiring Rules)
AS 3509	LP (liquefied petroleum) gas fuel vessels for automotive use
AS 3533	Amusement rides and devices
AS 3788	Boiler and pressure vessels - In-service inspection
AS 3873	Boiler and pressure vessels - Operation and maintenance
AS 3920 Pt 1	Pressure equipment manufacture - Assurance of quality (that is, ME/1/21 Standard)
AMBSC Pt 1	Australian Miniature Boiler Safety Committee Code for copper boilers
AMBSC Pt 2	Australian Miniature Boiler Safety Committee Code for steel boilers
BS 3913	Industrial safety nets
BS 5062	Self-locking safety anchorages for industrial use

Note: AS 1219, AS 1473, AS 1788 and AS 1893 have been included as an interim measure until such time as AS 4024 is revised in a suitable format for reference in regulations.