

Minerals Australia
Warehouse, Inventory, Logistics and Property
(WIL&P)

Packaging Standard (New Buy)

Document: MINAU.WIL.TSPT.STD.001
Version: 1.0
June 2023

Document Control

APPROVER	DATE	CUSTODIAN	REVIEW DATE
Head of WIL Operations Australia	September 2023	Transport Manager West	November 2024

Packaging Standard

Contents

Document Control.....	1
Document Amendment Record.....	4
Electronic Approval Record.....	4
1. Scope	5
2. Purpose.....	5
3. Statutory Requirements and Standards.....	5
4. Responsibilities	6
4.1. Supplier	6
4.2. BHP.....	6
4.3. Transport Company	6
4.4. Chain of Responsibility (CoR).....	6
5. Minimum Packaging Standards	7
5.1. General Packaging Guidelines.....	7
5.2. Additional Requirements for Imported Timber (ISPM 15).....	7
5.3. Containerised Packaging requirements	8
6. General Preservation Standards	8
6.1. General Preservation Guidelines	8
6.2. Preservation Phases	10
6.2.1. Supplier Phase	10
6.2.2. Preservation Maintenance Phase	10
7. Packaging Materials/Methods	10
7.1. Cardboard Cartons.....	10
7.2. Bags and Sacks.....	10
7.3. Crates, Cases and Boxes.....	11
7.4. Bundling.....	11
7.5. Pallets and Skids.....	11
7.6. Cages.....	12
7.7. Drums.....	12
7.8. Liquids and IBC's (Intermediate Bulk Containers).....	13
7.9. Pipes and Lengths.....	13
7.10. Flat Steel, Plates and Mesh	13
7.11. Large Individual Items (Cable reels and conveyor belt).....	13
7.12. Vehicles.....	14

Packaging Standard

8.	Steel Transport Frame Requirements	14
8.1.	Design Specifications	14
8.1.1.	Marking Requirements.....	15
8.2.	Documentation Requirements	16
8.2.1.	Quality Assurance	16
8.3.	Bolting Procedure	16
8.4.	Supplier Requirements	17
8.4.1.	Frame Maintenance	17
9.	Labelling and Marking Requirements.....	18
9.1.	General Requirements	18
9.2.	Machinery Labelling Requirements	19
9.3.	Non-Purchase Order Item Labelling Requirements.....	19
9.4.	Special Requirements.....	19
9.5.	Cable Drums	21
9.6.	Delivery Dockets	22
10.	Packing List Requirements.....	22
11.	Requirements for Packaging of Hazardous and/or Dangerous Goods	23
12.	Requirements for Supply of Oversize Goods	23
13.	General Lifting Requirements	24
14.	General Transport Requirements	24
14.1.	Load Restraint	24
14.2.	Transport Vehicles	25
14.3.	Oversize Loads and Transport.....	25
15.	BHP General Storage Requirements	25
16.	General Requirements for Projects (Operational Readiness)	26
17.	General Requirements for Construction Goods	25
18.	General Requirements for In Storage Maintenance.....	26
19.	References.....	26
	Examples of Packaging Products	27
20.	Examples of Poor Preservation and Packaging.....	29
21.	Examples of Good Preservation and Packaging.....	30
22.	Definitions and abbreviations	33

Packaging Standard

Document Amendment Record

Version	Page	Change Date	Change Effected	Author	Approver
1.0	All	31/05/2023	Document Created	Principal Transport Strategy (WILP&P)	Head of WIL Operations Australia

Electronic Approval Record

Business Role	Name
Author Role	Name
Principal Transport Strategy	Wikus Viljoen
Reviewer Role	Name
Transport Superintendent (Coal)	John Payne
Transport Superintendent (WAIO)	Matt Rowe
Transport Superintendent (NiW and OD)	Mark Telfer
Approver Role	Name
Manager WIL Operations	Dan Whinray Cornelius Castle Ella Goan

Packaging Standard

1. Scope

This document includes the minimum requirements for new buy items as it relates to:

1. The preservation, packaging, onsite storage and in storage maintenance for goods and equipment being supplied to any of the BHP assets in the Minerals Australia business, this standard applies to all Suppliers and third-party logistics providers and back freight from BHP operations.

2. Purpose

The purpose of this document is to:

1. Provide the minimum requirements and practical guidelines to ensure all goods and equipment being supplied are preserved and packaged in a way that prevents damage during transport and storage;
2. Ensure that packaging enables the transport company to comply with the most recent National Transport Commission (NTC) and relevant Road Transport Authority as well as Chain of Responsibility (CoR) legislation from the National Heavy Vehicle Regulator and any additional regional requirements.
3. Provide the minimum requirements and practical guidance to ensure all goods and equipment are being supplied safely and packaged in a way that prevents damage to the goods, environment and people during transport and storage – particularly, over long distance and potentially rough terrain.
4. Ensure that goods and equipment are packaged and correctly labelled in accordance with their destination so that they can be delivered to the correct BHP asset without the need for the transport company to separate and repackage.
5. Provide practical guidance on storage methods and in storage maintenance requirements for fixed plant goods and equipment. Ensure that dangerous, oversize, or fragile goods are packaged and labelled correctly so they can be transported in accordance with the requirements of the relevant Road Transport Authority
6. Provide pictorial examples of what good and substandard packaging looks like.

***Note:** It is not possible to state the exact requirements for every scenario so in some instances the guidance will focus on the what and not the how, references to the other standards and guides have been provided that the Supplier should reference

3. Statutory Requirements and Standards

All works shall comply with relevant and most up to date:

1. Statutory requirements;
2. Current Australian and International Standards; and
3. Related BHP Standards and Specifications as applicable.

The following precedence shall be applied with regards to technical specifications:

1. Government Acts, Codes and Regulations of relevant statutory authorities
2. Australian Standards
3. International Standards
4. This document - MINAU.WIL.TSPT.STD.001
5. BHP Standard Specifications

4. Responsibilities

4.1. Suppliers

It is the Supplier's responsibility to meet the minimum requirements and guidance set out in this document, and to ensure that goods or machinery are packaged in a way that will enable the transport company to comply with the load restraint requirements of the National Transport Commission (NTC) and relevant Road Transport Authority. This includes third party Suppliers where the Supplier orders through another Supplier to supply to BHP.

It is also the Suppliers responsibility to advise the relevant BHP representative if they are unable, or it is not practical to comply with the minimum requirements or guidance provided in this document or any referenced document.

4.2. BHP

It is BHP's responsibility to meet the minimum requirements and guidance set out in this document, and to ensure that the goods or equipment are packaged in a way that will enable the transport company to comply with the load restraint requirements of the National Transport Commission (NTC) and relevant Road Transport Authority when we transport goods from BHP's assets.

4.3. Transport Company

It is the transport company's responsibility to identify and reject any goods that are not packaged in accordance with the minimum requirements or guidance provided in this document, or where they are not packaged in a way that enables them to comply with the load restraint requirements of the National Transport Commission (NTC) and relevant Road Transport Authority, and to advise the BHP representative when they have provided a rejection notice to a Supplier or to one of our own assets.

4.4. Chain of Responsibility (CoR)

Chain of Responsibility Legislation within Australia stipulates that all parties who have control throughout the transportation supply chain share legal responsibility to prevent goods in transport causing or contributing to road safety breaches. If an individual, team or company plays a role in the transportation of goods, then they form part of the chain.

You are a party in the Chain of Responsibility when you perform any of the following 10 Functions in the table below:

Party	Responsible Roles
Employer	Employ a heavy vehicle driver
Prime Contractor	Engage someone to drive a heavy vehicle under a contract for services
Operator	Direct the control and use of a heavy vehicle
Scheduler	Schedules the transport of goods and passengers in a heavy vehicle, or schedule a driver's work and rest hours
Consignor	Consigns goods for transport by a heavy vehicle
Consignee	Receives goods delivered by a heavy vehicle
Packer	Packs or assembles goods for transport by a heavy vehicle
Loading Manager	Manages premises where five or more heavy vehicles are loaded or unloaded each day
Loader	Loads the heavy vehicle - this can be anyone (including those who assist) with placing a load onto or into a heavy vehicle.
Unloader	Unloads the heavy vehicle

It is worth noting that a driver is NOT a party to the CoR, their obligation sits under the Heavy Vehicle National Law (HVNL). The driver is only accountable under the CoR if they perform some of the functions in the table above.

5. Minimum Packaging Standards

5.1. General Packaging Guidelines

The minimum requirements for packaging depend on the types of goods or equipment being transported and should always adhere to the Chain of Responsibility legislative requirements.

Wherever possible goods or equipment shall be supplied in packing cases made of strong export quality timber and have snug fitting lids that are able to be strapped down without the use of screws or nails which damage the case.

Contents shall be a snug fit inside the case, be restrained from movement by being properly bolted to the base, braced by padded battens fixed firmly to the case, and where required be protected by suitable padding such as air bags, foam, felt, rubber, bubble wrap or fibre pads.

Where the use of a packing case is not practical the following guidance is provided:

1. Where possible the item shall fit in or on the packaging with no overhang or protrusions;
2. All packaging shall be suitable to endure multiple points of transport, handling, and storage;
3. Where packages are wrapped, the plastic wrapping can only be used to assist in containing the items and is not to be used as a form of restraint. Consideration needs to be given for the type of material being wrapped, the weight of the material and edges that may cause the plastic wrapping to tear;
4. Optimise the packaging and package materials to minimise the cost of transport, handling, and storage and optimise the load space;
5. Materials must not contain any external contaminants (e.g. soil, grease, oil, etc);
6. Where timber is used, either internally or externally, it must be free of bark and insect infestation;
7. Packaging shall be suitable for lifting by forklift if the material cannot be safely handled manually;
8. Packaging shall be able to support the item's weight and physical size;
9. Packaging shall protect the material from physical damage, dust, and water;
10. All drums shall be unitised on pallets and be strapped down securely;
11. Locking elements, hydraulic shrink discs, and similar devices need to be tightened to specifications prior to transport (or the elements they hold removed from shafts and shipped separately);
12. Where possible machines shall be transported fully assembled. Where this is not possible all components removed shall be suitably match marked, preserved, packaged, and labelled so that the machine can be re-assembled easily at its destination
13. Hay, straw or similar vegetable fibres, shredded newsprint, polystyrene chips, or similarly combustible material shall not be used as padding;
14. Any material weighing more than 20kg shall be securely placed onto a pallet/skid or crate;
15. Large or unbalanced items that are not suitable for transport inside a packing case or on a pallet must be supplied on a BHP approved transport frame; and
16. Where a test certificate is statutory requirement to have with an item, please ensure that this is attached and not removed.

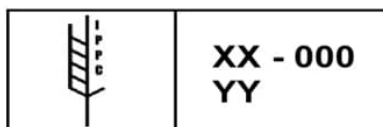
5.2. Additional Requirements for Imported Timber (ISPM 15)

ISPM 15 is an international standard for regulating the movement of timber packaging and dunnage through international trade and aims to prevent the global spread of timber pests. The requirements outlined in **ISPM 15** have been incorporated into the conditions for importing solid wood packaging materials into Australia. These are detailed in Australia's Biosecurity Import Conditions (BICON) under the following cases:

1. 'Timber and bamboo packaging' for packaging imported as a commodity – e.g. a consignment of wooden pallets imported for use in Australia.
2. 'Non-commodity' for packaging used to support other commodities – e.g. wooden pallets used to support a consignment of other goods.

Packaging Standard

3. Australia accepts solid timber packaging that is compliant with ISPM 15, but also offers alternative treatment options and will accept consignments of timber packaging that can meet the alternative requirements outlined in Australia's Biosecurity Import Conditions (BICON).
4. Wood packaging material bearing the stamp or mark below is certified as being ISPM 15 compliant. It may be stamped or branded to the wood packaging material in any colour.



Picture 1: Example Wood Package Material Bearing certified stamp

ISPM 15 certified stamped wooden packing inbound to Australia is subject to strict Australian Quarantine laws and, if not ISPM 15 certified and stamped accordingly, shall be fumigated to Australian Standards at the Supplier's expense prior to shipping

5.3. Containerised Packaging requirements

Items packed in sea containers shall be preserved and packaged to prevent damage to any item inside the container regardless of the freight method.

Sea container door openings are smaller than the interior dimension, and allowance must be made for the clearance of any lifting aids required to unpack the goods.

20' or 40' Dry Freight Containers (Sea Container) have the dimensions specified below.

Container Type	Min. Size of Door Opening (m)		Min. Internal Dimensions (m)		
	Width	Height	Width	Height	Length
ISO 20'	2.286	2.261	2.330	2.350	5.867
ISO 40'	2.286	2.261	2.330	2.350	11.998
ISO 40' High Cube (*)	2.286	2.566	2.330	2.566	11.998

(*) External container height 9'6" vs. standard height of 8'6" (ISO 668)

6. General Preservation Standards

6.1. General Preservation Guidelines

Prior to despatch all dirt and debris shall be cleaned from all surfaces. Organic solvents having less than 50 ppm chloride shall be used on stainless steel surfaces for cleaning. Cleaning products must be pH neutral and chloride free.

The following general guidance shall be used for all goods or machines supplied to BHP:

1. Wrapping applied to the outside of materials or equipment:
 - i. Will be UV protected and waterproof.
 - ii. Will provide suitable corrosion, moisture and dust protection to the material when stored in an outside environment for two years.
 - iii. The preservation material selected shall be a suitable Volatile Corrosion Inhibitor (VCI) or reactive copper-based polymer type and desiccant shall be a clay-based type or equivalent.

Packaging Standard

2. Un-flanged pipes shall have the bevelled ends protected using heavy duty plastic caps up to 24" and steel or rubber bevel protectors above 24";
3. Threads for connections to services should be protected with suitable caps or plugs;
4. Flange faces must be protected from physical and corrosion damage;
5. All stainless-steel products shall be lifted by non-metallic lifting straps and all contact with carbon steel shall be avoided, including steel bandit strapping;
6. All machinery doors shall be locked and the keys separately labelled and securely taped to the door handles;
7. Items susceptible to corrosion damage shall be coated with a suitable corrosion inhibitor such as VCI, Enviropel, Shell Ensic, CRC Soft Seal, Balm Blue Parts Coater, or similar protectant and be packaged with desiccant materials to protect the goods against humidity;
8. All electrical, electronic, and other goods where corrosion prevention cannot be applied shall be enclosed in airtight sealed barrier material of suitable quality in which sufficient quantity and type of desiccant is distributed;
9. All machinery must be completely drained of water prior to packing and shipment to prevent damage from freezing or corrosion;
10. Equipment that is likely to be contaminated or damaged by moisture penetration shall be protected by inclusion of new, dry, clay based desiccant or equivalent in permeable bags in each compartment.
11. All exposed bright surfaces shall be treated with an approved rust inhibitor prior to packaging and despatch. Where required products shall be segregated during the storage period.
12. All openings to machinery, such as inlet and outlet piping shall be plugged, capped, or otherwise covered to prevent physical damage, and to prevent the entry of moisture, dirt, or other potentially corrosive elements;
13. The mating surface of machinery components and shim shall be uniformly coated with a suitable corrosion inhibitor before assembly;
14. The shafts of rotating machines shall be securely braced to prevent rotation and to minimise the shock loading effects and vibration to bearings during transport. Bearings particularly susceptible to brinelling shall be relieved of load during transport using false bearings to support the load, and where possible the machine will also have vibration isolators fitted. The Supplier shall provide instructions for the correct removal of bracing and / or false bearings;
15. Instruments or devices installed on equipment that are particularly sensitive to mechanical stresses during transport shall be either protected by suitable padding or removed and transported separately;
16. Where preservatives have been added to oil, or a cavity filled with VPI, signage shall clearly state that flushing and refilling is required prior to use;
17. Machinery or components that have surfaces that can collect and hold water must be covered or packed to prevent the water collecting;
18. Machinery that will require regular in storage maintenance to keep it ready for eventual use shall have the preservation and packaging designed in such a way that maintenance can be performed without compromising the integrity of preservation or packaging;
19. Goods susceptible to damage due to vibration during transport which is not possible or practical to prevent by fitting locking devices or vibration isolators shall have signage fitted that informs the transport company to transport using trucks with air or hydraulic cushioned decks.

***Note:** Greases and oils containing silicones or anti-foam agents shall not be used to preserve machinery.

There are additional packaging requirements for repairable materials, detailed in document **MECOE.BLD.0012**. The package must be designed to consider ease of opening, ease of product removal, ease of periodic maintenance in store and ease of recycling, reuse, or disposal upon arrival at any BHP site.

In addition, document **MECOE.PRO.0007** provides further information for repair Suppliers to follow prescribed BHP procedures for all repair, overhaul, fabrication, and service exchange work managed by the BHP Repairables and Warranties team.

6.2. Preservation Phases

6.2.1. Supplier Phase

The Supplier is responsibilities include, but are not limited to:

1. The identification and description of preservation requirements for outdoor storage;
2. Applying the appropriate preservation;
3. Complete preservation labels and fixing these to the equipment;
4. Documenting preservation activities required to be carried out to maintain the equipment;
5. Completing and providing a preservation dossier;
6. Supplying Safety Data Sheet (SDS) in the preservation dossier for all preservation products being used; and
7. A procedure for removal of the preservation used on the equipment if required (e.g. locks, supports, storage material, blanking plates, etc.), and be included in the preservation dossier. Rectifying or reinstating preservation if removed or damaged due to normal inspection activities, or for any other reason.

6.2.2. Preservation Maintenance BHP Phase

The BHP Warehouse responsibilities include, but are not limited to:

1. Inspection of equipment on receipt;
2. In-store preservation maintenance according to agreed asset/function strategy;
3. Reinstating preservation in accordance with Suppliers preservation requirements;
4. Reporting damage or removal of any preservation; and
5. Recording preservation activities on electronic based system.

7. Packaging Materials/Methods

The following details and guidelines around using specific packaging materials

7.1. Cardboard Cartons

1. Shall be in good condition and relevant to the size, weight, and nature of the packed materials.
2. The materials inside must be appropriately packed to prevent damage or movement in transit specifically no movement inside the box.
3. Where required items should be protected by suitable padding such as air bags, foam, felt, rubber, bubble wrap or fibre pads to ensure no movement inside the box.
4. Fragile materials should be packaged individually and not with heavy or incompatible items.
5. Shall be securely closed as appropriate for the weight and or nature of the goods.
6. Consideration is to be made for materials sensitive to damp or wet conditions.

7.2. Bags and Sacks

1. Shall be strong enough to support the weight of the goods without tearing open.
2. Ensure that the materials inside are not able to pierce the packaging.
3. Where contamination is possible, bags and sacks shall be suitably lined and or sealed on the inside.
4. All plastic coverings must be clear wherever possible to allow visual inspection of goods.
5. Bags shall be appropriately marked and where required firmly attached to pallets.

Packaging Standard

6. Bulk bags (bulka-bags) and other 1,000kg containers shall be designed with approved lifting points, fitted to a pallet designed to be lifted by a forklift. They shall have dimensions that allow stable loading on the pallet and do not exert excessive point loads for the pallet.

7.3. Crates, Cases and Boxes

1. Shall be constructed including fixings and supporting timbers as appropriate to adequately contain the item enclosed for the duration of the transport, handling, and storage.
2. All timber cases/crates shall have banding or strapping applied to assist the integrity of the crate during transit.
3. Shall have a Safe Weight Limit (SWL) that exceeds the weight of the contents.
4. Crated contents should be packed in such a manner as to prevent movement during transport. Where metal or prepared paintwork may come into contact with the case timbers, it shall be protected from abrasion by suitable padding such as plastic or cardboard or foam rubber. Cantilevered or similarly attached portions of equipment shall be supported to resist additional loads imposed during transport and handling.
5. Shall be fitted with under boards and shall have bearers not less than 75mm high.
6. Particular attention shall be paid to the fixing of doors, hinges, locks, etc., which shall be securely held in place with masking tape or similar. Doors shall be locked and the keys separately labelled and securely taped to the door handles. Keys shall not be left in locks during transport.
7. Each package shall be marked with its gross weight if an individual packaged equipment or material weighs more than 20kg

7.4. Bundling

1. Each bundle shall be treated as an individual package and marked accordingly.
2. All items shall be segregated in accordance with their diameter/cross section, size and length and shall be bundled into units using steel or similar approved non-stretch strapping capable of bearing the unrestrained weight of the item.

7.5. Pallets and Skids

1. Shall be constructed in manner and of a timber suitable for the size and weight of the item. Pallets shall be two-way, flush sided and under railed made from robust material. Non- returnable are the preferred type.
2. Items are to be securely strapped and or attached to the pallet with a minimum of two straps
3. Strapping should run underneath loaded deck boards to prevent straps from coming loose.
4. Strapping should be positioned and fastened to prevent movement whilst in transit or being handled.
5. Shall be in good condition with no broken or loose parts.
6. Shall be fitted with an anti-tip device such as underboards to prevent pallets from tipping off forklift tines and shall have bearers no less than 75mm high.
7. Note that plastic wrap is not considered to be adequate load restraint.
8. All cylindrical items and items likely to roll or fall shall be chocked and strapped with steel or similar approved non-stretch strapping. Chocks shall be fixed directly to the pallet. Fit for purpose approved non-stretch strapping shall be capable of bearing the unrestrained weight of the items to the pallet.
9. Loads shall not overhang the forklift entry points of the pallet.
10. Where mixed cartons are palletised, they are to be stacked with the heaviest cartons on the bottom. No carton should be placed that affects the structural integrity of the ones below. Angles are to be placed across all corners of the cartons that contacts restraint strapping. Strapping shall be placed around the items and the beams of the pallet where possible. If the planks are required to be used for safety reasons, they shall be securely screwed to the pallet with coarse thread roofing type screws. The pallet is to be heavy-duty clear heat shrunk wrapped as a secondary restraint where required to further prevent movement during the transport process. Items above 20kg to be placed on their own skid/pallet.

Packaging Standard

11. All items, identified by risk assessment, that are susceptible to damage or require mechanical lifting during handling shall be palletised as a first option. Dedicated skids are an alternative method that can also be utilised. This includes items that cannot be handled by one person (> 20kg), designed to be lifted by a forklift, have dimensions that allow stable loading on the skid and do not exert excessive point loads for the skid.
12. Skids shall be suitable to adequately support the item and with a load capacity exceeding the weight of the item. Skids shall be two-way, flush sided and under railed made from hardwood or similar robust material. Non-returnable are the preferred type.
13. Lightweight pine skids are not acceptable for transport.
14. Skid mounted items shall be secured to the skid to prevent movement. Items shall be secured around the main beams of the skid with no chance of the items becoming loose or falling off the skid during transport loading or unloading. If the planks are required to be used for safety reasons, they shall be securely screwed to the skid with coarse thread roofing type screws. The skid is to be heavy-duty clear heat shrunk wrapped as a secondary restraint where required to further prevent movement during the transport process.
15. Loose individual items shall be securely bundled and suitably restrained to the skid with the heaviest items placed at the bottom for ease of handling.
16. All cylindrical items and items likely to roll or fall shall be chocked and strapped with fit for purpose approved non-stretch strapping. Chocks shall be fixed directly to the skid. Steel or similar approved non-stretch strapping shall be capable of bearing the unrestrained weight of the items to the skid.
17. Loads shall not overhang the forklift entry points of the skid.

7.6. Cages

1. Shall be in good working order and have appropriate lifting points.
2. Shall have at least one collapsible gate allowing easy access for safe loading and unloading.
3. Shall contain the items preventing them from becoming dislodged during transport or loading/unloading.
4. Where no lid exists, shall be wrapped, or strapped as appropriate to contain materials.
5. Shall be constructed with underboards or forklift tine pockets not less than 75mm high and 150mm wide.
6. Fragile materials should be packaged individually and not with heavy or incompatible items.
7. Only goods or packages less than 20kg shall be placed into cages. Where applicable any goods or packages weighing 20kg or more shall be securely placed on pallets/skids/crates.
8. All cages must be suitable for lifting with forklifts.
9. All steel cages require an Anti-Tip Device.
10. All cages to have a Working Load Limit (WLL) marking.

7.7. Drums

1. Shall be unitized on pallets where possible, with horizontal and vertical strapping to prevent movement.
2. Squaring of the edge might be achieved using timber, which when combined with 7.7.1 will prevent movement.
3. 205 litre drums used to freight liquids. If multiple drums are transported, they shall be belly strapped with approved non-stretch strapping. They shall have angle positioned on the top of the drums and be strapped with steel or similar approved non-stretch strapping across the top and around the beams of the transport pallet.
4. 205 litre drums used to transport solids. They shall be fitted with a lid, firmly attached with an approved clamp. If multiple drums are transported, they shall be belly strapped with approved non-stretch strapping, have angle positioned on the top of the drums and be strapped with steel or similar approved non-stretch strapping across the top and around the beams of the transport pallet.
5. 205 litre drums transported empty. If fitted with a lid it shall be firmly attached with an approved clamp. If multiple drums are transported, they shall be belly strapped with approved non-stretch strapping, have angle positioned on the top of the drums and be strapped across the top and around the beams on to transport

Packaging Standard

pallet or transported as individual single items restrained with gates and tie down straps. Unloading shall be a consideration in the loading process.

6. 20 litre drums or smaller. If multiple drums are transported, each layer shall be belly strapped with steel or similar approved non-stretch strapping. They shall have angle positioned on the top of the drums and be strapped with approved non-stretch strapping across the top and around the beams of the transport pallet.

7.8. Liquids and IBC's (Intermediate Bulk Containers)

1. All liquids shall be in fully sealed receptacles, such as drums or IBC's.
2. Outer packaging shall be designed to support restraint, loading, and unloading without risk of spillage or damage.
3. Packaged bulk liquids (pods, pots, cubes, palletcons and other 1,000 litre containers) shall be designed to be lifted by a forklift and have dimensions that allow stable loading/unloading

7.9. Pipes and Lengths

1. All drill casings are to be supplied in a fit for purpose engineered transport cradle.
2. All singular tubular products must be secured with strapped timber cleats of suitable dimensions above and below the bundle to eliminate the risk of uncontrolled movement.
3. If bundled, should be bundled by strapped timber cleats of suitable dimensions above and below the bundle.
4. All tubular products shall only be transported on vehicles suitable fitted with adequate bulkheads to prevent the inadvertent forward movement of the plate.
5. Wherever possible bundles should have bearers or dunnage attached to enable forklift tine access.
6. Multiple lengths shall be bundled tightly to prevent any horizontal movement or separation during transit.
7. Bundle packaging to consider size, lifting capacity and any flex caused by the nature of the material.

7.10. Flat Steel, Plates and Mesh

1. All sheet items shall only be transported on vehicles suitable fitted with adequate bulkheads to prevent the inadvertent forward movement of the plate.
2. Dunnage shall be positioned in a transversal direction to stop any uncontrolled movement of freight.
3. Wherever possible bundles should have bearers or dunnage attached to enable forklift tine access.
4. Bundle packaging to consider size, lifting capacity and any flex caused by the nature of the material.
5. Consideration shall be made for steel-on-steel slipping.
6. All thin plate (Steel, Aluminium, Plastic etc) shall be transported in specifically designed single use protection able to be lifted by a forklift, have dimensions that allow stable loading/unloading and do not exert excessive point loads for the pallet.
7. All heavy or large steel plate shall be transported as base loads or full loads, separated by correctly placed dunnage, suitably restrained. Allowance shall be made for safe forklift loading/unloading.
8. All sheet mesh shall be transported as base loads or full loads, strapped in bundles, separated by correctly placed dunnage, suitably restrained. Allowance shall be made for safe forklift loading/unloading.

7.11. Large Individual Items (Cable reels and conveyor belt)

1. All reels (cable, conveyor, wire rope, hose) shall be transported on vehicles suitably designed to minimise the height of the item and suitably restrained. Safe unloading shall be a consideration in the loading and restraint of the items.
2. All other individual items shall be transported on vehicles suitably designed for the task and suitable restrained. Safe unloading shall be a consideration in the loading and restraint of the items.

7.12. Vehicles

1. Vehicles (particularly trucks and utes) are to have all loose items removed from the tray (or equivalent)
2. There shall be no loose items inside the vehicle to prevent damage during transport.
3. Shall be cleaned prior to transport ensuring that there is no foreign debris that may become dislodged.

8. Steel Transport Frame Requirements

Steel transport frames are designed to support and restrain goods to resist additional loads and stresses that could be imposed during transport. Transport frames may be used for project equipment, single use goods and repairables.

Transport frames are the preferred method of transportation for any item that is:

1. Bulky, heavy, or large; or
2. Regularly transported to and from site; or
3. Sensitive to damage or vibration; or
4. An unstable or awkward load.

Special consideration should be given to tubular products, specifically singular items, to assess the requirement for a transport frame to avoid uncontrolled movement.

All transport frames must be engineered and fit for purpose including the transport, onsite transfer and long-term storage of equipment. This includes complying with relevant standards for all multiple use frames.

8.1. Design Specifications

In addition to compliance with Australian Standards, frames shall be designed with the following features, as applicable:

1. Frames must comply with requirements outlined by the Australian National Transport Commission (NTC) publication 'Load Restraint Guide 2004'
2. Lifting points shall comply with AS 4991-2004
3. BHP asset specific requirements
4. Be fitted with isolation dampers and shaft locks to protect against vibration where required.
5. All safety critical components are required to be painted a contrasting colour e.g. florescent blue green. This can include such items as retaining clips, securing pins, toggle latches, dedicated tie-down points, etc.
6. Components that may be detached from the frame for installation purposes are to be permanently affixed to the frame via a stainless-steel wire cable lanyard protected with a coloured plastic sleeve. Cable shall be attached to frame via a welded lug.
7. Mounting bolts shall be designed in accordance with AS 4100-1998.
8. Single-use frames are not required to comply with paint specifications or fatigue design requirements however the design of single-use frames shall conform to asset specific requirements.
9. Supplier owned frames shall be accompanied with certification of compliance with Australian Standards and written assurance that frames are fit for transport.

Packaging Standard

8.1.1. Marking Requirements

As a minimum, frames shall be marked with the following:

1. Identification (ID) tag fixed on two sides of the frame containing the following information:
 - ✓ Serial number (provided by design/manufacturing Supplier)
 - ✓ Name and phone number of design/manufacturing Supplier
 - ✓ Date of manufacture
 - ✓ IRCP number (if applicable) or Supplier part number
 - ✓ Associated material name/s
 - ✓ Working Load Limit (WLL)
 - ✓ Tare mass
 - ✓ Gross mass
 - ✓ Dimensions

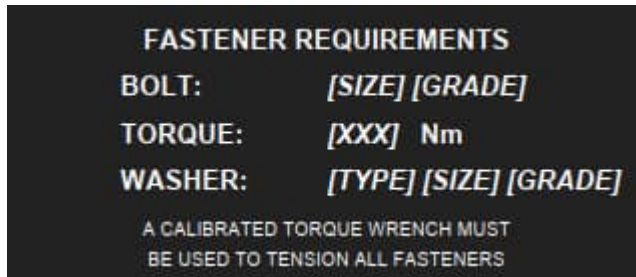
The identification tag should resemble the example below:

DESIGNED AND MANUFACTURED BY:		[VENDOR PART NUMBER] or [IRCP-XXX-XXX-XXXXX]	
<div style="border: 1px solid black; padding: 10px; text-align: center;"> [Company Name/Logo] <i>[Phone number]</i> </div>		WLL:	[XXXX] KG
		TARE:	[XXXX] KG
		GROSS:	[XXXX] KG
		LENGTH:	[XXXX] mm
SERIAL NUMBER:	[XXXXXXXX]	WIDTH:	[XXXX] mm
DATE OF MANUFACTURE:	[MMM-YYYY]	HEIGHT:	[XXXX] mm
[FULL COMPONENT NAME INCLUDING BRAND & MODEL] TRANSPORT FRAME <i>(LIST ALL EQUIPMENT COMPATABLE WITH FRAME)</i>			

2. The transport and lifting labels must be placed adjacent to each lug, anchor or tie-down point with information clearly specifying how each must be used; e.g. "Tie-Down Only," "Lifting Point," "Lashing Point" etc.
3. A label is to be placed proximal to the identity tag specifying the fastener requirements. This label must include the following details:
 - ✓ Bolt size
 - ✓ Bolt grade
 - ✓ Tightening torque
 - ✓ Washer type
 - ✓ Washer grade
 - ✓ Washer dimension
 - ✓ The wording 'A calibrated torque wrench must be used to tension all fasteners' (Calibration records preserved for auditing purposes).

Packaging Standard

An example of this type of label is shown below:



IRCP number shall be printed on the frame in accordance with BHP requirements. Once transport module is installed IRCP number must not be obscured during any stage of transit or storage.

Bolt locations shall be displayed by either:

1. A bolt symbol stencil printed adjacent to all securing points on the frame that are designed to be fastened with a nut and bolt; or
2. A steel plate positioned proximal to the identification tag displaying a schematic of the frame designating all bolting locations.

Bolt marking shall not be obscured by the transported component/s to allow verification by warehousing and upon arrival.

8.2. Documentation Requirements

Multiple-use frames shall comply with requirements of the relevant BHP asset. IRCP documentation and detailed drawings shall be provided to the BHP representative and transmitted into SPO.

This requirement is not applicable to single-use, Supplier owned or off-the-shelf frames, however all transport frames must be accompanied by written approval by a BHP representative.

8.2.1. Quality Assurance

All BHP-owned custom-built frames shall be accompanied with the following documentation upon delivery for quality assurance purposes:

1. Engineering calculations.
2. Structural analysis, including detailed analysis on lugs and high stress locations with compliance to AS 4100-1998.
3. Non-Destructive Testing of all welds.
4. Material Data Records for the construction material(s).

All documentation received from the Supplier shall be stored in SPO.

8.3. Bolting Procedure

All bolted connections shall be fixed using the following arrangement.

1. Where bolt specifications are not stipulated by the OEM, bolts are to be of metric designation, class 8.8 and galvanised.
 - ✓ Bolt shall be pre-drilled through the shank to allow the installation of a retaining clip once assembled.
 - ✓ Bolts shall be clean and free of contaminants.

Packaging Standard

2. Two Nord-Lock or LockRite wedgelock washer sets (one set for the bolt and one set for the nut), constructed from galvanised steel or zinc plated steel.
3. One hex nut.
4. One cotter pin.
 - ✓ Pin is to be attached to the frame via a cable lanyard and sprayed a contrasting colour as specified in Section 8.1
 - ✓ Pin is not required on bolts installed into threaded holes
 - ✓ Satisfactory pin types include:
 - R-clip
 - Snapper pin
 - Lynch pin
 - Rue-ring cotter pin
 - Other, reusable locking pins, as approved by a BHP representative.

Where a cotter pin is not feasible, the bolt must be installed with a nyloc nut and have a minimum of two full threads protruding above the nut once preloaded.

Once torqued the bolt head and nut must be marked with a waterproof marker or a coloured torque indicator paste such as Cross Check™ Torque Seal®. The mark shall be visible when performing inspections and must encompass the bolt head, washer and parent material on the head side and bolt, nut, washer, and parent material on the shank side.

Reuse the full bolt assembly provided is permitted on the condition that the fasteners are inspected for damage and plastic yield.

8.4. Supplier Requirements

In accordance with Chain of Responsibility legislation the Supplier shall notify a BHP representative if any goods arrive in a damaged or unsafe condition e.g. bolts loose/missing, evidence of lubricants, inadequately secured etc. Suppliers are responsible for ensuring transport frames are compliant to this standard and are fit for use before dispatching.

Goods that are secured by mounting bolts shall comply with the requirements in Section 8.1 (9) prior to dispatch. Suppliers shall replace any fastener component that exhibits signs of corrosion, damage, yield, or fatigue during assembly.

Any discrepancies with the frame condition or bolting assembly must be rectified by the Supplier prior to acceptance.

8.4.1. Frame Maintenance

All transport frames arriving at a Supplier's facility must be subject to a detailed clean and inspection. All critical stress areas such as lugs, welds and bolt holes shall be thoroughly cleaned to remove all dirt, oil, grease, and water. These areas shall then be inspected in accordance with AS4991-2004, Clause 15.1 for signs of:

1. Cracks,
2. Nicks,
3. Gouging,
4. Stretching,
5. Distortion,
6. Thickness reduction of parent material by more than 10%,
7. Exposed parent material not painted with a protective coating.

Packaging Standard

Any damage must be reported immediately to a BHP representative and the frame shall remain 'tagged' out of service until remediation is completed in compliance with AS4991-2004, Clause 15.2.

When a frame does not meet design requirements outlined in Section 8.1 all non-compliance items shall be scoped and modified with approval from a BHP representative.

A certificate of compliance to the BHP standard shall be supplied with the repair or strip and assess report and must be certified by the Supplier prior to dispatch. It is the responsibility of the Suppliers to ensure non-compliant frames are modified or remediated to meet minimum standards outlined in this document before dispatch.



Example of an appropriately engineered Transport Frame.

9. Labelling and Marking Requirements

9.1. General Requirements

Each package shall be marked with the following information:

1. Destination including specific BHP asset/site;
2. Name of BHP representative (person ordering or purchasing officer);
3. BHP purchase order number. Multiple purchase orders to be separated by individual handling units;
4. All free text POs are required to have labels outside of handling units once count confirmed by Transport provider;
5. BHP Project number (if applicable);
6. Description: equipment / tag / part / 1SAP Material / Serial numbers (as applicable);
7. Suppliers name and contact details;
8. Gross and nett weight (kg);
9. Measurements - length, width, height (m);
10. Dangerous goods classification (if applicable) and placarding;
11. Package number of total consignment (e.g.: 1 of 2, 2 of 2);
12. Consignment number sticker;

Packaging Standard

13. Paperwork or packaging labels are to be marked with "LOPO" along with the PO No. if they are a service order or warranty job.
14. Date packed;
15. Country of origin; and
16. Other standard markings as specified by the purchase order such as project specific ID tags.

All markings shall be applied using a waterproof medium on two sides and on one end of each package in clear characters at least 50mm high or largest feasible characters for the smaller packages. All colours used in the marking shall be in sharp contrast to the background on which it is used.

All tags used shall be of non-rusting, durable, fade resistance product, able to be clearly marked and firmly attached to the item with a flexible, non-jagged, durable product. Machinery to be stored outside shall be identified with a stainless-steel label, engraved with letters minimum 5.0mm high and paint filled, and firmly attached to the item in a visible location.

If any materials are packaged together, all orders must be clearly labelled up individually with respective delivery dockets that include BHP purchase order number, description and qty of goods.

On bundles the markings are to be on labels securely strapped on with stainless steel wire.

9.2. Machinery Labelling Requirements

Machinery to be stored outside shall be identified with a stainless-steel label, engraved with letters minimum 5.0mm high and paint filled, and firmly attached to the item in a visible location.

9.3. Non-Purchase Order Item Labelling Requirements

The following information shall be displayed on all non-purchase order items, e.g., personal freight, toolboxes etc;

1. Receivers name
2. Receivers contact phone number
3. Date of item drop off at Linfox processing facility
4. Site name or destination e.g., Yandi, Mining Area C, etc
5. Total quantity of items being dropped off
6. Total weight (KG)
7. Goods description
8. Sender's name
9. Sender's contact phone number
10. Sender's signature
11. Dangerous Goods safety data sheet (SDS) or dangerous goods paperwork, where applicable

If the items being supplies against the purchase order require more than one package, then the documents shall be attached to the first package and shall clearly indicate the number of packages sent for the consignment. The remaining packages should indicate the package number within the package total, e.g., 3/7








9.4. Special Requirements

Without limiting any additional statutory requirements that may apply below find a list of items that would require additional requirements:










1. Easily damaged items shall be fitted with suitable labels or marked "FRAGILE HANDLE WITH CARE";
2. Items required to be kept cool shall be fitted with suitable labels or marked "COOL STORAGE ONLY";
3. Items that shall not be lifted by hooks shall be fitted with suitable labels or be marked "USE NO HOOKS";

Packaging Standard

4. Items that must be kept upright to prevent damage shall be marked with suitable labels or be marked "THIS WAY UP" with visible arrows on all sides of the package pointing which way is up;
5. Containers or individual items over 5 tonnes shall have centre of gravity indicated on the case by a painted or stencilled black stripe 30 mm wide extending upward on each side, with the words 'CENTRE OF MASS' 30 mm high adjacent to the stripes;
6. Unbalanced packages shall have a centre of mass indicated by a painted symbol;
7. For hazardous / dangerous or restricted goods, mark as specified by the relevant dangerous goods regulations;
8. Items over 1.5m in height shall be clearly marked in a position and on two sides to permit visibility to forklift operators. Pictorial markings complying with **AS 2852**;
9. Packaging pictorial marking for the handling of packages shall be used where appropriate or required by law;
10. Sling marks shall be shown on packages over 5 tonnes;
11. Fabricated sections of structures and equipment shall have their respective markings permanently hard stamped onto the piece to a depth of not less than 1 mm with rust preventive paint to a radial distance of 50 mm on the surrounding area. Each letter or number used shall not be less than 12 mm high;
12. If marking tags have to be used on bundled structural material, the tags shall be made of metal and fixed flat to each bundle;

Designation	Symbol	Explanation
Fragile, Handle with care		The symbol should be applied to easily broken cargoes. Cargoes marked with this symbol should be handled carefully and should never be tipped over or slung.
Use no hooks		Any other kind of point load should also be avoided with cargoes marked with this symbol. The symbol does not automatically prohibit the use of the plate hooks used for handling bagged cargo.
Top		The package must always be transported, handled, and stored in such a way that the arrows always point upwards. Rolling, swinging, severe tipping or tumbling or other such handling must be avoided. The cargo need not, however, be stored "on top".
Keep away from heat (solar radiation)		Compliance with the symbol is best achieved if the cargo is kept under the coolest possible conditions. In any event, it must be kept away from additional sources of heat. It may be appropriate to enquire whether prevailing or anticipated temperatures may be harmful. This label should also be used for goods, such as butter and chocolate, which anybody knows should not be exposed to heat, to prevent losses.
Protect from heat and radioactive sources		Stowage as for the preceding symbol. The cargo must additionally be protected from radioactivity.
Sling here		The symbol indicates merely where the cargo should be slung, but not the method of lifting. If the symbols are applied equidistant from the middle or centre of gravity, the package will hang level if the slings are of identical length. If this is not the case, the slinging equipment must be shortened on one side.
Keep dry		Cargoes bearing this symbol must be protected from excessive humidity and must accordingly be stored under cover. If particularly large or bulky packages cannot be stored in warehouses or sheds, they must be carefully covered with tarpaulins.

Packaging Standard

Designation	Symbol	Explanation
Center of gravity		This symbol is intended to provide a clear indication of the position of the centre of gravity. To be meaningful, this symbol should only be used where the centre of gravity is not central. The meaning is unambiguous if the symbol is applied onto two upright surfaces at right angles to each other.
Stacking limitation		The maximum stacking load must be stated as "... kg max.". Since such marking is sensible only on packages with little loading capacity, cargo bearing this symbol should be stowed in the uppermost layer.
Clamp here		Stating that the package may be clamped at the indicated point is logically equivalent to a prohibition of clamping anywhere else.
Temperature limitations		According to regulations, the symbol should either be provided with the suffix "...°C" for a specific temperature or, in the case of a temperature range, with an upper ("...°C max.") and lower ("...°C min.") temperature limit. The corresponding temperatures or temperature limits should also be noted on the consignment note.
Do not use forklift truck here		This symbol should only be applied to the sides where the forklift truck cannot be used. Absence of the symbol on other sides of the package amounts to permission to use forklift trucks on these sides.
Electrostatic sensitive device		Contact with packages bearing this symbol should be avoided at low levels of relative humidity, especially if insulating footwear is being worn or the ground/floor is nonconductive. Low levels of relative humidity must in particular be expected on hot, dry summer days and very cold winter days.
Do not destroy barrier		A barrier layer which is (virtually) impermeable to water vapour and contains desiccants for corrosion protection is located beneath the outer packaging. This protection will be ineffective if the barrier layer is damaged. Since the symbol has not yet been approved by the ISO, puncturing of the outer shell must in particular be avoided for any packages bearing the words "Packed with desiccants".
Tear off here		This symbol is intended only for the receiver.
Bolt to frame here		All securing points on transport frame that are designed to be fastened with a nut and bolt shall have a bolt symbol stencil printed adjacent to hole.

9.5. Cable Drums

The following information shall be provided on every cable drum delivered to any BHP site, regardless of preferences of the Contractor responsible for cable delivery and/or installation:

1. A registered name or mark, which enables the manufacturer or Supplier of the cable to be identified;
2. Drum traceability number;
3. The cable catalogue number or type number or other marking to distinguish the cable;
4. The number and size of the conductors;
5. The voltage rating of the cable;
6. The cable designation of insulation;
7. Length of cable on the drum;

Packaging Standard

8. An arrow indicating the direction of unwinding the cable shall be clearly identified; and
9. The cable shall be capped to stop the ingress of moisture.

The cable delivered to the site on drums shall be well protected against mechanical damage during transport and handling and effects of weather conditions.

The cable drum surfaces shall be smooth and without any protrusions that could affect the safety of operators during handling the drum or damage the cable.

The manufacturer shall provide clear warning signs and basic instructions for handling the delivered drums and unwinding cable from the drum.

9.6. Delivery Dockets

The following information shall be displayed on all delivery dockets with respect to each item of goods, package, or freight container:

1. Consignor's details (including company name and phone number);
2. The Suppliers invoice number, or reference number for the delivery;
3. The BHP purchase order number associated with the goods delivered;
4. The purchase order "line items" associated with the good delivered;
5. The date goods are dispatched to the BHP delivery address as identified in the purchase order;
6. Receiver's details (ship to address including unloading point, contact name and phone number if known);
7. Type of package (i.e. roll, box bundle);
8. A brief description, quantity and contents, Suppliers' material, item number (if applicable);
9. To the extent the delivery contains packages of different goods – The number of packages in the delivery;
10. Weight (kg or t) and dimensions (metric measurement) of each item;
11. Dangerous goods classification (if applicable), Emergency Procedures Guide (EPG) and Safety Data Sheet (SDS). Dangerous Goods shall be consigned on a separate consignment;

If the items being supplies against the purchase order require more than one package, then the documents shall be attached to the first package and shall clearly indicate the number of packages sent for the consignment. The remaining packages should indicate the package number within the package total, e.g., 3/7

10. Packing List Requirements

Packing lists detailing all the items contained in each package shall be produced in triplicate:

1. One copy shall be enclosed with the goods
2. One copy shall be attached to the exterior of each package in a waterproof envelope
3. One copy shall be supplied to BHP representative

Under no circumstances shall goods be dispatched without packing lists distributed as detailed above.

Packing lists shall be prepared for each delivery and shall show the following information:

1. Consignee;
2. BHP Purchase order number or contract number;
3. Name of Supplier;
4. Method of despatch - carrier name;

Packaging Standard

5. Description of contents and item numbers;
6. Total packages and package numbers;
7. Supplier's reference; and
8. Destination.

11. Requirements for Packaging of Hazardous and/or Dangerous Goods

Appropriate documentation for hazardous substances and dangerous goods including shipping certification, instructions for shipping, material safety data sheets (MSDS) that include handling instructions, material properties, exposure information, emergency medical information, and disposal requirements. Documentation shall be sufficiently specific for users to identify all necessary actions concerning the hazardous substance or dangerous goods being supplied.

Certify that all containers and packaging for hazardous substances or dangerous goods such as poisons, poisonous gas, inflammable liquids, compressed gases, inflammable compressed gases, explosives, and radioactive materials etc. are in accordance with the rules and regulations of the applicable Australian Government and International Transportation agencies and provide relevant hazardous cargo certificates.

Hazardous and non-hazardous substances shall be identified on separate invoices and packing lists using the substances proper technical name. All hazardous substances invoices and packing lists shall contain the following statement: "This is to certify that the above-named material is properly classified, described, packaged, marked and labelled, and is in the proper condition for transportation according to the appropriate Government or International Transportation regulations."

The Supplier shall provide a schedule of the dangerous materials to be incorporated in the consigned goods to BHP when classified as:

1. Hazardous Substances as defined by the National Occupational Health and Safety Commission's (Worksafe Australia) "Guidance Note for Determining and Classifying a Hazardous Substance" {NOHSC: 3011 (1191)}; or
2. Dangerous Goods as defined by the "Australian Code for the Transport of Dangerous Goods by Road and Rail" (ADG Code), Fifth Edition, September 1992, prepared by the Federal Office of Road Safety, Transport and Communication as updated from time to time.

12. Requirements for Supply of Oversize Goods

Typically loads considered oversize exceed the following dimensions or weight:

1. Length: 11.8 metres;
2. Width: 2.30 metres;
3. Height: 2.30 metres (including transport vehicle); and
4. Shipping weight: >20 ton.

The Supplier shall provide the following information to BHP three months in advance of the expected movement, so the required permits and arrangements can be made with the carrier:

1. Weight and dimensions of the equipment;
2. Centre of gravity;
3. Lifting lugs, lashing, and jacking locations;
4. Size of lugs;
5. Saddle material used (wood or steel);
6. Saddle location;

Packaging Standard

7. Number of saddles;
8. Saddle width, height, and weight (per saddle);
9. Any specific transport and lifting requirements and/or precautions;
10. Any drawings that show dimensions, weights, or other information relevant to the lift or transportation.

13. General Lifting Requirements

All lifting attachments fitted to packaging, containers, machines, or special lifting frames that are supplied to BHP must comply with **AS4991 Lifting Devices**, and include:

1. A copy of the current Inspection test and certification
2. Have the safe working load clearly marked on each attachment

The Supplier shall provide a detailed lift plan when supplying any item that is unbalanced, considered an unusual load that requires a special lifting frame or spreader beam, or other special circumstance that would not be considered a standard lift.

The lifting plan must be forwarded to the BHP representative prior to final inspection and movement of the goods. The Supplier shall ensure that each package of goods complies with the relevant size and weight restrictions and regulations applicable to the relevant method of transport.

Lifting attachments on machines, packaging or containers shall be in a position that will not cause damage to the item or its packaging during the lift, or suitable protection must be supplied that does not contravene good rigging practices.

Lifting attachments designed and intended to lift off packaging only which are not intended to lift the actual item contained inside the packaging shall be clearly marked "designed for lifting packaging only"

Any rigging, lifting, or handling equipment being supplied with the item must meet all the required Australian standards and come complete with all required certifications.

Threads in casings near shaft ends shall not be used to attach eye bolts for transport or lifting unless they are specifically designated for this purpose by the OEM.

14. General Transport Requirements

14.1. Load Restraint

All transport requirements must adhere to the most recent Load Restraint Guidelines of the National Transport Commission (NTC) and relevant Chain of Responsibility (CoR) legislation from the National Heavy Vehicle Regulator, in addition to any specific regional requirements.

All freight carriers shall ensure load restraint equipment used complies with the Law and must have a documented inspection process for conducting periodic inspections of load restraint equipment. Steel items must not be loaded directly onto a steel tray due to the risk of sliding. Restraint of steel items shall be with the use of a rubber or alternative suitable packaging material.

The use of Over Centre Load Binders (Chain Dogs) is prohibited on all BHP sites. One off transport company or drivers who arrive with Over Centre Load Binders and are unaware of this policy, are required to complete an in-field Risk Assessment (Take 5 or similar) prior to unfastening the load to look for signs of over tension/load movement and ensure appropriate controls for releasing the lever on the chain tensioner.

A tarpaulin or other suitable material must be used where applicable to provide a barrier to the outside elements. Tarpaulins are not classed as a method of restraint to secure a load.

14.2. Transport Vehicles

Vehicles entering BHP sites must comply with all Site Standards and Procedures, and relevant local Legislation.

14.3. Oversize Loads and Transport

Deliveries of over dimensional (overlength/ overwidth/ overheight) equipment and materials must meet all relevant Laws and shall be transported by approved carriers. The sender is to work directly with the Transport company and the Receiver to ensure to meet any additional requirements specific to the asset or site receiving the oversize material/s.

Ensure suitable notice is provided to BHP prior to sending any oversize materials to enable efficient planning for crane and MHE requirements.

15. General Requirements for Construction Goods

The following general guidance is for the preservation, packaging, and transport of typical construction goods used on major projects:

1. Steelwork dismantled for transport shall be adequately marked to facilitate reassembly on site. Each section of steel shall be appropriately stamped / marked so that it can be easily identified against the construction or manufacturing drawings or assembly plan.
2. All surface coatings shall be fully protected using a suitable packaging material such as felt or soft rubber between lifting tackle and the work whilst loading is being carried out, to minimise damage to both the surface and the protective finish.
3. All machined surfaces are to be protected by Shell Ensis Fluid or Balm Blue or approved equivalent.
4. Projections from steelwork such as lugs and splice plates which may suffer damage during transport are required to be reinforced with timber packing pieces.
5. All fixing devices such as nuts and bolts shall be safely packed in steel drums or solid timber cases and marked to identify the contents.
6. Light slender members shall be bundled securely and have stamped metal tags attached which shall contain the relevant drawing and part numbers.
7. The bundles shall be painted with the relevant colour band.
8. Small parts shall be placed in sealed drums or cases

16. BHP General Storage Requirements

BHP Warehouse Storage should be completed in accordance with existing Safe Work Procedures and Warehouse Processes.

1. **WH.SWP.009b Storage at Heights**
2. **WH.SWP.009d Dangerous Goods Handling and Storage**
3. **COM.WILP.WH.GLO.PRO.PACK Packaging Standards Process Overview**

Upon receipt of preserved and packaged goods and machinery to site the item should be stored in accordance with the general guidance below:

1. Preservation and packaging should be restored after goods receipt, so the item remains protected in storage;
2. Goods made of materials such as rubber or fibreglass that are susceptible to heat or UV damage should be stored inside or covered with tarps or a UV resistant product;
3. Items shall be oriented in a way that allows safe access for inspection / maintenance during Storage;

Packaging Standard

4. Items shall remain secured to pallets when stored at height;
5. If an item has exposed metal surfaces do not store it outside or in an area of high humidity without applying a corrosion inhibitor or Denso wrap;
6. Items that require storage within a certain temperature range should be stored in cool or shaded area's that do not exceed their range;
7. Fluids such as oils or chemicals must be stored in containment bunds;
8. Hazardous substances and dangerous goods shall be stored in accordance with the specific regulations and standards required;
9. Items that require particular care to prevent internal corrosion from humidity will be stored near a power source so that Maintenance can set up heating systems;
10. Electronic goods susceptible to dust must be stored in a dust free environment or fully sealed with shrink wrap;
11. Items that can pool water must be covered;
12. Items in crates or boxes shall remain closed/ sealed at all times;
13. Do not overload pallets with heavy goods; and

17. BHP General Requirements for Projects (Operational Readiness)

When ordering materials, spares, equipment, or machinery as part of a project the responsible person shall consult the Manufacturer/ Supplier and relevant BHP Engineering function to establish the preservation, packaging, and in-storage maintenance requirements before placing a purchase order for the goods.

The BHP Projects function is responsible for any maintenance to goods stored in a project controlled lay down area or store while awaiting installation and remain responsible until the project has been handed over and accepted by the operations.

The Supplier is responsible to ensure the goods meet the specifications provided by the project scope prior to dispatch of the goods.

18. BHP General Requirements for In Storage Maintenance

There are spares or machines that will require some maintenance whilst in storage to ensure they remain in a serviceable condition until they are required.

The BHP Maintenance function is responsible to create strategies in SAP for in-storage maintenance and to schedule and execute that maintenance at the required frequency.

This document includes the minimum requirements and guidance for preservation, packaging, onsite storage and in storage maintenance for goods and equipment being supplied to any of the BHP fixed plant assets.

It excludes the minimum requirements and guidance for mobile fleet and rolling stock as these have unique requirements which are covered by a separate BHP Standard

19. References

Ref #	Document Name
1	National Transport Commission (NTC) Load Restraint Guideline
2	Road Transport Authority (RTA)
3	Australian Code for the Transport of Dangerous Goods by Road and Rail
4	Australian Code for the Transport of Explosives by Road and Rail
5	Australian Dangerous Goods Code (ADG) published by the NTC
6	National Road Transport Reform (Mass and Loading) Regulations 1995

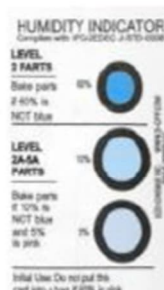
Packaging Standard

7	Australian Transport Council
8	National Heavy Vehicle Regulation Chain of Responsibility
9	National Occupational Health and Safety Commission
10	Federal Office of Road Safety
11	ISPM 15
12	Australia's Biosecurity Import Conditions (BICON)
13	ISO 668
14	AS1216-2006 Class Labels for Dangerous Goods
15	AS4991-2004 Lifting Devices
16	AS4100-1998 Steel Structures
17	AS2852
18	NOHSC: 3011 (1191)
19	MECOE.BLD.0012
20	MECOE.PRO.0007
21	BHP procedure SAF-076
22	BHP Standard SPEC-000-S-00061
23	BHP Standard SPEC-000-G-12004
24	SWP.MINAU.WH.002a Storage at Heights
25	SWP.MINAU.WH.002c Dangerous Goods Handling and Storage
26	COM.WILP.WH.GLO.PRO.PACK Packaging Standards Process Overview

Examples of Packaging Products to be utilised



desiccant dryers



Protect your shipped goods against 'container rain'

padded bags & void fill



Use Void Fill
to protect
your quality



Component bags available
with corrosion inhibitor

resealable & component bags



Large bags for heavy components



Multi-purpose
resealable bags



pallet collars



Joined
with 2
removable
pins

- Dividers available
- Minimal backloading/
storage
- Lids available



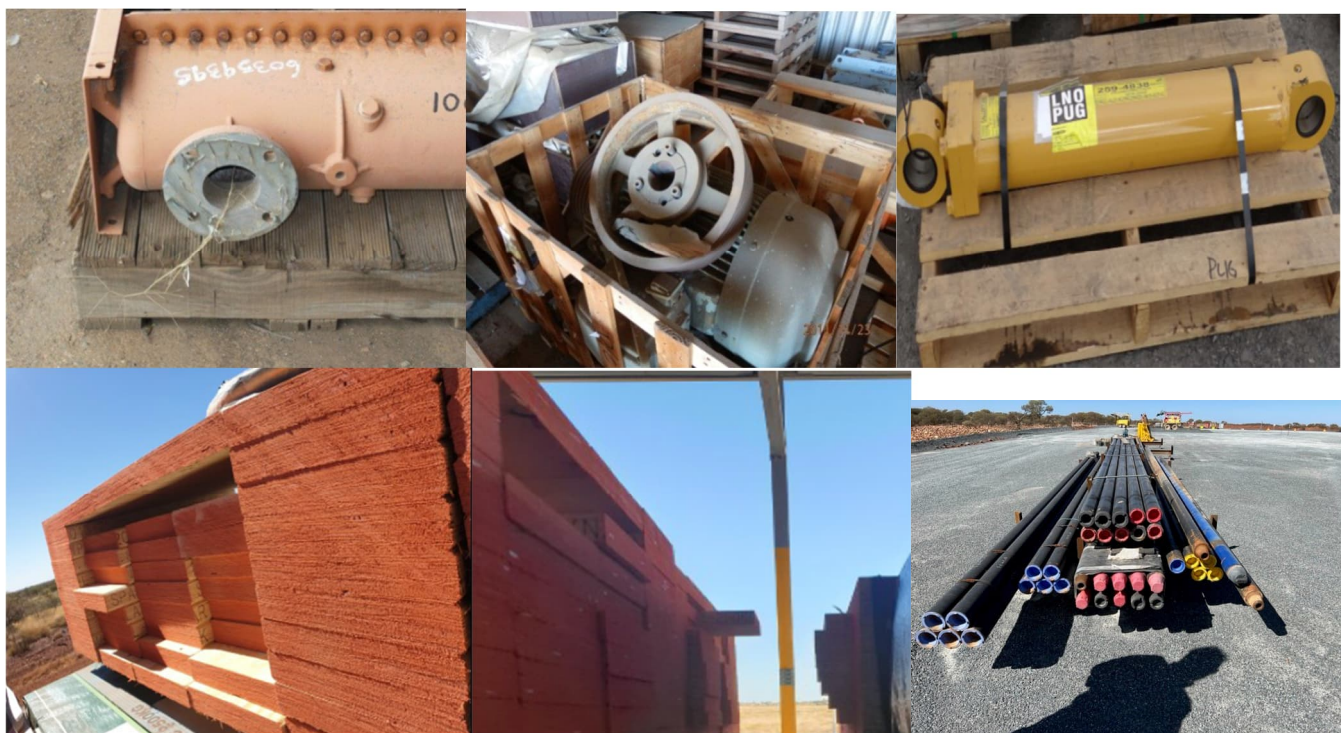
Load secured



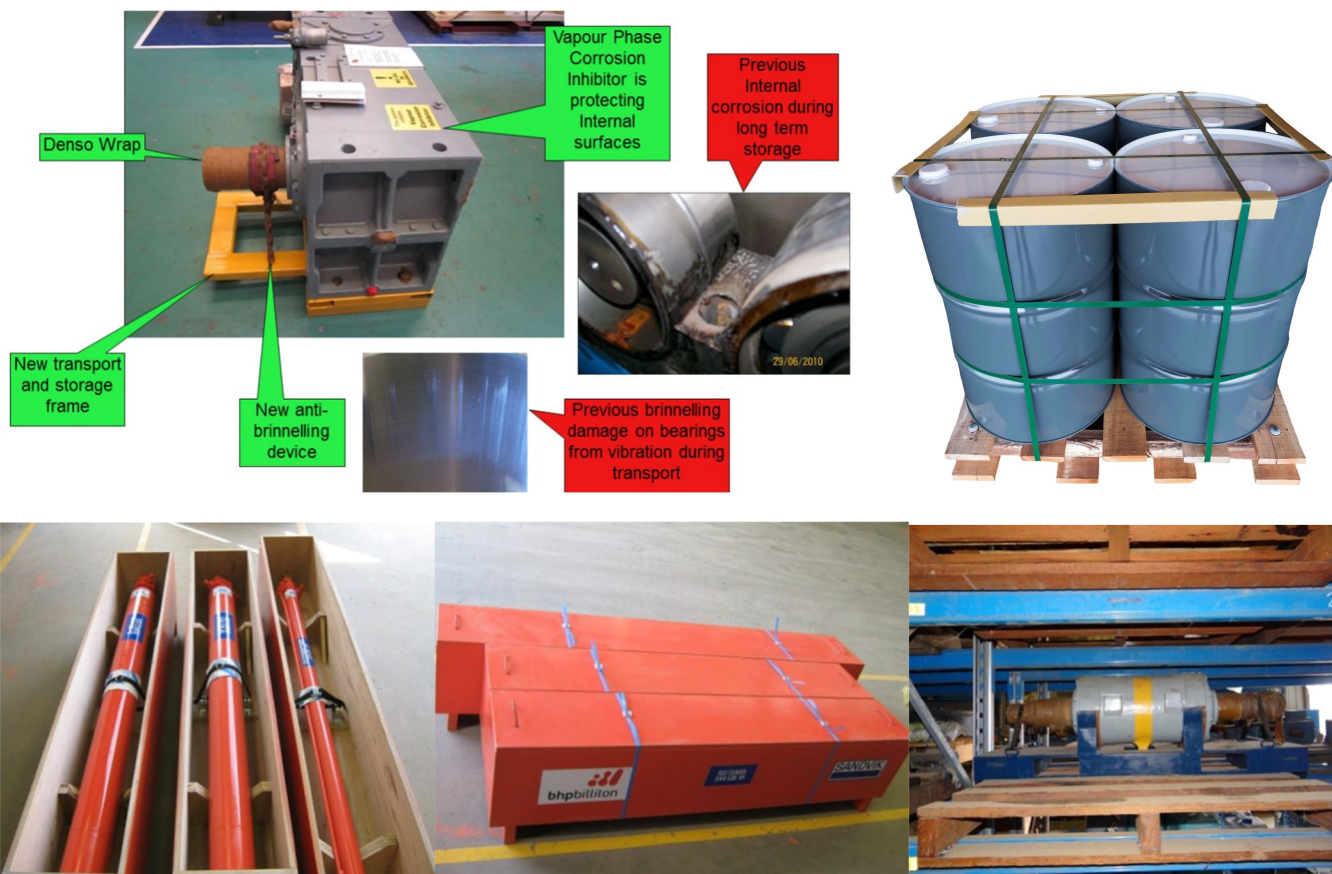
20. Examples of Poor Preservation and Packaging



Packaging Standard



21. Examples of Good Preservation and Packaging



Packaging Standard



Packaging Standard



Packaging Standard



22. Definitions and abbreviations

Term	Definition or convention
ADG	Australian Dangerous Goods Code
AQIS	Australian Quarantine and Inspection Services
EPCM	Engineering Procurement Construction Management
IRCP	Internal Registration of Classified Plant
MSDS	Material Safety Data Sheet
NTC	Australian National Transport Commission
OEM	Original Equipment Manufacturer
Supplier	Anyone supplying goods to BHP also referred to as the Contractor in BHP standard contracts
VCI	Volatile Corrosion Inhibitor
VPI	Vapour Phase Inhibitor

