



Packing Marking and Documentation of Goods for Shipment Specification

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Document History

Version No.	Date	Author	Approver	Description of Amendment
1.0	15/09/2022	Fawzi Al Kindi	Mahmood Al Aamri	First issue



1. Purpose

This document has been developed to help employees, vendors / suppliers understand the specification associated with Packing, marking and documentation of goods for shipment at OQ. This document provides the minimum packing and shipping documentation requirements for project materials and is a guide for acceptable standards. When specific export packing instructions are detailed in the Purchase Order (PO/Oman royal decree) and conflict with these specifications, the packing instructions within the Po/Oman royal decree will have precedence.

2. Scope

This document is approved by the <Concerned N-2/ Process owners> and applies to OQ Group of companies.

This document aims to outline the processes steps, roles, responsibilities and requirements covering the packing, marking and documentation of goods and materials prior to shipment.

3. Confidentiality and Distribution

- This document is the property of OQ Group of Companies. Unless otherwise authorized by the Company, the distribution and use of this specification is limited to Company authorities and the Contractors' nominated by the Company. Unauthorized sharing is strictly prohibited, and Company shall not bear any responsibility further.
- This document should be part of the ITT/Contract and thus becomes a contract requirement for the Contractor / Vendor to comply with as applicable.
- This document shall be revised only by the document custodian that is OQ Projects, CoE team.

4. Specification

4.1 Responsibilities

The Seller must be ultimately responsible for the supply, protection, and application of the export packing of project materials and equipment from the Seller's facility to ultimate destination.

The Seller must remain responsible for the adequacy of the preservation, protection, and packing of the project cargo to reach its final destination in an "FOB" condition. Adherence to the present instructions does not release the Seller from liability for damage as a result of faulty packaging, inadequate protection, and / or preservation. This liability includes, but is not limited to, the costs associated with the return and replacement of rejected items.

4.2 General Requirements

Export packing materials must be selected, and packages constructed to withstand the rigors of multiple handling by manual and mechanical means, truck, air, and / or ocean transport. The packaging must also withstand open, uncovered storage at the destination for six (6) months with severe climatic conditions to include: high humidity of 90% or more, excessive temperature ranges from freezing to 55 degrees Celsius (130 degrees Fahrenheit), condensation, and dust. As a result of these diverse and severe conditions, special consideration must be given to the degree of protection and to the selection of packing materials to ensure:

- Safe and easy handling is facilitated
- Packing and transportation are economical in cost
- Damage and theft are prevented
- Rust and corrosion are inhibited
- Intrusion of dust and moisture is prevented



Manufacturers' special packing instructions for specific commodities and recommended shipping modes must take precedence to these specifications.

If specific requirements of this specification are not practical, the best alternate export packing industry methods must be used to obtain the desired comparable degree of protection. All alternate export packing supplies and / or methods employed by the Seller must be brought to the attention of the project logistics Lead.

Should the manufacturer's or Seller's standard methods of protection and export packing provide equal or better protection at the same or less cost, this information should be brought to the attention of the project logistics Lead.

Manufacturer's and Seller's recommendations, comments, and suggestions regarding protection, packing, and the handling of project equipment and materials are solicited and should be referred to the project logistics Lead.

All packing materials, cases, crates, drums, saddles, and supports must become a part of the PO and are not returnable.

4.3 Specific Requirements

4.3.1 Heavy Lift Equipment

Heavy lift equipment is defined as any piece of equipment or cargo that is 45,000 kilograms (100,000 pounds) or heavier. Items in this category require special handling and long-term planning.

Medium lift equipment is defined as any piece of equipment or cargo that is 20,412 kilograms (45,000 pounds) or heavier and less than 45,360 kilograms (100,000 pounds). Items in this category require special handling and planning six (6) months prior to shipping.

Oversize lift equipment includes heavy or medium lifts and their integral components or falloff material which is equal to or greater than 13.5 Meters (45 feet) length by 3.352 meters (11 feet) width and 3.657 meters (12 feet) height, shipped as a separate entity and whose structural integrity requires special handling arrangements.

Lifting and sling points must be provided for each item to allow the item to be lifted in a stable, horizontal position when lifted by one hook.

Lashing points must be provided for each item with appropriate lashing points to secure the load during handling and transport.

All surface areas of each item which may come in contact with slings during lifting must be covered to prevent scratches, dents, or other damage during loading.

Marking of lifting points and lateral and vertical centers of gravity on heavy lift equipment should be with colored or contrasting marks.

Self-supporting items must provide adequate clearance for handling. Should cradle or saddles not be adequate to permit clearance during lifting or movement, additional timber support must be provided.

Seller is responsible for design and provision of transportation cradles or saddles unless otherwise specified by the PO. Seller is to provide scale drawings detailing proposed cradles or saddles for approval prior to transport from supplier facility.



4.3.2 Limits of Stacking, Nesting for Containerization

Unnecessary free space within package must be avoided to reduce shipping costs.

Containers should be loaded and unloaded by mechanized means, e.g., low mast forklift trucks.

Any single piece weighing in excess of 35 kilograms (80 pounds) should be unitized for forklift handling of loading and unloading.

Clearance for forklift tines should be no less than 8.9 centimeters (3.5 inches).

Materials with different PO numbers must not be consolidated together unless authorized by the Buyer.

Individual items and unit loads must not exceed 210 centimeters (83 inches) in any dimension or 1,375 kilograms (3,000 pounds) maximum gross weight. Deviation from these limits must be approved by the Buyer.

Heavy goods are not to be placed upon lighter goods.

Damaged goods should not be loaded into container until contents have been checked and packages are repaired.

Weight in container should be evenly distributed over the horizontal, longitudinal, and transverse places of the container as much as possible. The center of gravity of the loaded container should be lower than the mid-point of the container when possible.

Wooden bracings, when necessary, should be applied to loaded container to ensure the cargo will not fall out when the doors are opened.

4.3.3 Air Cargo Packing

All air cargo materials must be packaged in accordance with International Air Transportation Authority (IATA) or International Cargo Airline Organization (ICAO) specifications.

Whenever possible, standard airline containers will be utilized.

Packing for over-dimensional items will be performed in accordance with airline requirements.

4.3.4 Skid, Packing Box, Pallet Construction Drawings:

Note: Example drawings for construction of various package requirements can be found following these specifications.

4.4 Hazardous Materials / Dangerous Goods

Hazardous material / dangerous goods will be identified, packaged, packed, marked, stored, and transported with the appropriate Safety Data Sheet (SDS) in accordance with all applicable laws and regulations which govern U.S. and international shipments.

4.4.1 Preparation of Material

Prior to packing, all project equipment and materials must be checked internally and externally to ensure they are free from all weld spatter, scale, rust, cuttings, filings, etc., as well as any other foreign matter. Critical wearing surfaces must be cleaned by dipping or brushing with a suitable solvent, such as petroleum, naphtha, or alkaline cleaning compound. After hydro-testing, operation, or performance testing, all fluids (e.g. lubricating oil, fuels, or water) must be completely drained from all tanks, vessels, jacketing, piping, etc., and wiped or blown dry. Lint free rags must be used for wiping the critical-wear surfaces.



4.4.2 Painting and Rust Preservation

Any paint and / or rust preventive coatings required by the PO must be inspected by the project quality control inspector(s).

4.4.3 Protection of Openings

Flanged openings must be protected with veneer plywood (minimum 5.5 mm thick) or gasketed metal covers bolted with at least three (3) bolts to the flanged opening. The use of wire to attach the cover is not acceptable. An appropriate gasket must be used between the metal cover and the flange. If veneer plywood covers are utilized, the joints must be sealed with a waterproof adhesive tape, such as gum tape, after the openings have been covered.

Bagged desiccants must be placed inside the openings before applying protective covers to connections and openings of any equipment item susceptible to contamination from moisture and identified with warning tags for removal before installation.

Unconnected pipe threads must be protected with threaded metal plugs or caps and must be identified with metal tags explaining the purpose, and / or providing connection number references used on the project, and / or vendor drawings.

All closures that are part of original equipment must fit tightly. **Plastic closures and thread protectors are prohibited.**

4.4.4 Flexible Connections

All flexible connections subject to damage during shipment must be disconnected and all loose ends must be adequately protected / supported to prevent damage.

4.4.5 Shaft Couplings

Flexible couplings must be removed and protected / supported to prevent damage. Rigid coupling must be protected / supported in accordance with the manufacturer's recommendations for shipment and storage.

4.4.6 Use of Desiccants

The use of desiccants enclosed in pieces of equipment and with sensitive materials and instrumentation is of extreme importance in environments with high humidity and condensation caused by wide variances in temperature. Ample desiccant (bagged) must be used to provide uniform protection internally and externally where possible.

Desiccants must be placed such that any spilled crystals will not damage parts or hinder the functioning of item to be protected. The quantity of desiccant to be used must be determined by item's surface area to be protected and / or the volume of the enclosed space.

Additional desiccant must be used if moisture absorbing dunnage or supporting structures are within the enclosed space to be protected. All equipment to be shipped with enclosed dehydrating materials must be conspicuously marked with a large red warning tag reading:

CAUTION: *Desiccant materials are enclosed in this equipment. Do not operate before removing. Should the integrity of the enclosure be broken before operation, the desiccant must be replaced, and the enclosure resealed for continued storage.*

4.4.7 Small Tool Parts

Small and / or loose component parts must be tagged and packaged separately with a packing list copy identifying the items with the appropriate PO line item. Such items may be shipped with the main equipment item, if they can be attached securely to the piece of equipment or skid.



Steel strapping or bolts must be used to secure accessory boxes to the main equipment and / or skid. Tying or wiring is not acceptable.

4.4.8 Special Tools

Special tools must be packed in individual, heavy duty boxes with a packing list copy identifying the items and marked "*SPECIAL TOOLS*".

Large special tools, such as disassembly cradles, must be prepared for shipment in the same manner as the main equipment item, including a separate packing list identifying the items.

4.4.9 Equipment for Ocean Carriage

The Seller must warrant that equipment readied for shipment may be handled by mechanical means, e.g., port's and / or vessel's lifting gear.

All equipment pieces must be skidded, pre-slung, fitted with lifting lugs—or other adequate means of lifting—and must be accurately and clearly marked with the center of gravity, and / or lifting points to ensure safe handling during loading, off-loading, and truck transport operations.

All Seller-supplied lifting devices shipped with major equipment items, such as lifting beams, spreader bars, cable slings and lugs, as supplied, must be certified by an officially recognized authority and acceptable to the authorities in loading and discharge ports. Shipping cradles and supports for equipment items must be suitable for ocean transportation in design, strength, and number to safely support the equipment item in transit. Equipment items must be fitted with sufficient tie-down lugs for lashing / securing the pieces during shipment.

4.4.10 Equipment Preparation for Overland Transportation

Transportation saddles fabricated for equipment are designed to provide support for the item until its final placement and installation. Therefore, it is necessary for these saddles to be designed and fabricated of sufficient strength and attached securely to the equipment item to withstand the stresses to be encountered during shipment from the Seller's plant to the project construction site.

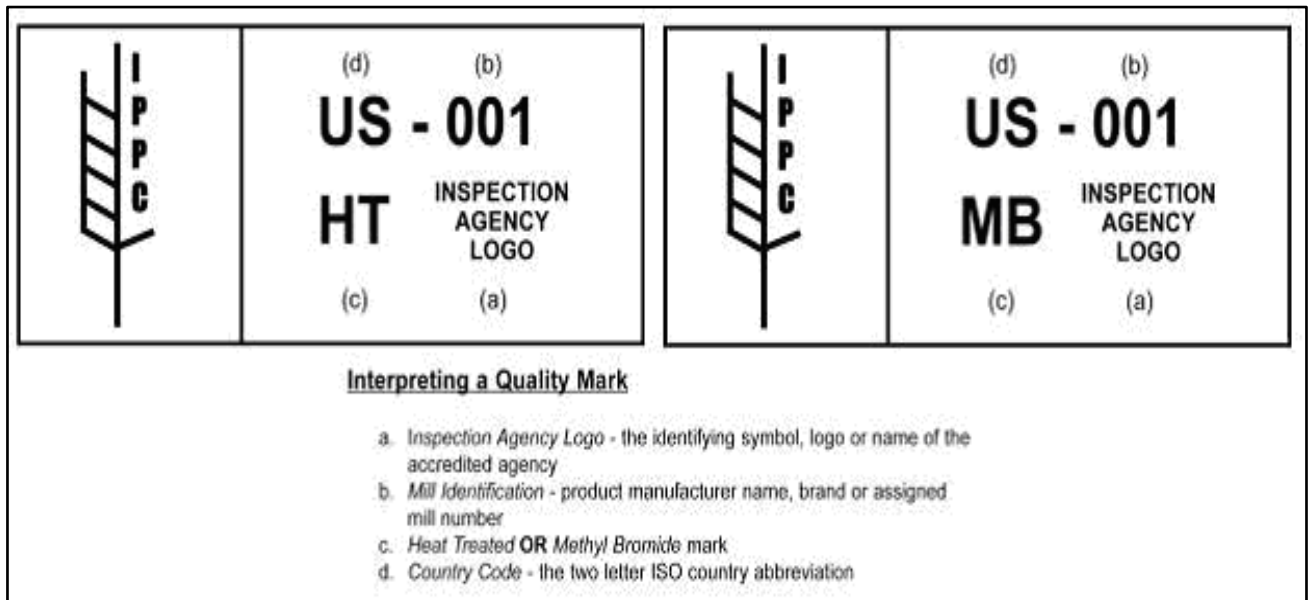
4.5 Materials and Workmanship

Materials and supplies used for wrapping, packaging, taping, sealers, moisture barriers and retardants, and corrosion prevention must be recognized brands and of acceptable grade. Materials and supplies must also conform to the best standards in the export packing industry and must be capable of performing all their functions without damage and / or contamination to the PO items packed.

The nature of the commodity and degree of protection required will govern final selection and quantity of the packing materials used. See below for selection criteria and methods of construction.

4.5.1 Wood

All wood packaging material (including dunnage) used must be in accordance with International Standards for Phytosanitary Measures (ISPM), Publication No. 15. These requirements include certifying that either heat treatment or chemical (methyl bromide) treatment has been performed and wood is labeled with the International Plant Protection Convention (IPPC) accepted symbol. Markings must be in conformance with the following IPPC standards:



4.5.2 Dimensional Lumber

Dimensional lumber must be new, well-seasoned, and must be free from defects that cause weakness. Knots, or knot clusters, must not be in excess of 1/3 width of the board and must not cause interference when nailing / stapling. Lumber with bad cross-grains must be avoided. Lumber dimensions used in this specification are nominal.

4.5.3 Plywood

Only new, clean C-D exterior grades of plywood must be used for the construction of shipping boxes.

4.5.4 Nails

All nails must be cement coated, deformed shank, or clinched wire box nails.

Note: When crates are subject to wetting and drying over an extended period of time, cement coated nails may tend to lose some of their holding power. In this instance, hot-dip galvanized nails should be substituted for cement coated nails.

For maximum strength, they must be driven into the side grain of the lumber. The species and thickness of the wood govern the size of the nail to be used. See below for selection criteria. Corrugated fasteners may be preferred to nails when packing items that are highly susceptible to pilferage.

4.5.5 Strapping:

Unless otherwise specified, metal strapping must be non-annealed steel, minimum 1.9 cm (3/4 inch) applied with a stretching tool and secured with crimped steel seals. Metal straps must be cut evenly at the seal leaving no sharp edges. Corner protectors must be provided to keep strapping from cutting into packages. Not less than two straps per box, and not to exceed 36 inches center to center, must be used.



4.5.6 Workmanship

All workmanship must be in accordance with the best commercial practices and within the requirements of the applicable specifications. There must be no defects, imperfections, or omissions that would impair or lessen the protection afforded by the package as a whole.

4.6 Packing

Packing materials and shipping container types must be selected to afford the best protection to items shipped from the rigors of rough handling and international transport. It is imperative that the selection of materials to be used be equal to the item to be shipped itself and to consider the shipping environment, as well as the duration the item will be in open storage.

Items which completely fill the container and do not contribute to the strength of the package are normally the most economical to package. Articles that do not completely fill the selected container must be cushioned, braced, fastened, or blocked to prevent damage to the article itself or to the container.

Minor disassembly and nesting to conserve shipping volume and prevent damage must be followed. **Materials requiring special jigs, fixtures, tooling, or recalibration for reassembly will not be dismantled.** Parts, attachments, or fixtures of the commodity packed must be boxed or blocked and braced within the shipping container (where practical) containing the main unit.

If the load must be kept upright, equip the container with lift handles, skids, top peaks or gables, or a similar device to assure stowage and handling in an upright position. Break bulk items must be equipped with lifting lugs.

Do not exceed the weight capacity of the shipping container as declared by the manufacturer.

Interior blocking and bracing must distribute the content's weight within the container.

4.6.1 Bundles and Pallets

Unitize, palletize, or assemble cargo to the largest practical unit consistent with handling, weight, and dimension limitations at transshipment points and destination. Palletized materials should be capped and strapped or shrink-wrapped to four-way entry pallets. Material must fit the pallet without large voids and must be capable of withstanding stacking without damage to the materials.

Materials shipped in bundles must be segregated by length and size and must be secured with steel strapping (width 1-1/4-inch thickness .035-inch HD) with a stretching tool and with crimped steel seals (spaced 36 inches apart) and skidded to permit stacking without damaging the product.

Sturdy commodities such as rough castings, structural or fabricated steel, heavy wall pipe, or tanks not subject to water or handling damage, may be bundled, skidded, and / or palletized for shipment.

4.6.2 Fibreboard Boxes

Fiberboard boxes, when used, must be export quality (resistant to compression, puncture and moisture). Flaps should be stapled or may be glued with a water-resistant adhesive applied to the entire area of contact between the flaps. All seams must be sealed with a water-resistant packing tape.



Unitizing, palletizing, or by over-packing several fiberboard boxes in consolidation containers is preferred. When this is not possible, reinforce with two tension straps applied at right angles and crisscrossing at top and bottoms, or with two girth straps.

In every instance, the fiberboard box and contents must bear the weight of a superimposed load (minimum 50 pounds / square feet) without compression or collapse. Never use boxes with bursting test strength of less than 275 pounds.

Fragile / sensitive materials subject to handling or stowage damage must be packaged and cushioned in crates or boxes. Materials not subject to weather damage may be shipped in unsheathed (open) crates.

Materials subject to water damage must be packed in:

- Waterproof lined boxes or sheathed crates, or
- An inverted waterproof bag slipped over the material within the box or sheathed crate

Should a higher degree of protection be required, both types of methods above must be used.

Packages or pieces over 35 kilograms (80 pounds) must be provided with four-way entry pallets that permit handling by forklift and / or slings. Minimum pallet depth must be 3-1/2 inches and pallet ends must be chamfered.

4.6.3 Skidded and Framed Boxes

Skidded and framed boxes must be constructed upon skid members joined by headers and must be floored with 2-inch lumber. Each header must be double bolted to each skid member. Each bearing surface of machinery or equipment must rest over a skid member and bolts used to secure the equipment to the skid must pass through a skid member. **Lag screws are not acceptable.** Framed construction must use "X" bracing with 2-inch by 4-inch lumber. The clear distance between the skids must not exceed 48 inches.

- Rub strips must be used to allow entry by forklift on four sides.
- Boxes / crates must be constructed to allow slings to be inserted under the box for lifting purposes.
- Bolt sizes:
 - 3/8-inch diameter carriage bolts when fastening pieces up to 2-5/8 inches thick
 - 1/2-inch diameter carriage bolts when fastening pieces over 2-5/8 inches thick up to 3-5/9 inches thick
 - 5/8-inch diameter carriage bolts when fastening pieces over 3-5/8 inches thick

Note: Use lock washers and lock nuts to prevent loosening

4.6.4 Crates

Open crates may be used for items that are virtually indestructible and packing is required only to facilitate handling and stowage. Crates also serve well as overpacks to consolidate fiberboard boxes or to provide unit pack stiffness to resist crushing. Three-way corner construction reinforced with diagonals must be used for all crates that are not plywood sheathed. Open crates



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Large crates must bear great superimposed loads. Ensure top strength by frequent (not more than 38 inches apart) top joists. When sheathed, place joists under sheathing. Provide joist supports directly under joist ends.

Reinforce crate floors at load bearing points when between skids or sill members.

To permit forklift entry, terminate end sheathing at flooring. Terminate side-sheathing 1/2 inch above the skid bottom. To transfer the load to the forklift tines, add additional cross members at 20 inches and 40 inches from each end.

Ventilation holes must be located at intervals around the sides and ends of sheathed crates. Provide drainage holes through the deck or space floorboards 3/8 inches apart when the crate structure above the base is not weatherproof or if condensation can occur within fully sheathed crates.

Additional ventilation holes must be provided when excessive heat and humidity are anticipated. These ventilation holes must be placed through the ends near the top, but not through any frame members. The diameters of these holes should not be greater than 1-1/2 inches nor more than three (3) holes per two (2) lineal feet of crate length or width.

4.6.5 Plywood Boxes and Crates

Plywood Specifications:

- Use 3/8-inch C-D exterior grade plywood for boxes bearing up to 10,000 pounds, and / or spans 2 feet or less.
- Use 1/2-inch C-D exterior grade plywood or boxes bearing up to 10,000 pounds and over and / or spans up to 4 feet.
- If exceptionally rough and abusive handling or pilferage problems are anticipated, use 1/2-inch C-D exterior glued plywood regardless of size.

Frame Members:

- Use 1 inch by 4-inch lumber for up to 1,000 pounds.
- Use 2 inch by 4-inch lumber for 1,000 to 11,200 pounds.

Skids and Rub Strips:

- Up to 1,000 pounds, use 2-inch by 4-inch.
- 1,000 pounds to 11,200 pounds, use 4-inch by 4-inch.

Fasteners:

- Nails – See below
- Staples may be used to secure plywood to struts



- The following applies when staples are used:
 - Use maximum length possible and clinch.
 - Crown width should be at least 3/8 inch.
 - Orient crown 45 degrees to grain of plywood.

Note: *Mating members must be in contact since staples do not draw parts together.*

Construction:

- Corners should be lapped double post.
- Nails must be spaced at 3-inch maximum intervals.
- All frame members must be inside the crate.
- Horizontal braces are required when 5 feet or over in height.

4.7 Inner Packaging

All items must be braced and / or cushioned within the container to prevent damage from shock, vibration, rough handling, and transportation. Water absorbing cushioning material must be avoided. **Under no circumstances will newspaper or periodicals be used as packing material.**

Identical small items must be packaged in cartons, bags or boxes prior to packing in the actual shipping containers. **Do not pack loose.**

Protect materials' tops and sides by using waterproof shrouds or waterproof case liners. Because many waterproof barriers contain asphalt, an additional paper liner may be necessary to prevent the asphalt material from "bleeding" onto the materials to be shipped.

Preserved surfaces must be insulated from hygroscopic materials (wood, fiberboard, etc.) with grease-proof, non-corrosive barriers. **Do not place polyethylene film in contact with rust inhibitor coatings.** Finished and painted surfaces must be protected from abrasion. Place materials on skids, pallets, or dunnage to keep items above collected drainage. Crates and other large containers must have drain holes in their flooring to prevent the collection of moisture within the shipping container.

Commodities must be nested or packed to reduce volume as much as possible. Pack articles firm but not tight. Construct containers relevant to the content's dimensions.

Moisture sensitive commodities (precision instruments, electrical, and electronic assemblies, etc.) subject to water vapor damage must be protected by sealing materials and including ample supplies of desiccants to form a vapor/moisture barrier.

Note: *It will be the responsibility of the manufacturer / Seller to warrant that the commodity is free and dry of all moisture both internally and externally. Re-certification may be required for items which are known to have undergone hydro-testing.*

The amount of desiccant to be used must be in proportion to the total volume of the shipping container. Suitable cushioning must be used on all corners, edges and protrusions to protect flexible barriers from puncture. Included air volume must be kept to a minimum. When flexible barriers are used, the barrier must cling snugly to the enclosed item without puncture. Silica gel or desiccant must not come in contact with critical working surfaces or finished surfaces.

4.8 Marking

Indelible inks, paint, and waterproof labels must be used to prevent obliteration of shipping labels, instructions, and handling symbols.

In general, shipping labels and instructions should be 3 inches to 5 inches in height, where practical, however, the size of the shipping container must dictate the acceptable size of the shipping labels / marks.

Only those shipping instructions / marks required in the PO, plus any cautionary markings, and / or special handling symbols must appear. Under no circumstance must Seller's or manufacturer's advertising or symbols which indicate the contents or other extraneous information appear.

Packages requiring special handling or storage must be clearly marked and labeled with requirements, e.g., "This Side Up", "Fragile", "Flammable", etc. Should a shipping unit require lift by mechanical means other than pallet jack or forklift, the center of gravity and sling points must be clearly indicated on the outermost packaging.

These symbols for package handling instructions are internationally standardized in International Organization for Standardization (ISO) R/780.

(Ref to section 4.11 below for further details)

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".

Designation	Symbol	Explanation
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 should not be exposed to heat in order 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 center 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.
Center of gravity		This symbol is intended to provide a clear indication of the position of the center of gravity. To be meaningful, this symbol should only be used where the center of gravity is not central. The meaning is unambiguous if the symbol is applied onto two upright surfaces at right angles to each other.
No hand truck here		The absence of this symbol on packages amounts to permission to use a hand truck on them.

Designation	Symbol	Explanation
Stacking limitation		The maximum stacking load must be stated as "kg (or lb) 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 (or °F)" for a specific temperature or, in the case of a temperature range, with an upper ("°C max [or °F max]") and lower ("...°C min [or °F 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 vapor 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".

4.9 Warning Tags for Special Equipment

This section covers special warning tag requirements for prohibition of any welding on certain types of equipment during its transportation from the Seller's plant to the project jobsite.

The Seller of the equipment, such as pressure vessels, heat exchangers, etc. must attach to each piece of equipment a warning tag stenciled in red with the following statement:

"WARNING: Any welding is prohibited during transportation from the factory to the job site"



4.10 Loading of Steel Shipping Containers

The loading of a shipping container must be planned well in advance before loading. Packages of uniform size and strength must be selected to maximize the loading space and limit excessive blocking and bracing requirements.

Cargo must be loaded into shipping containers to the maximum cube available within the container.

The load of cargo must not exceed the container's weight capacity. The relevant limitations on highway or road axle weight in the country of loading and / or transit must not be exceeded.

4.10.1 Container Inspection

For cargo integrity and safety purposes, only operational steel shipping containers must be accepted for the loading of project materials. The containers must be inspected both inside and out before loading. The container's interior floor and roof must be checked for evidence of leaks and cleanliness, and the doors must operate freely. The doors' waterproof gaskets must be complete and functional.

4.10.2 Securing Within Containers

It is essential that the cargo stowed in the container is prevented from shifting and movement during transit by any reasonable cause and therefore all cargo must be blocked and braced tightly against adjacent goods, and / or surfaces.

Cargo weight must be distributed evenly over the floor of the container.

Plywood "slip sheets" must be used between layers of stacked cargo to prevent damage to and to distribute the weight of the over-stowed cargo.

Heavy cargo items must be loaded on the bottom layers of cargo with the lighter items placed on top. The center of gravity must be below the half-height of the load.

Damaged packages must be repaired and then coned before loading.

Blocking and bracing of the cargo at the container entrance must be used to prevent cargo from tumbling when the container is opened.

4.11 Packing List Requirements

Each package must have two (2) copies of a detailed packing list in waterproof packages: One (1) packing list copy must be placed inside each package and one (1) packing list copy on the outside of each package.

Ocean shipping containers must have two (2) copies of detailed load lists in waterproof packages listing the contents of the container. One (1) load list must be secured on the inside of the container door and one (1) load list attached to the outside of the door.

4.12 Shipping Identification Marks

Each package (boxes, crates, pallets, etc.) shall be marked on two (2) opposite sides with the following shipping label / markings. Bundles, skids, pieces, etc. shall be marked with shipping tags / boards as appropriate.



PROJECT NAME:	_____
P.O. NUMBER	_____
PIECE #	_____ of _____
NET WEIGHT	_____ KGS
TARE WEIGHT	_____ KGS
GROSS WEIGHT	_____ KGS
DIMENSIONS:	_____ L x W x H (in inches and in metric)

Indelible inks, paint, and waterproof labels shall be used to prevent obliteration in any way of shipping labels, handling instructions, and symbols.

In general, shipping labels and instructions should be 3 to 5 inches in height where practical; however, the size of the shipping container shall dictate the acceptable size of the shipping labels / marks.

4.13 Documentation

Shipping Documents

The Commercial Invoice, Packing List, and Certificate of Origin are the primary documents that are required for international shipping and customs clearance purposes. The Commercial Invoice, prepared solely for international shipping and customs declarations, is not to be confused with the Seller's invoice to the Buyer requesting payment. Invoicing for payment instructions is contained in the PO.

Commercial Invoice

Commercial Invoices must be written in English and on the letterhead of the Seller. The Seller's complete name and address must be clearly indicated on each document. If the Seller is not the manufacturer of the supplied goods, the full name and address of the manufacturer must be included. If the materials contain any foreign components, the country of origin and content percentage must be indicated. Commercial Invoices must have original signature of the Seller. Commercial Invoices from sub-suppliers of the Seller are not acceptable. Should Seller wish the sub supplier to produce the Commercial Invoice, the Seller must provide the sub supplier with the letterhead of the Seller and the PO prices and correct descriptions.

Contents of the Commercial Invoice must include the following data:

The general description of the goods, e.g., "Equipment and materials for the _____ .

- SOLD TO / SHIPPER: (address to be advised).
- SHIP TO / CONSIGNEE: (address to be advised).
- NOTIFY PARTY: (address to be advised).
- Shipment identification marks as indicated in the marking instructions.
- Invoice number and date.
- INCOTERMS® 2020 Shipping Terms as indicated in the PO, e.g., FCA, FOB, FAS.
- PO number (including Change Order number when applicable).
- Line-item numbers, tag numbers, and descriptions must be identical to that of the specific PO line-item detailed information. Harmonized System Numbers must be noted on each



individual item listed on the commercial invoice. Spares and capital items will be mentioned as separate line items.

- Quantities shipped and units of measure per each PO line item.
- Total metric volume and metric net and gross weights of the goods.
- Currency identification, e.g., U.S. Dollars, Euros, etc.
- Unit selling price.
- Extended selling price.
- Total invoice price.
- Name of vessel, voyage number (air carrier and flight number), and departure date (normally completed by the Freight Forwarder).

Commercial Invoice Certification:

"I, [Name], [Title], [Name of Company] certify this invoice to be true and correct and in accordance with our books and also that the goods referred to are of [Name of Country] origin."

Packing List

Packing List must accurately document the contents of each package included in the shipment in addition to the information required in the Commercial Invoice, Section 0 above.

Packing List must also indicate the following data:

- Type of pack (e.g., box, crate, carton, bundle, piece, skid, etc.).
- Number of packages by type.
- Gross and net weight per package in kilograms.
- Total net and gross weight of total packages on packing list in kilograms.
- Dimensions of each package in centimeters.
- Total volume of packages on packing list in cubic meters.
- The identical PO line-item descriptions must be used in describing the contents of each package shipped.
- One (1) Packing List copy in a protective envelope shall be placed inside each package, and one (1) Packing List copy in a waterproof protective envelope shall be affixed / attached to the exterior.

As requested by the project to support any additional importation requirements, the supplier shall amend the associated shipping documentation to reflect the conveyance type and quantities that are carrying the nominated goods.



Certificate of Origin

Certificate of Origin is normally prepared by the Seller but may be prepared by the Freight Forwarder / Shipping Agent (on behalf of Seller) based upon information taken from the Seller's Commercial Invoice and Packing List.

Should the PO require the Seller to prepare the Certificate of Origin, such Certificates of Origin must be prepared in accordance with the rules and regulations of the individual country of origin. Seller must specify the type of goods and the full name and address of the manufacturer of the items being shipped. Carrier's name, voyage / flight number, and departure date are normally added by the Freight Forwarder.

Certificate of Origin must include the following information:

"We certify that the information herein is true and correct to the best of our knowledge, that the products being shipped are of [Name of Country] origin, and that they have been manufactured in the [Name of Country]."

In the case of U.S. Certificates of Origin, should the products contain any foreign components, the country of origin and content percentage must be indicated on a notarized Appended Declaration to Certificate of Origin.

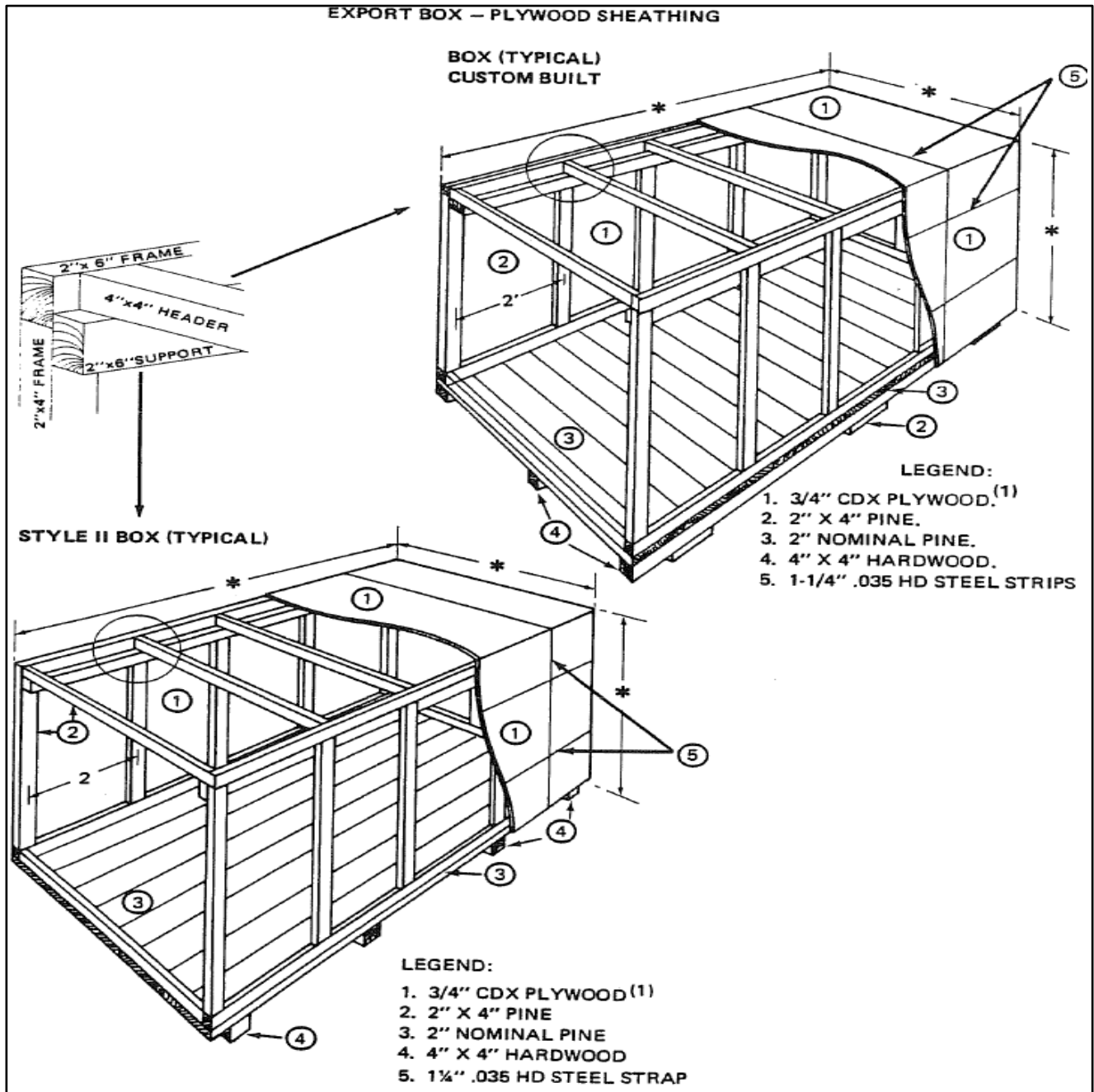
4.13.1 SOLAS Container Weight Verification Requirements

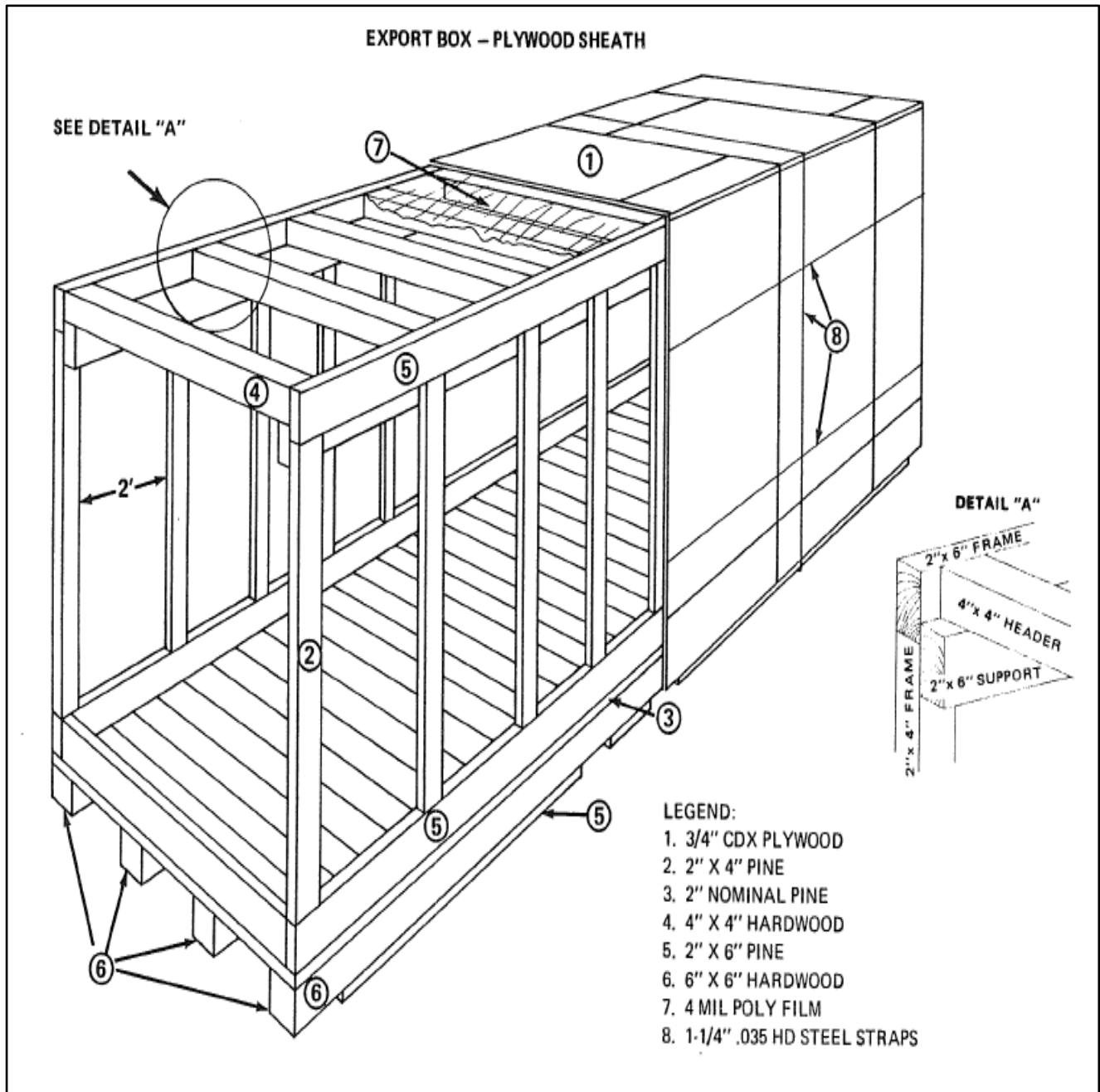
Under the corresponding Incoterms® 2010 (FCA, FOB, or FAS), Seller shall fully comply with the International Maritime Organization (IMO) mandatory amendments to the International Convention for the Safety of Life at Sea (SOLAS) Chapter VI, Part A, Regulation 2 – Cargo Information, whereby the Shipper (effectively the Seller under FCA, FOB, or FAS Incoterms® 2010) is responsible for providing a verified weight certificate for loaded containers. For full details, refer to <http://www.imo.org/en/OurWork/Safety/Cargoes/Containers/Pages/Verification-of-the-gross-mass.aspx>

4.13.2 Legalization of Commercial Invoice and Packing List

If applicable by destination port's custom clearance process, legalization of commercial invoice and packing list will be arranged by seller through their local chamber of commerce.

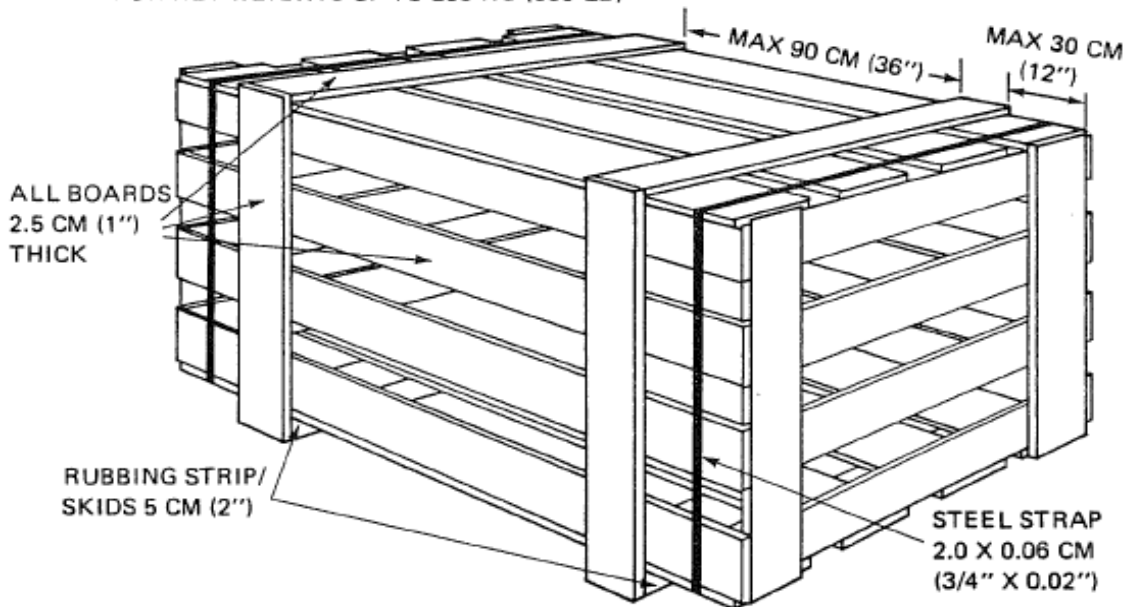
For all heavy haul piece (over 100,000 kg each) the supplier must provide a certified weight certificate for each piece of equipment. Calculated engineered weights are not acceptable.



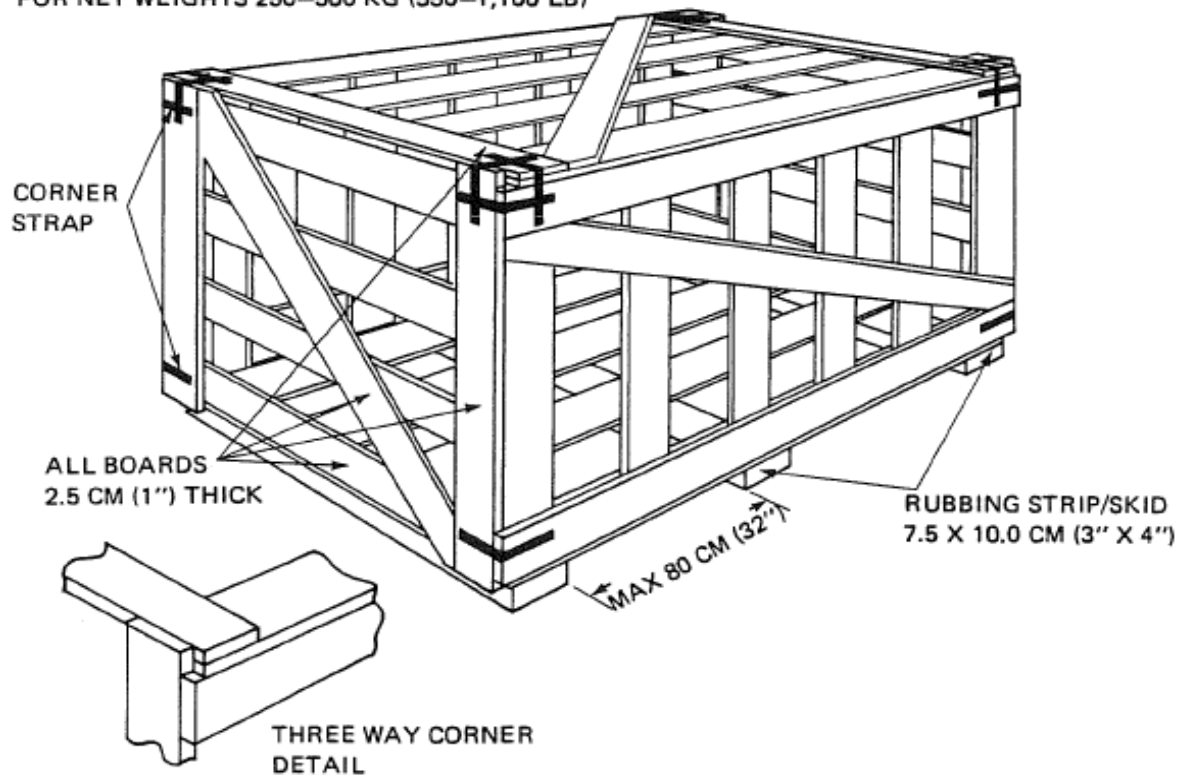


CRATE TYPE 1
FOR NET WEIGHTS UP TO 250 KG (550 LB)

EXPORT CRATE

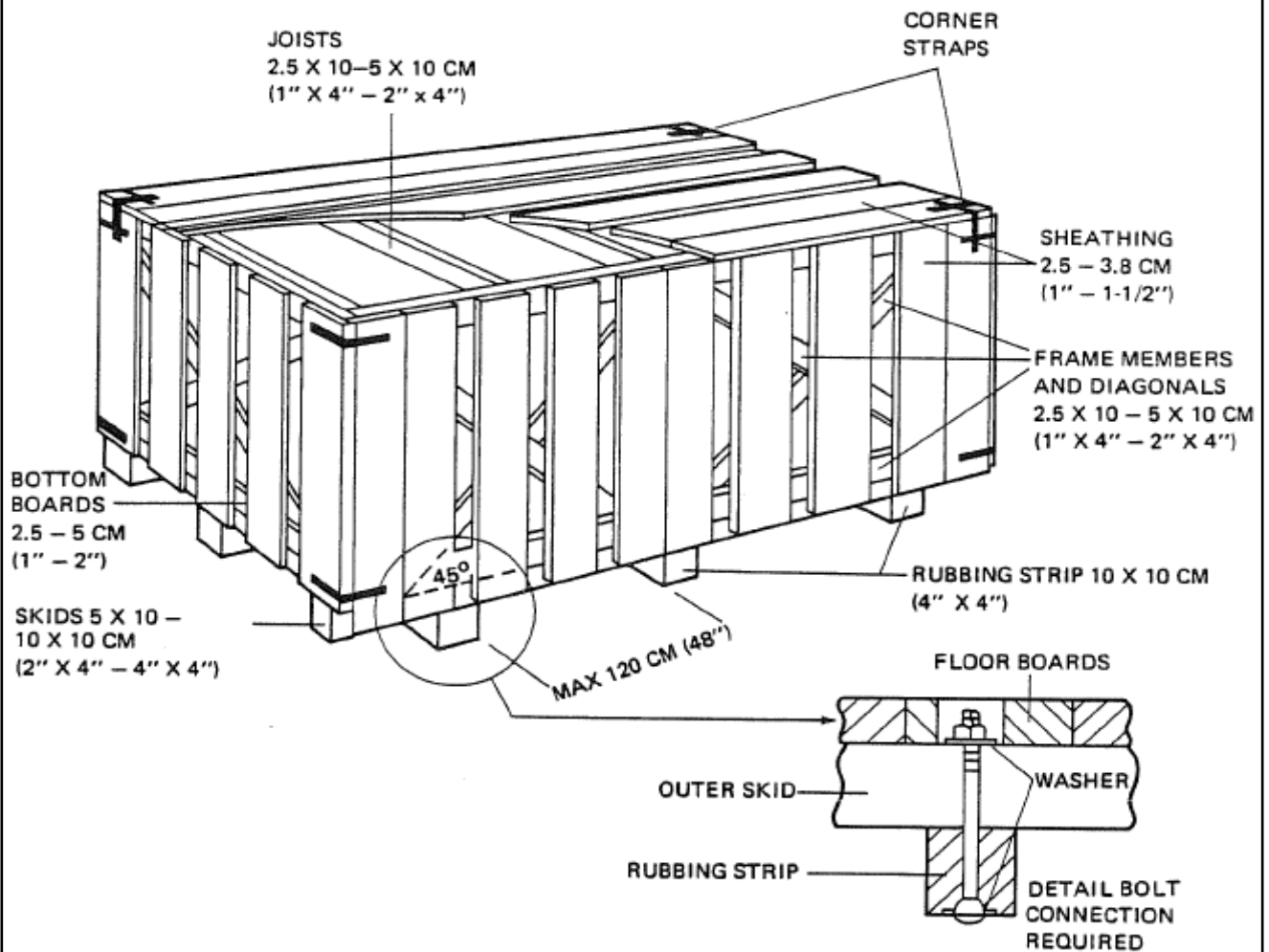


CRATE TYPE 2
FOR NET WEIGHTS 250–500 KG (550–1,100 LB)



CRATE TYPE 3
FOR NET WEIGHTS 500–5,000 KG (1,100–11,000 LB)

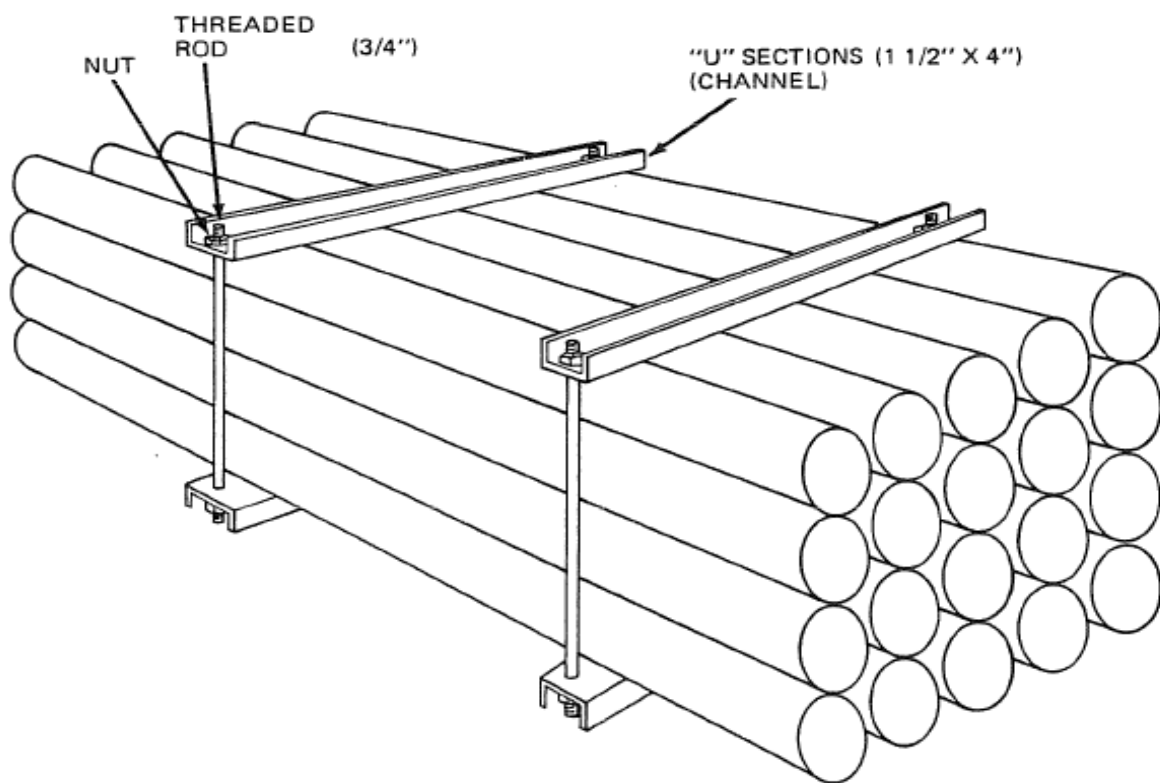
EXPORT CRATE



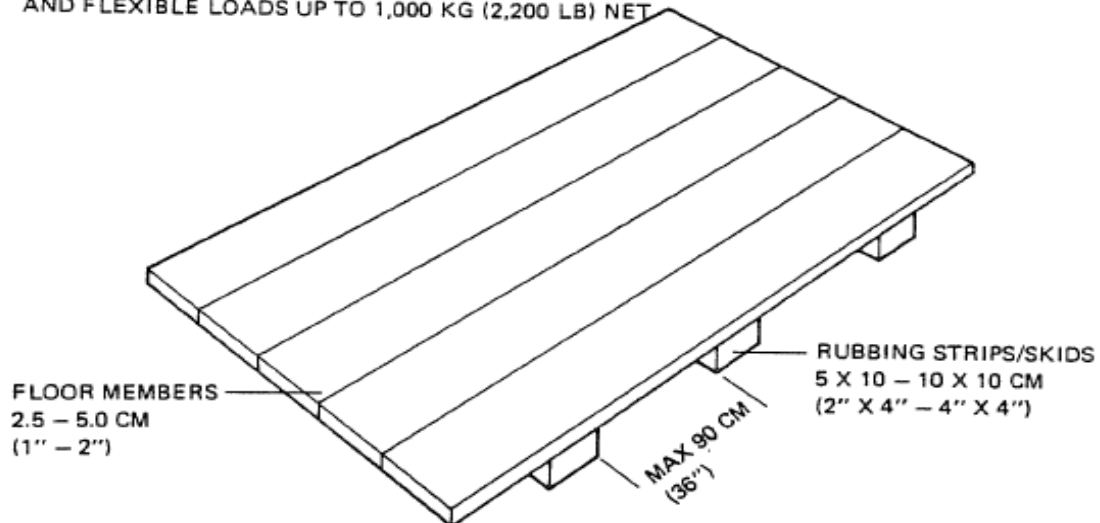
JOISTS AND STRUTS OF ADEQUATE SIZE AND QUANTITY MUST BE APPLIED TO PROVIDE TOP LOAD SUPPORT AND TO PREVENT COMPRESSION BY SLING ROPES.

FOR NET WEIGHTS OVER 5,000 KG (11,000 LB) CRATE DESIGN TO BE APPROVED BY THE BUYER

**SHIPPING BUNDLES FOR IRON OR STEEL BARS, PIPES,
RODS AND PLATES**

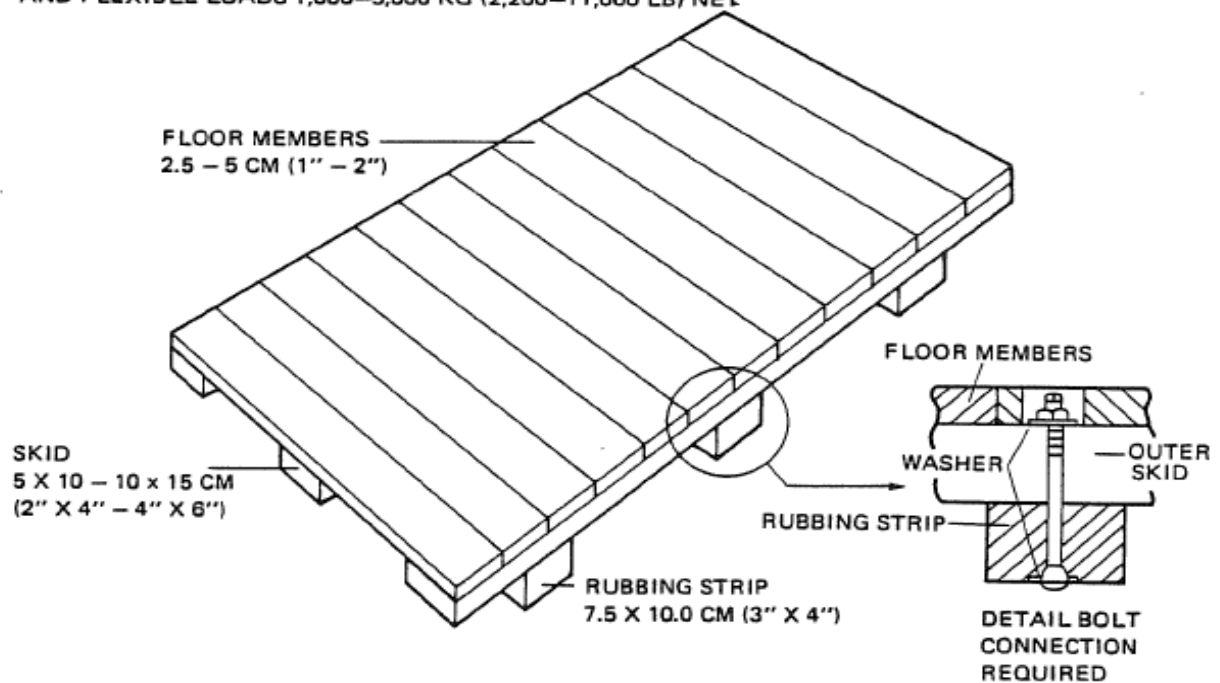


FOR RIGID LOADS UP TO 2,000 KG (4,400 LB) NET
AND FLEXIBLE LOADS UP TO 1,000 KG (2,200 LB) NET



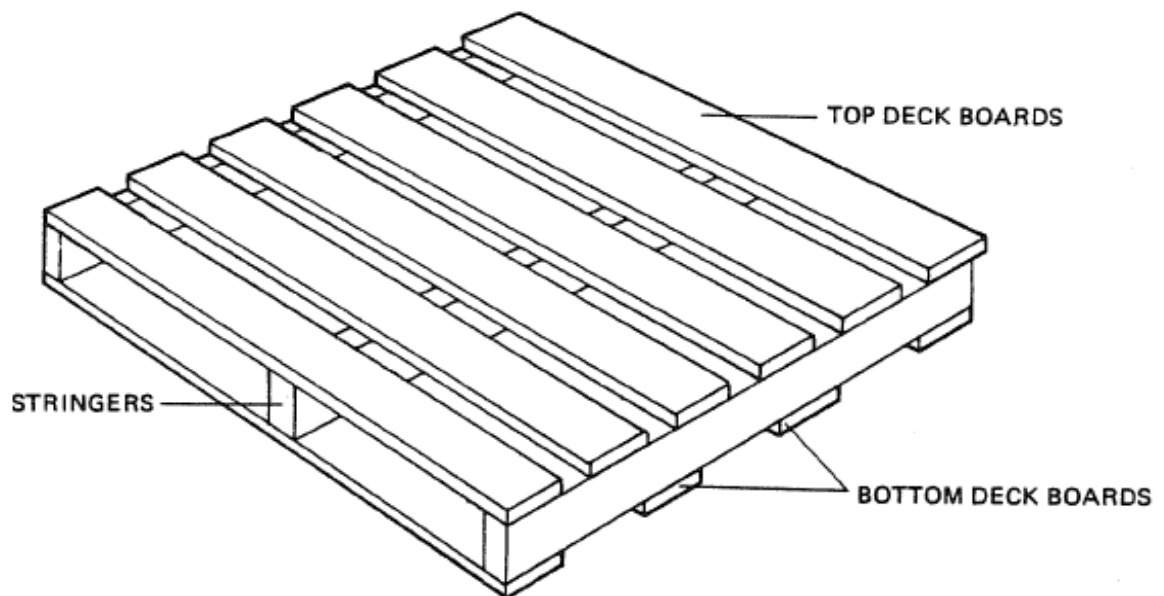
SKIDS SHOULD BE POSITIONED SO THAT THE WEIGHT IS DISTRIBUTED EQUALLY.

FOR RIGID LOADS 2,000–5,000 KG (4,400–11,000 LB) NET
AND FLEXIBLE LOADS 1,000–5,000 KG (2,200–11,000 LB) NET



FOR WEIGHTS OVER 5,000 KG (11,000 LB), SKID DESIGN TO BE APPROVED BY FLUOR

PALLET SPECIFICATIONS

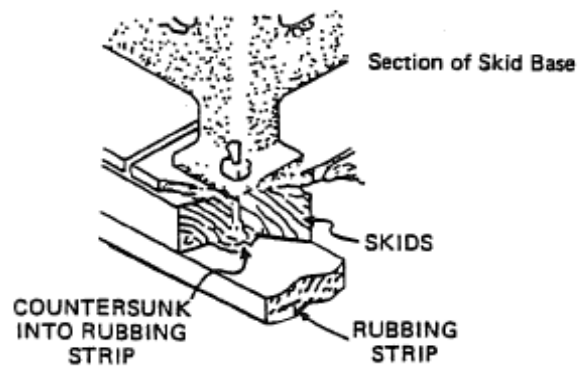
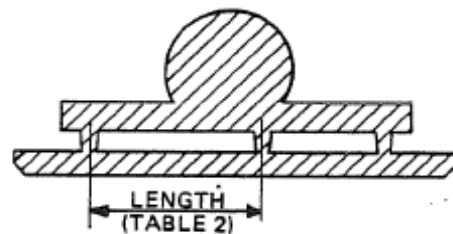
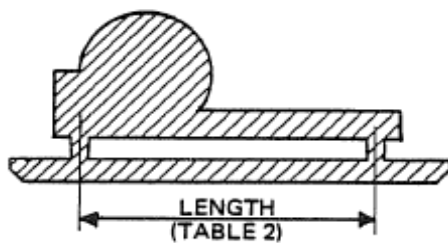


PALLET SIZE		120 X 120 CM (48 X 48 INCHES)
TOP DECK BOARDS	6 OF	15 X 2.5 X 120 CM (6 X 1 X 48 INCHES)
BOTTOM DECK BOARDS	4 OF	15 X 2.5 X 120 CM (6 X 1 X 48 INCHES)
STRINGERS	3 OF	5 X 10 X 120 CM (2 X 4 X 48 INCHES)
*FOR PALLETS EXCEEDING 140 CM IN WIDTH, 4 STRINGERS ARE TO BE PROVIDED.		

SKID SPECIFICATIONS

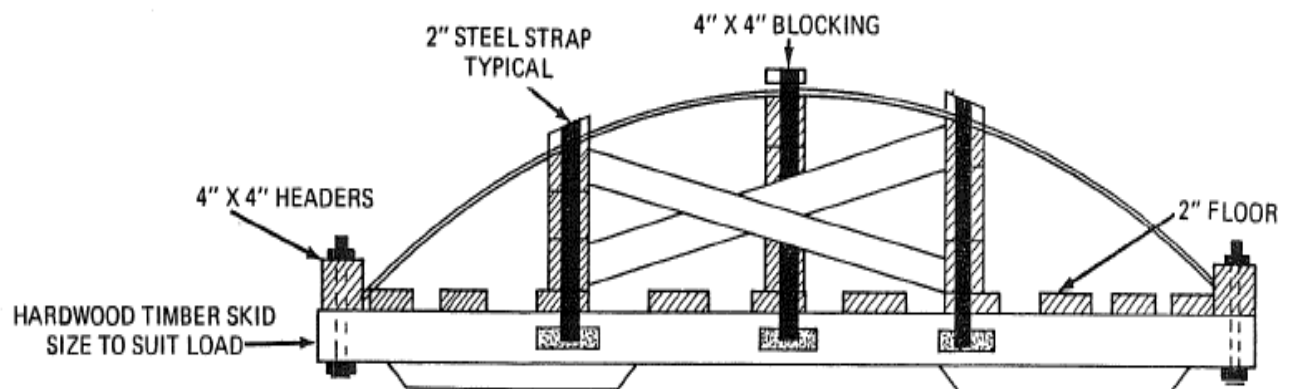
TABLE 2: CHART TO DETERMINE LUMBER DIMENSIONS OF SKID MEMBERS AND HEADERS

WEIGHT (LBS)	DISTANCE BETWEEN PARTS OF EQUIPMENT WHICH ARE FASTENED TO SKID (LENGTH IN FEET)									
	TWO SKIDS		THREE SKIDS				FOUR SKIDS			
	3	4	6	8	10	12	6	8	10	12
1000	2x4	2x4	3x3	3x3	3x4	3x4	3x3	3x3	3x3	3x4
1500	3x3	3x3	3x3	3x4	3x4	4x4	3x3	3x3	3x4	4x4
2000	3x3	3x3	3x4	4x4	4x4	4x4	3x4	4x4	4x4	4x4
2500	3x3	3x3	3x4	4x4	4x4	4x6	3x4	4x4	4x4	4x4
3000	3x3	3x4	4x4	4x4	4x6	4x6	3x4	4x4	4x4	4x6
4000	4x4	4x4	4x4	4x6	4x8	4x8	4x4	4x4	4x6	4x6
5000	4x4	4x4	4x6	4x8	4x8	6x6	4x6	4x6	4x8	6x6
6000	4x4	4x4	4x6	4x6	6x6	6x6	4x6	4x8	6x6	6x6
7000	4x4	4x6	4x8	6x6	6x6	6x6	4x6	6x6	6x6	6x6
8000	4x4	4x6	4x8	6x6	6x6	6x8	4x6	6x6	6x6	6x6
9000	4x6	4x6	6x6	6x6	6x8	6x8	6x6	6x6	6x6	6x6
10000	4x6	4x8	6x6	6x6	6x8	6x10	6x6	6x6	6x6	6x8
12000	4x6	4x8	6x6	6x8	6x10	6x10	6x6	6x6	6x8	6x8
14000	4x8	6x6	6x6	6x8	6x10	8x8	6x6	6x6	6x6	6x8
16000	4x8	6x6	6x8	6x10	8x8	8x8	6x6	6x6	6x8	6x8
18000	6x6	6x6	6x8	6x10	8x8	8x10	6x6	6x6	6x8	6x10
20000	6x6	6x6	6x10	8x8	8x8	8x10	6x6	6x8	6x8	6x10

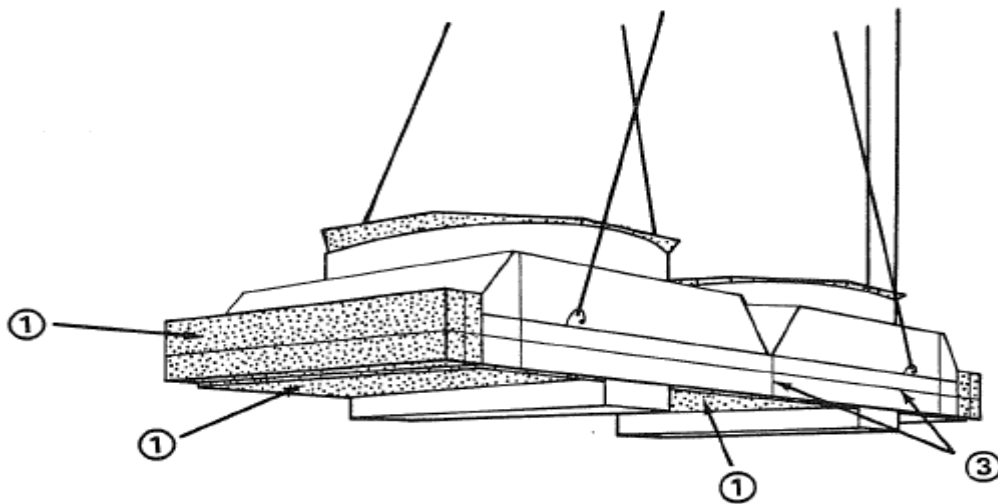
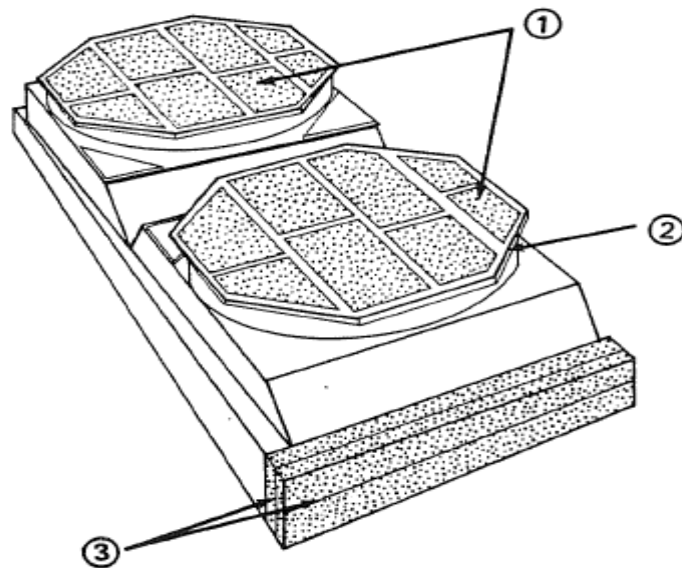


**ILLUSTRATION
SECTION OF SKID BASE.**

SKID DESIGN FOR RADIUS ROLLED STEEL SHEETS

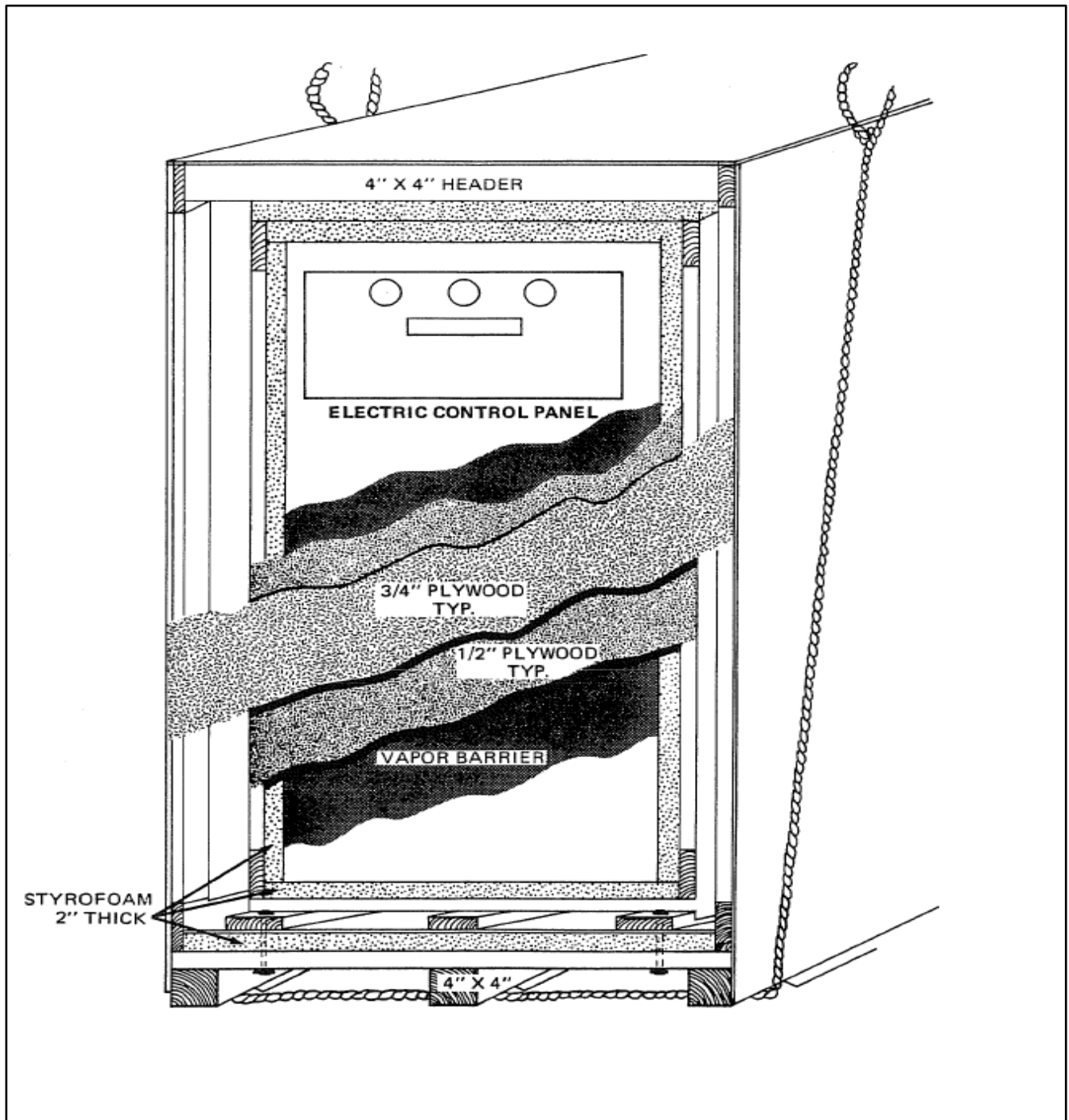


AIR COOLED HEAT EXCHANGERS EXPORT PACKING SPECIFICATION

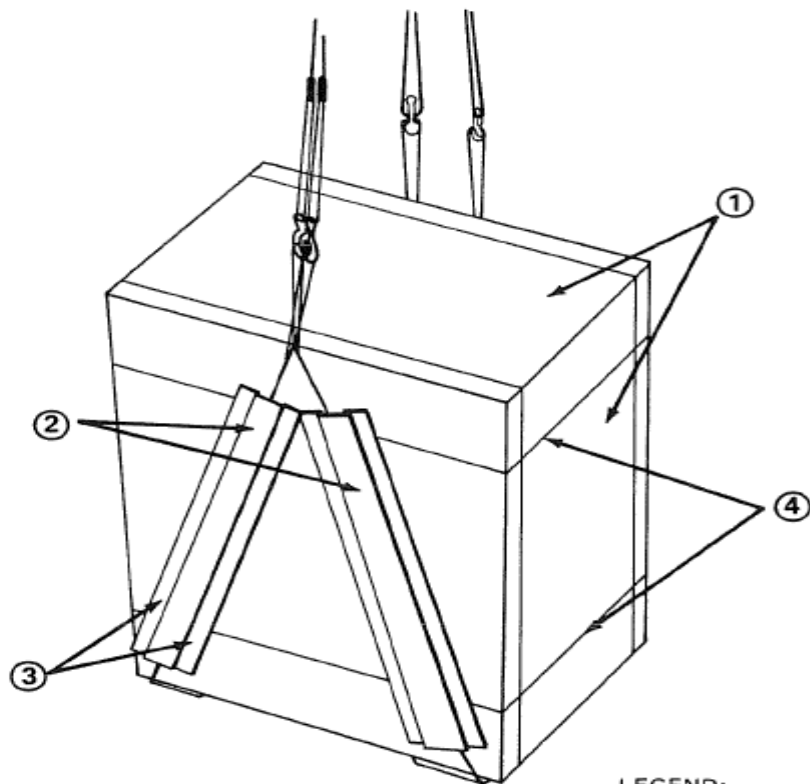


LEGEND:

1. 3/4" CD X PLYWOOD.
2. 2" X 4" PINE.
3. 1-1/4" .035 HD STRAPS



SPECIAL LIFTING ATTACHMENTS



LEGEND:

1. 3/4" CD X PLYWOOD
2. 2" X 4" PINE
3. 2" NOMINAL PINE
4. 1-1/4" .035 HD STRAPS



5. Roles and Responsibilities

QA/QC Engineer is responsible for the proper carrying out of the inspection and testing details respective to this procedure by supporting with other related discipline.

Project Delivery team (Upstream, Downstream, Alternate Energy as applicable) will include this specification in the contract or project specific direct OQ Purchase Order.



USER FEEDBACK PAGE

Document title					
Document number and the revision					
	User to use this Feedback form to identify any inaccuracy, error or ambiguity to notify the Document Authority so that appropriate action can be taken. The user is requested to return this page fully completed, indicating precisely the Proposed Improvement & Justification.				
Name:		Email:		Date:	
Page Ref:	Observation		Proposed Improvement & Justification		



Abbreviations / Definitions

Abbreviation	Meaning
Vendors / Suppliers	Third party contractors that OQ can utilize in supporting them with FM activities
PO	Purchase Order
ITT	Invitation to Tender
MSDS	Materials Safety Data Sheet
US	United States
FOB	Free Onboard
Company	The person, group, company, or corporation who has or will have title to the facility or installation under construction. Here it means OQ.
Contractor	Any organisation, party, or person under contract with Company who is responsible for furnishing items and/or services; one who agrees to furnish items and/or services in accordance with a contract.
Licensor	Process Licensor, responsible for the development and guarantee of the process design for the licensed facilities.
Vendor/Supplier	Any organisation, entity, person or company that agrees to sell and provide components, equipment, materials, parts, services, or some combination thereof, required by a Contractor or Company under a PO
Sub-Vendor/Sub-Supplier	Any organisation, entity, person or company who agrees to sell and provide components, equipment, materials, parts, services, or some combination thereof, required by a Vendor/Supplier in fulfilment of that Vendor's/Supplier's obligations to Company or Contractor.



DOCUMENT INFORMATION

Title	Packing, Marking and Documentation for Shipment Specification
Document Code	03.01.13 - Packing, Marking and Documentation for Shipment Specification
Purpose	This document provides the minimum packing and shipping documentation requirements for project materials and is a guide for acceptable standards.
Audience	Project team, Contractors and Vendors
Category	Governance;
Subcategory	Projects/ CoE
Effective Date	15/09/2022
Review Date	30/09/2024
Document Advisor	Projects COE Quality Team Lead
Approving Authority	VP Projects COE

RELATED AND SUPPORTING DOCUMENTS

Policy	N/A
Policy Manual	N/A
Process	N/A
Procedures	N/A
Related Documents and Forms	N/A



DOCUMENT APPROVALS		
Authorized Approver	Date	Signature(s)
VP, Project CoE	02-10-2022	