

مراکز بارگیری و تخلیه، حمل مصالح و تجهیزات، نحوه ارزشیابی محموله و مشخصات بسته بندی.



Table of Contents

1. Packing & Marking Procedure

1.1. General

1.2. Equipment Marking and Tagging

1.3. Packing

1.4. Packing size

1.5. Content Protection

1.6. Package Construction

1.7. Marking

1.1. Packing Lists



1. PACKING & MARKING PROCEDURE

1.1. General

The intent of these instructions is to establish the minimum requirements for packaging and marking the Equipment, Materials and Spare Parts to be supplied under the Contract and for handling, transportation and extended storage at Site. It shall be responsibilities of contractor to design and provide adequate protection for the above items to be supplied and /or his Sub-suppliers, subject to the inspection as herein described.

1.1.1. Identification, protection and packaging shall be suitable for the following conditions, as a minimum:

- Lifting with forklift truck and hoisting with sling, without the use of spreader bars.
- Under-deck sea voyage and probable ling demurrage in the Persian Gulf, (for ocean shipment).
- The possibility of being the lowest package in multiple stacking. Outdoor storage, up to 18 months, in ambient temperatures reaching + 40 °C, and -10 °C varying substantially, subject to rain and dust storm. Adequate identification of the contents of each package both before and after being opened.
- Adequate protection of the goods for the prevention of damage, injury or breakage during handling and transshipment by boat, train, truck or other types of carriers.
- Sufficient packing or guarding for the prevention of damage, injury or breakage during handling transshipment by boat, train, truck or other types of carriers.

1.1.2. Drawings or sketches and description of the packages, including approximate sizes and weight of the contents, sheeting, as well as the lining or wrapping materials shall be submitted to the Owner or his appointed representative(s) for review and comment prior to the construction of the packages.

1.1.3. The packing procedure and shipping may be subject to inspection by appointed representative(s) of Owner before the goods are put into case/crate and before a case/crate is closed. However, the inspection made by Owner's representative(s) shall not relief contractor from any of his obligations under the terms of this Contract.

1.2. Equipment Marking and Tagging

1.2.1.A metal nameplate, of rust-resistant material, bearing the following information (as applicable) shall be attached to each item of Equipment.

- Manufacture's name and address
- Serial number
- Rating or capacity

1.2.2.When the Equipment is disassembled for shipment or components are fabricated without assembly, each piece shall be adequately identified for the Ease of assembly at Site. Each identity mark shall contain the Contract number, Equipment number and either of the following data:

- Manufacture's identification number or letter designation, appearing on a
- Reference drawing and the reference drawing number. Match marking which are identical for each side of Equipment separation and which are non-repeating for the entire lot of Equipment. All match marks to be used shall appear on one or more drawings, which shall be enclosed with the shipment, as described herein.
- Part identification shall be paint stenciled, conspicuously, on large pieces of Equipment. As an alternative for smaller parts, self-adhesive aluminum embossed labels may be used on selected Materials. Small parts shall have a metal tag, wired (only for the parts to be shipped in boxes) or tack welded in place, with the identification stamped or etched.
- Paper or cardboard tags shall not be used.

1.3. Packing

1.3.1.All mechanical parts, all items with electrical or electronic components, all instrumentation, all fire able Materials or components or other Materials subject to damage by moisture shall be packed sealed with aluminum foil protection. For sensitive items such as the precision instrumentation and electronic, such cases shall be housed in standard containers for sea and road transport.

1.3.2.Small parts such as nuts, bolts, washers^ small machine parts and similar items shall be corrosion protected, put into sealed plastic bags marked for identification and packed into a drum or box and shall be included in container. Welding rods shall be vacuum packed in metal cans and shall be included in a container.

1.3.3. Structural fabrications, except as included above, with projections subject to damage on impact, or with shapes unsuited to stacking and bulk Materials such as pipes smaller than 100mm (but not fittings), shall have suitable corrosion protection and be enclosed in skidded open crates, fastened securely in place.

1.3.4. Structural steel shapes, plates, knocked down vessel sections and similar components not otherwise limited above, shall be formed into a unit package, by tack welding braces and suitable spacers, and fastened to a pallet or skid base. Only sections of comparable size and length shall be combined into one package. Provision shall be made to prevent individual pieces from moving in a longitudinal direction.

1.3.5. For pieces which are not skidded, provisions shall be made for safe lifting by cables, i.e. lifting lugs or equal.

1.3.6. Fragile Materials, oil products and all inflammable and combustible Materials shall be separately packaged in suitable drums, cases, etc. and clearly identified.

1.4. Packing size

1.4.1. Normal dimensions for the packages shall be:

- Height: 2.5m
- Width: 2.8m
- Length: 12m

1.4.2. Minimum size for a package shall be 2 cubic meters except for large and heavy items such as structural beams and large pipes. Single drums, barrels or individual items shall be combined to meet or exceed these dimensions, or enclosed within larger containers.

1.4.3. Normal weight limitation for the shipment of packaged or crated Materials and Equipment is 20 tons.

1.4.4. For the packages larger and heavier than those described here above special arrangements shall be made in advance.

1.5. Content Protection

1.5.1. Against Contact and Impact

1.5.1.1. Wherever possible, all Equipment shall be bolted to the case/crate base. Bulk items shall be banded or otherwise utilized and fastened to the case/crate. Shock

absorbing media, such as felt layers, shall be placed between Equipment base and the case/crate, for rotating machinery and large electrical equipment.

1.5.1.2. Fragile items shall be wrapped in crepe-cellulose wadding or some equally efficient

cushioning material such as cast "Styrofoam" or floated in excelsior.

1.5.1.3. When several items are packed in the same case/crate, they shall be packed in such a manner as to prevent one from damaging another, wood spacers shall be used between the parts weighing more than 20Kg.

1.5.1.4. As tilting or upending of any case/crate is likely to occur, all contents shall be protected and blocked to avoid damage at such times.

1.5.1.5. In all cases items shall be nested or packed to reduce volume as much as possible. Waste space within any container is a source of weakness and shall be avoided as far as practically possible.

1.5.2. Water and Corrosion Protection

1.5.2.1. Each item in a case shall be enclosed in a separate, sealed plastic wrapping, made vapor-tight by heat seams. Where penetrations are necessary such as for the bolts fastening to the base, gaskets around the bolts shall seal the penetration before the Equipment is set in place.

1.5.2.2. Plastic used shall be of a type and of a thickness which shall limit the penetration by vapor to less than 1 g/m²/day at 40°C.

1.5.2.3. Openings in electric motors, generators and other electrical equipment shall be sealed with waterproof tape or in some equally efficient manner. A Protective greaseproof paper shall be inserted between the brushes and armature of motors and generators.

1.5.2.4. Sharp corners of the contents and protuberances shall be wrapped in felt taped into position, to prevent damage to the plastic.

1.5.2.5. Bagged desiccant shall be fastened to the contents in each sealed wrapping. If silica gel is used, approx. 2 kg/irT of enclosed is recommended prior to sealing the plastic.

1.5.2.6. All parts not protected by primer shall be coated with a corrosion inhibitive compound suitable for long term storage and easy removal at Site, especially when applied on parts in crates or on skids.

1.5.2.7. For the items not shipped in closed cases, such as vessels, all openings shall be sealed. Flange openings shall have gaskets and metal plate covers bolted to flanges. Threaded openings shall have a screw cap. Non-flanged opening shall be soundly plugged or plastic-warp sealed and banded. Bagged desiccant, as specified above, shall be fastened inside each sealed item.

1.5.2.8. Pumps, compressors, electrical cabinets and similar items, which may be sealed prior to packing, shall have bagged desiccant fastened inside the enclosed space in addition to the desiccant for the case packing.

1.6. Package Construction

1.6.1. Skidded and Framed Boxes

1.6.1.1. Skidded and framed boxes shall be constructed upon skid members joined by headers and shall be decked with lumber.

Each head shall be double bolted to each skid member. Each baring surface of the Equipment shall rest over a skid member and the bolts securing the Equipment to the skid shall pass through a skid member. Log sowers are not acceptable for this purpose. 25mm x 100mm lumber, as a minimum, shall be used for X-bracing framing on the interior of all box faces except the base. Interior frames shall be provided along the length of the box and spaced not greater than 1 meter apart.

1.6.1.2. The skids shall be suitable for fork lift handling.

1.6.1.3. Box sheathing shall be not less than 20mm in actual thickness for boxes weighing less than 1000kg, and not less than 25mm in actual thickness for boxes less than 10,000kg, and not less than 30mm in actual thickness for boxes of 10,000kg and over. Floor or deck thickness shall not be less than 50mm.

1.6.1.4. Lumber shall be sound and well-seasoned with a moisture content not exceeding 12-18%. Knots shall be sound and not in excess of % the width of the board. Exterior type plywood may be used, not less than V2 of the above thickness, provided that all inside edges are fully supported by the framing.

1.6.1.5. All nails shall be cement coated, wire box nails. For maximum strength, they shall be driven into side grain of lumber used for packaging, with a minimum of 4 nails per board.

1.6.1.6. Steel strapping shall be applied to every box, spaced not greater than 600mm apart, and with not less than two bands per box and the end straps approximately

100mm from the end of the box. Straps shall be a minimum of 8.2mm wide, of unannealed steel applied with a stretching tool and secured with crimped steel seals. Each strap shall be stapled to every intersected board.

- 1.6.1.7.** For relatively larger boxes, ventilation-holes, about 6mm in diameter, shall be drilled at intervals slanted upward around the box just under the top bracing, and drainage holes of the same size in the bottom of the box in the same locations where the plastic wrapping will not block them.

1.6.2.OPEN CRATES

- 1.6.2.1.** Crates shall be constructed of nominal lumber sizes and in the same manner as indicated for boxes, except for sheathing. Additional slats shall be provided as necessary for anchoring material, for strength in handling and stacking, and for minimizing pilferage.

- 1.6.2.2.** A common point of weakness in a crate containing over 3000kg is its top edge, upon which a severe strain is placed by slings each time it is handled. Furthermore, the side wall construction shall be capable of accepting loads of interior blocking when the crate is tipped.

1.6.3.Pallets

Pallets **shall** not be accepted.

1.6.4.teel drums

When steel drums are used for packing, they shall be non-returnable steel export barrels.

1.6.5.Pipes

Each length of pipes of 150mm or larger diameter shall be treated as an individual package and shall be marked accordingly. Pipes smaller than 150mm but larger than 100mm in diameter shall be bundled in units not exceeding 2000kg by strapping cleats of 50mm x 100mm lumber or greater above and below the load. Different sizes of pipes shall not be nested without Approval by Owner or his appointed representative(s).

1.6.6.Bundles

Materials bundled in packages exceeding 2000kg shall be fastened with steel rods; framed end plates may be required in certain cases and this shall be discussed with Owner or his appointed representative(s).

1.7. Marking

1.7.1. Identification shall be stenciled on three sides, in letters 50mm size (if possible) and on top of the box/crate? in black waterproof and sun proof ink paint, as following:

Tel:

Fax:

Via BANDAR ABBAS (or other relevant harbor point) Point Contract No. of embarkation.

L/C No.

Shipment No. of

Package No. of

Suppliers Serial No.

Item No.

Net Weight kg

Gross Weight kg

Dimensions mm(H) x mm (W) x mm(L)

Maximum permissible weight on top of package kg

Area designation (indoor, outdoor, temperature limitation etc)

1.7.2. Package number shall identify the individual package and shall also indicate the total number of packages in the shipment.

1.7.3. Special Markings, such as "Fragile Handle With Care" "This Side UP, and Sling Here", together with their international pictorial symbol, shall be used wherever possible. The center of gravity shall be marked with an "X" and the letters -C.G".

1.7.4. Cases containing Spare parts shall be marked on three sides with a horizontal "Red" color paint stripe, 50mm wide, but not obliterating any printing. Certain packages may be required by Owner or his appointed representative(s) to be similarly marked to indicated special handling requirements.

1.7.5. Upon receipt of the export data, a special identification code shall be issued by Owner to the Contractor for each package.

1.7.6. Should sufficiently room on packages not be available for identification, this matter shall be discussed with Owner or his appointed representative.

1.7.7. No advertising or mark to indicate the contents (except for spare parts stripe) shall appear on the package.

1.7.8. For skids and loose pieces, the "green" paint for Site identification shall be applied to the ends of each pipe, structural members and similar items.



1.8. Packing lists

1.8.1. A separate packing list shall be prepared for each package shipped. In addition to the identification as marked on the box, the following data shall be listed for each item in the package:

- Description of part or assembly.
- Part number of assembly number.
- Quantity of the part or assembly, or Material.
- Drawing number on which the part or Material is shown.

1.8.2. One copy of the packing list and the Bill of Lading shall be sealed in waterproof envelope and fastened to the lower side of the package face. A thin metal plate shall be fastened to the box completely covering the envelope.