

PREPARATION FOR SHIPMENT SPECIFICATION (FOR PACKAGED EQUIPMENT)

1.0 SCOPE:

This specification defines the minimum requirements for the preparation of skid mounted and packaged equipment prior to shipment and/or transportation. This specification shall be used in conjunction with other specifications, Codes, Standards, individual equipment specifications, Data Sheets and/or drawings.

2.0 SUBMITTALS PRIOR TO SHIPMENT:

Seller shall submit lifting calculations, lifting arrangement and lifting procedure to Buyer for approval.

Seller shall submit transportation analysis calculations to Buyer for review and approval.

Seller shall submit procedures and methods of preparation for shipment to Buyer for review and approval.

Seller shall submit detailed shipping lists to Buyer. Three copies of all packing list(s) shall be furnished to Buyer.

Seller shall include with shipment one complete set of data listed on the Seller Data Commitment form in a waterproof envelope.

3.0 COATINGS

Coatings of all skid(s), equipment, piping, supports, etc. shall be in accordance with Buyer's specifications. All coatings shall be complete and cured prior to packing.

Protect equipment, valves, controls and instruments from damage during skid assembly and painting.

Top coat areas under equipment, such as separators and engine blocks.

Stencil the name and component identification on major equipment and components.

Mark all safety hazards, such as low pipe, containment curbs and handrails, with yellow top coat.

4.0 PREPARATION FOR SHIPMENT

Seller shall supply a detailed description of proposed plans for preparation of equipment for shipment, which shall be reviewed and approved by the Buyer. The following items shall be included, as a minimum:

4.1 General for Skid Mounted or Packaged Units

After the assembled unit has been approved for shipment, all items designated to be shipped loose shall be tagged with stainless steel tags. Each item shall be indelibly marked with its key number from the assembly drawing. All sections of piping or other subassemblies designated to be shipped loose shall be removed from the skid and shall be properly packaged to prevent damage during loadout and shipment.

Equipment for each skid shall be packaged separately, if required, and shipped with the skid.

A copy of the assembly drawing and operating/maintenance procedures shall be packed in a waterproof envelope in one of the packing crates. A packing list shall be made for each box and/or crate. One copy of this packing list shall be placed in a waterproof envelope and attached to the outside of the crate/box.

4.2 Anchoring

Each equipment component shall be securely anchored to a supporting skid, pallet, or crate.

4.3 Instrumentation

Instruments that could be damaged during shipment or by exposure to the elements shall be removed, tagged and crated in boxes.

Instruments requiring waterproof protection shall be crated in waterproof boxes. Seller shall notify Buyer of instruments requiring waterproof protection. Electrical instrumentation shall be packed with a vapour action corrosion inhibitor (Northern Instruments Corporation "STOR-SAFE" or equal). All instruments shall have manufacturer's original shipping stops reinstalled prior to shipment.

Boxes shall be securely attached to the skid for shipment.

4.4 Equipment

Any equipment extending beyond a skid's edge shall be removed, tagged and crated in boxes.

Equipment requiring waterproof protection will be crated in waterproof boxes. Seller shall notify Buyer of equipment requiring waterproof protection. Rust preventatives and corrosion inhibitors shall be applied to exposed metal surfaces, vessel interiors, etc., suitable for the expected storage time indicated in the specific equipment specification. Seller shall furnish shipping restraints for shafts of compressors, pumps, gears, motors and engines.

Boxes shall be securely attached to the skid for shipment.

4.5 Connections

All openings, flange faces, threaded connections, valve stems or other components subject to mechanical damage and corrosion shall be adequately protected. Male and female threaded connections shall be coated with rust inhibitor and closed with steel or plastic plugs and caps. Cast iron and malleable iron fittings are not acceptable.

Openings and flange faces shall be coated with a suitable rust inhibitor, covered with temporary plastic or wooden flange covers, held in place by cadmium plated bolts, nuts and washers, and sealed with waterproof tape. All shipped-loose bolts, nuts, etc., shall be boxed, tagged and secured to the skid.

4.6 Piping and Handrails

All piping and handrails removed for shipment shall be properly tagged and secured to the skid. A drawing shall be furnished for reassembly showing tag numbers and piece marks. All items shall be test fitted prior to shipment.

4.7 Electrical

Any enclosure which contains electrical equipment or connections shall have a vapour action corrosion inhibitor suitable for the enclosure size (i.e., Northern Instruments corporation "STOR-SAFE" or equal). All conduit hubs or openings shall be plugged with square head plugs for shipment. Plugs shall be installed with approved thread lubricant, per Buyer's specifications.

4.8 Ship Loose Items

All small and/or delicate ship loose items shall be packed in wooden boxes to prevent damage and loss.

All ship loose items, including instruments and/or items that extended beyond the skid's edge, shall be tagged, inventoried, described in detail and submitted as part of the shipping/packing list. Included shall be an assembly drawing showing tag and mark numbers.

Secure all ship loose boxes and/or piping to the skid, if possible.

4.9 Packing

Seller is responsible for all packing, crating, bracing, anchoring, closing openings and loading for shipment. Crates shall be of sufficient strength to support equipment packaged in them, when loaded by a crane, and shall also furnish sufficient protection to prohibit atmospheric corrosion for a period of at least six months of outdoor storage.

4.10 Warnings

All equipment that has temporary desiccants, rust inhibitors, lubricants, coolants, etc., shall be plainly tagged with a warning stating the type of material. Material Safety Data Sheets (MSDS) shall be included as part of the packing list information.

All equipment requiring lubricants, coolants, etc., to be added before start-up, shall be plainly tagged with a warning stating which items must be filled and the material to be used.