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Guide to Vendors on Container-Stuffing

1. **PURPOSE:** This specification provides vendors, contractors, and Saudi Aramco personnel with general guidelines for packing containerize-able cargo and for container- stuffing.

This specification is for the use of those vendors with container-stuffing capabilities. This specification applies to 20-ft equivalent units recognized as International Standard Organization (ISO) standard freight containers. In general, containers will be provided by the Buyer for purchase orders placed out-of-Kingdom; for locally supplied material, containers will be provided, when necessary, by the local vendor.

2. **USE:** This specification is a statement of minimum requirements. The vendor's own experience and practice should be used to determine whether certain items require more than the minimum standards in this specification to ensure safe delivery to their final destination. The specification may also be used by Saudi Aramco receiving staff at loading ports to determine if the goods are adequately packed or the container is properly stowed.
3. **REQUIREMENTS:** These requirements are in addition to any that may be in the material descriptions or other Saudi Aramco specifications. Deviation from these requirements is not allowed without the Buyer's prior written approval.

3.1 **Atmospheric protection:** All items require protection from rain, sea spray, condensation, high humidity, high temperature, and fine dust.

3.1.1 All surfaces which are subject to corrosion must be treated with an appropriate protective compound.

3.1.2 Materials that SHOULD be sealed against atmospheric intrusion must be placed in moisture-/vapor-proof packages, protected with a suitable desiccant.

All openings in equipment or materials susceptible to atmospheric damage must be securely sealed.

3.2 **Packing:** A heavy standard domestic pack is required unless the Buyer specifically requests a different type of pack. The pack must adequately protect the material prior to, during, and after handling, stacking, and shipping in a container.

- 3.2.1 If cartons are used, they must be of adequate "bursting" strength and construction to retain their original configuration and ability to protect their contents during handling, stacking, shipping, and storing.
 - 3.2.2 To reduce shipping costs, unnecessary free space within the pack must be avoided.
 - 3.2.3 All packaging, including protectors and atmospheric inhibitors, must be sound and undamaged after packing.
 - 3.2.4 If an item consists of more than one component, the components must be either assembled or packaged together, whichever is appropriate, as a single unit of issue. Components should only be assembled as a single unit in a pack when it will not negatively impact safe and cost-effective packing.
 - 3.2.5 Items in the pack must be protected from damaging each other.
 - 3.2.6 Finished and coated surfaces must be protected from rubbing or abrasion.
 - 3.2.7 Preferably, purchase order line items should be segregated and packed separately.
- 3.3 **Unitization:** Containers and trucks are generally unloaded/stripped by mechanized material handling equipment; for example, a low-mast forklift. Packed material must be unitized whenever the configuration permits.
- 3.3.1 The preferred method of unitizing container cargo is the use of "container pallets" with 4-way entry, minimum dimensions of 100 cm (40 inches) by 120 cm (48 inches), and a clearance for forklift tines not less than 8.9 cm (3.5 inches). Total loaded pallet height (ground to top of loaded pallet) shall not exceed 115 cm (46 inches).
 - 3.3.2 The governing factors for unitizing loads include the following:
 - a. Assurance of safe handling, with a center of gravity lower than the midpoint height of the load.
 - b. Weight and dimension constraints established in paragraph 3.4 below.
 - c. Optimum volume and weight for each load.
 - d. Efficient use of container space and weight.

- 3.3.3 Single pieces weighing more than 35 kg (80 lb) must, whenever possible and practical, be unitized. The appropriate Saudi Aramco/Aramco Services Company/Aramco Overseas Company, B.V., Buyer must give prior written approval for manual stuffing of any container.
- 3.3.4 With prior Buyer approval, a supplier's standard unitized load configuration may be acceptable provided it conforms with the following:
 - a. Specific weight and dimension limits established in paragraph 3.4.
 - b. A clearance for forklift tines of at least 8.9 cm (3.5 inches).
 - c. General adherence to other provisions established in this specification.
- 3.3.5 Unless authorized by the Buyer, items with different purchase order numbers must not be consolidated or unitized together.

3.4 Weight and dimension limits:

- 3.4.1 Individual items and unitized loads must not exceed:
 - a. 1,860 kg (4,100 lb) maximum gross weight.
 - b. 220 cm (87 inches) in any dimension (height, width, or length).

Note: These limits include tare weights and are extreme overall dimensions.

- 3.4.2 Deviation from these limits is not permitted without prior written approval from Saudi Aramco Materials Logistics Department, In Kingdom Logistics Management Division/ Dhahran.

3.5 **Hazardous materials:** Materials which are subject to International Maritime Organization (IMO), International Air Transport Association (IATA), Saudi Arabian Standards Organization (SASO), United States Department of Transportation (DOT), or International Civil Aviation Organization (ICAO), or other industry or government organization directives or regulations require that the vendor must be in full compliance with those directives in the treatment of such materials.

- 3.5.1 The preferred position within a container is adjacent to the doors to allow quick access for inspection and removal.
- 3.5.2 All hazardous materials must be packed separately from other nonhazardous materials unless specifically authorized in writing by the Buyer.

- 3.5.3 All hazardous materials must be identified by the proper shipping name and must be packaged, packed, and labeled in accordance with the applicable directives, regulations, and specifications established in paragraph 3.5 and the purchase order.
- 3.5.4 Deviation from these requirements is not permitted without prior written approval from Saudi Aramco Materials Logistics Department, In Kingdom Logistics Management Division/ Dhahran.
- 3.6 **Marking:** Individual items, packages, packs, and unitized loads must be marked in accordance with instructions provided with the Saudi Aramco purchase order. Marking of containers is to be done by the Buyer.
- 3.7 **Inspection of the container:**
 - 3.7.1 The container must be inspected both inside and out before it is stuffed. From the inside, the container is to be checked for cleanliness and airtightness. Containers that are damaged pose a safety risk to personnel handling or transporting them. If a container appears to be badly damaged or unclean, a replacement is to be requested.
 - 3.7.2 In general, the Buyer provides a container for purchase orders placed out-of-Kingdom in compliance with the requirements for protection of cargo and structural integrity established by the International Institute of Container Lessors. If there is any reasonable doubt regarding the container's condition, it must be resolved with the appropriate Saudi Aramco/Aramco Services Company/Aramco Overseas Company, B.V., Logistics office.
- 3.8 **Prior to Stuffing:**
 - 3.8.1 Stowage of a container must be planned before stuffing begins. Packages of an appropriate strength and type must be placed adjacent (as practical) to each other to gain the desired tightness of stow and compatibility between items.
 - 3.8.2 Shipments must be stuffed in containers to the maximum practical extent in accordance with volume and weight limit factors for the container.
 - 3.8.3 The planned load of the container must not exceed the container's weight capacity marked on it. The relevant limitations on the highway (road axle weights) in the country of loading or transit must not be exceeded.
- 3.9 **Stuffing and Securing:**

- 3.9.1 It is essential to secure the containerized cargo against movement from any reasonable cause; therefore, all cargo must be tightly blocked against adjacent goods or surfaces.
- 3.9.2 When necessary, cargo must be separated using adequate dunnage; for example, plywood slip sheets.
- 3.9.3 Heavy goods are not to be placed on top of lighter goods.
- 3.9.4 Cargo compatibilities must be verified to eliminate damage from contamination or onerous characteristics. If necessary, noncompatible cargo must be segregated and separated by a physical barrier to limit risk of damage.
- 3.9.5 Damaged goods must not be loaded into a container unless the contents have been checked and the packages repaired, or the packing re-coopered when necessary, to prevent further damage.
- 3.9.6 As much as possible, weight in the container must be evenly distributed over the horizontal, longitudinal, and transverse planes; the center of gravity of the loaded container must be lower than the midpoint of the container (when possible).

3.10 On completion of stuffing:

- 3.10.1 Steps must be taken to ensure that the cargo will not fall out when the doors are opened. Wooden bracing or a proprietary dunnage system must be used when necessary.
- 3.10.2 Each container must be provided with a packing list, to be located on the **INSIDE OF THE RIGHT-HAND DOOR**, stating full details of the contents loaded and the following complete address of the container consignee

3.11 Exceptions: Deviation from this specification is not allowed without the Buyer's prior written approval.

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