

ISSUED BY:	DHAHRAN MATERIALS & LOGISTICS DEPARTMENT TRAFFIC DIVISION	<b>MS 8314-03</b>	
		ISSUE DATE 05-2005	REPLACES 02-05
SUBJECT:	SAUDI ARAMCO PACKING SPECIFICATIONS		PAGE NUMBER 1 OF 4

## PART II WOODEN BOX PACKING SPECIFICATION

**REQUIREMENTS:** These requirements are in addition to any that may be in the material descriptions or other Saudi Aramco specifications, including Saudi Aramco Packing Specification 8314-02, which should be used in combination with this specification. Deviation from these requirements is not allowed without the Buyer's prior written approval.

1. Box Design: The attached figure shows suggested designs which fulfill Saudi Aramco's requirements. Other box designs which offer equal, or better, protection may be used if the designs comply with international standards (e.g., BS, DIN, JIS) or with the Buyer's written approval.
2. Construction: Lumber must be new, sound, and well-seasoned with a moisture content between 12 and 20%. Knots must be sound and not in excess of 1/3 of the width of the board and must not cause any nailing interference. Where possible, nails should be driven into side grain of lumber. Exterior grade plywood of equivalent strength, minimum 12-mm thickness, may also be used as sheathing.
  - 2.1 Lumber sizes indicated are nominal and must be considered as a minimum.
  - 2.2 Where a range is indicated, the lumber dimensions will depend on the weight and type of materials to be packed. Vendor is to ensure that the lumber dimensions selected are adequate for the weight and type of materials.
  - 2.3 Fasteners must be of adequate length and quantity and must be of the coated type; e.g., cement, resin, galvanized, or chemically etched. Staples are not permitted, except in the securing of plywood sheathing.
  - 2.4 Metal strapping must be unannealed steel applied with a stretching tool and secured with joints as strong as the strapping. No sharp edges are to be left exposed.
  - 2.5 The top and sides of lumber boxes must be lined with waterproof paper or plastic film.

3. Layout:

3.1 Articles must be nested or packed firmly in minimal space. Unnecessary free space within the box must be avoided to reduce shipping costs.

3.2 Fragile articles must be wrapped in cushioning material to provide protection and prevent movement.

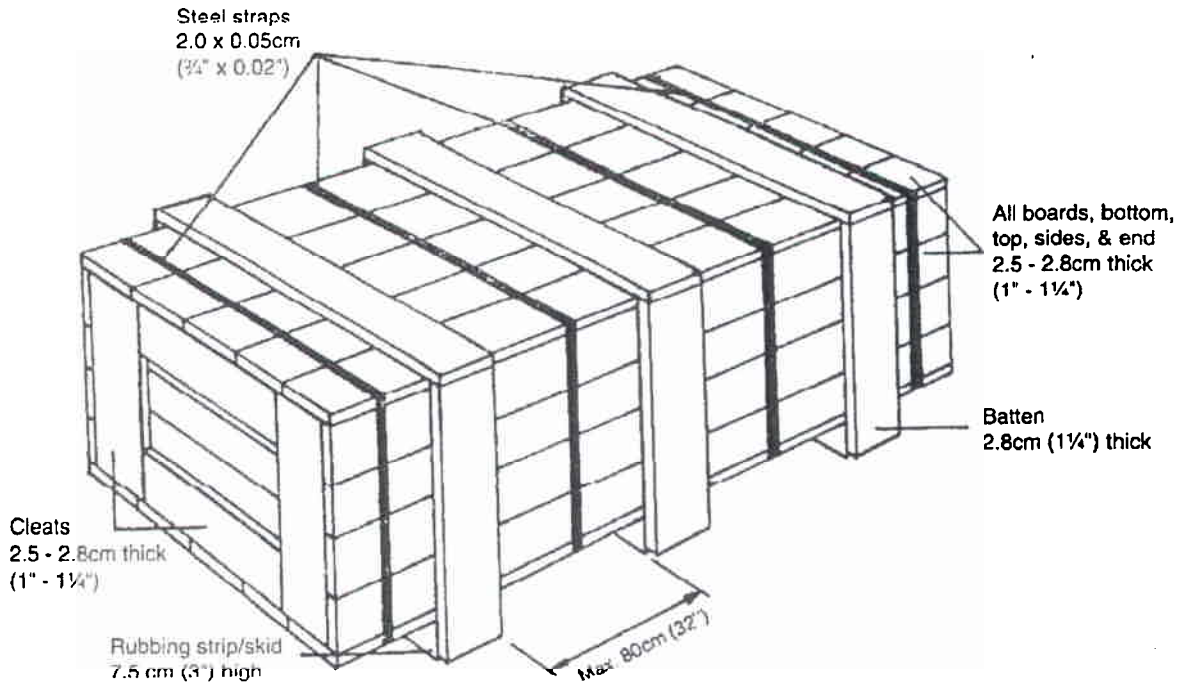
3.3 Heavy items must be secured to the base of the box and any movement prevented by means of adequate bracing, with cushioning used as needed.

4. Dimensions: If dimensions exceed 12-m length, 2.5-m width, or 3.45-m height, the Buyer must be notified.

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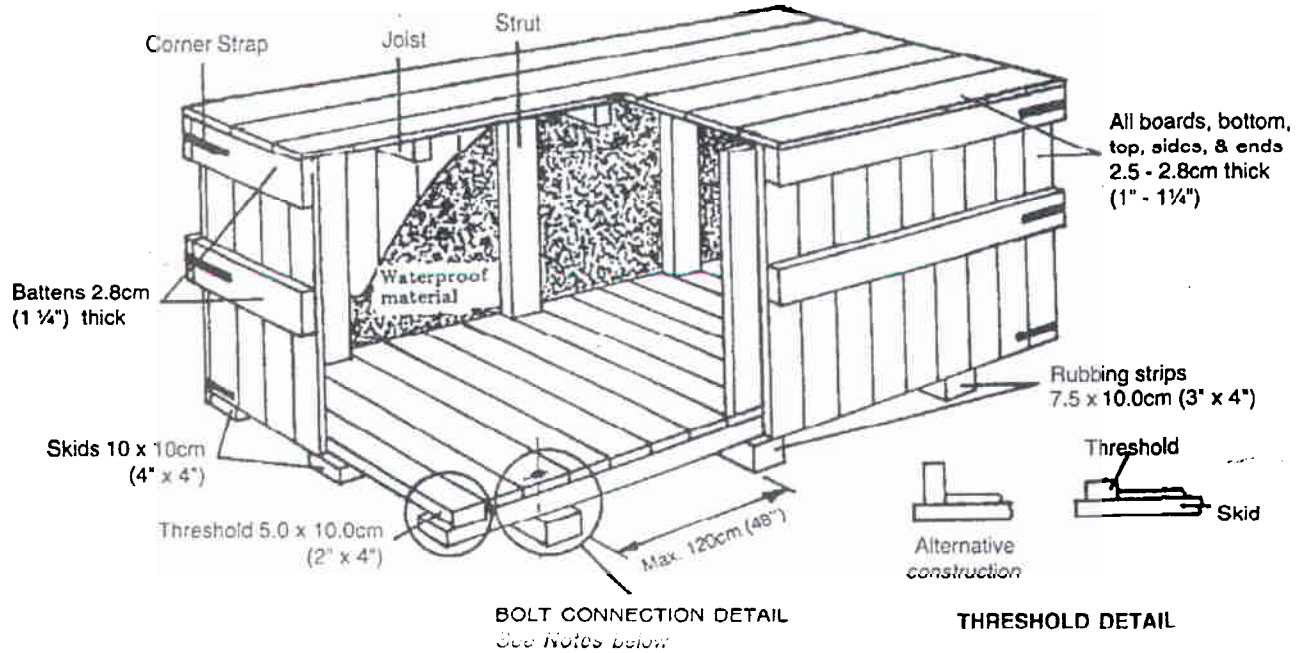
### BOX TYPE 1

For net weights up to 1,000 kg (2,200 lb)



### BOX TYPE 2

For net weights 1,000-5,000 kg (2,200-11,000 lb)

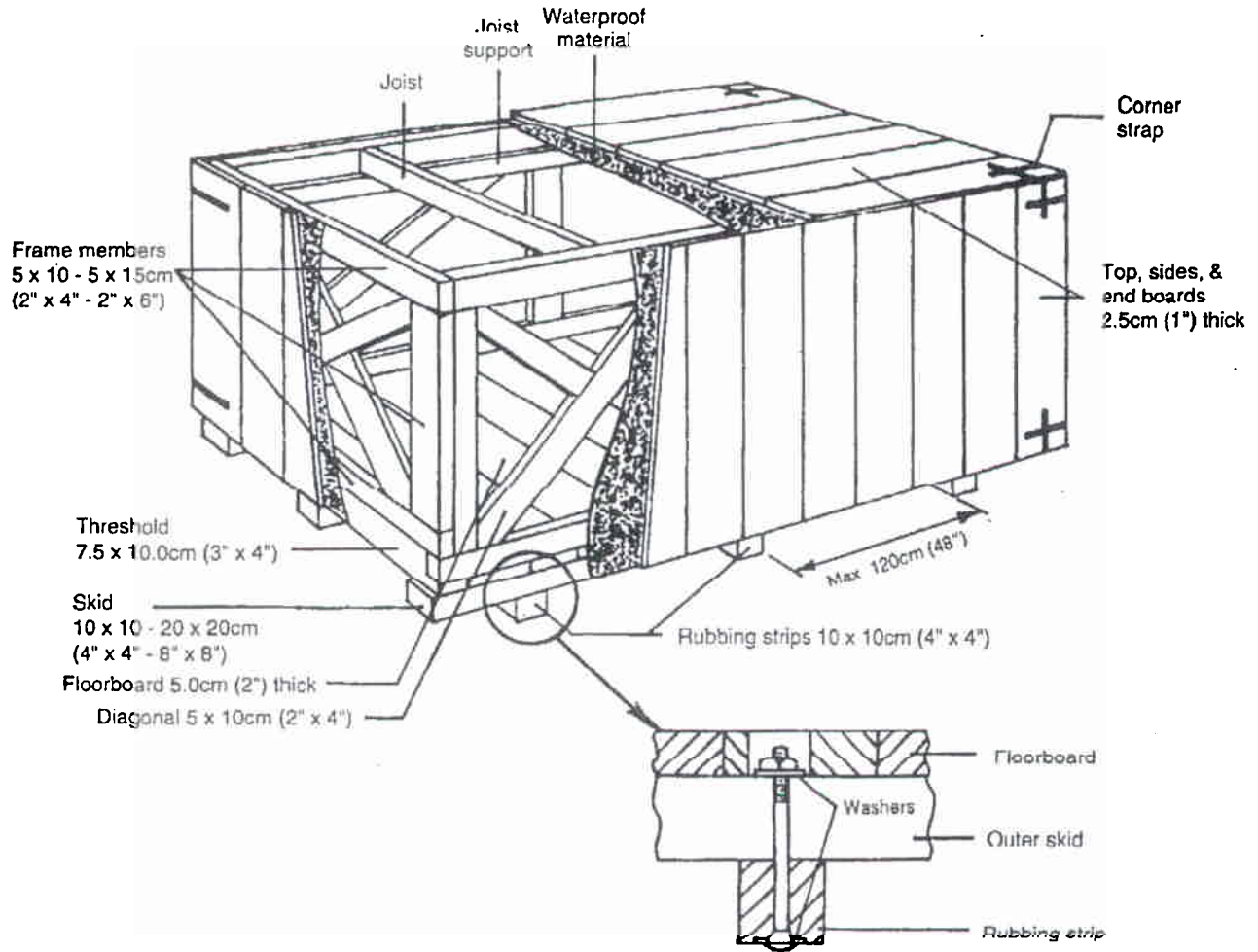


**Notes:** 1. Bolt connections are required when point loads will result in distortion of the base during lifting by slings. If required, adopt BOLT CONNECTION DETAIL shown in BOX TYPE 3.

2. Joists and struts may be required to provide top load support and to prevent compression by slings.

**BOX TYPE 3**

For net weights 5,000-15,000 kg (11,000-33,000 lb)



**BOLT CONNECTION DETAIL**

- Notes:**
1. For net weights over 15,000 kg (33,000 lb), box design is to be approved by the Buyer.
  2. Joists and struts of adequate size and quantity must be applied to provide top load support and to prevent compression by slings.