



BHARAT HEAVY ELECTRICALS LIMITED
PIPING CENTRE, MADRAS-600 017

Title : Inspection Procedure for Packing

Specification No : TIP:07:0

Project : All

Material : All

Equipment : -

--	--	--	--	--	--	--	--

	Date 10/09/93						
	Orig. Issue	Rev. 1	Rev. 2	Rev. 3	Rev. 4	Rev. 5	Rev. 6
Revised by	m. myy						
Approved by	L. Ravas						

Distribution :

Piping Centre	Quality Assurance Department	Page 1 of 7
---------------	------------------------------	-------------

MASTER COPY

INSPECTION PROCEDURE FOR PACKING

TIP:07:0

Dt 10.09.93

1.0 SCOPE

This procedure describes the requirement of Packing and Inspection of packing of raw material and finished products.

2.0 GENERAL REQUIREMENTS FOR ALL PRODUCTS

- 2.1 All packing shall fulfil the following requirements and these requirements shall be checked during inspection.
- 2.2 All bundles shall have identification tags with details such as Material Code, Size, W.O., D.U., Quantity.
- 2.3 Specific instruction given in drawings, Purchase orders, QP, QCP etc. shall be carried out.
- 2.4 All crates /boxes, used shall be covered, fastened tightly and shall have coating or lining inside so as to avoid water seepage into the packing.
- 2.5 PVC coated gunny bags shall be used for packing and bags shall be firmly closed.
- 2.6 All forwarding instruction shall be strictly adhered to.
- 2.7 Tanks and vessels / pipes with attachments shall be positioned in the packing in such way that nozzle and other attachments like stubs, flanges etc. are not loaded.
- 2.8 Except for the structural material and other certain products mentioned in this document, all other products shall not be sent as loose piece. They shall be packed.

3.0 SPECIFIC REQUIREMENTS FOR PRODUCTS

- 3.1 The specific requirements product wise is given below. These requirements shall be adhered to.

INSPECTION PROCEDURE FOR PACKING**TIP:07:0****Dt 10.09.93**

3.2 Straight pipes / tubes:

3.2.1 Straight pipes and tube ends shall be covered by end caps as follows:

Type of End cover	Pipe / tube diameter
Plastic end cap	Dia $\leq$ 76mm
Metallic cap	76mm > dia $\leq$ 610mm
Metallic ring	610mm > dia

3.2.2 VCI pellets shall be used for tubes / pipes for diameter upto and including 610mm. Dosage shall be 100gms / cu.m.

3.2.3 VCI pellets shall not be used for SS pipes.

3.2.4 The pipes / tubes upto dia 76mm can be bundled in such a way that weight of the bundle shall not exceed 1000kgs.

3.2.5 The bundle shall be strapped with steel bands at 1 metre interval.

3.2.6 The pipes of dia above 76mm can be despatched loose.

3.3 Pipe Bends including Mitre Bends:

3.3.1 End covering and use of VCI pellets shall be as per 3.2.2. norms and shall be packed in wooden boxes for Nb upto 150mm.

3.3.2 Bends of above Nb 150 can be despatched as loose piece.

3.4 Pipe with attachments:

The packing shall be as per 3.3 and the attachments shall be covered with plastic or metal caps as per 3.2.1.

3.5 Rubber lined pipes and fittings:

Wooden blanks of minimum thickness of 12mm shall be provided at the flange ends. The wooden blanking shall be secured to the flange by 4 bolts and nuts at 90° apart.

INSPECTION PROCEDURE FOR PACKING

TIP:07:0

Dt 10.09.93

3.6 Fittings other than IS:1239:

3.6.1 Fittings of nominal diameter upto Nb 150 and below shall be packed in wooden boxes. The boxes used for this purpose, shall have coating or lining inside so as to avoid any water seepage from outside.

3.6.2 Fittings above Nb 150 can be despatched as loose piece with proper end cover and VCI pellet. See para 3.2.2.

3.7 Tanks and Vessels:

The pipe ends shall be covered with plastic or metal caps as per 3.2.1.

Wooden blanks of minimum thickness of 12mm shall be provided at the flange ends. The wooden blanking shall be secured to the flange by 4 bolts and nuts at 90° apart.

The tank / vessel shall be supported by channel in the packing to avoid transit damage.

3.8 Clamp Assembly:

Components shall be assembled as per drawing. Grease shall be applied on threaded portion and plastic sleeve / VCI coated tape shall be used to protect the threads. All fasteners shall be tightened with spanners to avoid loss during transit. Clamp assemblies upto Nb 100 shall be packed in wooden boxes. Higher sizes can be sent as loose items.

3.9 Clamps and Tube Clips:

3.9.1 Tube Clips

Bundling shall be done in multiples of ten (for long clamps) / twenty (for short clamps) with G.I. wire. Packing shall be in the Standard (shipping) Wooden Box.

3.9.2 Clamps

Clamps shall be bundled with G.I. strap / wire in size wise and shall be packed in wooden box.

INSPECTION PROCEDURE FOR PACKING**TIP:07:0****Dt 10.09.93**

3.10 Insulation clamps & fixing components:

Clamps in multiples of 50 shall be bundled with G.I. wire and shall be packed in Standard (shipping) Wooden Box.

3.11 Tie Rods:

Proper rust preventive coating as per relevant painting schedule / QCP / QP shall be applied. Plastic sleeve / VCI coated tapes shall be used to protect the threaded ends. Tie rods shall be bundled size wise as per the table below:

Size -----	No. of piece in bundle -----
M12, M16	30 Max.
M20, M24	25 Max.
M30	Max. quantity restricted by the handling facility.

3.12 Fasteners:**3.12.1 Hex Nuts**

Packing shall be in PVC coated polythene bags in multiples of "N" nos. The PVC coated gunny bags with weight not exceeding 10kgs shall be packed in wooden boxes.

The quantity of "N" hexagonal nuts for different sizes shall be as per the table below:

Size of Hex. Nut -----	No. "N" of nuts / Polythene bag -----
Dia $\leq$ 20mm	100
20mm > dia $\leq$ 36mm	50
36mm > dia $\leq$ 56mm	10
56mm > dia	5

INSPECTION PROCEDURE FOR PACKING**TIP:07:0****Dt 10.09.93**

3.12.2 Studs and Bolts

All studs and bolts shall be coated with rust preventive. Thread size above M20 shall be protected with plastic sleeve / VCI coated tape. All studs and bolts shall be put in PVC coated gunny bags size wise and DU wise. The PVC coated gunny bag shall be properly closed and packed in wooden boxes.

3.12.3 Washers

Rust preventive coating shall be applied. Packing shall be in PVC coated gunny bags in multiples of 50 nos with weight not exceeding 10kg packed in the wooden box.

3.12.4 Split Pins

Packing shall be in a good quality polythene bag such that each bag shall not weigh more than 0.5kg.

3.13 IS:1239 Black Fitting:

Edge prepared portion and inner portion of the fittings shall be coated with rust preventive. Outside shall be painted as per the relevant TDC.

Packing shall be in VCI coated polythene bag or PVC coated gunny bags with VCI pellet / powder, in multiples of 10 nos, each bag not weighing more than 10kgs. Size NB 150 and below shall be packed in wooden box.

3.14 IS:1239 G.I. Fitting:

Rust preventive shall be applied to threaded portions and packed in plain gunny bag / PVC coated bags with breather holes in multiples of 10 nos. such that each bag not weighing more than 10kgs. Proper end cap shall be provided. Nb 150mm and below shall be packed in wooden boxes.

3.15 CLH Bracket:

The CLH bracket shall be painted and shall be supplied as loose.

3.16 CLH Pins:

Galvanised pins shall be bundled in PVC coated bags with breather holes such that each bundle weighs less than 10kgs.

3.17 Hanger Components:

Hanger components such as weld on / bolt on clevis, eye nuts, turn buckle, bracket with hole, rod couplings shall be painted and the machined portion shall be treated with rust preventive. (GI and yellow chromotised components need not be treated with rust preventive). Packing for items other than galvanised and yellow chromatised, shall be in VCI coated polythene bags or PVC coated gunny bags with VCI pellets / powder, with maximum weight not more than 10kgs, and shall be kept in wooden boxes.

3.18 Rod type clamps:

Rust preventive coating shall be applied for threaded portion. Threads shall be covered with plastic sleeve / bitamax tape. Rods in multiples of 10 shall be bundled with G.I. wire such that weight shall not exceed 10kgs. Final packing shall be in wooden boxes.

3.19 CAF jointing / Rubber gaskets:

The jointing and rubber gaskets shall be rolled and tied before packing it in the wooden crates / boxes.

3.20 Boughtout items:

The suppliers shall use the packing procedures approved by BHEL.