

# हौज एवं हौज कपलिंग के लिए तकनीकी टिप्पणियाँ

## TECHNICAL NOTES FOR HOSES & HOSE COUPLINGS

| 1       | 28.03.13 | REVISED & ISSUED AS STANDARD SPECIFICATION | UK          | SH         | RN                           | ATD                       | DM          |
|---------|----------|--------------------------------------------|-------------|------------|------------------------------|---------------------------|-------------|
| 0       | 29.06.09 | ISSUED AS STANDARD SPECIFICATION           | PK          | RN         | SC                           |                           | ND          |
| Rev. No | Date     | Purpose                                    | Prepared by | Checked by | Standards Committee Convenor | Standards Bureau Chairman | Approved by |

**Abbreviations:**

|      |   |                                          |
|------|---|------------------------------------------|
| AARH | : | Arithmetic Average Roughness Height      |
| ASME | : | American Society of Mechanical Engineers |
| CS   | : | Carbon Steel                             |
| eDMS | : | Electronic Document Management System    |
| MR   | : | Material Requisition                     |
| PMI  | : | Positive Material Identification         |

**Piping Standards Committee**

**Convenor :** Mr. R. Nanda

**Members :** Mr. Harish Chander  
Mr. M. Ismaeel  
Mr. Amrendra Kumar  
Mr. G. Balaji  
Mr. K.J. Harinarayanan (HMTD)  
Mr. P P Lahiri / Mr. S. Ghoshal (SMMS)  
Mr. G.K. Iyer (Construction)  
Mr. K.V.K Naidu (Projects)

## CONTENTS

|     |                              |   |
|-----|------------------------------|---|
| 1.0 | PURPOSE & SCOPE .....        | 4 |
| 2.0 | TECHNICAL REQUIREMENTS ..... | 4 |
| 3.0 | DOCUMENTATION .....          | 4 |
| 4.0 | TESTING & INSPECTION .....   | 4 |
| 5.0 | MARKING & DESPATCH .....     | 5 |
| 6.0 | ATTACHMENTS .....            | 5 |
| 7.0 | ATTACHMENTS FOR MR .....     | 5 |
| 8.0 | REFERENCES .....             | 5 |

## 1.0 PURPOSE & SCOPE

These Technical Notes shall form part of Material Requisition as well as the Purchase Requisition for Hoses & Hose couplings. These shall also serve as reference for Materials Engineer and Inspection. These notes cover the technical requirements, documentation, inspection, testing, marking and dispatch requirements for hoses and hose couplings.

## 2.0 TECHNICAL REQUIREMENTS

2.1 Hose material and Ends thereof shall be as per Material Requisition (MR).

2.1.1 The material composition, physical properties, heat treatment, mandatory tests, dimensions and tolerances and marking shall conform to the applicable codes/standards/specifications.

2.2 Hoses shall be suitable for outdoor installation in an atmosphere containing hydrocarbon vapour, steam etc. The outer cover shall be resistant to ageing, abrasion & weather effects etc.

2.3 Flanges for flanged hoses shall be in accordance with ASME B16.5 unless specified otherwise in the requisition. Flange finish shall be as specified in the requisition. The interpretation for range of face finish shall be as follows:

Serrated/Smooth/125AARH: 125 to 250 micro inch AARH.

2.4 Hose end connections shall be supplied as per MR.

2.5 CS Fittings(hose couplings, clamps, claws, nozzles etc.) shall be cadmium chromium Plated.

2.6 Manufacturer shall guarantee suitability of hoses for the service and working conditions (design pressure, design temperature) as specified in Data sheet of hoses and hose couplings.

## 3.0 DOCUMENTATION

3.1 No documents shall be submitted along with the offer. However, vendor shall submit the following documents for records through EIL eDMS:

- Duly signed and stamped data sheet for hoses & hose couplings.
- Vendor's catalogue/ drawings showing detailed dimensions along with material for different parts.
- Material test certificates as applicable; test reports of mandatory tests, hydrotest and special tests as per applicable specifications and standards.

3.2 In addition to submissions through eDMS, the following documents shall be submitted in hard copies (6 sets) and soft copies (2 CDs/DVDs) along with the delivery of respective items:

- Vendor's catalogue/ drawings showing detailed dimensions along with material for different parts.

## 4.0 TESTING & INSPECTION

4.1 All hoses shall be tested at 2 times the design Pressure along with end connections.

4.2 Steam resistance test, vacuum test and electrical continuity test shall be carried out and shall fulfill the requirements of the applicable design code/specifications.

- 4.2.1 Electrical continuity test shall be conducted on individual non-metallic hoses.
- 4.2.2 Vacuum test shall be conducted on all individual metallic and rubber hoses intended for steam service. For rubber hoses intended for steam service, steam resistance test shall also be conducted.
- 4.3 Flanges shall be so aligned so that the deviations measured in any direction do not exceed 0.5°.
- 4.4 The length of the finished hose assembly shall not differ from the specified length by more than  $\pm 1\%$ . Hose assembly shall be measured after being subjected to the various tests. Tolerances shall be as per specified design code.
- 4.5 Positive Material Identification (PMI) shall be performed as per the scope and procedures as defined in the 'Specification for Positive Material Identification (PMI) at Supplier's Works (No. 6-81-0001).
- 4.6 Inspection shall be carried out by EIL or its representative prior to dispatch.

## 5.0 MARKING & DESPATCH

- 5.1 All hoses along with their couplings shall be dry, clean and free from moisture, dirt and loose foreign material of any kind. All hoses shall be suitably packed and protected to avoid damage during transportation, shipment and storage.
- 5.2 Each hose shall have a weatherproof tag attached with a corrosion resistant metal wire. The weatherproof tag shall be embossed with item code, size of hose and length of hose. In addition, all hoses shall be clearly marked with service and maximum working pressure at both ends.

## 6.0 ATTACHMENTS

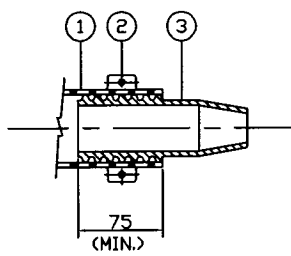
6-44-0064-A1 : Sketches for hoses and hose couplings (End details)

## 7.0 ATTACHMENTS FOR MR

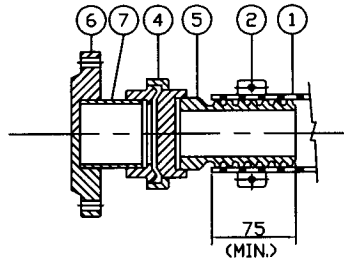
Format No.3-1643-0095: Data sheet for hoses and hose couplings

## 8.0 REFERENCES

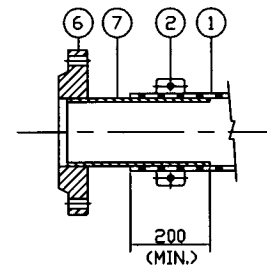
6-81-0001 : Specification for PMI at Supplier's Works



**TYPE-1**

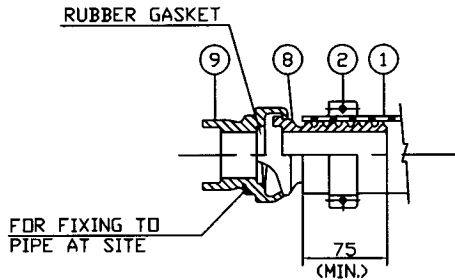


**TYPE-2**

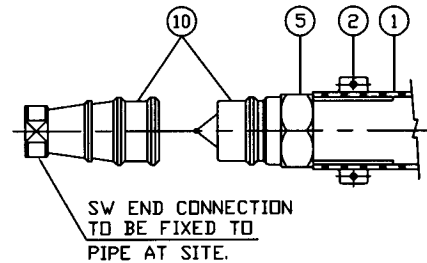


**TYPE-3A & 3B**

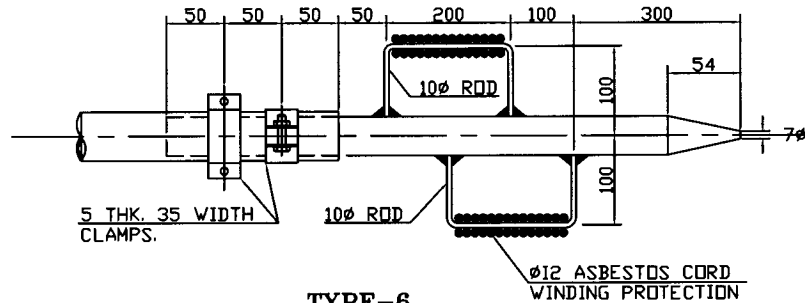
NOTE: FOR TYPE 3B HOSE TO BE FULLY  
VULCANIZED OVER NIPPLE & NO CLAMP



**TYPE-4**



**TYPE-5**



**TYPE-6**

(FOR STEAM HOSE CONNECTION)  
PIPE OD 33.4 & 4.5 THK.

| ITEM No. | DESCRIPTION                                                                                                                          |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|
| 1        | HOSE PIPE AS SPECIFIED                                                                                                               |
| 2        | HOSE PIPE CLAMP WITH BOLTS MINIMUM 6mm THK. STEEL PLATE (IS2062) IN TWO PARTS BOLT/ NUTS A307 GR'B'                                  |
| 3        | PIPE NIPPLE MATERIAL AS SPECIFIED (SEAMLESS)                                                                                         |
| 4        | 3000 LB SW UNION, ENDS TO SUIT ITEM (5) AND (7). MATERIAL AS SPECIFIED                                                               |
| 5        | SEAMLESS PIPE NIPPLE WITH SERRATIONS TO SUIT ITEMS (1) AND (4). MATERIAL AS SPECIFIED                                                |
| 6        | END FLANGE MATERIAL AND DETAIL AS SPECIFIED                                                                                          |
| 7        | PIPE MATERIAL AS SPECIFIED WITH SERRATIONS                                                                                           |
| 8        | QUICK CLAW COUPLING (HOSE END) MATERIAL AS SPECIFIED BOTH COUPLINGS TO BE SUPPLIED IN TYPE 4                                         |
| 9        | QUICK CLAW COUPLING WITH SOCKET WELD PIPE END. MATERIAL AS SPECIFIED                                                                 |
| 10       | QUICK ACTING, QUICK RELEASE COUPLER/ ADAPTOR ASSEMBLY WITH BUILT IN CHECK VALVE BOTH COUPLER AND ADAPTOR SHALL BE SUPPLIED IN TYPE 5 |

**NOTE:-**

ALL DIMENSIONS ARE IN MM.