

## SPECIFICATIONS FOR BRASS TUBE FITTINGS

|       |  |   |  |
|-------|--|---|--|
| 1     | Type                                     | : | Flareless compression, twin ferrule  |
| 2     | Material / type                          | : | Brass as Per ASTM-B-124 / Forged   |
| 3     | Fluid                                    | : | Air  |
| 4     | Max. Pressure                            | : | 40 kg/cm <sup>2</sup> (g) @ ambient temperature  |
| 5     | Maximum Temperature                      | : | 320 °C   |
| 6     | Overall Dimensions                       | : | As per ANSI-B-1.20.1   |
| 7     | Hardness                                 | : | > Rockwell B-90  |
| 8.0   | <b>Tests</b>                             |   |  |
| 8.1   | <b>Type Test</b>                         |   |  |
| 8.1.1 | Chemical Composition test                | : | Incoming Material as per ASTM-E-54/478   |
| 8.1.2 | Ferrule Hardness Test                    | : | On each size of Ferrule as per ASTM-B-124  |
| 8.1.3 | Test on Raw Material                     | : | Raw material for body, nut and ferrules should be tested for physical properties (i.e. tensile strength, % elongation, hardness)   |
| 8.1.4 | Seismic Test                             | : | Required. Vibration should be in the frequency range from 1-33 Hz, Peak acceleration at frequencies 1, 1.26, 1.59, 2 and 2.5 Hz should preferably be between 1g and 3.5g or capability of shake table. For and beyond 3.75 Hz Peak acceleration should be 3.5 g. Test duration should be 30 seconds at each frequency. Frequency should be increased in step of 1/3 octave in the specified frequency range 1-33 Hz. Before and after the test the fitting assembly should be tested and should qualify all the other tests. |
| 8.2   | <b>Routine Tests</b>                     |   |  |
| 8.2.1 | Overall Dimension Thread                 | : | Required to be done on 1% items of each type   |
| 8.2.2 | Check for End Connections                | : | Required to be done on 1% items of each type   |
| 8.2.3 | Hydrostatic test                         | : | At a pressure of 60 kg/cm <sup>2</sup> (g); duration = 10 min., required to be done on 10% items of each type  |
| 8.2.4 | Pneumatic leak test                      | : | At a pressure of 4 kg/cm <sup>2</sup> (g); duration = 10 min., required to be done on 10% items of each type.  |
| 8.2.5 | Reassembly Test                          | : | Required to be done on 1% items (min. 2 nos., from each lot, six times after sixth, pneumatic test)  |
| 9.0   | <b>Applicable codes &amp; standards:</b> |   |  |
|       | ASTM-B-124                               |   | Copper and copper alloy forging rod bar and shapes   |
|       | ANSI-B-1.1                               |   | Unified inch screw threads (UN AND UNR thread form) equivalent for tube end  |
|       | ANSI-B.1.20.1                            |   | Pipe threads, general purpose  |
|       | ANSI-B-1.20.2                            |   |  |
|       | SAE J 514                                |   | Hydraulic Tube fittings  |
|       | ASTM-B-16                                |   | Free cutting brass rod, bar and shapes for use in screw machine.   |
|       | IS 4218                                  |   | Indian standard for Metric Straight Pipe Threads   |