

**ADDENDUM TO ST47025****APPLICATION : STEAM TURBINE****Date : 09.11.2012****ITEM : GENERAL SPECIFICATION OF VALVES****ADDITIONAL SPECIFICATION :**

- a) Pressure retaining parts of valves shall be subjected to NDT as per Table-I.
- b) Bar stock / forging above 50mm diameter for valve trim shall be subjected to UT.
- c) Hardened / stellitted valve disc and seat are to be subjected to LPI and hardness check.
- d) Colour matching of valve disc / plug and seat shall be carried out to ensure contact.
- e) Hydraulic pressure test and seat leak test shall be carried out as per ANSI 16.34.
- f) Air seat leak test shall be carried out as per applicable standards / codes.
- g) Functional testing shall be carried out on each valve to check the following as per the approved valve data sheet :
  - (i) Smooth operation
  - (ii) Valve travel, closing and opening time
  - (iii) Current drawn by actuators
- h) Springs for safety valves shall be tested with suitable NDT and for spring rate.
- i) Safety and safety relief valves shall be tested for performance.

**TABLE-I**

<b>Valve Size NB in mm</b>	<b>ANSI Class UPTO 300</b>	<b>ANSI Class ABOVE 300 UPTO 600</b>	<b>ANSI Class ABOVE 600 BELOW 900</b>	<b>ANSI Class 900 &amp; ABOVE &amp; BELOW 4500</b>
Less than 50	Visual	Visual	Visual	MPI
50 & above but below 100	Visual	Visual	MPI	MPI & RT (on 10% of valves on 100% area)
100 & above but less than 300	Visual	MPI	MPI & RT (on 10% of valves on change of section & weld ends)	MPI & RT (on 100% area)
300 & above	MPI	MPI	MPI & RT (on change of section & weld ends)	MPI & RT (on 100% area)

- NOTE :**
1. For body and bonnet forgings UT with MPI may be adopted in place of RT.
  2. For austenitic steel MPI may be replaced by LPI.
  3. Outer surface of valve shall be painted as per following painting scheme

**Painting Scheme**

<b>Paint (Coat)</b>	<b>Paint Type</b>	<b>No. of coat</b>	<b>DFT*</b>
Primer Paint	: Epoxy base Zinc rich primer paint	1 Coat	35
Intermediate Paint	: Epoxy TiO <sub>2</sub> Pigmented Polyamide Cured Paint	1 Coat	70
Finish (Final) Paint	: Aliphatic Acrylic 2 Pack Polyurethane Finish paint	2 Coat	75
Total DFT		180	

DFT – Dry Film Thickness (final) in microns.

- Shade as per RAL – Grey 9002
- Identification Tag/Band of white 9010 color. Legend in Black letters.

This supersedes clause 8 (i) of ST47025.

4. Valve made of stainless steel shall not be painted.

5. Valve body material for the following temperature parameter shall be as follows :-

- Upto 371<sup>o</sup>C - Carbon steel
- 372<sup>o</sup>C - 495<sup>o</sup>C - Alloy steel ( 15Mo3 or equivalent )
- 496<sup>o</sup>C - 550<sup>o</sup>C - Alloy steel ( 10CrMo910 or equivalent )
- Above 550<sup>o</sup>C - Alloy steel ( X10CrMoVNb9-1 or equivalent )

6. Each type of Angle Drain valve (MAL valves) and Temperature control valve offered should have a minimum of two years of operational experience in similar application at the time of offer submission.

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