

 <b>HTE-2006</b>	<b>PRODUCT STANDARD</b> <b>HYDRO TURBINE ENGINEERING</b>	<b>HT-00012</b>
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## **Non Destructive Testing of Forgings for Hydro Turbine**

### **Spherical Valve, B.F. Valve**

1. **SCOPE :**

This standard covers Non destructive testing of forgings for small parts e.g. spear Tip, Needle stem of nozzle and other miscellaneous forgings etc.

2. **Technique and Acceptance standards for Non-Destructive Tests :**

<u>S.No.</u>	<u>Test</u>	<u>Technique</u>	<u>Acceptance Standard</u>
1.	Dye penetrant Test	ASTM-E165 (Equivalent BHEL Std.AA0850131)	See Clause 2.1
2.	Magnetic particle Inspection	ASTM-E709 (Equivalent BHEL Std.AA0850133)	See Clause 2.1
3.	Ultrasonic Test	BHEL Standard AA 0850118	BHEL Std. AA0850118 (Category 1 or 2 as specified On drawings).

2.1 **Acceptance Standard for Dye penetrant Test & magnetic particle Inspection**

- 2.1.1
- i) Any cracks, flaks, seams or laps shall be unacceptable.
  - ii) Any defect with major dimension more than 2mm with its location on a sketch should be forwarded to BHEL for its clearance, depending upon the product requirement.

3. **SCOPE OF N.D.T. Examination for Forging**

- i) Ultrasonic Test – 100%
- ii) Magnetic particle Test – 100%
- iii) Dye pentrant Test – As an alternative to magnetic particle inspection where ever required in consultant with Design deptt./ NDT experts of BHEL.

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