# WORK INSTRUCTION FOR HYDRO TESTING

## 1.0 SCOPE:

The Procedure is applicable to all grades of Austenitic and Seamless Duplex, Super Duplex, Nickel Alloy Stainless Steel Pipes and Tubes.

## 2.0 PURPOSE:

The purpose of this procedure is to check the leakage in pipes and tubes.

## 3.0 EQUIPMENTS:

**3.1** Hydro tester 1 2: - for Straight pipes & tubes and Hydro Tester No. 3: - for U-Tubes using, Demineralized Water **containing less than 20ppm of Chloride OR as specified by Customer in their P.O. / Specification.**.

**3.2** Seal of required Outside Diameter of Tube / Pipe.

**3.3** Valid calibrated Pressure Gauge of suitable range and should be **1. 5 to 4 times** the Pressure to which the pipes / tubes are to be Hydro Tested.

## 4.0 RESPONSIBILITY:

The Shift QA Engineer is responsible for inspection.

## 5.0 INSTRUCTION:

1. Depending on the OD and length of pipes / tube. Hydro tester machine is adjusted.
2. Check the range and calibration validity of the pressure gauge to be used and record this in the Report.
3. Check the quality of Dematerialized water.
4. Check the O.D., thickness, W.O. No., Grade, Heat No. and quantity mentioned on the tag and verify with the bundle.
5. Adjust the Hydro Tester to the required tube / pipe OD and length. Refer the W.O. file to select testing pressure.
6. **For ASTM A 213, and A 269**: –
7. 1000 psi **OR** (32000 x t)/D, whichever is LESS **OR** as per customer's P.O. (Hold for **10** secs **OR** as specified by the Customer in their P.O. / Specification Sheet )
8. **For ASTM A 312: -**
9. Hydro Test the tube / pipe at the pressure from the values stated below, **whichever is less**

| | | |
|---|---|---|
| 2500 psi for OD 88.9mm and less<br>2800 psi for OD over 88.9mm | **OR** | Test Pressure, psi = (32000 x t) / D |

(Hold for 10 secs)

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