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| **No.** | **Questionnaire** | **Y/N/NA** | **If No-Corrective action taken** |
|  | **Assign Responsibility** |  |  |
| 1 | Has the contractor assigned persons responsible for the hydro-test? |  |  |
| 2 | For major tests, are representatives from Inspection, the proponent organization, and Loss Prevention Department monitor testing present? |  |  |
|  | **Issue Written Approved Procedures** |  |  |
| 3 | Is written approved procedure available at the job site? |  |  |
| 4 | Is hydro-test drawing available? |  |  |
| 5 | Is test manifold arrangement available? |  |  |
| 6 | Is location of blind flanges and isolation valves identified? |  |  |
| 7 | Is location of check valves identified? |  |  |
| 8 | Check if is required to remove flappers from the check valve? |  |  |
| 9 | Is location of air vents identified? |  |  |
| 10 | Is relief valve size and set pressure data available? |  |  |
| 11 | Is vacuum valve size and set pressure data available? |  |  |
| 12 | Is the test medium water? |  |  |
| 13 | Is test pressure data known? |  |  |
| 14 | Are special supports requirements identified? |  |  |
| 15 | Is it required to add chemical additives? |  |  |

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| **CHECKLIST FOR SAFE HYDRO-TEST**  Page 1 of 6 | | |

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| 16 | Is minimum temperature allowed data available? |  |  |
| 17 | Are inspection requirements identified? |  |  |
| 18 | Is the area kept free of people? |  |  |
| 19 | Is the area barricaded? |  |  |
| 20 | Are warning signs installed? |  |  |
| 21 | Is work permit obtained? |  |  |
| 22 | Is test medium disposal method available? |  |  |
| 23 | Are personnel safety requirements identified and worn? |  |  |
| 24 | Is safety instruction sheet issued to concerned personnel? |  |  |
| 25 | Is communication system available? |  |  |
|  | **Test Medium** |  |  |
| 26 | Is water the test medium? |  |  |
|  | **Selection and Treatment of Hydro-test**  **Water** |  |  |
| 27 | Is procedure available for hydro-test water treatment? |  |  |
|  | **Appropriate Test Equipment** |  |  |
| 28 | Is relief valve tested and tagged with test pressure and date? |  |  |
| 29 | Is relief valve designed to relieve the required capacity? |  |  |
| 30 | Is it ensured that there is no block valve at the relief valve inlet and outlet? |  |  |
| 31 | Are relief valves located in the system under test and near the test pump? |  |  |
| 32 | Ate two nos. calibrated pressure gauges provided? |  |  |

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| 33 | Are pressure gauged provided with block and bleed valves? |  |  |
| 34 | Are pressure gauges provided in proper location? |  |  |
| 35 | Can the pressure gauges be read by the operator? |  |  |
| 36 | Is blow down valve provided on the test piping? |  |  |
| 37 | Is isolation valve provided on the test piping? |  |  |
| 38 | Is the blow down valve readily accessible and can the test water be drained to the designated location? |  |  |
|  | **Permit To Work** |  |  |
| 39 | Is permit to work obtained for Hot work? |  |  |
| 40 | Is permit to work obtained for cold work? |  |  |
| 41 | Is permit to work obtained for confined space entry? |  |  |
| 42 | Is permit to work obtained for release of hazardous material? |  |  |
|  | **Isolate Equipment Not Adequate for**  **Test Pressure** |  |  |
| 43 | Are equipment not adequately designed to withstand the test pressure isolated? |  |  |
| 44 | Is it ensured that isolated equipment cannot be pressurized? |  |  |
|  | **Prevent Overload from Weight of Water** |  |  |
| 45 | Will the weight of the test water overload the system? |  |  |
| 46 | If so, are adequate supports provided? |  |  |
|  | **Handle Chemicals Safely** |  |  |
| 47 | Are personal protective equipment used |  |  |

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|  | while handling chemicals? |  |  |
|  | **Avoid Failure by Brittle fracture** |  |  |
| 48 | Is it ensured that temperature of the water is not above the temperature at which the material can brittle? |  |  |
|  | **Control Access to The Site** |  |  |
| 49 | Is the test area marked and warning signs posted to alert approaching personnel, where practical? |  |  |
| 50 | Are personnel posted at the plant site to keep the test area, clear of all people, not connected with the test? |  |  |
| 51 | For systems outside of plant areas, are warning signs placed at locations where people could be exposed? |  |  |
| 52 | For a pipeline crossing underneath a road, is traffic diverted or stopped during the  test, or are personnel posted? |  |  |
| 53 | For an above ground pipeline parallel to a road within 30 m (100 ft), is traffic diverted or stopped during the test, or a waiver is granted? |  |  |
|  | **Remove Air Before Pressurizing** |  |  |
| 54 | Is vent kept open at the time of filling with water? |  |  |
| 55 | Is vent closed after air is removed? |  |  |
|  | **Control Pressure Rise** |  |  |
| 56 | Is pressure increased gradually with at least 10-minute holds at each step in a strength test? |  |  |
| 57 | Are weaknesses repaired and leaks stopped before exceeding 50 percent of the test pressure? |  |  |
| 58 | Is the pressure increased in steps no greater than one-fifth of the test pressure after reaching 50 percent of the test |  |  |

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|  | pressure? |  |  |
| 59 | Are weaknesses repaired and leaks stopped before proceeding to any higher pressure? |  |  |
|  | **Depressurize Before Stopping Leaks or**  **Repair** |  |  |
| 60 | Is pressure released, except pressure due to head of water, before attempting to stop leaks or repairing, including tightening of bolts? (Exception: Bolts may be tightened in a tightness test if specifically approved). |  |  |
|  | **Restrict Approach to the System** |  |  |
| 61 | The system under test is not to be approached during the step-wise increase in pressure. Is the pressure, at which the system under test, can be approached for close inspection specified in the test procedure? |  |  |
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| 62 | Is the personnel carrying out the test provided with a safe place from which the progress of the test can be observed and controlled? |  |  |
| 63 | Is safety clearance distance for the hydrostatic test systems reviewed? |  |  |
| 64 | Are only personnel involved in the test are allowed near the system at any time during the test? |  |  |
| 65 | Is the test pump located such that the pump operator is not exposed to injury in the event of a failure? |  |  |
|  | **Depressurize Safely** |  |  |
| 66 | Are depressurizing valve and piping arranged for safe discharge? |  |  |
| 67 | Is it ensured that system will not be depressurized by loosening bolts or unscrewing fittings? |  |  |

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| 68 | Is the system depressurized at a slow enough rate to prevent damage? |  |  |
| 69 | Are Heat exchangers monitored with pressure gauges if necessary to prevent excessive differential pressures? |  |  |
|  | **Dispose of Test Mediums Safely** |  |  |
| 70 | Is there a disposal procedure in place and shown on the approved test procedure? |  |  |
|  | **Additional Safety Precautions** |  |  |
| 71 | Is the temperature of the test medium allowed to equalize with the ambient temperature before pressurizing? |  |  |
| 72 | Is it ensured that the test pump is not left unattended during the test unless isolated with a valve? |  |  |
| 73 | Is it ensured that temporary test piping is not allowed to remain pressurized unnecessarily? |  |  |
| 74 | Is it ensured that system is not allowed to remain unattended when filled with water unless the vent is open? |  |  |
| 75 | Is it ensured that the test relief valve is not removed until the test water has been drained? |  |  |
| 76 | Is it ensured that test water is drained slowly with open vent to prevent vacuum? |  |  |

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