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**Pressure Testing**

**NOTE:** If there is potential for equipment to be over pressurized, establish relief valve set pressure to prevent system pressure from exceeding:

* The maximum allowable pressure of the lowest rated component in the test boundary
* The maximum allowable seat or backseat pressure for boundary valves
* The maximum allowable pressures established by the applicable code or project specification.
  + 1. The RS shall19 address and resolve the following during preparation for pressure testing:
       - Receive and review the Construction Work Package for Pressure Testing
       - Assess, coordinate, and resolve impacts on scheduling and/or access to surrounding work
       - Control and ascertain the installation of temporary devices and materials required to assure the readiness of the system to be tested
    2. For pneumatic pressure tests, safety boundaries are determined from Appendix 6. When test parameters are greater than those provided in Appendix 6, use the calculation below and Table 2 to determine the safety boundary. The RFE enters test pressure, free air volume, and stored energy onto the Pressure Test Data Sheet (Appendix 2). The Stored Energy Calculation Sheet to be included with the Pressure Test Report. The stored energy equation is:

#   14.7

0.286





*SE*  2.5 *V*  144 (*P* 14.7) 1    

Where:

#   *P* 14.7  

*SE* = stored energy in foot pounds force (ft-lbf)

*V* = test boundary free air volume in cubic feet (ft3) (inside pipe diameter area in ft2 multiplied by linear ft of pipe = ft3)

*P* = test gauge pressure in psi

**NOTE:** Ensure the inside pipe diameter area is in square feet.

* + - * Second Review of calculation is confirmed via signature on pressure test record
    1. Table 2: Limited Access/Safety Boundary

**Table 2: Limited Access/Safety Boundary**

|  |  |
| --- | --- |
| **Stored Energy** | **Limited Access/Safety Boundary** |
| Less than 9,588,801 ft-lbf | 50 ft |
| 9,588,801 ft-lbf to 25,078,400 ft-lbf | 100 ft |
| 25,078,401 ft-lbf to 199,152,000 ft-lbf | 300 ft |
| Greater than 199,152,000 ft-lbf | 660 ft |

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**Pressure Testing**

***Appendix 6 Pneumatic Pressure Test Boundaries***

