

## **Model 153 Back Pressure Regulator SHOP ACCEPTANCE TEST INSTRUCTIONS**

### **Scope**

This instruction describes the procedures of shop acceptance test of the RedQ Model 153 Back Pressure Regulator.

### **Hydrostatic Proof Test**

(Optional at customer's request on sales contract only)

1. Perform the following on regulator body shell only.
2. Install test fitting on inlet and outlet ports and spring barrel.
3. Fill valve cavity with treated water through the inlet port and bleed all trapped air from the outlet port.
4. Apply 1500 psig hydrostatic pressure to the inlet port and hold for 5 minutes. There shall be no visible leakage or permanent wetted parts with dry compressed air.
5. Release hydrostatic pressure. Remove test fittings and dry wetted parts with dry compressed air.

### **Leak Test and Functional Test**

(Fully assembled regulator)

1. Test media may be either compressed air or nitrogen gas.
2. Apply maximum control pressure to inlet port. Turn handwheel clockwise until the regulator shuts off.
3. Check for tight shutoff of valve by using bubble fluid to outlet opening.
4. Check for external leakage with bubble fluid.
5. There shall be no leakage.
6. Increase pressure applied to inlet port. Valve shall open to relieve the excess pressure.
7. Reduce inlet pressure until flow stops. Valve shall open to relieve pressure back to the original set pressure.
8. There shall be no flow.
9. Release pressure from the regulator. Remove test fittings.
10. This completes the shop acceptance test.

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