John N. Fehlinger Co.
Steam and pressure controls since 1951

20 Vesey Street, 10th floor
New York, NY 10007
(212) 233 5656

GENERAL TROUBLE SHOOTING GUIDELINES FOR STEAM REDUCING STATIONS

EDITION #1 – Loss of Steam Pressure

General Clarifications

1. Steam control valves used for pressure reducing applications are normally closed/air to open. Loss of delivered air pressure will cause the valve(s) to close.
2. Pressure controllers for these applications are reverse acting meaning air output pressure decreases as steam pressure increases above set point and visa versa.
3. Some control valves may be fitted with manual hand wheels. The hand wheels are unidirectional and can only be used to open the valve. Once the hand wheel is disengaged the main valve spring acts to force the valve closed.

Things to check on a loss outlet steam pressure:

1. **Insure inlet steam supply pressure is normal.**
   - If inlet steam pressure is low check source of steam supply.
2. **What is the valve position? This can be determined by observing the indicator disc on the valve stem in relation to the travel scale located on the valve actuator.**
   - Valve should be open.
3. **What is the air delivery pressure from the pneumatic controller to the valve? This can be determined be observing the air outlet pressure gauge located on the controller.**
   - The controller should be delivering air pressure to open the control valve.

Determining Cause of Failure

Assuming supply steam is at normal pressure the most common scenario resulting in loss of pressure is that the control valve is closed and there is low or no air output pressure from the controller.
At this point it must be determined whether the problem lies within the controller or valve.

1. Disconnect the airline tubing at the valve actuator and check if air is coming out. If there is air flow plug off the end of the tubing by putting your finger over the end. If air output from the controller increases to full output the valve is leaking air from the actuator diaphragm and/or stem seal and will not open. The diaphragm and stem seal will require replacement.

2. If there is no air flow from the tubing the controller is most likely faulty and in need of cleaning/repair or replacement.

Note: In a critical situation the control valve can be operated manually to deliver steam pressure until repairs can be facilitated. In manually operation the downstream steam pressure must be continually observed and the valve hand wheel adjusted accordingly. A valve in Manual operation should NEVER be left unattended.