

Blast Valve Adjustment

After some maintenance practices, such as the rebuild of the blast valve, it will be necessary to adjust the blast valve opening.

Key Points

The following is a list of items to keep in mind when adjusting the blast valve opening.

- The breaker will have to be opened and closed several times by hand.
- The opening of the blast valve should be 3/4" plus or minus 1/8" for 1500 MVA. (5/8" plus or minus 1/8" for 2500 MVA)
- A six inch ruler/scale is best for making the measurements.
- Reference Figure 10 for blast valve details.

Safety

This procedure requires the hand operation of the breaker. Therefore, the breaker reservoir needs to be drained. Close the supply valve, and open the drain valve for the duration of the job. Because the breaker will be opened and closed while someone is making measurements, the person taking the measurements should be aware of any pinch points. Also, the person operating the breaker should keep focused on the person he is helping.

Summary of Method

The following list is a summary of work needed to be done.

- The reservoir needs drained.
- A measurement needs to be made with the breaker opened.
- A measurement needs to be made while the breaker is being opened.
- Adjustments are made by removing the pin through the lever assembly and valve body and turning the lever assembly.

Adjusting The Blast Valve

The following steps are required to adjust a blast valve.

Method

1. With the breaker in the open position, make a measurement from the flat, machined surface of the valve body to the top of the valve stem nut.
2. Close the breaker until all three blast valves have reset.
3. Open the breaker until the contacts are about 5 inches apart and the blast valve lever assembly has not dropped off the cam.
4. Make a measurement from the flat, machined surface of the valve body to the top of the valve stem nut (the same measurement as in step 1.)
5. Subtract the opening measurement from the closed measurement. The answer is the total opening of the blast valve.
6. Subtract the answer in step 5 from 3/4" (5/8" for 2500 MVA)
 - a. If the answer is negative, the opening gap is too large.
 - i. Remove the pin through the valve body and lever assembly
 - ii. Lift the lever assembly until it pushes down on the valve stem nut.
 - iii. Without turning the valve stem, turn the lever assembly clockwise.
 - iv. Replace the pin connecting the valve body and lever assembly.
 - b. If the answer is positive, the opening gap is too small.
 - i. Remove the pin through the valve body and lever assembly.
 - ii. Lift the lever assembly until it pushes down on the valve stem nut.

- iii. Without turning the valve stem, turn the lever assembly counter-clockwise.
 - iv. Replace the pin connecting the valve body and lever assembly.
 7. Repeat the above steps until satisfactory results are achieved.

Recommended Manpower

Two people

Recommended Tools

Flashlight
Six inch ruler/scale
Pliers for cotter pins

Recommended PPE

Hard Hat
Gloves
Safety Glasses