The More You Know

June 25, 2025

Under Pressure...

Milwaukee Valves HP butterfly valves are called HP (High Performance) for a reason, but there are still limitations. The cold working pressure for Milwaukee Valve HPs is rated to 275-285 PSIG for Class 150, and 720-740 PSIG for Class 300. But, when managing a steam line, the valve is rated at 150 PSIG for on/off applications, and 50 PSIG when used in modulating service.

And if using for modulation, DO NOT throttle steam in the near-closed position! For best results and to avoid damage to the valve, HP throttling applications should be limited to 50 pounds of pressure and the disc should be in between 30 and 70 degrees open. Due to

the characteristics of steam, if a disc is positioned less than 30 degrees open, it creates high velocity flow in the area between the disc and the seat. This high velocity steam can pull part of the seat out, which gets crinkled and damaged when the operator tries to close the valve.

This is what happened in both of the installations below. In the picture on the left, the customer said he had been throttling 130-pound steam in a near-closed

position. This phenomenon is known as ***wire drawing***, where high-pressure steam can sometimes cut a groove across the seat of an almost-closed valve. We will deal with this problem in future issues of this newsletter.

To learn more about high performance butterfly valves, and download spec sheets or access 3D CAD drawings and BIM modelling, visit our website at **www.MilwaukeeValve.com**. While there, you'll also find downloadable product literature, and Milwaukee Valve representative contact information to help you with application questions on any Milwaukee Valve products.

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