

Fugitive Emissions Update

Recent years have been marked by increasing demands for a cleaner environment. This has translated into a myriad of regulations for emission control of hazardous materials. The U.S. has taken the lead in passing clean air legislation, and many other nations now recognize that early detection of fugitive emissions is critical for ensuring cleaner air and water for the future.

By Bob Donnelly

In any industry that uses ball valves and pipes, one of the primary concerns is the potential leak path through the valve stem seals. The repeated cycling of any ball valve over extended periods of time can cause fugitive emissions to escape through the valve stem packing. Certain ball valve suppliers have pioneered solutions for this potential problem.

One is a multi-purpose secondary media containment device that also can serve as a monitoring system. These devices provide a secondary sealing mechanism for the valve stem. By adding a secondary set of graphite stem packing with a live loaded design using Belleville washers these devices also automatically compensate for any temperature or pressure

fluctuations, thus maintaining a leak proof seal for extending the life cycle of the valve. By providing an added height these devices also distance any valve actuation components from dangerous high temperature media.

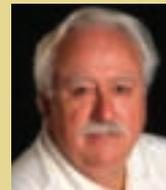
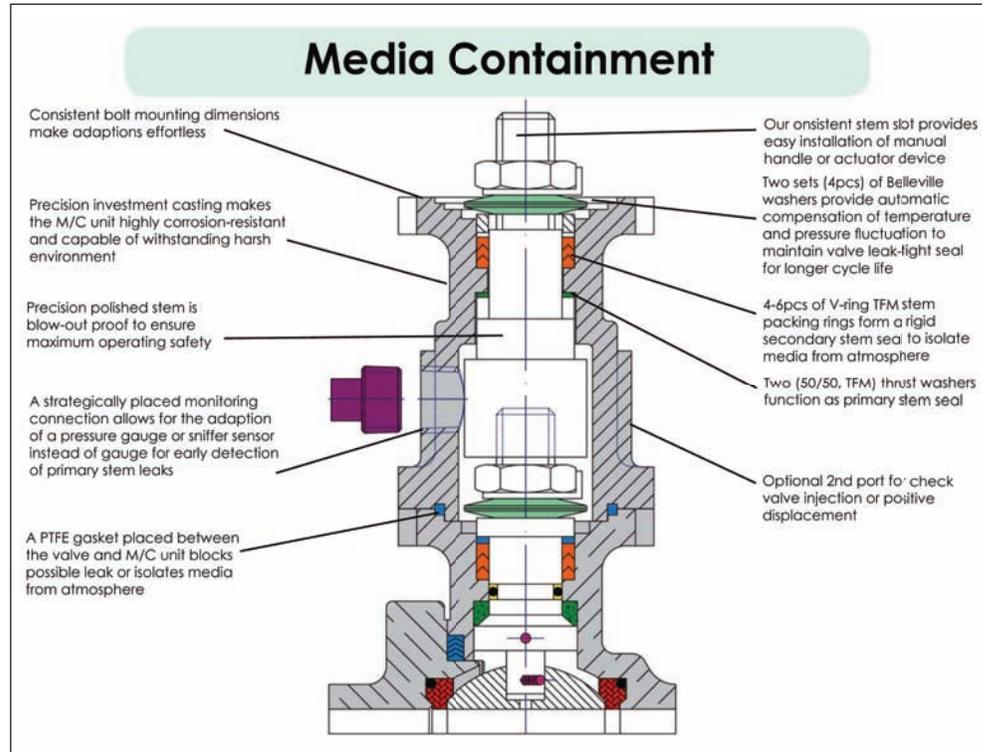
Considering potential plant shut downs due to emissions of hazardous materials, the possibility of EPA fines, potential workmen's compensations issues, higher insurance premiums, and potential negative public relations, the expense of adding these media containment devices is well worth their modest cost.

In addition, other monitoring devices can be easily adapted like a simple sensing device that can be fitted onto the media containment unit that will act as an alert in the event of any stem failure. A button head check valve can also be adapted to the media containment device allowing for a sealant to be injected providing an additional third seal if an emergency shut-off is needed. Lastly, a positive displacement air line can be permanently connected to the media containment device, providing a positive pressure supply that exceeds the valve line pressure. This is another assurance against the possibility of any valve stem leak to the atmosphere.

These media containment devices are an ideal economical solution for reducing the possibility of costly down time situations and other

risks caused by ball valve stem leakages. Any safety engineer tasked with controlling the possibility of hazardous material emissions will find these media containment devices another line of defense against that possibility.

Media containment devices can be fitted to automated valves when ordered, or kept in reserve for immediate installation when a problem is identified, thus extending the life of the valve and avoiding costly down time for replacement of a valve.



About the Author

Bob Donnelly is the Vice President of Marketing for Flo-Tite Valves & Controls. Bob is a pioneer in valve automation and has over 30 years of experience in the valve industry.