Valves & Actuators

Pay Now, or Pay Later

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Metal-seated ball valves were introduced to solve problems associated with soft-seated valves whose performance too often degraded in applications that challenged their service limits. The primary advantage of metal over soft seats is their ability to withstand high temperatures and severe service conditions.

Metal-seated ball valves are designed for service temperatures up to and exceeding 1,000 F. Proven in the field, they provide uninterrupted service with the highest shut-off standards for longer time-in-service than soft-seated valves.

In metal-to-metal seating, dependent on service conditions, application of various coatings allow the ball and seat rings to be hard faced on the sealing areas. Coating examples include electrolysis nickel plating, satellite hard facing, chromium carbide and tungsten carbide. Sealing is assured by metal-to-metal contact between the two hard-coated surfaces.

Choosing the right seat material is the most challenging decision in ball-valve selection. For the most effective solution, the more application information available the better the materials selection will be.

Metal-seated ball-valve installations can adhere to shut-off standards, including ANSI/FCI 70-2-1976 for allowable leakage. Class V and VI are the most frequently specified leakage class. Class VI is frequently misinterpreted as "bubble tight." Actually, a certain amount of leakage is allowed and is measured by the number of bubbles of air that escapes per minute in established testing.

"Bubble tight" shut-off is more correctly associated with resilient-seated valves.

Metal-seated valves are expensive, but when the cost in downtime due to failure and in replacement of soft-seated valves is factored in, total cost of ownership may actually favor metal-seated valves for the same application.

In summary, metal-seated valves deliver economical long-lasting solutions for critical applications.

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