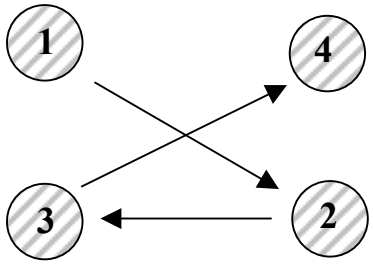
Installation, Operation and Maintenance Instructions
For Super Ceramics Valves
ANSI Class 150 & ANSI Class 300

I. INSTALLATION

a. The valves shall be stored in a dry and ventilated environment, in «full open position».The valves shall not be piled-up in storage. All valves have been factory inspected and pressure tested.
b. Prior to installation, all valves shall be inspected for damage or dirt accumulation during transport and handling.
c. The Super Ceramics valves are bi-directional and as such can be installed for flow in either direction.
d. When installing flange bolts, always tighten in a sequential pattern as indicated in figure 1. Bolts should be tightened to the appropriate torque as specified by SAE for the grade of the bolts being used.

NOTE : After bolts have been tightened, it is good practice to re-check flange bolt torques ½ to 1 hour after initial tightening (particularly when stainless steel bolting is used).

Figure 1 – Flange bolts tightening sequence.



II. VALVE OPERATION

a. All Super Ceramics ball valves feature ¼ turn operation. Turning the valve handle 90^{o} will fully open the valve.
b. The valve handle also serves as a ball orifice position indicator. When the valve handle is parallel to the pipe, the valve is open, when perpendicular to the pipe, the valve is closed.
c. All Super Ceramics valves are designed to provide optimum anti-leakage performance whenever furnished with PTFE, RTFE or Polypropylene seats.
d. To provide the longest possible service life, a hand operated ball valve should be operated in either its fully open or fully closed position. If an intermediate operating position is to be utilized, it shall be selected with the help of your area sales representative. Excessive pressure drops could adversely affect the service life of the valve.
e. All Super Ceramics valves are factory assembled using a lubricant. If the presence of this lubricant is objectionable, the valve can be ordered from the factory assembled without lubricant. If the lubricated valve is already in the field, the lubricant can be removed by thoroughly flushing the valve with an appropriate solvent.
f. During operation Do not exceed the valve's NON-SHOCK pressure / temperature rating. DO NOT open/close the valve abruptly. Open /close the valve slowly.

SUPER CERAMICS BALL VALVES

HALESON

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III. MAINTENANCE & TROUBLESHOOTING

a. During its normal service life, one of the maintenance items that may be required by your Super Ceramics ball valve, should be periodic stem seal adjustment. If leakage at the stem is noted, simply tighten the valve stem gland nut or packing plate bolts until leakage subsides. It is not practical to predict frequency of stem adjustment, as it is influenced by such factors as frequency of cycling and Process conditions.

IMPORTANT : As is the case with any valve on the market today, it is important that stem leaks do not go unattended. Lack of timely maintenance could result in a premature need to replace the stem seals(i.e. the packing).

NOTE : If operating temperature of system is substantially higher or lower than 80°F, initial stem seal adjustment may be required to prevent leakage. Installations that do not allow access to valve stem area for maintenance should be avoided.

b. If there is difficulty to turn the stem;
   1) The packing may been too much tightened, loosen the packing.
   2) The stem or the ceramic ball or seat surfaces are dirty, need to clean-up these deposits.

c. If there is leakage through the split body area; tighten the body bolts. If the leakage persists. Open the valve to inspect the interior.

d. For valves with soft seats (PTFE, RTFE or PP) if there is leakage across the valve to the downstream piping;
   1) Tighten the body bolts (same as item c. above)
   2) Open the valve to check if the seats, the ceramic ball, the body lining are dirty or damaged. Clean-up or replace parts as required.

IV. REBUILDING

WARNING : Most standard bi-directional ball valves on the market today regardless of manufacturer, can trap fluids under pressure in the valve when closed. If your Super Ceramics ball valve has been used to conduct hazardous media, the following steps should be taken prior to removal from line.

CAUTION : Always advise maintenance personnel when they are maintening or rebuilding a valve that has been conducting a hazardous material. The use of eye protection and protective clothing must be stressed.

a. Relieve the line pressure and install the necessary blind flanges.
b. Place the valve in its half-open position and flush the line to remove hazardous material from the valve. The valve can now be removed from the pipeline.
c. The replacement of worn out parts and the rebuilding of the valves shall be carried on by qualified personnel only.
d. Use only original Super Ceramics replacement parts.

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