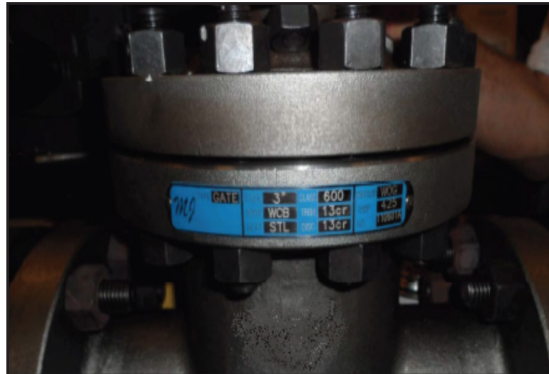


## Challenge

### Background

An international valve manufacturer was introduced to **Chesterton 1622** low emissions packing and wanted to obtain sealing performance in valves, based on the International Standards Organization (ISO) 15848-1 test protocol. Whereas the API 622 standard focuses on the packing performance regardless of the valve make and model, the ISO standard is a test of a specific valve performance with the packing installed. Both the valve and the packing become qualified as one offering.



Valve manufacturer's test valve.

## Solution

### Product

The test protocol selected was:

- On/Off (block) valve with 1500 mechanical cycles
- 100 bar g (1450 psig) at ambient temperature
- 90 bar g (1300 psig) at 200° C (400° F)
- The manufacturer selected a 3" 600 Class Gate Valve for the performance test



Chesterton 1622 single spool packing.

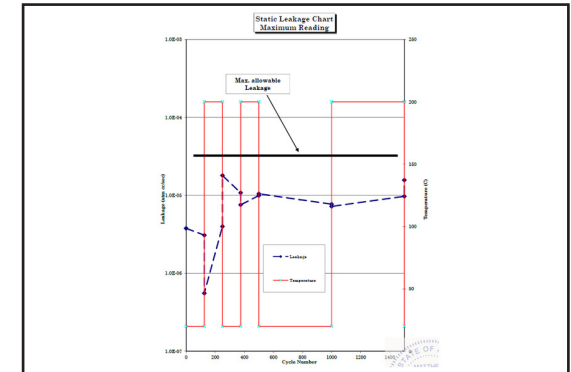
## Results

Leakage measurements passed Class B requirements, indicating this flexible graphite packing achieved the sealing performance of a PTFE packing.

With readings consistently below Class B requirements, **Chesterton 1622** had a maximum static leakage rate of  $3.0 \times 10^{-6}$  atm cc/sec.

### ISO 15848-1 Tightness Classes:

- Class B:  $\leq 10^{-4}$  mg/s-m: typically achieved with PTFE based packing or elastomeric seal
- **Chesterton 1622** qualified at Class B



Leakage measurements exceeded Class B.