



**DISCOVER INDUSTRIES, INC.**

**DISCOVER VALVE**

**DISCOVERVALVE.COM**

**719-434-1727**

## How Does Discover Industries Ensure API Standards Are Met?

The American Petroleum Institute (API) sets various standards for different aspects of the oil and gas industry, including valve testing. API testing for ball valves typically involves a series of steps to ensure that the valves meet the required performance and safety standards. [Discover Industries](#) inspects every shipment that arrives at their Colorado warehouse according to the API 598 Standard per the guidelines set by Standard E 2234 (the Practice for Sampling a Stream of Product by Attributes Indexed by AQL).

### Pre-Test Inspection:

- a. Visual Inspection: Examine the valve for any visible defects or irregularities, such as cracks, dents, or improper assembly.
- b. Documentation Review: Verify that all documentation, including design specifications, drawings, and factory inspection reports are in order and match the valve being tested.

### Thread or Inside Diameter Confirmation:

- a. NPT (National Pipe Thread): Discover Industries ensures valve thread depth does not exceed accepted tolerance by using NIST (National Institute of Standards and Technology) traceable plug and ring gages.
- b. Inside Diameter (ID): Socket Weld and Flange valves must fit within specified ID dimensions. Discover uses verified measurement equipment to determine the ID and ensure it meets the specifications.

### Pressure Testing:

- a. Shell Test: Discover Industries uses a custom-made hydro-tester to perform a shell test which verifies the structural integrity of the valve body and closure. This test involves pressurizing the valve to a specified pressure to ensure that it can withstand the required design conditions without leaking, deforming, or becoming damaged.
- b. Seat Leakage Test: Conduct a seat leakage test to check the tightness of the valve seats. This is typically performed using a hydrostatic test, where the valve is subjected to a specific pressure to detect any leakage from the seats.



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#### Material Testing:

- a. Body material: Discover Industries uses a Niton XRF analyzer to verify body material. This ensures a product marked as CF8/304SS is at minimum 304 stainless steel. More importantly if a product is marked with CF8M/316SS, Discover can ensure that it has the required amount of molybdenum in the material composition.
- b. Seats and Seals: PTFE (Polytetrafluoroethylene) is the most common seat material in Discover Valves; however, Discover Industries *EXCLUSIVE* [high-temperature ball valves](#) are fitted with Grafoil seats and seals which can withstand a greater temperature range.

#### Documentation and Reporting:

- a. Record all test results, including any anomalies. If a specified sample size does not pass the requirements a 100% Inspection may be required to ensure quality.
- b. Generate a comprehensive test report that includes all relevant data, test procedures, and results.

#### Certification:

Only when the valve passes all tests and inspections, can it be certified as compliant with the API Standards and put into inventory for sale. Discover Industries offers [Individualized Traceable Certifications](#) with a unique Serial Number and matching certificate verifying authenticity of the product. This service is available for a minimal fee, upon request.

