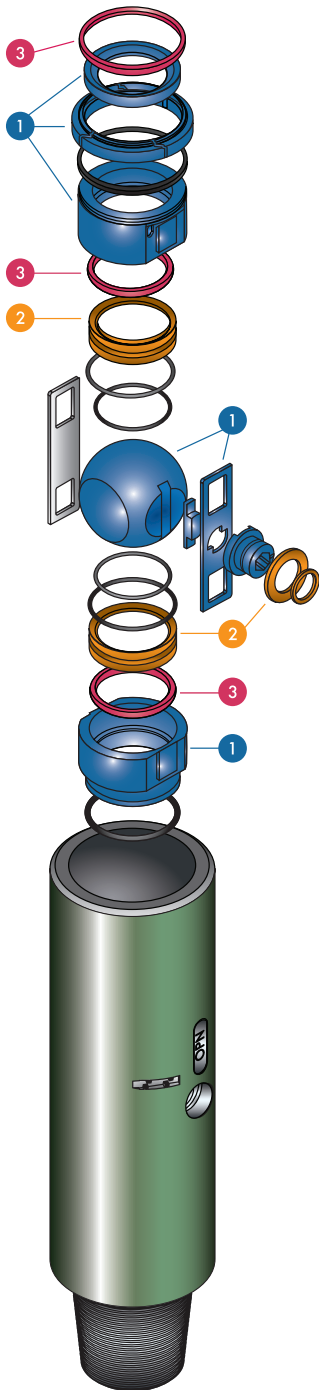


Well Control Valves

What's in your H₂S Trim Valves?

According to API Specification 7-1, paragraph 5.7.4, supplemental requirements for H₂S trim: any valve internals exposed to the service environment must be in compliance with NACE MR0175/ISO 15156 Standard Materials Recommendations - Metals for Sulfide Stress Cracking and Stress Corrosion Cracking Resistance in Sour Oilfield Environments.



- 1 17-4PH (UNSS17400):** precipitation-hardening stainless steel steel in HH 1150 condition has been successfully used for mildly sour environments. According to NACE MR0175, 17-4PH is acceptable for valve components other than the body and bonnet, provided that the partial pressure of H₂S does not exceed 0.5 psi.

Given that the valves are only "H₂S trim," they should not be used in severely sour conditions and that restriction is immaterial in the HH1150 condition.

- 2 Tough Met AT110 (UNS C72900):** a copper-nickel-tin alloy designed for use in applications demanding wear resistance, high-bearing performance, and resistance to saltwater corrosion. NACE MR0175 indicates that copper alloys may be used without restriction in sour service conditions.
- 3 Alloy X-750:** a precipitation-hardened, nickel-chromium alloy specifically approved for springs by NACE MR0175 at hardness values up to 50HRC. It is a good alternative to 17-7H for retaining rings.

The EZ-FLOW CARTRIDGE™ has patent protected technology.



1369 West Mills Avenue Breaux Bridge, LA 70517
337-442-6057 337-442-6071 fax
www.mmoiltools.com

