

# ***Gonval*** INC.

## World Class Clampseal® Fire-Safe Valves

- *Meet API Standard 6FA*
- *Retrofit with any  
Clampseal Globe Valve*
- *Single-piece Gland*
- *Cartridge-type  
Packing Chamber*
- *Pressure Seal Backseat*



# Conval Clampseal® Fire-Safe Valves are ideal for refining and chemical plants where fire safety is a major concern.



## DESIGN FEATURES

### *Meets API Standard 6FA by extremely high margins*

In a typical globe valve, if the yoke is exposed to the direct flame of a fire, it will expand at a rate much greater than the stem. As the yoke grows due to thermal expansion, the disc is lifted up off the seat, and considerable leakage occurs. This is true of virtually all globe valves now on the market.

Conval has developed a simple mechanism that compensates for thermal expansion. The stem bushing is allowed to float in a recess in the top of the yoke, and is loaded by a series of Belleville washers. The Bellevilles maintain a load, forcing the stem assembly down into the seat, even when the yoke expands at the high temperatures of a refinery or chemical fire.

The Conval fire-safe Clampseal valve has been tested and successfully passed the rigorous test procedure defined by the American Petroleum

Institute (API) Standard 6FA. In brief, this procedure calls for the test valve to be placed in line and pressurized to 75% of rated pressure, then subjected to a 1400-1800°F fire for 30 minutes. The valve is then quenched with water to cool it to ambient temperature, cycled to prove operability, and then subjected to further pressure testing. The valve is required to maintain strict leakage allowances during and after the burn.

### *Retrofitted with Standard Clampseal Globe Valves*

Our entire line of Clampseal globe valves may be retrofitted with this fire-safe capability, including: Y-pattern stop, check, and stop check valves; T-pattern stop, check and stop check valves; angle stop, check and stop check valves.

## STANDARD SIZES

1/2" through 4"  
SW and BW Ends  
Special ends available

## PRESSURE RATING

ASME/ANSI Class 900 through 2500

## STANDARD MATERIALS

A105, F22, F91, F92, F316, F347  
Inconel™, Monel™ and other materials.

## SPECIAL TESTING

Tested and passed API Standard 6FA

### *Uniform Single-piece Gland*

Proven, corrosion-inhibited, high-density graphite packing is loaded uniformly with a one-piece gland. This eliminates the potential for stem damage from gland cocking.

### *Cartridge-type Packing Chamber*

With secure leakproof bonnet, this chamber allows rapid access to valve trim for inspection and maintenance. Pressure boundary is sealed at the smallest diameter possible, to ensure maximum strength and low stress.

### *Pressure Seal Backseat*

The pressure seal backseat provides maximum valve integrity by ensuring a positive internal stop for the valve stem and disc assembly. It also securely isolates packing from line pressure when valve is fully open, to increase packing life.

*ISO 9001 certified since  
September 11, 1992*

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