

OIL & GAS

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TECHNICAL DATA SHEET

Product Code: D0920
Quality Standards:
ISO 9001:2015
ISO 14001: 2015
Issue Date—February 2017
Revision—02

Valve Sealant 701-L

Heavy duty gate valve sealant—for valves with buried check-valve injection fitting
NLGI 2

Introduction

API 6A gate valves are designed to achieve a metal to metal seal between the gate and seat. In some cases the seal surfaces can be damaged, either because of insufficient preventative maintenance. Poor choice of service lubricant, arduous operating conditions or a combination of all.

In such cases Valve Sealant 701-L may be injected into the valve cavity, to assist in achieving a seal across the gate or seat surfaces. The ability of any sealant to provide a seal which will sustain full wellhead pressure, depends upon its performance and the specific condition of the valve components. Valve Sealant 701-L is field proven as highly effective.

Description

Valve Sealant 701-L is a specially formulated heavy duty valve sealant. In full scale testing it has been proven to seal a severely passing gate valve. Valve Sealant 701-L is fully resistant to all types of produced hydrocarbons and also to high levels of H₂S and CO₂.

Valve Sealant 701-L's physical texture and high metal adhesion promotes extended cavity retention. It also has enhanced lubricating properties to protect the sealing surfaces during further functioning of the valve under high differential pressure.

Applications

Valve Sealant 701-L should be used in gate valves with moderate to severe leaks, where the use of Valve Sealant 701 is not possible because the specific model of gate valve has a secondary, "buried" check valve injection fitting. Valve Sealant 701-L is fully compatible with Valve Sealant 701 and Valve Lubricant 601.

Valve Sealant 701-L may be injected into plug and ball valves in an attempt to assist with sealing however elastomer seal compatibility must be

Testing

During development, Valve Sealant 701-L was workshop tested in a 5K API 6A gate valve with a severely damaged seat, cut to a depth of 0.75 mm. Despite the severe damage, the sealant was able to provide a full seal and held pressure of 5,000 psi, which was the rated working pressure of the test valve. A detailed test report is available upon request. Valve Sealant 701-L is suitable for use across all pressure classes of API 6A gate valves, it is not limited to 5K psi service.

Typical Characteristics

Appearance	Visual	Adhesive
Colour	Visual	Black/Grey
Thickener		Inorganic (non-soap)
Temperature Range		0°F to 350°F
Unworked Penetration	IP 50	265-295
Drop Point	IP 396	Non-melting
4-Ball Weld Load	IP 239	>620kg

Base Oil Characteristics

Type		Synthetic
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Important Note

The injection of a sealant is a temporary measure. The valve is leaking due to physical damage to the sealing surfaces, the valve or its components should be changed out at the earliest opportunity. The sealant may be employed to assist in regaining integrity so well intervention operations can be carried out in a cost-effective manner.

Valve Sealant 701-L can be pumped by high pressure pumps—please contact RS Clare for pump specification advice.

*It is the sole decision of the operator if a sealant is employed to assist to restore or maintain the integrity of a valve as a well barrier. *Prior to injecting 701-L, the operator should identify the exact make, model and pressure rating of the gate valve and then confirm the arrangement of the sealant injection fitting(s) in the valve's bonnet. If a buried check valve is present please utilise Valve Sealant 701-L*

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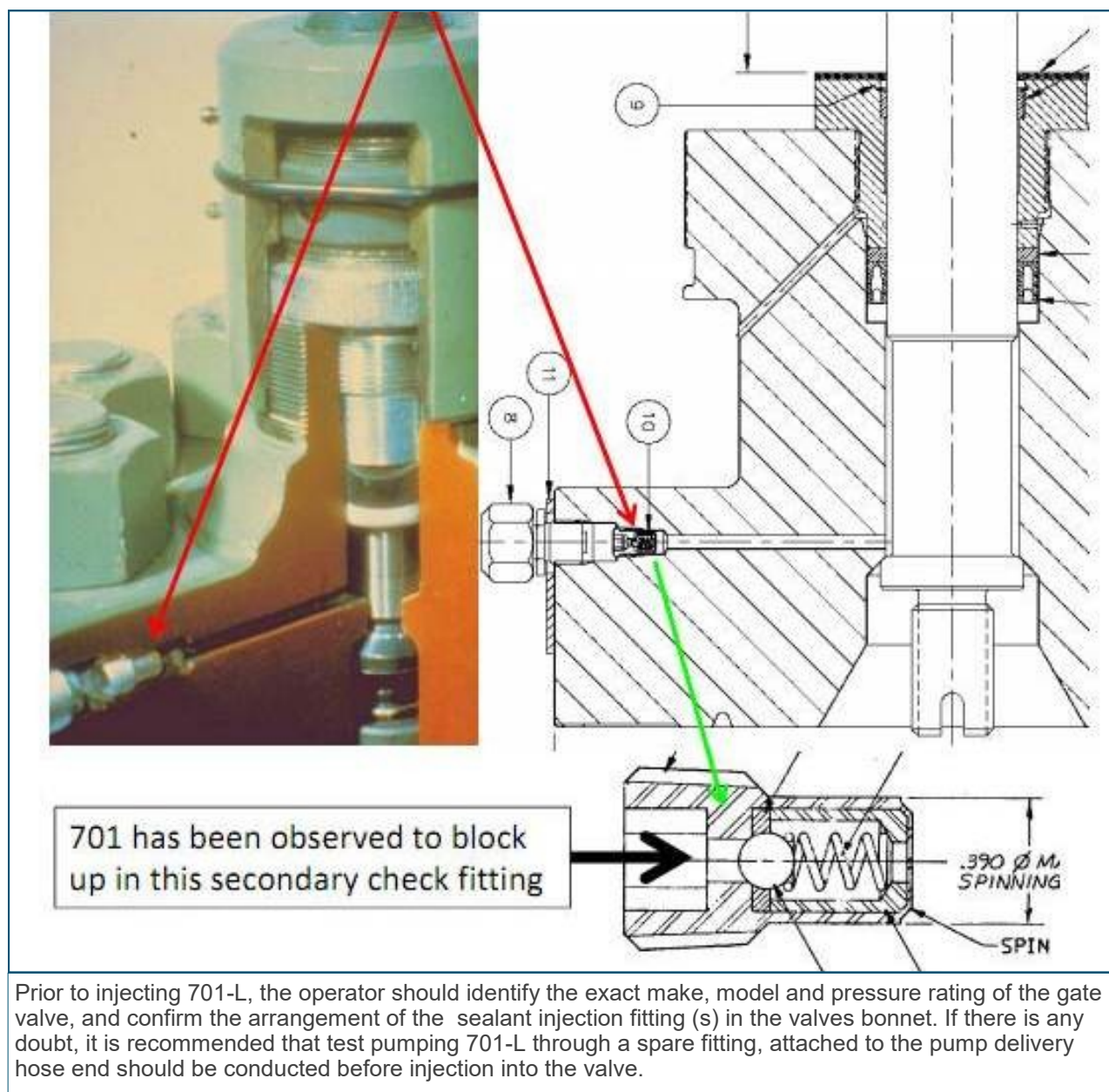
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Secondary, “Buried” Injection Check Valve Fitting



Prior to injecting 701-L, the operator should identify the exact make, model and pressure rating of the gate valve, and confirm the arrangement of the sealant injection fitting (s) in the valves bonnet. If there is any doubt, it is recommended that test pumping 701-L through a spare fitting, attached to the pump delivery hose end should be conducted before injection into the valve.

It is the sole decision of the operator if a sealant is employed to assist to restore or maintain the integrity of a valve as a well barrier.
**Prior to injecting 701-L, the operator should identify the exact make, model and pressure rating of the gate valve and then confirm the arrangement of the sealant injection fitting(s) in the valve's bonnet. If a buried check valve is present please utilise Valve Sealant 701-L*