

# LEE TECH TALK

## TECHNICAL APPLICATION NEWS BRIEF

### NEW ZERO LEAK CHECK VALVES OPERATE RELIABLY IN TOUGH CONDITIONS

#### The Challenge

As companies involved in oil and gas exploration and production continue to push their boundaries into deeper wells, the reliable operation of drilling, completion, and production equipment under extreme environmental conditions is a major challenge. For example, chemical injection systems are dependent upon check valves that can prevent reverse flow of chemically aggressive wellbore fluids at extreme temperatures and pressures without the possibility of leakage.

#### The Solution

For decades, The Lee Company has continually expanded the performance limits of their field-proven range of Lee Chek® miniature check valves. Recent developments have resulted in configurations manufactured completely out of materials compliant with NACE specification MR0175/ISO 15156. The valves utilize MP35N bodies and poppets for durability, and custom polymeric valve seats that offer zero leakage of fluid at pressures up to 15,000 psid and at temperatures up to 400 °F. Seat material options are available to achieve compatibility with typical subsea and down hole fluids and gases.

#### The Benefits

NACE Compliant Zero Leak Lee Chek® valves exceed the performance requirements necessary for oil tool operation under the extreme environmental conditions found in deep wells. The valves are 100% performance tested to guarantee reliable, consistent performance for the life of the system. They are also self-retained, without the need for o-rings, through the use of the field-proven Lee locking end, which securely locks the valves in place and prevents any bypass leakage. Available in sizes from 0.187" up to 0.500" diameter, Lee Chek® check valves offer the ability to optimize the combination of size and flow rate for most down hole applications. Configurations may also include integrated safety screens or restrictors for added protection and performance.

#### Potential Applications

Reverse flow prevention valves are commonly used in oil tools operating in all stages through the life of an oil well. NACE Compliant Zero Leak Lee Chek® valves are ideal when the application requires zero leakage at high differential pressures in high temperature, corrosive environments. They are currently in service in chemical injection systems, gas lift systems, and down hole safety valves.

#### Lee Chek® Valves

These NACE Compliant Zero Leak Lee Chek® valves are the latest innovation in the extensive offering of check valves available from The Lee Company. With sizes available from 1.0" down to 0.093" diameter, Lee Chek® valves are the smallest in the world. The Lee Company has supplied millions of Lee Chek® valves worldwide, many operating for over 30 years in service. Lee Chek® valves set the standard for size, weight, and dependability.

#### THE LEE COMPANY

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