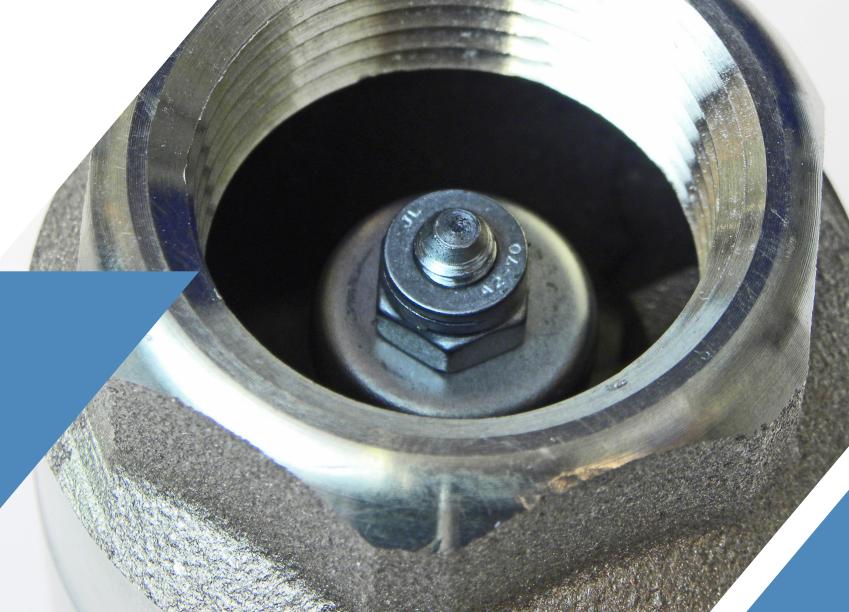




Preventing Compression Check Valve Failures

ESL locknuts maximize production and minimize labor



CHALLENGE

Installation Problems Cause Headaches for Manufacturers

Manufacturers of compression check valves often experience seized nuts during installation and removal. Unfortunately, anti-seize pastes and greases are not always possible due to in-service contamination. As a result, they must contend with a multitude of problems:

- Sorting and verifying locknuts before installation, which leads to an increase in labor costs and lost material for failed nuts.
- Potential chemical reaction or contamination that could occur with anti-seize pastes and greases.
- Inability to remove nuts to perform required maintenance, creating increased downtime and high warranty costs for OEMs.

ESL LOCKNUT CHARACTERISTICS

Prevailing torque

ASME B18.16.6
(IFI 100/107)
ISO 2320

Mechanical

SAE J995- Gr.5 & Gr.8
ASTM A563, A194
ASME B18.16.6
ISO 898-2, cl.8-10-12
A2070 / A4-80
304L / 316L

Features

Installs with standard tools
Suitable for hand tools
Locks in any position
Highly reusable



Closeup of ESL locknut



WHY USE THE ESL?

Benefits of ESL Locknuts

- 1 Reliable and predictable locking performance**
with no galling and no damage to bolt threads.
- 2 No seized nuts**
during installation and maintenance.
- 3 Significantly lower maintenance costs**
(both time and labor) caused by fastener failures.
- 4 Elimination of warranty claims**
related to locknut failures.



Check valves

SOLUTION

Consistent Performance with ESL Locknuts

J.Lanfranco worked with a major compressor valve manufacturer that was experiencing a high frequency of seized nuts. As costs mounted, the OEM searched for a solution to **improve installation efficiency** and **eliminate maintenance issues**.

The ESL locknut, in stainless steel 304L passivated, was implemented to overcome these problems. After successful testing on 300 valves, the OEM decided to outfit all of its major valves with this innovative solution. Today, nearly 150,000 valves are produced annually using ESL nuts.

What are ESL locknuts?

With an all-metal design made of a single unique material, the J.Lanfranco ESL locknut requires no insert. It derives its prevailing torque from two radially de-pitched locking slots positioned parallel to the thread pitch in the turret portion of the nut.

The locking slots are opened by the bolt threads and apply precise and controlled locking torque directly on the thread flank. As a result, this non-galling fastener technology resists all forms of dynamic and cyclical vibration without damaging the bolt threads.

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