LOCTITE®

Run Like a Well-Oiled Machine

The Benefits of Metal Free Anti-Seize

Henkel Excellence is our Passion

The Skinny on Anti-Seize

It is common to say when a situation is proceeding as planned that everything is “running like a well-oiled machine,” indicating that, even on a basic level, most people understand the importance to operation of lubrication for moving parts in industry. On a more specialised level, maintenance staff in relevant industries such as mining, manufacturing, power, oil and gas could describe the benefits of good quality anti-seize lubrication. These could include protection of metal parts from rust, corrosion, galling, and seizing; easing assembly and disassembly; the reduction of friction and wear on critical operating equipment; as well as a protective role.

What might be less well-understood is that not all anti-seize products are as beneficial as each other for the machinery they are used on, for the workers applying them, or for the environment. The choice of lubricant can have a great impact on any operation, especially over time and with possible changes to government regulations.

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Heavy Metal Pollution

Common ingredients in many of the anti-seize lubricants used widely in industry are copper, nickel, aluminium and zinc, as well as other heavy metals. The governments of Australia[1] and New Zealand[2] are increasingly requiring industries to act sustainably. These will see metallic contaminants being phased out, requiring industries to convert to the use of metal-free anti-seize products.

The dispersal of heavy metals, including lead, into the environment where contamination of soil and water supplies can occur is a growing concern for all types of industry. The use of anti-seize products containing these harmful substances can subvert a company’s own anti-pollution initiatives, as well as potentially causing harm to workers, the public and the environment.

The choice to use anti-seize products containing nickel and copper can be a counter-productive one as it could cause corrosion when used on stainless steel, brass and bronze items, such as pipes[3].

Impurities and Corrosion

Many workers incorrectly believe that the same metal-based anti-seize they are familiar with can be used in every circumstance. Maintenance staff are not always properly trained to understand which anti-seize is appropriate for particular applications, nor why the right choice is important[4]. But there is a high cost to the business for making an incorrect choice.

When incorrect metal-based anti-seize lubricants are used on machinery, causing corrosion, the parts must be replaced. This can cause unscheduled shutdowns, meaning that profits are lost while the machines are inactive, and further costs the industry by requiring parts to be replaced with increased frequency, thereby decreased Mean Time Between Failures.

Corroded and rusty machine parts are also an increased WHS risk[5], as greater force needs to be applied to loosen joints; and seizing, vibration and other inefficient operating difficulties can be encountered.

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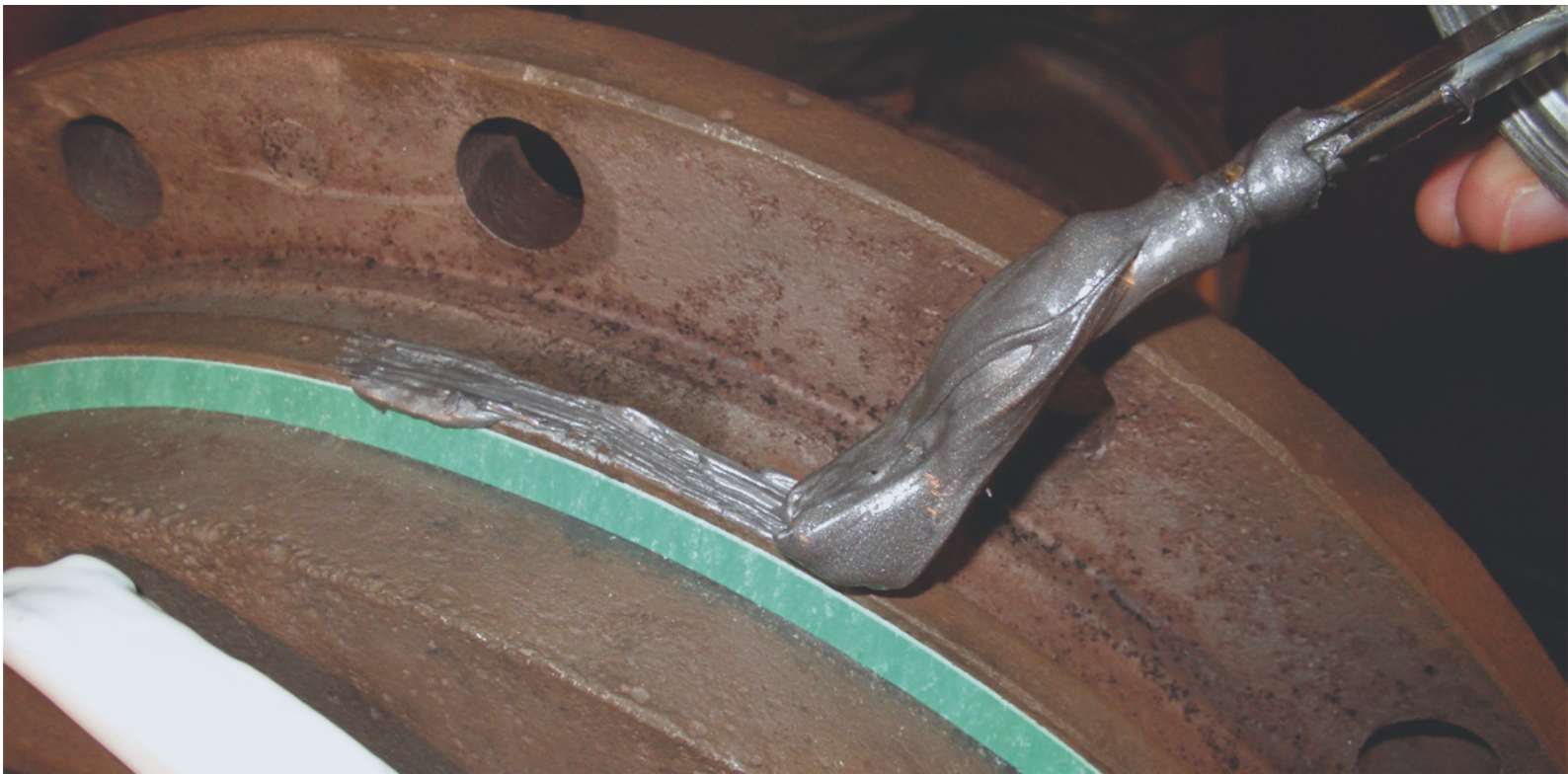

Switch to Metal Free Anti-Seize

These problems, including the need to comply with changing legislation, can be avoided by simply switching to the use of a metal free anti-seize lubricant product.

A high quality metal free anti-seize, such as those manufactured by Loctite, can also confer other benefits with its use. In addition to being competitively priced, Loctite's range of metal free anti-seize products reduce wear and tear on machinery by using graphite which acts more effectively to evenly lubricate than metal-based products, thus lowering maintenance costs.

Loctite Heavy Duty Anti-Seize is widely used in mining, quarrying, and manufacturing plants, particularly in oil and gas where copper-based anti-seize use is prohibited. It has a reputation for quality and affordability and is available in both liquid and stick forms. A food grade metal free anti-seize is also available in Australia and New Zealand and beneficial to the food and beverage industry. Risks are reduced for workers, who are consequently not exposed to heavy metals, nor is the environment exposed to heavy metal pollution.

Loctite's Heavy Duty Anti-Seize functions on all metals including galvanized iron, stainless steel, brass, aluminium and soft metals between -29 °C and +1315°C. Loctite's Heavy Duty Anti-Seize has been formulated to resist higher temperatures than most other anti-seize products on the market. Loctite's Heavy Duty Anti-Seize is also non-reactive with the catalyst used in petroleum refineries: traces of copper from metal based anti-seize products can theoretically contaminate and deactivate the catalyst used in these operations[6].

When other anti-seize products fail to perform, Loctite's Heavy Duty Anti-Seize can continue to work, according to rigorous testing of the products. Other anti-seize products can fail to be approved for gas turbine applications, but Loctite has GE approval for this use.

The Loctite Heavy Duty Anti-Seize Stick confers all the same benefits as its liquid counterpart, but the semi-solid form suits it ideally for convenient use overhead. Small enough to be kept in a pocket, it is convenient, fast and easy to apply, and won't leak or drip onto workers or surfaces.

When considering the need to comply with environmental sustainability policies, worker safety, machine longevity and ease of operation, as well as over-all effectiveness in every application, Loctite's range of metal free anti-seize can provide a product that fulfils all requirements to keep any job running smoothly.

References

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