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PRESS RELEASE

Getting Down to the 'Nuts and Bolts' of Pump and Valve Maintenance

Power plants depend on hundreds of valves and many different pumps to carry out operations 24/7. Any time these fail or go offline for repair can be a big problem. Interestingly, the root cause is sometimes as simple as a nut that has rusted in place on a packing gland. Cortec® therefore encourages power plant maintenance crews to use two simple bolt loosening options to keep the situation from getting out of control.

The Problem of Rust on Packing Glands

Each pump or valve contains "packing" material held in place by a "packing gland" to prevent leakage from the stem. These packing glands are held in place by nuts that need to be periodically adjusted to put more pressure on the packing material as it ages. It is also common for a little bit of water to leak out of the gland over time, causing the nuts and bolts to rust. If the rust is so bad that it locks the nut in place, the worker may be tempted to put more pressure on it during adjustment. Unfortunately, this is one of the worst things to do, as the extra torque on the immovable nut may put so much pressure on the bolt that it breaks. If this happens, it means a simple maintenance task has suddenly turned into a big headache because the pump or valve will need to be taken offline for repair.

Two Ways to Loosen Nuts and Bolts

Instead of trying so hard to turn a rusted packing gland nut, the easy solution is to cut through the rust with a product such as Cortec® VpCI® Super Penetrant. This deep penetrating formulation allows the user to quickly penetrate through deep rust, displacing moisture and loosening the corrosion products. At the same time, it lubricates the metal parts, allowing them to move freely, while also leaving behind an ultra-thin corrosion inhibiting film for lingering protection. By spraying the rusty nuts and bolts of the packing gland with VpCI® Super Penetrant, maintenance crews can quickly cut through the rust that is locking the fasteners in place, allowing them to be loosened and adjusted as needed while avoiding breakage and further repair.

Those who want to add more biobased products to their maintenance portfolio can use EcoLine® CLP. This USDA Certified Biobased Product contains 89% USDA certified biobased content from renewables such as canola oil and canola methyl ester. EcoLine® CLP lubricates, penetrates, and leaves behind a very persistent layer of protection for damp environments like those inside pumps and valves. Bolt loosening power is also good, according to one test that showed lower torque was needed to unscrew rusted nuts treated with EcoLine® CLP than to unscrew those treated with a widely used conventional penetrant/lubricant.

The Power of Little Things

As the packing gland adjustment scenario above shows, it is often the small things that make a big difference. By unlocking nuts that have rusted in place, maintenance crews can avoid bigger problems like broken bolts and unexpected downtime needed to repair pumps and valves. The same solutions can be applied to other rust-frozen components around the plant. Contact Cortec® for further guidance on corrosion control in power gen and any other industry that faces rust: **https://www.cortecvci.com/contact-us/**

Keywords: pump and valve maintenance, packing gland nut, loosening nuts and bolts, rust on packing glands, cut through rust, rust on packing gland nuts, power plant valve rust, USDA Certified Biobased Product, Cortec, bolt loosening power

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