Seaworthy CuNiFer

Cunifer passivation

Cunifer 90/10 has a high resistance against corrosion and bacterial adherence. This metal alloy is used for marine applications, dealing with seawater. The formation of a good passivation layer is crucial.

Work method

The most common practise for chemical passivation of Cunifer is based on circulation with a temporary cleaning system. Alternatively, the component can be immersed in a treatment bath. During assembly, the vulnerable monolayer requires extra care.

We advise our clients on the scope for treatment and provide all associated documentation in accordance with cGMP guidelines. We will generate bespoke RAMS for each project, including fully marked-up P&ID's and GA's showing temporary circulation loops and flushing sequences.

After approval of our engineering, we agree on a planning for execution, often shortly before commissioning. All testing is performed with certified calibrated equipment.

A final report of the complete chemical cleaning will be issued for later reference.

Sodium Diethyldithiocarbamate

SDMC is the chemical used to apply a monolayer on the Cunifer. This process is called chemical passivation.

SDMC is a powerful chelator of Cupper. It binds the metal ions to macromolecules. This stable structure acts as a corrosion inhibitor and has a brownish color.

Scientific research:

1. **Without proper use of backing gas, the corrosion rate of Cunifer in sulphide containing seawater, increases. Without chemical passivation corrosion is visible within 2 days.**
2. **Under ideal conditions the protective layer grows up to 3 months. Sulphide in the seawater inhibits the formation.**
3. **Chemical passivation with SDMC significantly improves the corrosion resistance of Cunifer.**

CONTACT US IF YOU NEED ASSISTANCE WITH YOUR PROJECT

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