



VpCI® SOLUTIONS FOR LONG-TERM PRESERVATION, LAYUP, & MOTHBALLING

CASE HISTORY SPOTLIGHT

Case History #303: On-Deck Layup of Offshore Equipment

CASE HISTORY
Lay-up Preservation System For Offshore Equipment

PROBLEM
 A new Cortec® customer needed to store equipment for one year on the deck of an offshore platform. Exposure to salt water spray, sand, shot blasting operations, among other corrosive elements, made this an interesting challenge.

An effective method of corrosion protection during this storage period was needed. Additionally, the customer required a solution that was safe and easy to apply for storage at this remote location.

STEPPY STEPS INSTRUCTIONS FOR MUD PUMP PROTECTION

1. All exterior and accessible inside surfaces of the unit were sprayed with VpCI®-414 Cleaner/Degreaser diluted to a 15% concentration with water.
2. The crane and oil system of the DC motor were protected by adding 30% by volume of the oil capacity of VpCI®-329 Oil Based Concentrate.
3. The standpipe manifold was connected to the check manifold and the standpipes were cleaned out. Potable water was added to the cleaned out mud pit. VpCI®-1609 Powder was dissolved in water to a concentration of 5% and flushed through the system until clean. However then drained and the solution was disposed of. VpCI®-1609 Powder is a biodegradable product which does not have special disposal needs.
4. Valves and valve seats, piston rods, and lines were removed from the pump. Valves and valve seats were washed with VpCI®-414 Cleaner/Degreaser diluted to 15% with water. Inside surfaces of the fluid cylinder liners, bushing, and rods chamber were cleaned and internal surfaces were sprayed with VpCI®-369D Corrosion Inhibitor Lubricant. Piston rods and lines, hose clamps, and rod clamps were descaled and deionically cleaned with VpCI®-422 Non-Toxic Rust Remover, VpCI®-414 Cleaner/Degreaser and coated with VpCI®-369D Outdoor Corrosion Inhibitor. Piston rods and lines were covered with VpCI®-126 Blue Film, and sealed with waterproof adhesive tape before placing in a storage box.
5. VpCI®-137 Foam Pads were placed on suction filters and ventilation side of the DC motor. The DC motor was then wrapped with VpCI®-126 Blue Film, which was additionally secured with waterproof adhesive tape.
6. All exposed surfaces of the mud pump housing were coated with VpCI®-369D Outdoor Corrosion Inhibitor.

PRODUCTS
 EcoLine® Bio-Based Rubber Revitalizer
 EcoAid® 422 Non-Toxic Rust Remover
 EcoLine® Bio-Based Cleaner/Degreaser
 ElectroLine® VpCI®-329
 VpCI®-301 Emitters
 VpCI®-303 Emitters
 VpCI®-414 Cleaner/Degreaser
 VpCI®-422 Non-Toxic Rust Remover
 VpCI®-126 Blue Film
 VpCI®-137 Foam
 VpCI®-329 Oil Based Concentrate
 VpCI®-369D Outdoor Corrosion Inhibitor
 VpCI®-369D Corrosion Inhibitor Lubricant
 VpCI®-414 Bio-Based Cleaner/Degreaser
 VpCI®-609 Bio-Based Powder
 VpCI®-1609 Bio-Based Grease

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 January 2007

CORTEC® REPRESENTATIVE
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A mud pump, BOP (blowout preventer), and top-drive unit needed to be stored for one year on the deck of an offshore platform. This presented interesting challenges because of exposure to corrosive conditions such as seawater spray, sand, and shot-blasting activities. The client needed an effective method of corrosion protection that was also safe and easy for them to apply in a remote location. Cortec® was able to meet the customer's requirements in a corrosive environment by supplying the following preservation system along with world-class technical support.

Preservation involved cleaning much of the equipment's inner and outer surfaces with VpCI®-414 or VpCI®-415. VpCI®-422 and VpCI®-423 were used where rust removal was required. Various exposed equipment surfaces were coated with VpCI®-368 M, while many internal surfaces were protected by spraying or lubricating them with VpCI®-369 D.

A number of the components, such as gearboxes and or oil systems, were protected by adding VpCI®-329, an oil-based corrosion inhibitor concentrate. EcoLine® Bio-based Rubber Revitalizer provided protection for storage of various rubber components, such as the BOP packer and ram body top seals. The top drive rail, wire cables, and rotating gears were coated with CorrLube™ VpCI® Lithium EP Grease, as were the BOP bearing and brake linkages, which were also covered in VpCI®-126 Film. VpCI®-609 was dissolved in water and flushed through part of the mud pump system until clean.

Electrical enclosures of the top drive were protected with Electricorr® VpCI®-238, VpCI®-101 Devices, and VpCI®-105 Emitters. VpCI®-126 Film was used to wrap the DC motor of the mud pump, in combination with VpCI®-137 Foam Pads, which were placed on the suction filters and ventilation side. Other components on the rig were also stored in VpCI®-126 Film.

Startup procedures generally required simply rinsing outer equipment surfaces with EcoLine® Cleaner/Degreaser, removing VpCI®-126 Film and VpCI®-137 Foam Pads, and inspecting as needed.

Read the full detailed case history here: https://www.corteccasehistories.com/?s2member_file_download=access-s2member-level1/ch303.pdf

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