

CASE: Ocean Teams Chemical Cleaning and Passivation

- resulted in huge savings for our customer

An incorrect storage of completely new nitrogen bottles almost costed the customer a fortune in purchasing of new bottles and daily fines for lost work.

When handling lifting operations from a ship, it is important to maintain and stabilize the ship's position.

This stabilization happens with a number of automatic regulated thrusters (dynamic positioning) or by emplaced anchors and chains.

When the sea is rough and the waves are high, the movements of the ship are too powerful for arming the wells or anything similar situated on the ocean floor or on fleets.

Our customer had discovered a completely new wave compensator solution enabling more stability and effectivity during rough conditions on and in the ocean.

The solution included six newly fabricated 4½-meter high nitrogen bottles (accumulator) placed on board of the ship and thereby able to participate in maintaining the ships position.



▲ *Incorrect sealing of the bottles by using the wrong vents and seals enabled saltwater and moisture to penetrate and thereby cause the rust.*

However, prior to the process of using these bottles, they found out, that they had stored the bottles incorrectly, and therefor rust was showing on the inside.



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After an in-depth video inspection of inside of the nitrogen bottles, it was fair to say that they did contain rust deposits. They had to remove the rust before using the bottles, as it potentially could affect the control valves negatively.

Solution Suggestion:

Purchase New Nitrogen Bottles

Buying new is always a solution to solve a cleaning problem, yet time of delivery for nitrogen bottles were 6 months and time of approval would cross the customer deadline. In addition, the solution would result in expenses for purchasing and expenses in form of possible daily fines.

Our customer chose to search for alternatives and therefore they called Ocean Team.

Ocean Team's solution:

Effective and Timesaving Chemical Cleaning and Passivation.

Ocean Team created the right mixture of chemistry to clean the bottles from rust deposits. They filled every bottle with this chemistry and left them to soak for 12 hours.

After the chemical cleaning process had ended, the bottles went through a new video inspection and approval by the customer. Afterwards, the bottles were nitrogen dried and passivated. Finally, the customer tightened the reduction vents securely to make sure the problem would not arise. The entire process lasted only 3 days. The following day, the customer attached the nitrogen bottles to the ship.

Nobody exceeded the deadline, no daily fines issued, and the cost and time of buying new nitrogen bottles saved!



Photos above clearly show the badly infected nitrogen bottles.
Photos below shows the bottles after chemical cleaning.
Now ready for passivation. ▼

