

**CASE:**

**How Dependent is One of a Functional Toiletsystem?**

100% ! - The production platform is otherwise in risk of mobilization.

**An elder vacuum-toilet system required constant maintenance from two men approx. 10-12 hours a week. It was important to do take action and do something to avoid a full system breakdown.**

The system pipelines were long and with a countless number of tortuous bends. In order to remove blockages they would cut the pipes in areas they assumed blocked. Then after trying to clean on the inside, they re-gathered them the best possible way. A difficult and perishable solution. More and more cut rings appeared and thereby, also a greater risk of further blockage. Not only were the hours of maintenance manifold, also the toilets failed continuously; a major irritation for everybody on site.

Besides blockages, the pipes suffered from corrosion damages. It was important to act fast. If pipes started to leak, extremely bad hygiene could risk infection among the platform crew. The customer approached Ocean Team to investigate on better solutions.

**Ocean Team's Solution: Installation of a new system.**

As Ocean Team penetrated the pipes with a video inspection, it revealed a very thick inner coating. Samples were picked out in order to find its origin. By a closer sample review it indicated a huge amount of layered uric acid stones.

It was difficult to conclude on other infecting particles, so samples were tested with chemistry, yet, no chemistry was able to dissolve the stone. Due to this this and because of the badly shaped pipes, they commonly decided to skip both the chemical- and mechanical cleaning. Ocean Team suggested to remove and deposit the wast toilet system and a following installation of a new pipe system. This time using pipes with a greater diameter.



▲ Uric acid stones and other growth lie layer upon layer - almost similar to growth rings of a tree. The passage keeps decreasing.

The alternative was to continue using the old expensive system including the cost of two men working the long hours per week. Hours, more constructively usable within oil and gas objection. While still using the previous system, the customer constantly, ran two vacuum pumps in order to maintain the vacuum pressure inside the system.

Ocean Team spend only two months on changing the system to a new with a wider diameter. This change reduced the suction pressure significantly as well as it reduced the wear on the toilet house. Now, the customer only needed one vacuum pump switched on periodically. Ocean Team rebuild the toilet system while the old system was still up and running.

The customer were very satisfied with Ocean Teams efforts and left a fine opinion on their behalf. The customer, especially, mentioned Ocean Teams' professional planning of night- and dayshifts.



▶ Samples were send to the Institute of Technology for analysis with following chemistry testing. No chemistry was able to break down the stones.



◀ The newly installed pipe system. In order to avoid frost skips, they dressed the pipes in heating cables.