

Case Study 1

Desiccant Breathers for Oil Storage Tanks

Background

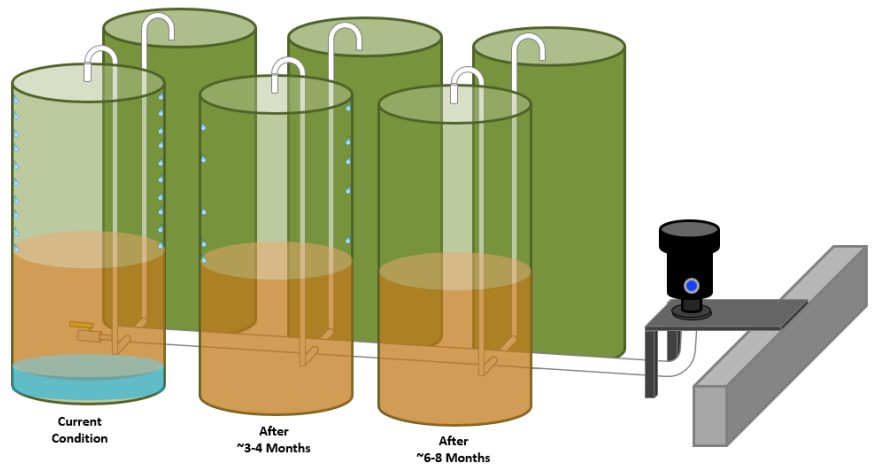
A Midwest oil distributor stores and sells multi-brand bulk lubricants, hydraulic fluids, heat transfer oils and transmission fluids. Their largest customer of hydraulic fluids requires extremely clean and dry fluid delivered and certified. To meet their quality requirements they extensively filtered the fluid before and after loading onto their trucks causing high OPEX. When they started testing the fluid from their suppliers, they found the fluid to be much cleaner than what was coming out of their own storage tanks. Further investigation showed they had excessive condensate problems in their storage tanks causing free water and oxidative solids to collect in the oil. Northeast Filter was asked to investigate options to remove and eliminate the moisture ingress problem.

Solution

Large desiccant breathers were installed to isolate environmental moisture from the oil. Each time they filled the tanks, moisture laden air in the head space of the tanks was exhausted through the breathers, removing moisture. The dry headspace air caused any free moisture in the oil to transfer to the air as the air attempts to reach moisture-equilibrium with the oil. After six months the fluid quality leaving their storage tanks was the same as their delivered quality and filter consumption at their delivery trucks was greatly reduced, substantially reducing OPEX.



Impact of Desiccant Breathers



For Reference Only – Head Space Volume, Oil Movement/Frequency & Environmental Conditions will Directly Impact Tank Results and Desiccant Life

This case study is an original work of Northeast Filter & Equipment Company (Northeast Filter). Any copying or other use by any other party is prohibited without the express written permission of Northeast Filter.

©2020 Northeast Filter & Equipment Company. All Rights Reserved.