



ANSIMAG Pumps Provide the Right Fit for Oleum Applications



A large mid-western chemical producer has been using ANSIMAG pumps since the late 1980s. The operators in this plant enjoy a long-lasting & productive relationship with Sundyne's Romeoville Illinois distributor, Corrosion Fluid Products. So when a pump made by another manufacturer went down in the plant (back in 1998), they called Corrosion Fluid's John Pesek for a same-day replacement that could handle Oleum (103.5% Fuming Sulfuric Acid).

The ANSIMAG line makes for ideal replacements, because the pumps come in a wide range of sizes and their external dimensions facilitate a quick & easy swap, without having to change piping or baseplates. Given the urgency of the situation, Pesek took what he had off the shelf – an ANSIMAG K3158, in standard ETFE construction.

A quick examination of the Tefzel charts revealed that ETFE was recommended for Oleum (at that time) but only to 120° Fahrenheit. The chemical plant was running at 150° – so Pesek informed the operators that this would be a temporary replacement – which should get them through the next few weeks. The ETFE pump lasted 6 weeks before fluid started to drip out the bracket weep-hole. By this time, the pump was replaced with another ANSIMAG pump, constructed with PFA internals.

When Corrosion Fluid Products got the ETFE pump back in their shop, the internals looked fine. There was no visible leak path through the containment shell and the impeller was in surprisingly-good shape. They set the impeller on the shop bench, rinsed it thoroughly, and the next day

they noticed a 12" diameter puddle of Oleum, which had leached out of the ETFE (...a perfect example of "weight gain" with plastics.)

DuPont makes the PFA for Sundyne pumps, so Pesek called them to evaluate the suitability of PFA with Oleum – which was fine. During this research, he learned that CFR mouth rings were not suitable for Oleum because they absorbed Oleum – and this was what caused the problem with the first replacement pump.

With this in mind, Corrosion Fluid uses a standard lined casing of ETFE. There is no permeation with this ETFE, since it is not carbon filled. They've had casings in service for many years. They use all PFA-wetted materials with a SiC mouth ring and Viton o-ring.

Their Chemical Plant customer has gotten an extremely long service life out of the internals – proving the point that Oleum is a good service for ANSIMAG. As a side note, they also use standard ETFE ANSIMAG pumps for 93% and 99% Sulfuric applications, with no issues.

As an FYI, John Pesek was ANSIMAG 7th customer – back in 1985 (at McKesson Chemical, bleach services). Anyone interested in contacting John can reach him at Corrosion Fluid Products, Romeoville, IL 630-200-8659, or jpesek@corrosionfluid.com.



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