

Background

A Wind Tower builder had a massive water ingress that contaminated the oil system used to fill wind tower rotors (hub with the 3 blades attached) at the jobsite. The contaminated oil in the rotors showed a water saturation of 100% and visible free water was noted in the oil. The customer needed an onsite solution to remove the water from contaminated oil. Disassembling the wind tower rotor and returning to the shop would entail huge expenses due to additional labor, permitting and crane fees.



Solution

Working with our Distributor, Schroeder expedited a Triton-E and Filtration Station® to the site in 8 days.



Triton-E

Our **Triton-E Dehydrator** has a 15 GPM flow rate and is capable of removing 100% free water and 90% dissolved water. The Triton-E was used to dehydrate the oil to 33-35% saturation. The dehydrating process took approximately 1.5 hours per tote (220 gallons each).



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The **Filtration Station®** was used to show the ISO level and water saturation levels were within acceptable levels according to the OEM's oil specifications. The Filtration Station® data was downloaded via the USB port to a laptop to create a permanent record of the achieved cleanliness level. This documentation was necessary for warranty purposes.

Overall cost savings was estimated to be greater than \$1 Million. This includes the cost of down time, labor savings of 25 people on site, potential charges for three cranes and permits, rotor transit time to the repair shop and back, and loss of production time.

Additional Benefits of Equipment

- Conditioning and documenting the cleanliness of fluid being used for new installations to assure proper Warranty Compliance. In general, new fluids do not have the required cleanliness levels (ISO), and might have elevated water concentrations due to storage conditions.
- The Dehydrator and Filtration Station® can be used for future, planned Maintenance requirements. The maintenance includes the cleanup of the fluids by removing particulates and water that have accumulated over time, to prevent gear box damage and to extend fluid life.

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