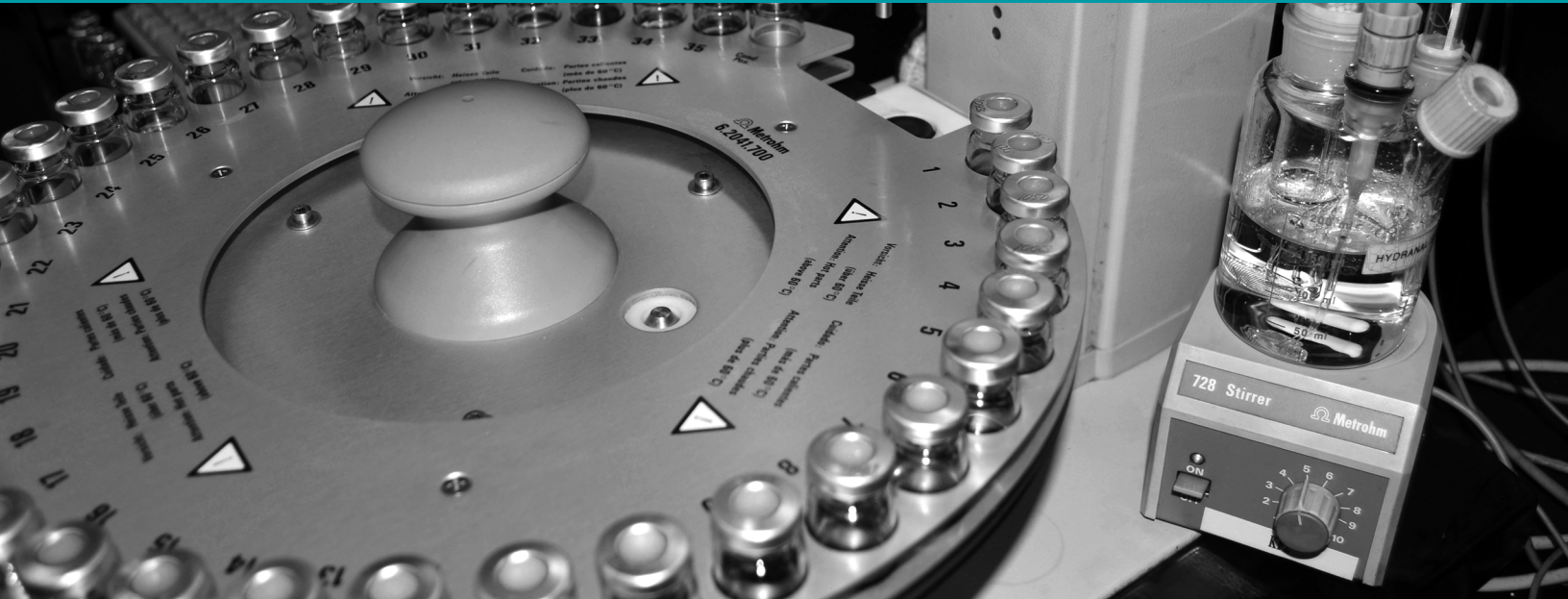


KARL FISCHER WATER TITRATION



Water contamination is a primary concern for many types of industries. In some climates and operating environments, water contamination is a of a greater concern than solid particulate contaminants and wear metals. Small amounts of moisture may potentially lead to severe component damage, resulting costly downtime and loss of productivity. Karl Fischer Water Titration (Karl Fischer) is an excellent test for hydraulics, compressors, turbines, bearings and any component where water contamination is a concern.

Karl Fischer is a widely used analytical method (ASTM D6304) for quantifying water content. Knowledge of the water content of lubricating oils, additives and similar products can be useful to predict quality and performance characteristics of the product. For lubricating oils, the presence of moisture could lead to premature corrosion and wear, an increase in the debris load resulting in diminished lubrication and premature plugging of filters, an impedence in the effect of additives and undesirable support of deleterious bacterial growth. Results from a Karl Fischer can be reported as low as 0.001%.

Benefits of Water Testing:

- Increased equipment reliability
- Reduction in component wear
- Reduction in costly down time

The Effects of Water:

- Accelerates oxidation and promotes corrosion
- Displaces the oil film and leads to erosion in journal bearings
- Diminishes the effectiveness of oil additives
- Causes premature clogging of filter elements
- Acts as an abrasive at high speeds

With the ability to measure moisture at such low levels, out customers gain the benefit of having the earliest indicator of water ingress. Dissolved water can be detected using a Karl Fischer which would not be detected by basic testing methods.

A Karl Fischer can be triggered by the crackle test in an industry test package or by customer request, set as a default to include in additional testing.

MAINTENANCE SOLUTIONS

If an elevated level of water is present, a maintenance professional could deploy:

- Hygroscopic Breather
- Auxiliary Filtration
- Vacuum Dehydration

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