**Chiller Oil Migration**

**EFFICIENCY REDUCTION AND CAPACITY LOSS**

- All oil-based refrigerant compressors experience oil migration into the refrigerant.
- Independent industry parties have written papers documenting this fact and state that even in well-maintained chillers, refrigerant contamination can include 3% to 8% oil.
- Even at only 3.5% contamination, chiller efficiency loss is 8%.
- This loss is not included in any ARI/EER/NPLV/kw per ton calculations!
- The reality is that a net plant capacity of 100 tons quickly becomes 92 tons, but with the same energy consumption.
- Avoid this efficiency loss and wasted money for the chiller’s service life by using oil-less magnetic bearing compressors.
- When comparing energy models between conventional machines with oil-based bearings and more efficient magnetic bearing machines, remember to include this loss – only comparing published NPLV’s does not account for this inevitable oil migration.
- Bottom line – a 100 ton plant using scroll/screw/stnd centrifugal compressors will quickly become a 92 ton plant, whereas a 100 ton magnetic bearing centrifugal compressor plant will maintain full capacity.
- Use McQuay WMC/WME chillers with integral VFD’s for industry-leading chiller plant.

McQuay chiller selection software already helps you evaluate thousands of McQuay centrifugal chillers quickly and efficiently to find the best customer value. Now we have added a powerful new feature with Lifecycle Cost Analysis – a new software criterion for filtering and comparing centrifugal chiller configurations.

While most maintenance and repairs are comparable between McQuay and competitors, major maintenance for McQuay costs less. Therefore, when you compare chillers with identical first cost and energy efficiency, you also need to compare the cost of major maintenance. When major maintenance is included, McQuay chillers provide a lower total cost of ownership. In addition, McQuay has developed products with premium efficiencies giving McQuay a major advantage from a Total Cost of Ownership basis!

**VEMCO Q & A**

**Q:** What program did McQuay introduce last year to promote Centrifugal Chiller planned maintenance?

**Prize:** $50.00 AMEX gift card

**CONGRATs to** Travis Deaton of Tempright who correctly identified the moderator of the Cleaver Brooks webinar as Engineered Systems.

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