

Refinery River Water Pumps

- ▲ Refinery in the northeastern United States
- ▲ Ingersoll Rand 14AFV double suction between-bearings pump
- ▲ 8500 GPM at 1180 RPM
- ▲ 6 pumps have been converted since late 2005
 - 4 pumps operating, 2 spares
- ▲ Magtecta-OM with purge oil mist system and closed Trico oiler system
- ▲ OEM bronze dust collar also retained as a packing water leakage deflector
- ▲ One of the pumps converted to Magtecta-OM in 2007 had had 8 shaft or bearing failures between 1999 and 2007
- ▲ Since 2007 no failures or lubricant contamination
- ▲ Monthly vibration readings normal since conversion
- ▲ Maintenance Cost Avoidance = \$29,807 per year



Magtecta-OM and OEM
bronze dust collar



Sludge cup clean after 6 months operation

Atmospheric Heater Charge Pump

- ▲ Refinery in northeastern United States
- ▲ Sulzer model HSB, between bearings
- ▲ Atmospheric heater charge (hot crude).
- ▲ Pump kept getting water in the bearing housings from the steam quench.
- ▲ Pumping temp is 220 F
- ▲ Speed 3600 rpm.
- ▲ Pump also overhauled with Vespel wear rings and throttle bushings and isolators.



HMD-Kontro Magnetic-Drive Sealless Pumps built with Magtecta-OM for closed oil system

- ▲ Refinery in northeastern United States
- ▲ HMD-Kontro API-685 magnetic drive sealless pumps on Sour Water
- ▲ Selection of Sealless Pumps Eliminated need for expensive tandem or double mechanical seals and accompanying seal support system
- ▲ Hermetically sealed bearing frame
- ▲ Magtecta-OM bearing isolators and Trico closed balanced oilers with splash lubrication
- ▲ Prevents rapid oil oxidation caused by aggressive and noxious chemical environment with presence of H₂S



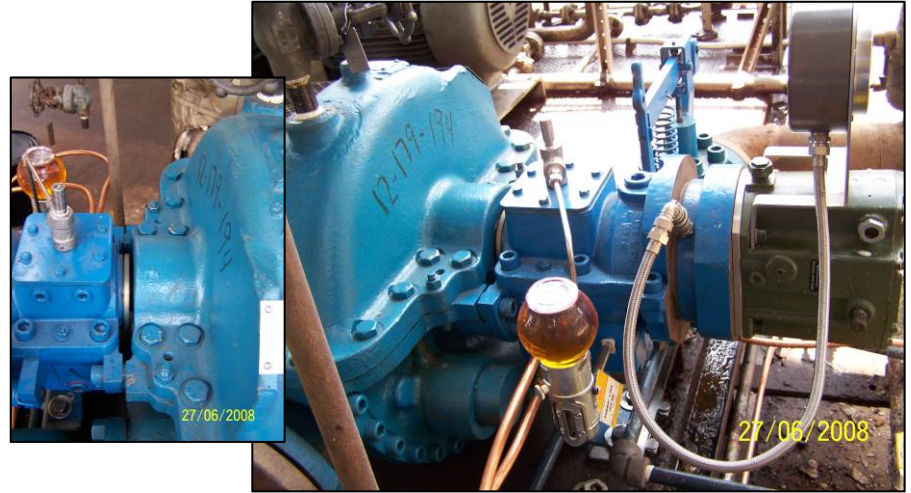
Oil Mist Motor

- ▲ Refinery in northeastern United States
- ▲ 75 hp General Electric
- ▲ Problem:
 - Oil entering windings
 - Lip seals caused bearings to run hot
- ▲ Magtecta-OM on inboard and outboard sides of both bearings
- ▲ Worked with motor shop for installation and test run at motor shop
- ▲ Result: Bearing temperatures dropped to normal
- ▲ Subsequently converted sister motor



Elliott Steam Turbine Labtecta-ST Bearing Isolators

- ▲ Refinery in northeastern United States
- ▲ Elliott 2AYR steam turbine
- ▲ Labtecta-ST installed and operating June 2008
- ▲ Overhaul by outside shop
- ▲ Previously had to change oil every 2-3 weeks
- ▲ Oil remained clean despite slight steam leak in Nov 2008
- ▲ 12 avoided PMs with oil change
- ▲ Savings of nearly \$5,000 in first 9 months
- ▲ Payback of less than 3 months



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| Further to AESSEAL Case Reference. 3495 | |
| Industry: | API Refining |
| Application: | Elliott Steam Turbine |
| Previous solution: | OEM Labyrinth |

