

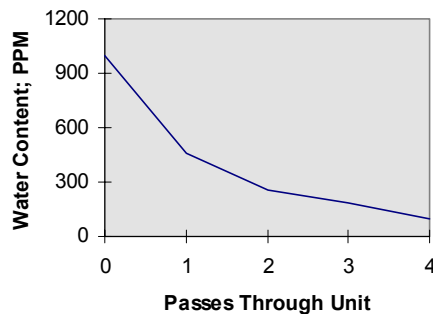
***The ThermoJet<sup>®</sup> Oil Purifier is an advanced, effective and reliable product which purifies industrial lubricants, hydraulic oils and other similar fluids. The ThermoJet<sup>®</sup> utilizes the principal of air/gas stripping making it technically sound and mechanically simple. The patented design and process of the ThermoJet<sup>®</sup> delivers benefits and results not possible with other types of oil purification equipment and technology.***

### **Principal of Operation**

The ThermoJet<sup>®</sup> works on the principal of air stripping. The use of air or nitrogen bubbled through contaminated liquids has long been used to remove contaminants. But the use of this technique was restricted because the volume of gas required was large due to limited mixing of the gas with the liquid. The unique technology embodied by the ThermoJet<sup>®</sup> makes air/gas stripping practical and efficient because of the mixing and intimate contact of the air/gas with the fluid being cleaned. In addition, the ThermoJet<sup>®</sup> utilizes the principal that the capacity of a gas to entrain moisture increases exponentially with temperature. For example, with a 55-degree Celsius increase in temperature, there is a 30-fold increase in the capacity of gas to hold moisture.

### **Water Removal**

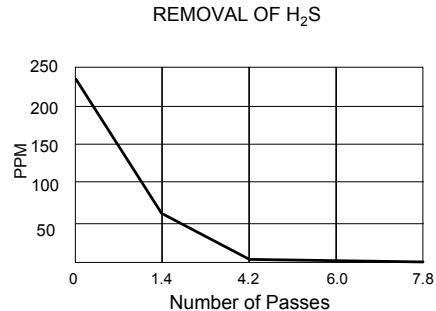
The ThermoJet<sup>®</sup> Oil Purifier not only removes free water it also removes emulsified and dissolved water meaning compressor, turbine lube oil and hydraulic systems can be kept water-free.



This results in improved reliability of machinery and also eliminates the need for frequent change of lube oil. The ThermoJet<sup>®</sup> will take oil that contains 1000 PPM of water down to a total water content of less than 100 PPM within five passes of the oil through the unit. The ThermoJet<sup>®</sup> out performs other equipment such as settling tanks, coalescing filters and centrifuges.

### **Degasification**

The ThermoJet<sup>®</sup> removes dissolved light hydrocarbon gases such as propane and H<sub>2</sub>S from industrial lubricants. In refineries and petrochemical plants an ideal application for the ThermoJet<sup>®</sup> is the removal of hydrogen sulfide from compressor seal oil. The ThermoJet<sup>®</sup> returns the viscosity of the lube oil and restores the oil flash point to like new levels. No longer is there a need to dispose of gas laden and sour lube oils; these oils can be purified and reused. Contaminants disposed thru the flare system.



The gas stripping technology and process design embodied in the ThermoJet<sup>®</sup> is mechanically simpler and a more reliable approach than that used in more complex vacuum systems.

### **Environmental Cleanliness**

ThermoJet<sup>®</sup> Oil Purifiers remove water and gaseous contaminants from industrial lubricating oil without contaminating the environment in which they operate. All ThermoJet<sup>®</sup> Oil Purifiers are equipped with the condensate purifier assembly that absorbs oil from the water condensate before it exhausts from the unit. Documented tests show that the water discharged can be put into a sanitary sewer since the contained hydrocarbon is below 8 parts per million. (EPA limit is 15 PPM) In addition, on all units that do not exhaust to a flare system, a practice which is strongly recommended when degassing, an oil mist eliminator rated at 1 micron minimizes oil mist in the vapor exhaust meaning the unit can be used in indoor industrial applications.

### **Benefits of ThermoJet<sup>®</sup> Oil Purification**

- All forms of water removed to below 100 PPM!
- Increase Machinery Reliability: No machinery failures due to poor oil quality.
- Eliminate oil changes by always keeping your oil like new.
- Eliminate new oil purchases and reduce oil inventories.
- Reduce particle filtration: Water catalyzes rust and corrosion formation that in turn produces sludge. When Oil is maintained with water contamination below 100 PPM, corrosion, rust and sludge is eliminated. Filter changes are significantly reduced.
- Zero disposal of waste oil
- No drum disposal.

# Benefits of THERMOJET® Oil Purification Systems

## Benefits

- Improved Machinery Reliability
- No Machinery Failures Due To Contaminated Oil
- Extended Oil Life Minimizes Downtime Required For Oil Changes
- Reduce Cost of Purchasing New Oil
- Eliminate Spent Oil Disposal Cost
- Easily Satisfy Environmental Regulations On Waste
- Oil Generation And Hydration Discharge

## Industries Served

- Power Generation
- Pulp & Paper
- Refining & Petrochemical
- Original Equipment Manufacturers
- Marine
- Oil / Gas Drilling & Production
- Plastics Injection Molding
- Automotive
- Aerospace
- Mining
- Steel, Iron. & Aluminum
- Food Processing
- Metalworking & Metal Fabrication