

## Comment on the performance of ThermoJet® Systems at Alliance Refining Company (ARC) - Thailand

Since 1995, we have successfully used the ThermoJet® System to purify the lube oil for Rotating Equipment both on-line and off-line (lube oil recondition). This system has proven that it can reduce the environmental impact of waste lube oil disposal and also the amount of new lube oil required for the refinery.

### **ThermoJet® with the Major Equipment:**

ARC (SPRC at the time) installed three permanent ThermoJet® systems on the Lube Oil Skids of the Steam Turbine Generator, Main Air Blower, and Wet Gas Compressor. We also purchased two moveable ThermoJet® systems for the large lube oil skid that contained more than 3000 liters of lube oil (for Recip., Heat Pump, and Centrifugal Compressors). During the past five years, the lube oil analysis has indicated that the lube oil viscosity, water content, acid number, insoluble, etc. are still within an acceptable operating condition after the continuous lube oil treatment by ThermoJet® system. The ThermoJet® has minimized the level of water and solid contamination, which contributes to a longer service life of the lube oil. We will continue using these oils until the lube oil analysis indicates an unacceptable limit of lube oil viscosity, acid number, foam tendency, insoluble, etc. Based on the past analysis records, we are hoping to use these oils for the next five years or more.

### **Lube Oil Recondition Program with MOCS Unit and ThermoJet® system:**

ARC Maintenance started the lube oil recondition program in CY-1999. This program was initiated to recover the used oil from the LubriMist® systems. The MOCS unit is used to collect the lube oil from the LubriMist® system collection pots and the ThermoJet® oil purifier is used to recondition the used oil. The program has recovered a total of 15,732 liters/year from the original consumption of 22,361 liters annually. This figure indicates that the program has helped reducing the waste lube oil from the refinery by 70%. In the same time, the annual costs of the new lube oil (Caltex Regal Oil 100) for the LubriMist® systems was reduced by 70%. (Note; 15 LubriMist® systems are in place.)

We hope that the above information will give you some idea of what happening with the ThermoJet® system at ARC. It has shown a great benefit of having this kind of equipment in-house. Please let us know if you have any questions or need more information regarding this matter.

Anuphot Bamrungtrakun  
Maintenance Superintendent

June 2000