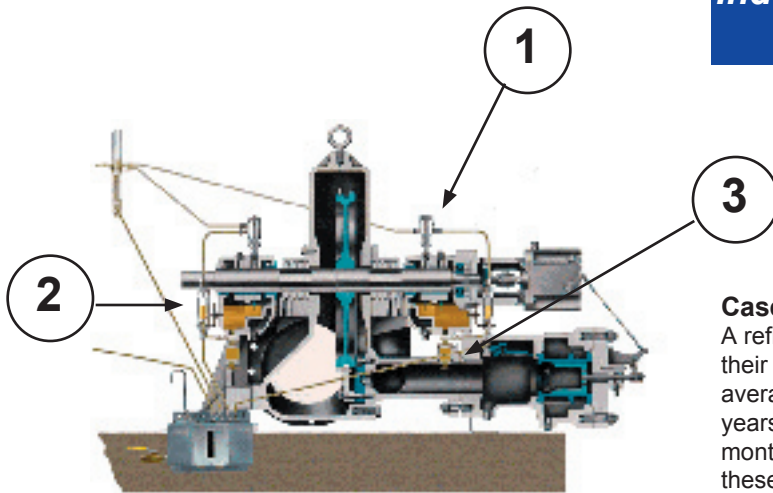


# APPLICATION BULLETIN...

**Small Steam Turbine Lubrication  
Industry - Refining, Petro-Chemical  
& Pulp-Paper**



## **Case History:**

A refinery in Texas applied an oil mist purge to their turbines in their Cat/Alky units in the fall of 2001. The MTBR for these turbines averaged 50 months prior to applying oil mist lubrication. After 2 years of operation with oil mist, their MTBR has increased to 210 months. This shows a healthy trend in the mechanical reliability of these turbines.

## **LubriMist® Oil Mist Can Be Cost Effectively Installed on Your Small Steam Turbine To Deliver Improved Machinery Reliability.**

### **The Problem:**

Water condensate migrates into the sump and contaminates the oil, causing rust and oxidation in the bearings. The consequence is costly repairs and reduced equipment availability. The repair cost can easily exceed \$10,000, particularly if remachining of the turbine shaft is needed.

### **Proper Application:**

Purge oil mist was selected because these turbines have sleeve (plain) bearings and the oil sump must be maintained to assure effective lubrication. The *LubriMist?* accessories required are (noted above with numbers) (1) Purge Mist Vent/Fill Assembly, (2) Oil Level Sight Assembly and (3) Vent Collection assembly. The Vent Collection assembly below each bearing housing consists of an oil sight bottle to show the condition of the oil in the bearing housing. It is specially designed to allow any water that might accumulate in the bottom of the bearing housing to transfer into the clear plastic bottle without having to drain oil from the bottle. . The water can then be drained from the Vent Collection assembly before it causes problems in the bearing housing. Normally the slight positive pressure created in the bearing housing will exclude moisture and air born contaminants

### **The Solution:**

Applying purge oil mist prevents ingress of moisture and assures that all metal surfaces are coated with oil, whether in operation or in stand by mode. Make-up oil from the oil mist system will maintain the sump at the desired level, thereby eliminating the need to periodically top off the sump. By immediately applying oil mist lubrication when a new turbine comes into your plant, the risk of a failure on start-up can be eliminated.

LSC technicians can extend the existing system to serve the turbine bearings or LSC can provide a stand-alone mist system with a set of engineering instructions to allow your technicians to carry out the installation.



### **FOR ADDITIONAL INFORMATION:**

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