Lubrication Systems Company

# Lubrication And Reliability Management

***A New Concept In Significant Reliability Improvements ...Through Outsourced Lubrication Stewardship.***

## Understanding the Genesis of and Necessity for LARM

The following discussion is extracted from a paper by H. F. Finley, Ph.D., given to the NPRA on February 13, 1984. Although the calendar has changed considerably, the principles remain the same.

**Why maintenance is where it is and why change is required**

**When looking at the word *maintenance*, substitute *lubrication*.**

- **Maintenance (lubrication) always has been industry's poor stepchild. It has played second fiddle to the more esoteric functions such as operations and engineering and has received much less management attention than these functions.**

- **Few senior corporation managers understand maintenance (lubrication). Their backgrounds are in finance, law, engineering, operations. They've never managed maintenance (lubrication) directly. The closest they've come to maintenance is that of their own automobile.**

- **Maintenance (lubrication) is highly technical. Maintenance (lubrication) professionals tend to become so engrossed in technology that they neglect the more strategic aspects of long range maintenance improvement. Consequently, maintenance (lubrication) has not had enough internal push to achieve optimum results.**

- **Maintenance (lubrication) is the prime example of the man/machine interface. Industry's concentration is almost entirely on the machine of the interface, the technical execution of the maintenance (lubrication) work. The problems and opportunities for improvement are on the man side of the interface: policy, organization, philosophy, and attitude. This side has been largely neglected by management.**

- **Industry has not recognized maintenance (lubrication) as a manageable function requiring its own professional management, its own technical development programs.**

- **Maintenance (lubrication) is highly fragmented. There is little uniformity in policies and practices, even within a single organization. An oil company with six refineries most likely has six different maintenance (lubrication) programs with widely differing characteristics.**

- **Maintenance (lubrication) is an occupation filled with uncertainty. It deals with equipment failure which is a random phenomenon. Many of the maintenance activities are not technically necessary (periodic shut downs) and only lead to excessive costs. (Oil mist will replace many of the unnecessary activities.)**

**Predictions in 1984**

• ***Plant maintenance*** **(lubrication) will be *cen tralized.* It was centralized and then decen tralized, to an extent. Machinists and instru ment technicians never did decentralize. I pre dict that it maintenance (lubrication) will re-cen tralize again, especially functions like lubri cation. Functions such as operations require a significantly different mindset than does main tenance (lubrication).**

• ***We will no longer depend on maintenance repairmen as the mainstay of our maintenance organizations*****. This has happened as highly skilled, trained technicians and engineers have taken over. Lubrication can no longer be rele gated to the lowest skilled, untrained laborer. Lubrication has advanced to a much higher technical level.**

• ***Maintenance (lubrication) organizations will shrink in size.*** **They certainly have, so much so that more and more tasks are being outsourced. The time to outsource the lubrication function has come.**

• ***A larger percentage of work will be con tracted than has been traditional.*** **This is a product of the shrinking maintenance work force, attempts to reduce costs, the demand to improve equipment reliability, improve produc tivity, and the need to upgrade technical skills.**

• ***Higher plant availability will become man agement's bottom line objective*****. This prediction has become true. Where one can achieve a 90% reduction in bearing failures, why wouldn't one install oil mist and institute LARM? There are few other things a plant can do to achieve such a great up lift in availability.**

• ***The traditional so-called preventive mainte nance programs will disappear.*** **They will be replaced by on-condition maintenance pro grams. Time based maintenance is costly because work is performed before it is neces sary. LARM's oil sampling and testing program is a very effective on-condition maintenance program. In addition, the regularly scheduled lube checks by technicians are an excellent platform for them to observe changes in the equipment.**

• ***There will be substantial innovative devel opments in equipment conditioning monitoring technology which will facilitate the move from traditional preventive maintenance to on-con dition maintenance.*** **Vibration monitoring and oil testing expose problems in their infancy. Such information can be used to schedule repairs and improvements before the machine experiences secondary failure (it wrecks). Cor rections after the primary failure (component defect) can be schedule, the extent of repairs is minimal, and interruptions to production are minimized. Reductions in operating costs and maximizing revenue are the name of the game.**

• ***Management will create corporate level main tenance administration in the form of coordinat ing functions and technology*****. In terms of insti tuting innovations such as LARM and oil mist, the companies who have high level champions have been the most effective. Significant change from the bottom up virtually never happens.**

• ***Maintenance management systems will move from the mainframe computer to distributed data processing systems*****. PC's and laptops have replaced the mainframe. LARM programs like KYER and LUBE IT keep every interested party up to date and informed.**

• ***Maintenance training will be increased sub stantially*****. LARM technicians will be trained and well capable of performing the critically impor tant function of Lubrication and Reliability Man agement.**