



International Council for Machinery Lubrication  
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# 2008 John R. Battle Award Application Form Entry Deadline December 31, 2008\*

\*ICML reserves the right to extend and/or change the deadline or any other aspect of the award process without prior notification

**Please Print or Type – All questions MUST be answered in order for application to be considered, use N/A (non-applicable) if needed**  
 - \*ICML reserves the right to send an audit team to your site

General Information					
Your Name			Title		
Phone Number ( ) ( )		Business Fax ( ) ( )		E-mail Address	
Company Name			Plant Name Specific to this application		
Street Address (No P.O. Boxes)		City	State	ZIP	Country
Mailing Address		City	State	ZIP	Country
Type of Industry		No. of employees at plant	Plant age	No. of shifts/day	Days per week
Plant Maintenance Information					
Total # of maintenance personnel. Total # of people working in predictive technologies		Total # of people involved in lubrication related-task (full-time equivalent). How many certified?		Estimate total pieces of plant equipment	
Estimate the % of maintenance practices performed in plant (total to 100%): 2007: Run-to-failure: % Preventive: % Predictive: % Proactive: % 2006: Run-to-failure: % Preventive: % Predictive: % Proactive: %					Number of people involved with the lubrication program
Do you have a dedicated lubrication department in your plant? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Plant Resources/Culture/Work Processes					
Have you implemented modern improvements to lubrication program? <input type="checkbox"/> Yes <input type="checkbox"/> No		How long ago?		Do you track cost/savings? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is there a formal training program for lubrication best practices? <input type="checkbox"/> Yes <input type="checkbox"/> No		Is your lubrication staff asked/expected to be certified by the ICML or other organization relating to lubrication competencies? <input type="checkbox"/> Yes <input type="checkbox"/> No		Do you reward your lubrication staff for receiving certifications or good job performance? <input type="checkbox"/> Yes <input type="checkbox"/> No	
What practices are used to select, manage and consolidate lubricants? (Select all that apply)					Are skilled lube technicians on staff to support your lubrication program? <input type="checkbox"/> Yes <input type="checkbox"/> No
(a) lubricants are compared and selected by performance properties <input type="checkbox"/> Yes <input type="checkbox"/> No (b) Lubricant selection is primarily guided by cost <input type="checkbox"/> Yes <input type="checkbox"/> No (c) Suppliers provide certificate of analysis (COA) for new lubricants <input type="checkbox"/> Yes <input type="checkbox"/> No (d) Little effort has been made to consolidate the different lubricants used <input type="checkbox"/> Yes <input type="checkbox"/> No					
Relating to lubricant storage areas, (a) Is it neatly organized and well managed? <input type="checkbox"/> Yes <input type="checkbox"/> No (b) Are lubricants labeled with the product name, expiration date, unique colors/shapes, etc. to avoid cross contamination? <input type="checkbox"/> Yes <input type="checkbox"/> No (c) Are lubricating oils filtered before use <input type="checkbox"/> Yes <input type="checkbox"/> No			Is an oil analysis program in place? <input type="checkbox"/> Yes <input type="checkbox"/> No Is equipment routinely inspected for lubrication effectiveness? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Relating to lubrication procedures and PMs, (a) are they specific to the equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (b) are detailed instructions provided? <input type="checkbox"/> Yes <input type="checkbox"/> No (c) are they routinely reviewed and updated by appropriate personnel? <input type="checkbox"/> Yes <input type="checkbox"/> No					Is contamination control continuously monitored and rigorously controlled? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is critical equipment properly accessorized for lubrication excellence (i.e., BS&W bowls, sight glasses, sampling ports, etc.)? <input type="checkbox"/> Yes <input type="checkbox"/> No			Is lubricant consumption and leakage control tracked? <input type="checkbox"/> Yes <input type="checkbox"/> No		

## Lubrication Management Practices

Are the machines in your plant or operation tagged to conspicuously display the correct lubricant and volume charge (for grease systems)?

All machines are marked  Some machines are marked  Few, if any machines are marked

How are machines topped off in your plant?

All oils are filtered upon entry, or dispensed from clean one-shot containers

Reusable cans are used to top-off sumps, but they are regularly cleaned and oil is discarded after every round. (Partially full cans are not allowed to sit around the plant)

Oil from cans allowed to sit in open is regularly used to top off sumps and reservoirs

Which of the following best describes your lubrication procedures?

Specific procedures exist for all aspects of the lubrication program. The procedures are readily available (on paper, intranet, etc), followed as a matter of routine, easy to understand and updated periodically to reflect changing requirements.

Some procedures exist, but they are loosely organized and not universally applied.

Few, if any, procedures exist. There is no mechanism in place to ensure they are followed.

Which of the following best describes the nature of your lubrication specification process?

Lubricants are specified according to a systematic assessment of the machine's requirements relative to the application and environment. The specifications are kept modern to reflect advancements in lubrication science. Consolidation of lubricants has been conducted to minimize cost and confusion. Specifications are periodically reviewed for accuracy and updating.

Lubricants are used solely based upon equipment supplier recommendations. Application and environment may not be accurately reflected in the specification. Consolidation has not been attempted, or has not been successfully carried out.

Lubricant specifications are haphazard at best. Little traceable evidence exists to support the use of a particular lubricant in a particular machine. Sometimes, lubricant specifications are changed in a casual manner, without a proper engineering or material compatibility analysis. In these cases, paperwork and documentation is weak and the process of changing over is not done systematically.

## Contamination Control Practices

Target dirt and moisture contamination levels are established for:

All of the machines in the plant have target cleanliness levels.

A few of the machines in the plant have target cleanliness levels, especially the critical ones.

No target levels have been set to control contamination.

Which of the following best describes your system cleaning process when starting up a new machine, or after intrusive maintenance?

Specific procedures exist and are followed to ensure that all parts are properly stored and cleaned prior to installation, the work is done in a protected area, systems are flushed prior to being put into service, and where possible, the flushing process continues during start-up under gradually increasing loads.

Parts are properly stored and cleaned prior to installation and attempts are made to minimize the ingestion of contamination. However, no specific procedures exist to control the process.

No procedures exist to control the process. Typically, machines are disassembled and reassembled without regard for contamination.

Which of the following describes your contamination exclusion practices?

All sumps and vents are equipped with upgraded breathers and seals to ensure that contaminants can't easily be ingested.

These devices are regularly maintained to ensure effectiveness. Thoughtful analysis has gone into the process of ensuring that the internal machine is buffered from the aggressive external environment.

Most systems have breathers. Some, however, are of questionable quality, or resemble steel wool on the inside. Several systems have poorly sealed top-off caps or flip caps exposing the system to the environment. Standard shaft and wiper seals are used in most cases.

Many systems are open-vented. Few, if any, fine breathers are used. Seals are standard, and poorly maintained. Leakage is sometimes a problem on systems.

Which of the following best describes the system filtration used in your plant:

High efficiency, beta rated filters are primarily used. They have been selected specifically to meet strict target cleanliness levels. Where moisture removal is required, dehydrating units or filters are employed. Filter carts and other portable off-line filters are used on an as needed basis to achieve required results. Filters are properly maintained. Changes are tied either to increase to terminal pressure differential, or when particle count suggests a filter is malfunctioning.

Some systems have been upgraded to fine filtration. Others only use screens or "cuno" type filtration. Filtration selection is haphazard, not tied to target cleanliness levels for most machines. Filter changes are scheduled rather than condition-based.

Machines only have filters if the machine came with them. Little is known of the filters' performance ratings, or even they are working. Filter changes occur only when a problem is suspected, or when the machine is rebuilt.

## Staff Education and Development Practices

Which of the following best describes management's commitment to assuring effective lubrication and machine reliability?

- Management has identified lubrication management as an important bridge to profitability. They provide the necessary focus and resources to achieve optimized performance.
- Management has awakened to the fact that poor lubrication management has cost them in the past. They are open to new ideas and suggestions, but resources are still a little tight.
- Management needs a lot of help in understanding the opportunities available if a plan is developed and executed to effectively manage lubrication in the plant.

Which of the following best describes the skill level of your plant's lubrication and lubrication analysis specialist(s)?

- The specialist(s) has received extensive training and education in the area of lubrication fundamentals, oil analysis, contamination control and other relevant topics. He/she (they) subscribe(s) to relevant journals and magazines, belong to appropriate technical societies and attend conferences dealing with the subject to remain up to date. The specialist(s) is(are) cross trained in other condition monitoring technologies as well.
- Training for the person assigned to support these activities has been sparse. The specialist(s) is expected to upgrade skills, but resources are not always made available to support the effort.
- We don't really have a specialist assigned to lubrication management and oil analysis. We do the best we can without it.

Which of the following best describes how the success of your lubrication management and oil analysis program is communicated to your organization?

- We use conspicuous charting to identify success in controlling root causes, saves generated by our efforts, improved uptime and other indications of success. We take great pride in charting in displaying our progress.
- We keep records on our progress, but some of them are a little sketchy. We talk about our success in casual terms, but we haven't really put the message into numbers and displayed them for all to see.
- We really don't have much success to report and no plan or mechanism for doing so.

Which of the following generally describes your lubrication management and oil analysis education plan?

- We have identified the specific educational needs of technical lubrication management staff, reliability engineers, mechanics, lubricators or oilers, operators and managers and supervisors. We have a plan to ensure that each group has sufficient opportunity to obtain the knowledge they require.
- We have educated a few people who deal directly with lubrication, but we have not really looked at the knowledge requirements of the general organization.
- We have not yet begun to address the education issue.

## Essay

For the remainder of this application, in essay format, please keep in mind the criteria for the Battle Award listed below and make sure to cover each one, addressing the improvements (prepared for or actually implemented) in each category, with demonstration of such improvements and when possible, specifics on the approach, examples of activities, results, and continued improvements. **It is important not to leave anything out** - the ideal candidate will be able to demonstrate, among other things, a solid program backed-up by a multi-disciplinary effort and approaches with sustainable results and continued improvements.

- Commitment to Education and Skill Competencies
- Maintenance Culture and Management Support
- Lubricant Selection/Performance Standards/Consolidation
- Preventive, Predictive and Proactive Program Design and Effectiveness
- Lubrication Program Metrics and Overall Performance Tracking
- Lubricant Storage, Handling, Safety and Conservation
- Lubrication PM Optimization, Work Plan Management/Scheduling/Documentation
- Oil Analysis Program Design, Test Slates, Lab Selection and Setting of Alarms
- Oil Analysis Sampling Frequency, Sampling Hardware and Procedures
- Contamination Exclusion and Removal
- Oil and Grease Application Methods and Hardware Deployed
- Plan for Continuous Improvement

If acronyms are used, please include a glossary. The addition of photos is encouraged. **Remember - information left out can not be considered, so please be thorough** in describing your program and covering the following items, **QUESTION POINT BY QUESTION POINT - please answer each point thoroughly:**

### Process of moving towards a world-class lubrication program

Describe the process by which improvement to your lubrication program was implemented.

What was the strategy that you implemented that resulted in the most benefit/savings? Changes to filtration? Changes to Lubrication? Changes to oil analysis? Other areas of change? Proactive maintenance? Predictive maintenance? Increased training and awareness?

Which machines did you target for change? Why did you choose these machines?

Describe unforeseen hurdles or obstacles in the process. Were there any surprises?

How long did it take you to implement the program/changes?
Describe how the proposed plan was justified (economic, safety, environment, etc.) and sold to management (if applicable).
What/who guided you in the changes and improvements. How did you know what to do?
<b>Specific changes made to move towards world-class lubrication program</b>
Describe what lubrication related training your staff routinely receives. To what extent has your plant/mill provided training to key people? Has this been a good investment? Was this training done in-house or elsewhere?
Describe your lubricant storage, handling and conservation procedures. How are new lubricants inspected? What changes have you made in your lubricant storage facility?
What measures are in place to control contamination ingress?
How are oil and grease application methods and equipment established?
How are lubricants selected, procured and consolidated in your facility?
How often is equipment inspected for lubrication effectiveness? What types of hardware are installed on equipment to aid in inspection, sampling and contamination control?
Please describe your oil sampling procedures. How and where are samples taken from equipment? What alarms and limits are set? How often is equipment sampled?
Please describe the overall effectiveness of your preventive, predictive and proactive program.
What role has your lubricant supplier played? Filter supplier? Equipment supplier?
<b>Benefits of a world-class lubrication program</b>
What benefits were realized? Reduction in lubricant consumption? Lower repair costs? Reduced production losses? Extended mean-time between failures? Reduced filtration costs? Reduced disposal costs? Planned maintenance versus reactive maintenance?
How did you gauge or monitor your program's progress? Please quantify savings or benefits monetarily if possible.
What was the role of contamination control in achieving your savings or benefits? How contaminated were your oils previously? What target cleanliness/dryness levels did you achieve? What did you do to restrict the ingress of contamination to your fluids: breathers, seals, transfer filters, etc.?
What was the reaction of the implementation team? Tell us about the people involved with your program. Who does what? What special skills were involved?
What was the reaction of those affected by the program change?
What was the reaction of management to the program change?
What would you have done differently if you could start over again? What techniques or strategies would you recommend to others?
What are the plans for continuous improvement?
Will the program be expanded to other applications, machines or plants?

I hereby authorize our plant's participation in the 2008 John R. Battle Award. I agree that, to the best of my knowledge, the above information is correct. All information provided will be held strictly confidential.

Plant Manager (please print) \_\_\_\_\_ Signature/Date \_\_\_\_\_

Maintenance Manager (please print) \_\_\_\_\_ Signature/Date \_\_\_\_\_