



ME199: Lube Oil Condition Assessment & Troubleshooting

Training Description:

This training course provides participants an extensive overview of machinery lubrication, condition monitoring and assessment, oil analysis, maintenance and troubleshooting techniques. Topics covered include best practices techniques for lubricant delivery and arrival, storage and dispensing, transfer, management of machinery lubrication routes, lubricant selection and additives, setting re-lubrication intervals, basic oil analysis, and contamination control.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ How lubrication affects machine reliability
- ✓ Maintenance program strategies for achieving world class lubrication
- ✓ The importance of oil film thickness and dynamic clearance on components
- ✓ Advantages and disadvantages of grease lubrication
- ✓ How lubricant properties change
- ✓ How additives deplete and degrade
- ✓ How to equip machines for effective contamination exclusion and removal
- ✓ How contamination affects the machine and lubricant
- ✓ The benefits of developing lubrication standards
- ✓ Quick tips to designing a world class lubricant storage room
- ✓ Troubleshoot lubrication problems
- ✓ How to utilize the proper methods and equipment to facilitate oil sampling procedures
- ✓ How to determine representative oil sampling locations
- ✓ Why oil analysis is an important tool to use determine machine and lubricant condition
- ✓ Why metrics are important

Training Designed for:

This course is intended for Engineers such as Rotating Engineers, Condition Monitoring Engineer, Maintenance Staff, Maintenance Supervisors and other Technical staff.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

FIVE DAYS:

❖ Lubrication Theory

- Purpose of a lubricant
- Function of a lubricant
- Tribology and friction



- Mixed film lubrication
- ❖ **Lubricant Types**
 - Mineral lubricants
 - Synthetic lubricants
 - Vegetable lubricants
 - Greases
- ❖ **Lubricant Properties**
 - Physical properties
 - Chemical properties
- ❖ **Lubricant Selection**
 - Selecting lubricants for specific equipment and components
 - Selecting greases for specific equipment and components
- ❖ **Lubricant Applications**
 - Manual lubrication
 - Natural delivery methods
 - Oilers delivery methods
 - Centralized lubrication
- ❖ **Lubricant Storage and Management**
 - Consolidating and procurement
 - Proper storage, dispensing, and transferring procedures
 - Designing optimum storage room
- ❖ **Contamination Control**
 - Particulate contamination
 - Water contamination
 - Air and other contamination
 - Filter types and ratings
- ❖ **Wear Debris Analysis and Monitoring**
 - Introduction to Oil Analysis
 - Sampling equipment and options
 - Sample bottles
 - Oil sampling frequency
- ❖ **Preventative and Predictive Maintenance Fundamentals**
 - Appearance screening
 - Contamination monitoring
 - Physical and chemical testing
 - Typical grease monitoring
 - Targets and limits
- ❖ **Lubrication Management, Troubleshooting and Best Practices**
 - Lubrication maintenance
 - Oil changes
 - Leakage
 - Safety
 - Troubleshooting & Best practices
- ❖ Course Conclusion
- ❖ POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

Aisha Relativo - Training & Career Development Manager

aisha@cmc-me.com / training@cmc-me.com

Tel.: +971 2 665 3945 or +971 2 643 6653 | Mob.: +971 52 2954615