

AN ARSENAL OF KNOWLEDGE FOR TODAY'S COMPETITIVE WORKPLACE.

Oil Analysis

The Complete Course For Maintenance Professionals

Most maintenance programs only achieve 10% of the benefits available from oil analysis . . . Learn how to get the most out of oil analysis when you attend these powerful training sessions.

You Will Learn:

- ▼ How to read oil analysis reports-and understand them
- ▼ How to tell if you are using the wrong oil
- ▼ How to squeeze maximum life out of lubricants
- ▼ How to set optimum oil analysis limits
- ▼ How to reduce oil consumption for easy near-term savings

*3 Days Training Course
Scheduled Classes for 2007*

March 28-30, 2007

**At Novotel Hotel, Bangna,
Bangkok**

Baht 18,400.- per attendee
(Excluding VAT 7%)

Presented By



Focus-Noria Thailand
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*Developed by James C. Fitch,
America's Premier Oil Analysis Trainer*

*Presented by Andy L. Sitton,
S.E. Asia's Leading Oil Analysis Instructor*

You'll leave the course will practical answer to the many tough issues you face and you'll be equipped with the know-how needed to run an oil analysis program successfully

COURSE OUTLINE

Oils and Additives

- ▼ Overview of oil formulation
- ▼ Synthetic oils
- ▼ Mineral oils
- ▼ The role of additives
- ▼ Machines requiring additives

Maintenance Strategies for Oil Analysis

- ▼ Overview of the 4 basic maintenance strategies
- ▼ Determining which strategy meets your needs
- ▼ Proper use for each strategy

Oil Sampling

- ▼ Primary and secondary sample point choices
- ▼ Techniques for maximizing data richness
- ▼ Oil sampling valve options
- ▼ Setting optimum oil sampling frequencies

Limits and Trends

- ▼ Understanding data patterns
- ▼ Proactive data patterns
- ▼ Predictive data patterns
- ▼ Deterministic data patterns
- ▼ Probabilistic data patterns
- ▼ Six common data interferences

Fluid Properties

- ▼ Six contaminants that add fuel to oil oxidation
- ▼ Common pointers for identifying oil oxidation
- ▼ Measuring and trending viscosity
- ▼ Proper use of viscosity index improvers
- ▼ Setting optimum limits for viscosity trending
- ▼ Diagnosing over-limit viscosity results
- ▼ Diagnosing under-limit viscosity results
- ▼ Using Acid and Base Numbers
- ▼ Common TAN trends for different oil types
- ▼ Using FTIR for detecting common problems
- ▼ When and how to use the RBOT test
- ▼ Diagnosing over-limit oxidation trends
- ▼ Detecting additive depletion

Oil Contamination

- ▼ Overview of seven common contaminants
- ▼ The effects of particle contamination
- ▼ Understanding particle size and count
- ▼ How to use the ISO Solid Contaminant Code
- ▼ Factors influencing particle size populations
- ▼ Setting proactive target cleanliness levels
- ▼ Diagnosing over-target particle counts
- ▼ The effects of moisture contamination
- ▼ Setting optimum limits for moisture
- ▼ Moisture detection methods
- ▼ Diagnosing over-limit moisture results
- ▼ The effects of air entrainment
- ▼ The effects of heat contamination

Wear Debris Analysis

- ▼ Technologies used to analyze wear debris
- ▼ Understanding wear metal trends
- ▼ Setting optimum limits for wear metals
- ▼ Using machine metallurgy for diagnosis
- ▼ Potential sources of metals in oil
- ▼ Elemental analysis vs. ferrography
- ▼ Using wear particle diagnosis templates
- ▼ How to prepare a patch ferrogram
- ▼ Identifying wear debris with your microscope

Field Tests

- ▼ Simplify oil analysis using easy field tests
- ▼ Ten easy tests you can do without instruments
- ▼ Combining field test data with lab test data

Data Interpretation

- ▼ Partnering oil analysis with vibration analysis
- ▼ The use of oil analysis software
- ▼ The anatomy of an oil analysis report
- ▼ Case studies-try to figure out what's going on

Getting Started

- ▼ Program implementation steps
- ▼ Lab selection considerations
- ▼ Goals for oil analysis
- ▼ Costs and benefits-what to expect

Learn the "Best Practices" of Oil Analysis

A Step-by-Step Gameplan for Reaching World-Class Status

Who Should Attend?

- All Maintenance Professionals
- Predictive Maintenance Technicians
- Reliability Engineers
- Lubrication Engineers
- Equipment Operators
- Maintenance Managers
- Operations Managers
- Vibration Instrument Specialists

Industries That Will Benefit From This Courses:

- Power Generation
- Petro Chemical
- Pulp and Paper
- Primary Metals
- Process Manufacturing
- Automotive Manufacturing
- Transportation
- Earthmoving & Mining

If You Have Any Of The Following Machines, This Seminar Is A Must:

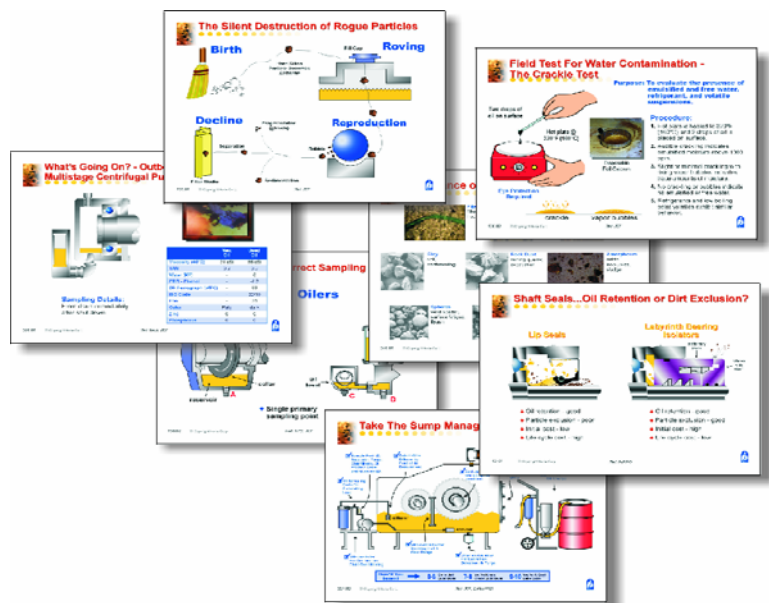
- Gas Turbines
- Steam Turbines
- Gear Boxes
- Hydraulic Systems
- Compressors
- Diesel Engines
- Rolling Mills
- Process Pumps
- Final Drives
- Motor Bearings

Expand Your Oil Analysis Skills And Get Better Results . . . A Whole Lot Faster!

If you're like many oil analysis users, you may already be finding your way around oil analysis. You may just be using it exclusively to predict catastrophic failures. Or, you may be basing your oil drains on the recommendations of your oil analysis lab. Either way, you probably know there's a lot about oil analysis you haven't mastered . . . and you might be wondering what you are missing out on.

Wouldn't you like to know **ALL** about what oil analysis can!

Presentation Slides are Full Color and High Quality, Making the Information Easy to Comprehend and Remember.



"This seminar produced instantly usable knowledge which will definitely result in changes in the way we handle lubricants and lubricated systems."

Joe Kelly, Maintenance Engineer, Akzo Nobel

"One of the most useful seminars I have ever attended. Not bogged down with theory, just the facts."

Dave Roycraft, Maintenance Manager, Chrysler

This Course Will Teach You Exactly What You Need To Know In Just Three Days

What You Will Learn

- ▼ How to read oil analysis reports-and understand them.
- ▼ How to use oil analysis to tell you when your using the wrong lubricant.
- ▼ How to ensure you get a data rich sample every time.
- ▼ How to squeeze maximum life from lubricants.
- ▼ How to integrate oil analysis with vibration analysis.
- ▼ How to set optimum sampling frequencies.
- ▼ Ten easy oil analysis tests you can do-without instruments.
- ▼ Easy to follow troubleshooting fault trees made just for oil analysis.
- ▼ How to select the right oil analysis lab for your plant.

☞ **To Enroll :**

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Each Attendee Receives:-

- ✓ **Complete Full Color Course Manual**
- ✓ **How To Sample Oil-Chart & CD**

Your Money-Back

Guarantee of Satisfaction

Focus-Noria Thailand proudly stands behind our public courses 100% with our no-risk guarantee of satisfaction. So, if you're hesitating because you're not quite sure if this course is for you-go ahead and enroll. We guarantee you'll be thrilled with the vital skills, powerful techniques and important insights you gain-or we'll give you your money back in full. You have nothing to lose and a wealth of hard hitting oil analysis know-how to gain!



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