



STLE Update

WHERE SCIENCE MEETS THE BOTTOM LINE



Mission Statement:

To advance the science of tribology and the practice of lubrication engineering in order to foster innovation, improve the performance of equipment and products, conserve resources, and protect the environment.

APRIL 2005

WELCOME

STLE Update provides our 4,000 members worldwide with news about STLE and practical content useful to technical professionals. Here's what's happening this month.

STLE Election Ballots due Friday, April 15

If you haven't already, please show your support of STLE by taking a moment to complete and return the official ballot that was faxed to you earlier this month. Deadline for fax return of the ballots is Friday, April 15.

If you are a full member (there will be an "M" after your member number on your STLE membership card), you are entitled to vote for three directors. Members in select STLE areas also are asked to vote for a Regional Vice President. [Candidate bios](#) are available online.

If you did not receive an official ballot, contact Judy Enblom at STLE: jenblom@stle.org. Fax your completed form to STLE at: 847-825-1456.

Send Your Thoughts on How to Improve STLE Services

Have you responded to the STLE Member survey that was e-mailed to you on April 4? The survey asks you to share your thoughts on key areas such as the society's role in your professional development, how STLE can better serve you and how you prefer to have STLE deliver information and services. The survey also solicits demographic information that is critical in defining the evolving needs of the membership.

STLE's leadership will use the survey results for 2006 program planning and to help the society better define its future roles in helping members deepen their technical knowledge and advance their careers. The society's board of directors will review the survey results during the annual meeting in Las Vegas, so your input is critical. Of course, all information you submit is strictly confidential. Survey response deadline is Monday, April 18.

The Member Survey takes about 15 minutes to complete, but your views are considered the single most valuable source of information the society has to improve its offerings and maintain its reputation as the premier technical society serving the lubricants industry.

If you did not receive your Member Survey, contact Judy Enblom at STLE: jenblom@stle.org.

Learn from the Experts & Leave with Practical New Ideas

Industrial lubrication professionals can get a year's worth of experience and ideas during four days at STLE's 2005 Annual Meeting in Las Vegas. Seven one- and two-day courses cover today's leading ideas and best practices. Learn the business from 50 expert faculty members selected by STLE's Education Committee.

Education courses are an exceptional value because fees (which start at only \$625 per day for STLE members) include classroom instruction, a course manual with details on each speaker's presentation and registration for the five day STLE Annual Meeting itself.

Upcoming Meetings:	
<p>STLE's 2005 Annual Meeting</p> <p>May 15-19 Las Vegas</p>	
<p>E-mail your comments to STLEUpdate</p>	

STLE membership supports and expands your professional abilities through:

Education: Top-rated and affordable courses are offered live at a variety of locations or through the new [LubeLearn](#) on-line education program.

Certification: Earn recognition and valuable credentials through two STLE-sponsored programs: Certified Lubrication Specialist (CLS) and Oil Monitoring Analyst (OMA).

Professional Networking: Offered at two major

international conferences, local section meetings or one of 23 technical committees and industry councils.

Marks of professional achievement: CLS and OMA

The following questions capture the kind of knowledge tested on the CLS and OMA exams, but are not actual test questions. See below for correct answers.

Test Your Knowledge:

1. Name the four basic types of cleaners:
2. What is the primary cause of failure of hydraulic systems?
3. A Centistoke is a unit of:
4. A colloid is the name for a suspension of very small particles in a liquid that is:

Answers

1. Solvent, water-based, emulsion, solvent/water based.
2. Contamination
3. Kinematic Viscosity
4. Very Stable

Visit our website at www.stle.org

This year's course lineup includes:

- Lubricant Technology: A Journey Beyond the Basics (Advanced Lubrication).
- Lubes 101: Fundamentals of Lubrication and Lubricating Materials (Basic Lubrication).
- Reliability Centered Maintenance: Today's Hottest Topic in Manufacturing Management (Condition Monitoring).
- Principles of Hydraulic Fluid Technology: Fluids (Hydraulic Systems).
- Total Metalworking Fluid Management (Metalworking Fluids).
- Shaft Seal Application and Performance Evaluation for Improved Reliability (Sealing Systems).
- Getting to Know Non-Petroleum Based Lubricants (Synthetic Lubricants).

Complete program information and registration materials were mailed to all members in January. For more information on courses, [click here](#). To register online for a course, [click here](#).

CMFS Body of Knowledge Available Online

STLE's newest certification program, Certified Metalworking Fluids Specialist, is being offered for the first time on Thursday, May 19, during the 2005 STLE Annual Meeting in Las Vegas. If you plan to take the exam, either in Las Vegas or later, you now have access to the body of knowledge necessary to prepare for the three-hour, 150-question test.

The online body of knowledge includes dozens of books, standards, glossaries and technical reports. You can access the body of knowledge by [clicking here](#).

More than 15 months in the planning and concept, the CMFS certification joins two other STLE certification programs: Certified Lubrication Specialist and Oil Monitoring Analyst. Nearly 25% of all STLE members have attained certification status.

Earning the CMFS certification demonstrates your expertise and knowledge in this highly specialized field and separates you from the many self-proclaimed industry experts. As more and more companies, particularly manufacturing concerns, are requiring certification from their employees and vendors, attaining CMFS status is a smart move for individuals looking to advance their careers.

Because metalworking is such an important discipline, the requirements to attain the new certification are rigorous. To be eligible for the exam, applicants must have both knowledge and experience in metalworking fluid technology, application, maintenance methods, health and safety, government regulations, recycling and treatment.

Important: Do not confuse the CMFS certification with the certificate that can be earned after taking the Metalworking Fluids education course offered May 17 and 18 in Las Vegas as part of the Annual Meeting program. A test is being offered at the end of that course, and those who pass will receive a certificate. While taking the course certainly will help you prepare for the certification exam, please be aware that requirements for the CMFS are much more demanding.

For more information on the CMFS certification and exam, contact Bob Gresham at rgresham@stle.org or Barb Rapacz at brapacz@stle.org

Still Time to Register for Golf Tournament, Hoover Dam Tour

The Desert Pines Golf Club, designed by Peter Dye (proclaimed by many experts as the Michelangelo of modern golf courses), is host to a tournament on Sunday, May 15, the first day of STLE's 2005 Annual Meeting in Las Vegas. It's a shotgun start scramble format for 144 golfers with a 1:30 p.m. tee-off time. Cost is \$135, which includes cart rental.

Also offered at the STLE Annual Meeting is a special tour of Nevada's world-famous Hoover Dam. The four-hour-long tour takes place Sunday, May 15, at 1

p.m. and Friday, May 20, at 8 a.m. As a special accommodation to STLE, the tour guide is one of the dam's engineers, and you'll be allowed to view the main generators, inspect the dam itself and walk along the observation deck.

Registration deadline for both the golf tournament and the Hoover Dam tour is April 15. [Click here](#) for more information and to access the online registration form.

Just a Handful of Booths left for Las Vegas Exhibit!

If you're an industry supplier, STLE's Annual Meeting & Exhibition is the industry's premier venue to connect with the technical people who buy and use your products and services. Registration for this year's conference, May 15-19 at Bally's Las Vegas hotel, is ahead of the pace for last year's highly successful event in Toronto, and more than 1,200 attendees are expected.

One of the highlights of the STLE meeting is the trade show, where more than 70 of the industry's leading suppliers demonstrate their latest technologies and meet face-to-face with convention delegates. This year the exhibit is on the same level and in the same area as all other annual meeting events, making it convenient for attendees to visit the show and maximize their time. For the first time, all coffee breaks are being held in the exhibition hall, which is certain to increase floor traffic.

Although the exhibition is virtually sold out, a handful of booths remain. Cost for the 10-by-10-foot spaces is the same as for the 8-by-10-foot spaces in Toronto.

If your company is looking to meet with the key technical professionals in the lubricants industry, exhibiting at STLE's Annual Meeting is an outstanding opportunity. To reserve your space, contact Tracy VanEe at 630-922-3459, tnicholas@stle.org.

Keynote Session Features experts on Nanotribology, Rocket Engines

The Annual Meeting's Keynote session, Monday, May 16 from 10:30 a.m. to noon in Bally's Las Vegas, features two of the world's most respected leaders in their fields.

Pascal Pempie, a 20-year veteran of the French Space Agency (CNES), addresses the main tribology problems related to cryogenic liquid rocket engines. These engines, burning liquid oxygen and liquid hydrogen, represent daunting tribological challenges.

In cryogenic engines the control of more than one hundred tribological couples is mandatory to reach high reliability and safety requirements. A roadmap addressing the future of tribology in liquid rocket engines will be discussed as part of his talk.

Pempie, a mechanical engineer, joined the French Space Agency (CNES) in 1985 to develop the turbopumps of cryogenic liquid rocket engines within the framework of the Ariane 5 program. He is currently technical advisor to the Launch Vehicle Directorate.

Also on the keynote session is Dr. Uzi Landman, a Georgia Institute of Technology physicist who has used powerful computer simulations to predict how friction and lubrication would affect nanometer-scale mechanical systems. His talk is titled, "Small is Different: Tribology and Control of Friction at the Nanoscale."

Director of Georgia Tech's Center for Computational Materials, Dr. Landman is recognized for the development and implementation of research methodologies that use molecular dynamic simulations to predict the often-surprising behavior that occurs at the nanoscale when surfaces of solid and liquid materials meet. His research team has examined the effects of friction and lubrication in these small-scale systems, predicting how such systems would behave long before they could be fabricated.

Performed on large parallel-processing computers, the simulations use known laws of physics—including quantum mechanics—to predict how hundreds of thousands of molecules or atoms interact and respond to a load or the application of shear relative motion between bodies in contact. The resulting calculations help

engineers design smaller and smaller disk drives, nanometer-scale machines and even biomechanical implants used in the human body.

To register for the STLE Annual Meeting, [click here](#).

The Society of Tribologists and Lubrication Engineers

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