



TOGA® Insulation Fluid and Lube Oil Testing Program

Risk Solutions

Hartford Steam Boiler

One State Street
P.O. Box 5024
Hartford, CT 06102-5024
Tel: (800) 722-5313
Fax: (860) 722-1870
www.hsb.com

Contact

Paul Boman
Tel: (785) 256-7161
Paul_Boman@hsb.com

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Major Features

- Access to Transformer & Lube Oil Specialists.
- Ease-Of-Use
- Automated Ordering
- Confirmed Laboratory Procedures
- TOGA® is independent of the laboratory or vendor-related services
- Sample Tracking
- Periodic Recommendation and Order Follow-Up
- Internet Access with On-line Editing Capability

Access To Industry Specialist

- Receive unit specific recommendations based on reported equipment history and oil test results.
- Routine follow-up with laboratory about questionable results
- Cost benefit analysis estimates provided based on recommendations
- TOGA® is a recognized participant in IEEE, Cigre and ASTM Subcommittees
- HSB's Staff available to help resolve a variety of equipment related issues

Ease-Of-Use

- Sort/filter information on location, equipment, condition code, sample status
- Perform functions on multiple records with one operation
- Barcode stickers for sample containers
- On-line print out of lost or missing sample paperwork
- Sampling instructions on-line, and on sample paperwork
- Help desk 800 telephone number provided to answer questions
- Add comments to equipment records while on-line
- Respond to oil test report recommendations on-line
- Color coded equipment condition code (1 - no recommendations given 2 - equipment on monitor list and 3 - recommendations given)

Sample Testing

- Compare results from different laboratories
- Import recent historical test results on request
- Export test results for inclusion in Computer Maintenance Management software



Automated Ordering

- Select sample frequency on-line (e.g. annual, semiannual, biennial, monthly)
- Anchor sample date based on location to month and date, regardless of the previous sample date
- Select next sample tests and next sample date

Periodic Follow-Up Notification

- E-mail notification of released reports
- Other notifications client selectable

Internet Access To Program

- Online viewing and printing reports via the Internet
- Unlimited user access to accounts available
- Location specific access to access single or multiple locations
- Secure Internet site with user changeable password and hint
- Does not use proprietary software, accessible with Internet Explorer Program
- Test results downloadable in Excel™ format
- Order sample containers online
- Password reminders
- Add users, locations, and equipment on-line by local users
- Information available 24/7 days per week

Laboratory Procedures

- Laboratories are periodically visited to review compliance with ASTM and IEC procedures
- Laboratory sample tracking is performed by third party

TOGA® Lube Oil Analysis

Gearboxes

- Hydro plants
- Ski resorts
- Wind turbine farms
- Primary metal locations

Heat Transfer Fluid

- Manufacturing
- COG
- Pulp and Paper applications

Internal Combustion Engine

- Lube oils used for power generation
- Emergency power units
 - Hospitals
 - Manufacturing processes
 - Pump/direct drive applications

Hydraulic Systems

- Mills
- Utilities
- Heavy manufacturing

Compressors

- Food storage
- Refrigeration
- Service air applications
- HVAC at
 - Universities
 - Hospitals
 - Manufacturers

The routine lube oil analysis includes:

Spectrographic analysis, particle count, acid number, color, dissolved moisture, FTIR (if applicable) and viscosity @ 40 C. Sample kit shipment is an additional cost. RPVOT, foaming, air release, viscosity index, varnish potential tests are available for an additional cost.



The sample bottle is made of polyethylene terephthalate (PET) then checked for proper cleanliness levels. A vacuum extraction hand pump is used to simplify the sampling process.

Getting TOGA® Started

- The client is contacted for nameplate Information and shipping information
- The client account is set up by TOGA®
- Sample kit is shipped, the client draws the sample and the sample kit is returned to laboratory
- The TOGA® Report containing the results, next recommended sample date and sample comments/recommendations