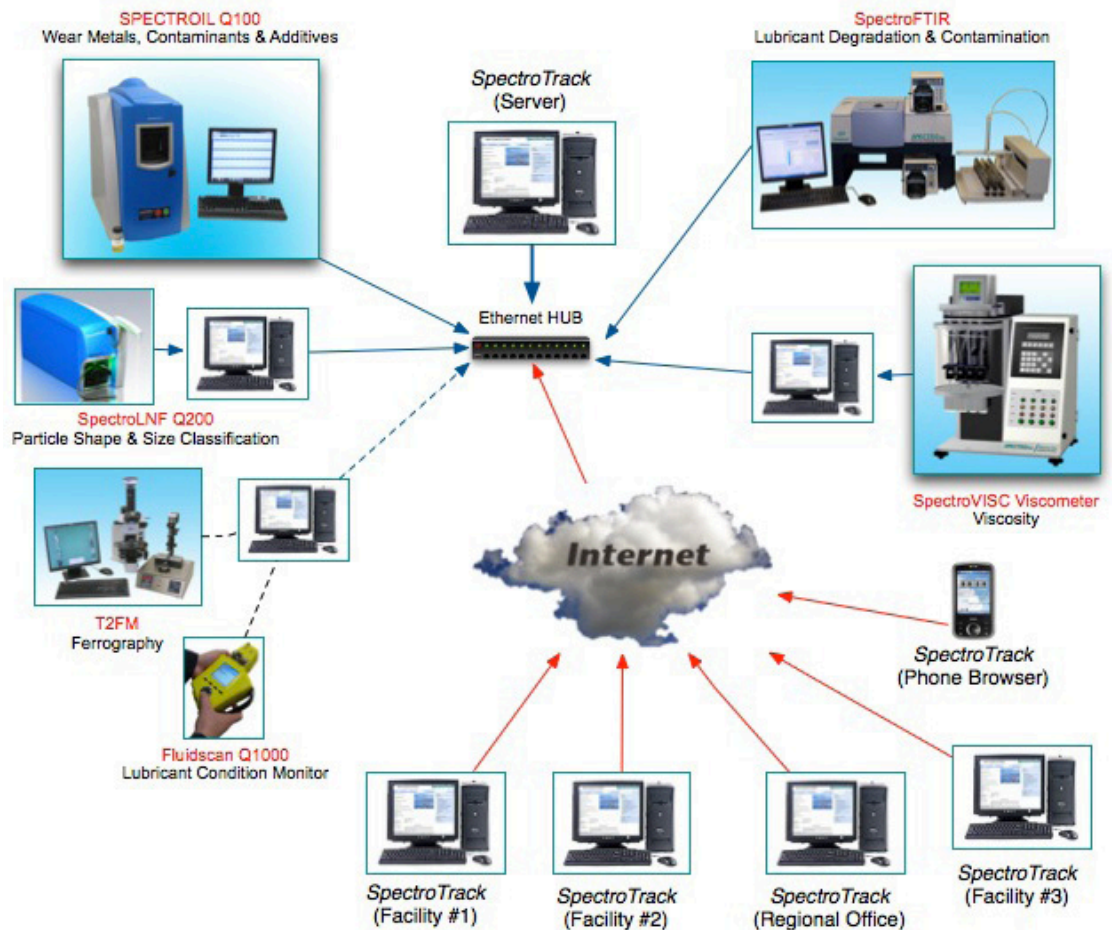


Complete In-Service Oil Analysis Laboratory

Spectro Industrial Tribology Laboratory (ITL) Turnkey Solution

Advantages

- Reduce maintenance costs.
- Increase equipment availability.
- Improved safety.
- Reduce lubricant usage.
- Extend equipment life.
- Fast sample turnaround time.
- Low cost per sample.
- One supplier provides:
 - all instruments
 - training
 - service
 - applications support
- All training from one supplier.
- All service support from one supplier.
- Instruments are continuously available for immediate analysis of oil samples.



Components of a Complete Oil Analysis Laboratory

The Spectro Industrial Tribology Laboratory (ITL) is a turnkey system providing condition monitoring for machines and engines by oil analysis. The measurements made using the Industrial Tribology Laboratory determine both lubricant and machine condition, the cornerstones of any effective predictive maintenance system.

An effective predictive maintenance program based on condition monitoring through in-service oil analysis must determine both machine condition and lubricant condition. Lubricating oil may be used as a diagnostic medium which carries wear debris away from the wearing surfaces. Analysis of the wear debris can, therefore, provide important information about the condition of the internal parts of a machine or engine. On the other hand, the condition of the lubricant itself is important to know. Does the lubricant meet specification? Is the viscosity correct? Is the oil contaminated with water, particulates or chemical compounds? Spectro has put together an instrument package that makes the necessary measurements to effectively monitor all the oil lubricated equipment in your plant or fleet.

Spectro installs and provides training for all instruments as an integrated system. Since the Industrial Tribology Laboratory is a turnkey system, supplied and installed by one vendor, the worry and learning curve errors associated with new methods and equipment are minimized during the startup process. Condition monitoring of your equipment can begin immediately after the installation of your instruments and during the initial training of your personnel.

The minimum instruments Spectro has chosen to include in the Industrial Tribology Laboratory are:

- a Spectroil Q¹⁰⁰ optical emission spectrometer for the analysis of wear metals, additives and contaminants,
- a Spectro-FTIR spectrometer for the analysis of lubricant contamination and degradation,
- a Spectro-Visc semi-automatic viscometer and
- a computer (or network) with the SpectroTrack Asset Management Software for data storage, processing and retrieval.

Spectro can also provide additional instruments to enhance the data generated from the basic instruments of the ITL configuration. They include ferrography instruments, a particle shape classifier and counter, a large particle analysis enhancement to the Spectroil M, and a fuel dilution meter. A local area network (LAN) version of the ITL system is also available for laboratories that process large numbers of oil samples. Automation is also available for several of the instruments for laboratories that plan to analyze large numbers of samples on a daily basis.

The instruments of the ITL were chosen because they provide all the necessary data to effectively condition monitor your oil lubricated equipment, but also because they are easy to operate, easy to maintain, require a minimum of special utilities to install, and have good sample throughput (most measurements take about 1 minute). The analytical instruments send results to the central computer (or a network) where they are stored in a database file for subsequent analysis, evaluation and reporting.

An optional computerized equipment condition monitoring software program, SpectroTrack, is also available for the ITL. It is a sophisticated, yet simple to use, web based information management system (IMS) which administers the routine operations associated with a condition monitoring program based on oil analysis. The software implements the tasks of a full function oil analysis laboratory including sample logging, analysis, data storage and retrieval, automatic evaluation, reporting and customer web access to data.

Sample Oil Analysis Laboratory Configuration



Dimensions are in inches.

SPECTRO INC.
QinetiQ North America

160 Ayer Road • Littleton, MA 01460 USA

Tel: (978) 486-0123 • Fax: (978) 486-0030

E-mail: sales@spectroinc.com • World Wide Web: www.spectroinc.com

