

***'Providing Tribological Solutions'***

## Technical Note

### Seven 'Easy' Steps for Care And Feeding of EHC Fluid

1. Have only one person or one team 'responsible' for/or available as a resource for most aspects of EHC fluid operation and maintenance. Ensure that there is adequate experience plus recent training. If not, contact suppliers for assistance. Some turbine OEM's have annual meetings for users and most other suppliers offer seminars. EPRI and STLE also have regular conferences and education courses.
2. Have up to date technical data, notices and specification materials from the suppliers for the turbine, fluid, filters, purification media and valves.
3. Follow the turbine manufacturers' recommendations for maintenance. If not, have a written and detailed technical case detailing the reasons why not. Check assumptions at least annually and the justification should consider the consequences if wrong.

For example; Changing the fuller's earth every 3-4 months.

Caking or running the fuller's earth before valving into system.

Changing the pump discharge filter every 6 months.

Inspecting and/or cleaning servo-valve screens every year.

Cleaning and noting deposits on pump suction screens.

4. At least once a year, benchmark the actual maintenance versus the recommended. Reviewing work reports and stores withdrawals are often very helpful. The stores withdrawals can be used to verify quantities and also serve as a check on what has been ordered/delivered. Do not use substitute materials unless proven to be technically better. Verify what is in stores and how stored. Get as found reports on all replaced items including filter elements, servovalves, screens and solenoids.
5. Ensure that maintenance procedures are correct and help new staff or staff doing a job for the first time to do it right. Many common tasks such as fluid sampling, filter element changes are not "simple" or obvious. In fact, it is often easier to do them wrong than right. Fortunately, maintainability can often be improved at very little cost with aids like true differential pressure gauges with peak holds, air release valves and/or better filters. As often as practical witness fluid sampling, maintenance and repair work.
6. Be proactive and if in doubt ask. Also have at least weekly checks on system status including the pressure drops across all filters and purification media, fluid temperature and fluid level. Sample the fluid at least every two months and send to the fluid supplier for testing. Proper sampling is essential and usually there is no charge for testing EHC fluids. Trend plotting results is essential and stay well away from the OEM limits.
7. Walk the system and lines once a week. This is to check on work and for drips, missing heat shields, fretting lines, loose pipe hangers or anything that will lead to later problems. Pressures and temperatures can be noted and preferably trend plotted.

***Details on all of the above can be provided upon request.***