



GEQuip Lube Oil Scrubbers

GEQuip lube oil scrubbers are the ultimate solution to compressor lube oil entrainment problems. Our scrubbers are both time tested and revolutionary, with features including:

- 99.9 % lube oil removal
- No filter elements
- Save space and \$\$
- Very low maintenance

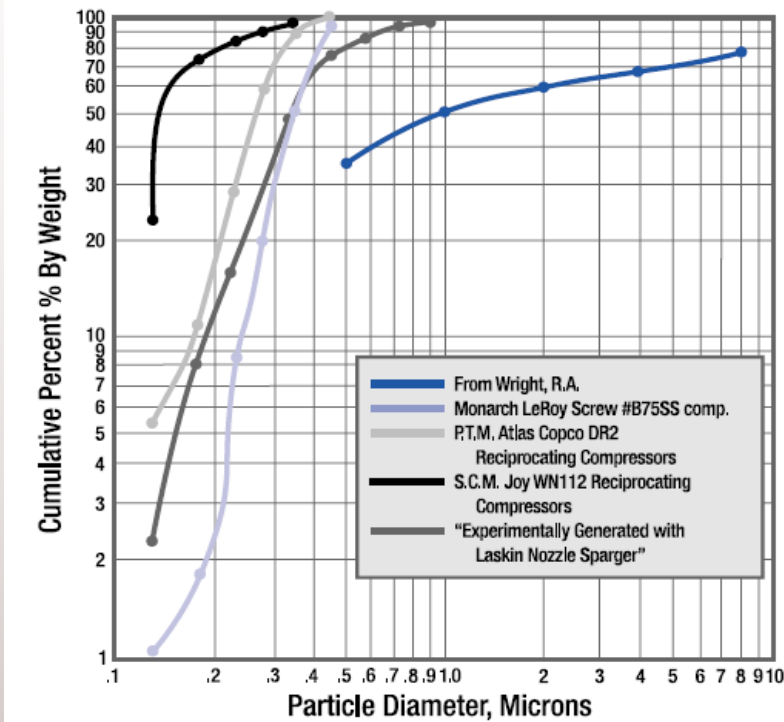
Lube Oil Entrainment

All compressors use lubricating oil to protect sliding surfaces, in both reciprocating and screw compressors. The compression of gas from low to high pressure at high speed creates jets of misted lubricating oil at the sealing surface which are carried away with the high pressure gas stream. Similarly, glycol can also become entrained downstream of a gas dehydrator.

Entrained oil mist can create problems meeting dewpoint specifications downstream, primarily because it causes false readings on a dewpoint test. Misted oil can also accumulate and pool in downstream lines and instruments causing a number of problems.

“Entrained lube oil can be a major obstacle to testing dew point specifications.”

Figure 1: Typical Aerosol Size Distributions from Lubricated Compressors



Typically, the entrained oil droplets are very small, in the range of 0.1 to 10 microns, which means to remove these particles by conventional separation would require an extremely large separator.

“Consistent, low pressure drop”

Removal by filtration can be both labour intensive and costly as filter elements can often plug and require changing. Pressure drop through an old-style filter element will be high especially as the element ages, saturates, and fouls.

GEQuip Lube Oil Scrubber do not see a change in performance over time- pressure drop will consistently be low, day after day, conserving both horsepower and fuel. A small saving in pressure drop will equate to a big saving in fuel over time.



Model 612 Lube oil scrubber, Claresholm Alberta.

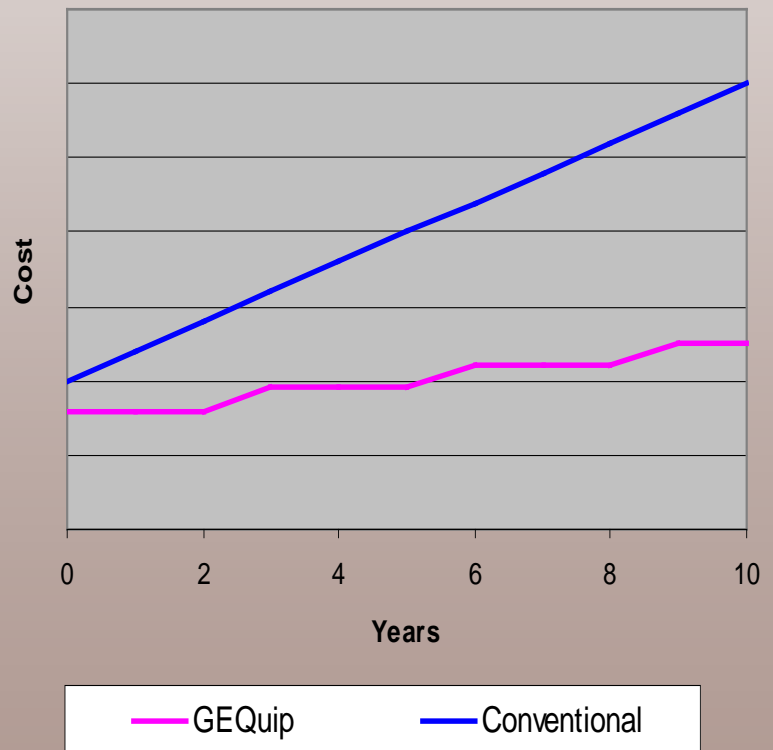
“GEQuip Lube Oil Scrubbers will reduce both initial capital and maintenance costs on your compressor”

GEQuip lube oil scrubbers utilize a proprietary internals system that removes more lube oil with less equipment, less space, and less effort than conventional approaches. These internals are extremely efficient at removing mist particles in the target range of .1 to 10 microns, and the system utilizes very minimal pressure drop. The internals system requires little to no maintenance, the only parts requiring occasional service being the dump valve system. Lube oil is collected in the boot of the vessel, where it can be automatically or manually dumped to your location of choice. Several optional dump systems are available to create a system that best suits your needs.

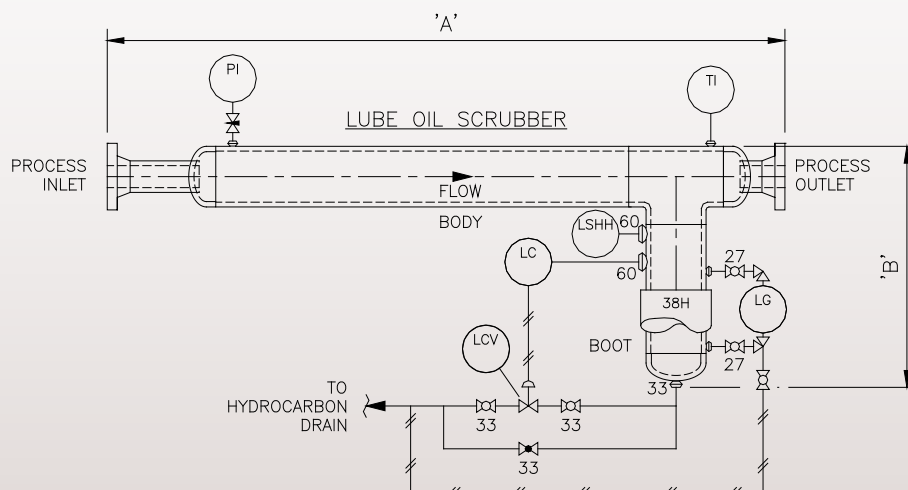
The case study (right) would be typical of the savings that will be realized by the installation of a GEQuip lube oil scrubber (actual values will vary):

	GEQuip	Conventional Filter Coalescer
Capital cost	8000	10000
Yr 1 maintenance	0	2000
Yr 2 maintenance	0	2000
Yr 3 maintenance	0	2000
Yr 4 maintenance	1500	2000
Yr 5 maintenance	0	2000

Cumulative Cost Comparison
GEQuip vs Conventional Filter Coalescer



INSTALLATION AND DIMENSIONAL INFORMATION



Model	Inlet Size	Outlet Size	Body Dia. In.	Boot Dia. In.	Dimension "A"	Dimension "B"	Approximate Flow Rate At 800 PSIG	Shipping Weight
306	3	3	6	6	6'6"	3'	3.5 to 6.5 MMSCFD	400lb
408	4	4	8	8	9'	3.78'	6.5 to 11 MMSCFD	570lb
612	6	6	12	10	12'	4.9'	15 to 24.5 MMSCFD	2,000lb
816	8	8	16	10	14'	5.1'	26.5 to 39 MMSCFD	2,400lb
1020	10	10	20	10	16'	5.3'	38.5 to 56.5 MMSCFD	5,000lb
1224	12	12	24	10	18'	5.5'	59 to 90 MMSCFD	6,050lb

- Dimensions typical for all ANSI Ratings
- Dimensions are for typical scrubbers.
- Call for detailed sizing, flow rates shown are approximate.

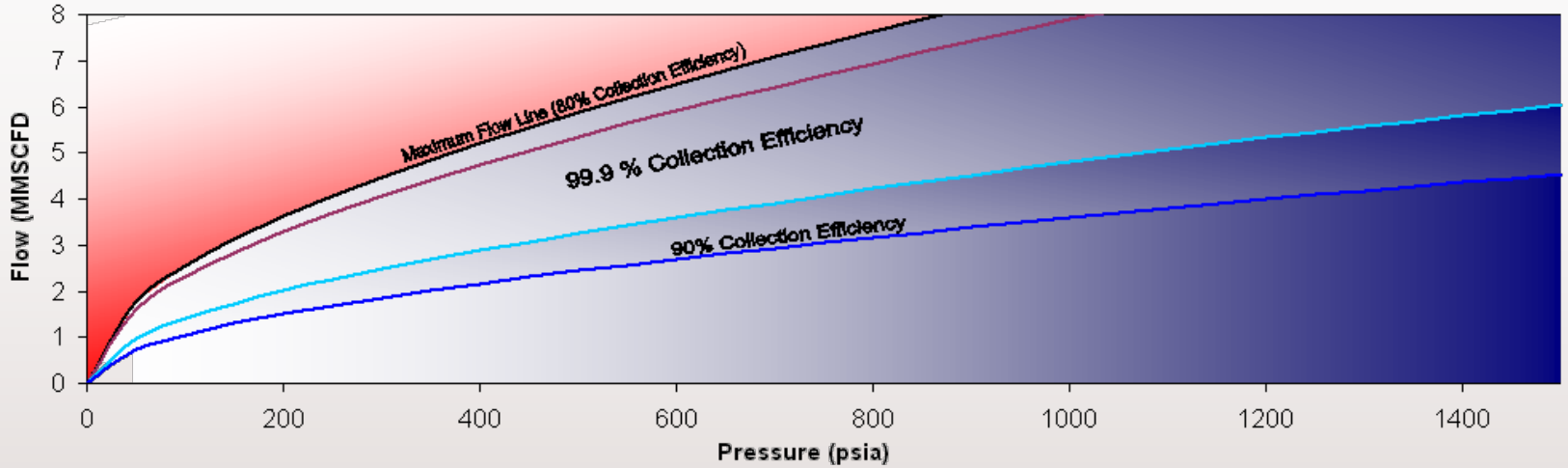
Contact: Robert Groenen
Cell: (403) 619-5280

Contact: Dawn Wambold
Cell: (403) 700-7526

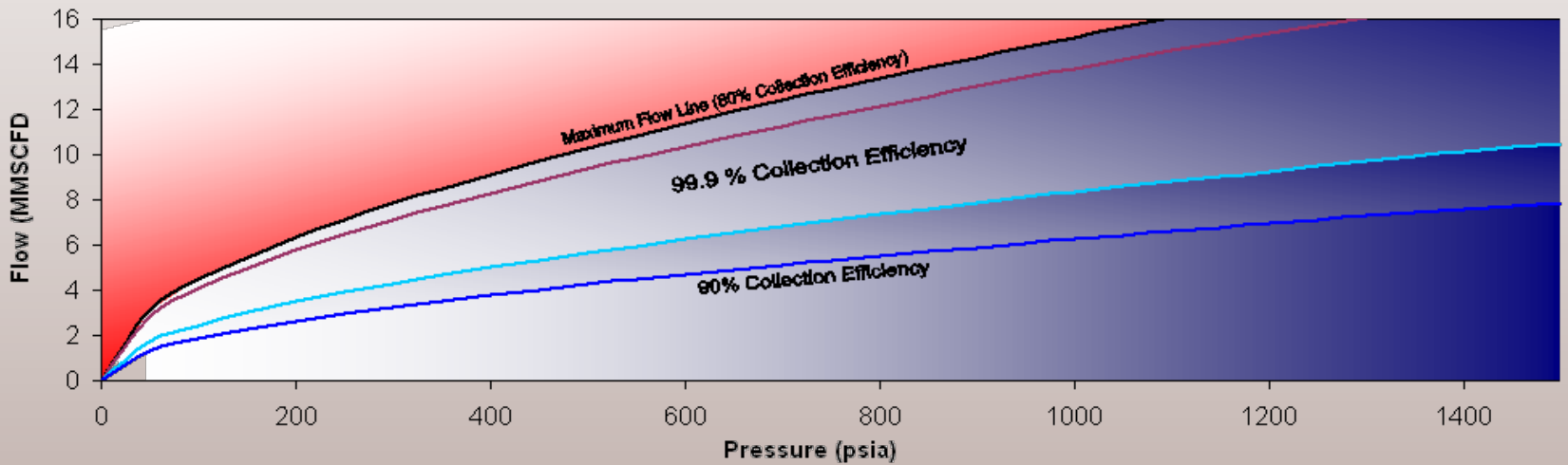
Email: sales@gequip.ca

LUBE OIL SCRUBBER CAPACITY CURVES

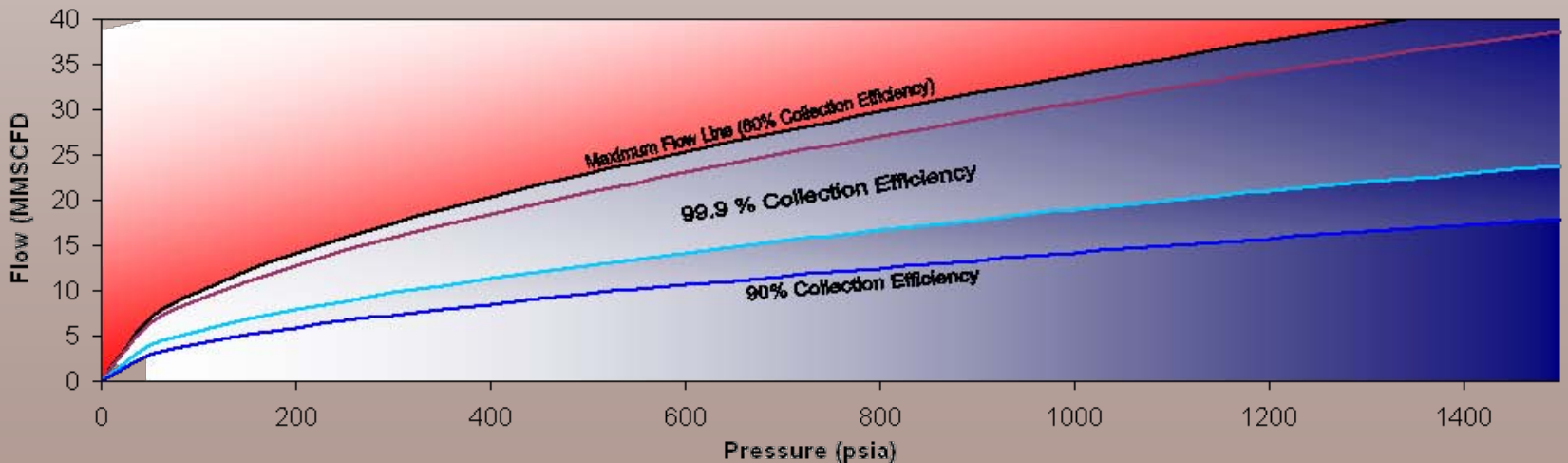
LS 306



LS 408



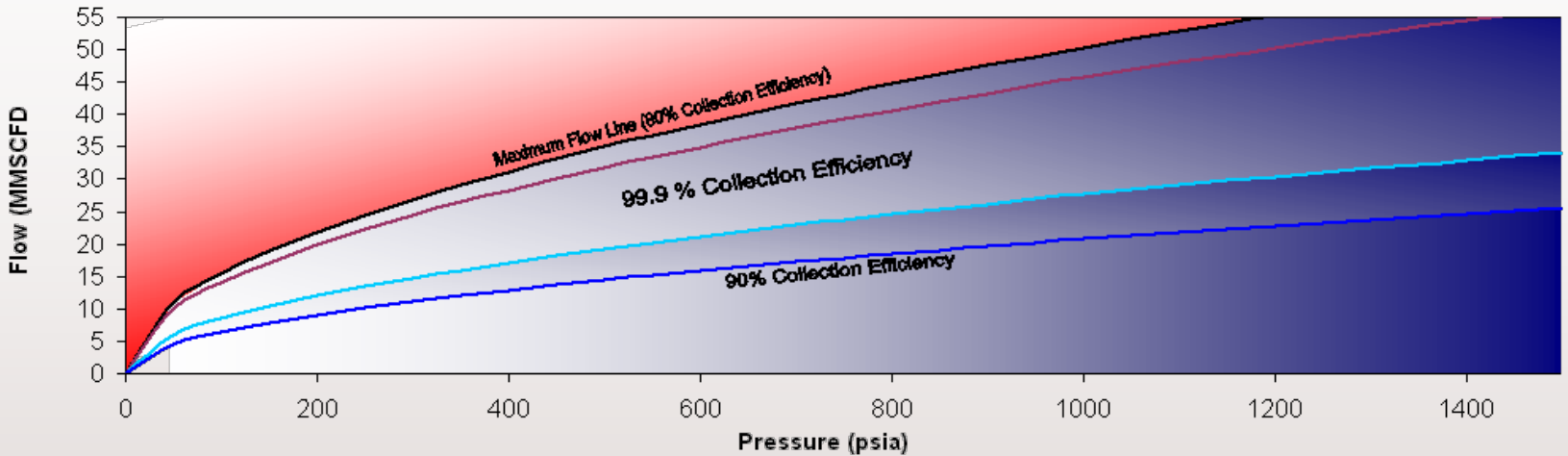
LS 612



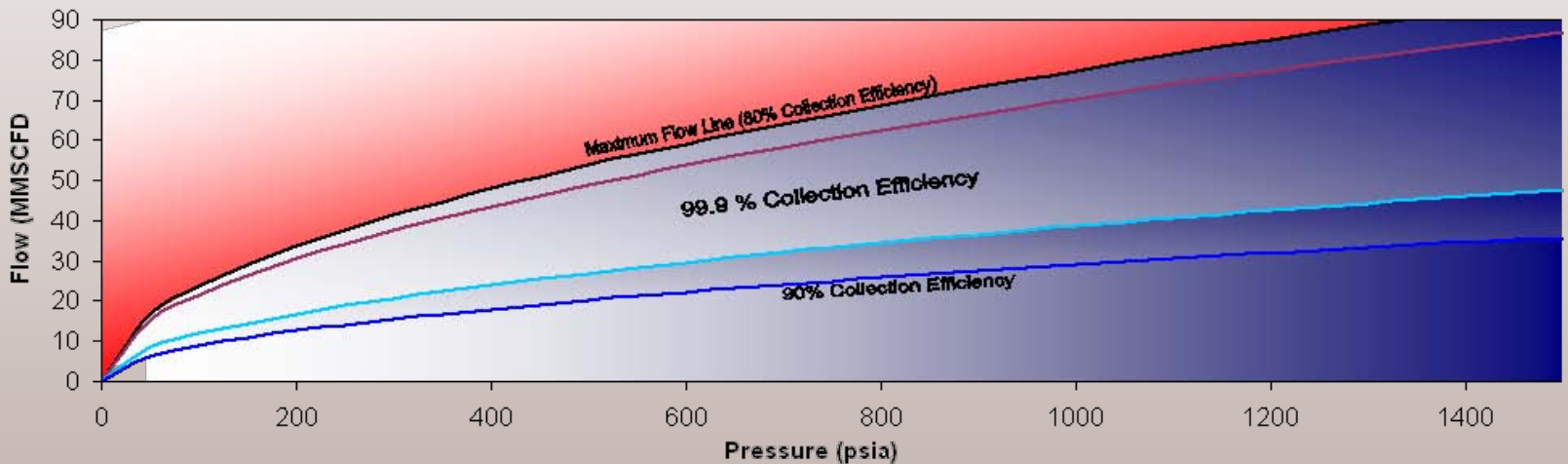
Note: These are generalized capacity curves. For sizing on your particular application, please contact GEQuip.

LUBE OIL SCRUBBER CAPACITY CURVES

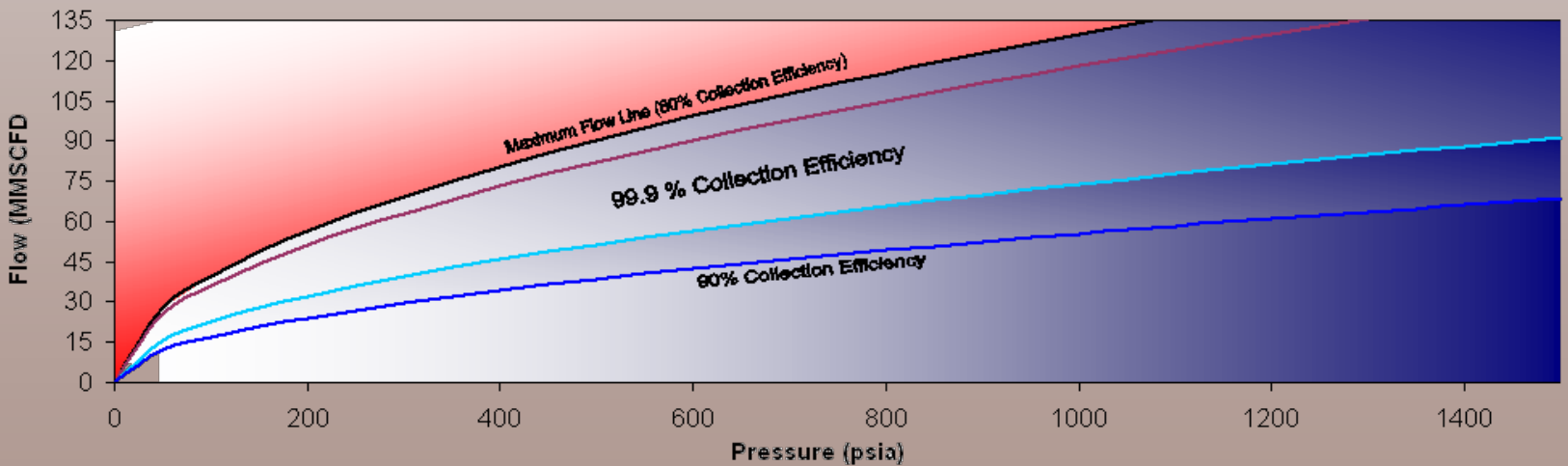
LS 816



LS 1012



LS 1224



Note: These are generalized capacity curves. For sizing on your particular application, please contact GEQuip.

Photos and Testimonials



“After I installed a GEQuip Model 816 Scrubber on the discharge line of the plant, I am collecting 3 gallons per day of Compressor Lube Oil and ATCO Gas no longer has an issue with Lube Oil Content or suspected Hydrocarbon Dew Point.”

November 2006, Todd Torrens, Lead Operator at the Claresholm Gas Plant, ConocoPhillips

“We have a QEQuip lube oil scrubber model LS-612 working at our plant. The flowrate is 25 MMSCFD at 1200 psig. The scrubber is collecting lube oil and working great!”

March 2007, Shane Imber, Lead Operator at the Galloway Gas Plant, Husky Energy



“We installed a GEQuip lube oil scrubber downstream of our existing cyclone lube oil separator, and the GEQuip unit continues to collect just as much lube oil as the upstream cyclone separator! We are very pleased with the outcome as Nova Gas no longer bothers us about a suspected hydrocarbon dew point.”

August 2006, Farley Vanstone, Lead Operator at the Chinook Compressor Station, Nu-Vista Energy





Installation and Operation

Installation:

1. GEQuip Lube Oil Scrubbers come with standard raised face weld neck flanges (RFWN) for easy connection to existing piping.
2. Install GEQuip scrubbers in the discharge line of the system producing lube oil contaminants.
3. The lube oil collection boot is located on the OUTLET end of the scrubber; observe that inlet/outlet connections are orientated correctly to the flow of the gas.
4. Connect drains, level gauges, level controllers and level switches using standard instrumentation installation practices and site procedures.
5. Prior to bringing the lube oil scrubber up to operating conditions, the scrubber and connecting lines need to be purged of air. Standard industry safe practices for purging should be followed.
6. Before bringing the system up to full operating pressures, all connections must be checked for leaks and any leaks must be repaired.

Operation:

1. GEQuip Lube Oil Scrubbers are designed for low maintenance and easy operation.
2. To ensure that the drain lines and dump system are working correctly, the liquid level in level gauges should be checked on a regular basis.
3. For safe operation, lines leading to upstream pressure safety valves should be unrestricted and the valves themselves maintained on a regular basis as per company pressure vessel owner-user programs and local jurisdictional requirements.
4. Vessel wall thickness integrity, especially in high corrosion applications, should be monitored as per company pressure vessel owner-user programs and local jurisdictional requirements.
5. When site conditions such as pressures or gas capacities change, contact GEQuip to confirm that the scrubber design is still viable.