

PIPELINERS HALL OF FAME NEWS

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THE SUPER FLUSHER

**UPI's Fully Portable
Lube Oil Flushing
System Reaches
ISO 4406
Cleanliness
Standards
Quickly and
Eliminates
Costly Downtime**

"I don't know of anything like it in the country," says Bob Schoneberger PE, owner of United Piping, Inc., a Duluth, Minnesota based company that designs, builds and installs underground utility systems. "Well, it's pretty unique and I'm not aware of any others that have performance capabilities like it," he adds.

What is it? It is a portable, fully self-contained, lube oil flushing and filtering system that cleans piping systems down to a small micron level of cleanliness, which includes an optical counter for on-line particle size/quantity detection. It is a huge improvement over conventional systems that do not have a "hot" and ready to go filter backup, or on-line counters, and have filter systems that only filter on one side of the piping. Last year, United Piping, Inc. (UPI) added this unique piece of equipment to its line-up, bringing a new service to the company's expanding pipeline station construction related work.

According to Bob Schoneberger, "Our rig is perfect for cleaning and flushing lube oil systems for new turbine engine installations. Today, a lot of new natural gas compressors are driven by turbine engines and these multi-million dollar engines need a clean lubricating oil system to operate efficiently. This is especially true after the systems are newly constructed and in the field. They need to be cleaned after construction and before they are put into service. Our new system does that very well."

Schoneberger goes on to explain that the lube oil used in turbine engines needs to be very clean to minimize wear and tear on the engine internals. "We filter it through our flushing rig with one micron high performance filters to reach an ISO 4406, 16/14/12 cleanliness code easily. It's amazing and very fast," says Schoneberger.



[TOP PHOTO] UPI's trained and qualified personnel know how to operate the flushing system for optimum results. [BOTTOM PHOTO] UPI's self contained flushing system already has a full schedule and work experience from pipeline station construction work across the Midwest.

Since purchasing the lube oil flushing system, UPI has used it on six jobs including projects for Henkels & McCoy in Gaylord, Michigan; Big Inch Fabricators and Construction in Montezuma, IL; US Pipe Line in Houston, TX; and, for themselves.

John Gray, manager, Industrial Division, Henkels & McCoy says, "We used UPI's lube oil flushing for turbine compressor installation at two locations this past year -- one in southeastern Michigan and the other in western Michigan. It performed very well and we would definitely use it again. UPI's competitive pricing, quick response, and qualified personnel for the equipment definitely fulfilled our needs."

Blake Hartman, president, Big Inch Fabricators and Construction, Montezuma, IL, has used UPI's flush lube oil system on two solar gas compressor turbines for work in Kansas and brought UPI back in June 2008 for another project. Hartman has been impressed with results, "The equipment and operator performed better than any other company we've used in the past. It was the best setup we have used for this type of work. The unit is totally self-contained with its own power supply and piping/hose for hook up. The equipment is well-maintained, their operator is one of the best, and the project was completed on schedule at the price quoted without any problems."

Benefits of this equipment include:

1. Very fast - Variable speed flow rates from 0 - 1000 gpm depending on the application requirements.
2. Has on-line/real-time particle counter to measure the cleanliness of the oil as it is flowing through the system so operators know exactly when cleaning is done without any downtime for testing. The on-line particle counter reads cleanliness levels in real-time. Other systems have to shut down and sample the fluid - the UPI system samples on-line, so there is no need to stop.
3. Has back-up filtration units to keep running continuous in the event the primary filters get plugged or dirty. The secondary, or backup, filters are always "hot" and if/when the differential pressure on the primary filters get too high, the system automatically switches to the backup filters so that the primary ones can be changed. This keeps the filtration running time continuous. It also cuts down on the actual overall time to perform the flush by eliminating that downtime.
4. Filters into piping and again on the return side. By using more filters (one filter bank flowing into the piping system and one back on the return side of the piping), operators cut down on the total flushing time.
5. Has 40 KW of on-board power generation to supply the system immersion heaters that are used to heat process fluid to required temperatures for flushing. Therefore, customers are not required to provide electrical power.



[ABOVE] On-line particle counters and real-time readouts tell operators when ISO cleaning specifications have been met without the downtime associated with conventional testing.

6. Major system components are insulated to retain as much heat as possible during the flushing process and when weather is "not cooperative".

This all adds up to less time in the field, which means less disruption for clients, more predictable flushing times, and one micron (absolute) high performance filters capture more particles faster. It's just what contractors, owners, and suppliers of turbine engine equipment are looking for.

UPI is experienced in commercial and industrial underground utility system work for applications including general utility line installation, natural gas distribution, propane distribution systems, and pipeline transmission systems. UPI has more than 40 years in the general/mechanical contracting business and is certified by the UA, ASME and NBBI.

For more information, go to <http://www.unitedpiping.us/> or call 1.800.269.2968.



[ABOVE] UPI's high performance lube oil flushing system is easy to set up virtually anywhere. This on the job photo shows work being done in California.