



Pure Municipal Power Plant

ISOPur Fluid Technologies fluid purification systems reduce oil replacement and disposal costs at Vero Beach Municipal Power Plant

The Vero Beach Municipal Power Plant serves the City of Vero Beach with reliable power. Due to the recent rapid growth of this mid-coastal Florida community, there has been an increased demand for stronger energy production. The plant runs General Electric steam turbines. Vero Beach teamed with GE to thoroughly investigate options to increase available power.

The Challenge

A key factor in the life cycle of GE steam turbines is oil quality. Water and contaminating particles were costing the power plant in increased wear and maintenance. Particles as small as 0.1 microns were causing internal deposits, equipment rust and corrosion. Cleaning and replacing filters were becoming an annoying and costly routine maintenance. Forced power outages and production downtime was also an increasing concern. A typical steam turbine inspection and rebuild cycle to scrape clean the sludge and varnish from tank lines and bearings can halt production for up to 14 days.

The Solution

Management personnel from Vero Beach Municipal Power Plant initially learned about ISOPur's patented technology, Balanced Charge Purification (BCP), while attending an independent power plant maintenance conference in 1996. The power plant installed the I-600 purification system, which is designed for production equipment with flow-rates ranging from 600 to 1000 gallons per hour and tank sizes up to 5000 gallons. Peter Lindberg, the plant manager at Vero Beach commented, "We were very impressed with ISOPur's ability to successfully extend the life of GE steam turbines and installed the ISOPur system on our three GE steam turbines in 1997." BCP completely removed preexisting varnish and sludge and resulted in pristine internal surfaces. Lindberg also stated, "Lubricating oils are not only expensive to buy, they are expensive to dispose of. Because maintenance on multi-million dollar turbines also doesn't come cheaply, using ISOPur systems to extend the life of lubricating oils and equipment makes absolute sense for power generation operators."

The Return on Investment

"We're a small outfit and we run a tight budget like everybody else," noted Lindberg. "ISOPur has given us a huge boost in reducing our operating, maintenance and lube costs as well as extending the life and reliability of our steam turbines. I can't think of a system that has delivered a stronger return on investment than ISOPur." BCP completely removed preexisting varnish and sludge, which accounted for the pristine condition of the turbine's internal surfaces. The plant reduced maintenance downtime by 2000% when compared to run time prior to implementing the ISOPur system. "The bottom line is ISOPur has helped and continues to help Vero Beach to serve our growing community with reliable power while also allowing us to protect our environment by virtually eliminating the need to dispose of the oil in our turbines," said Lindberg.

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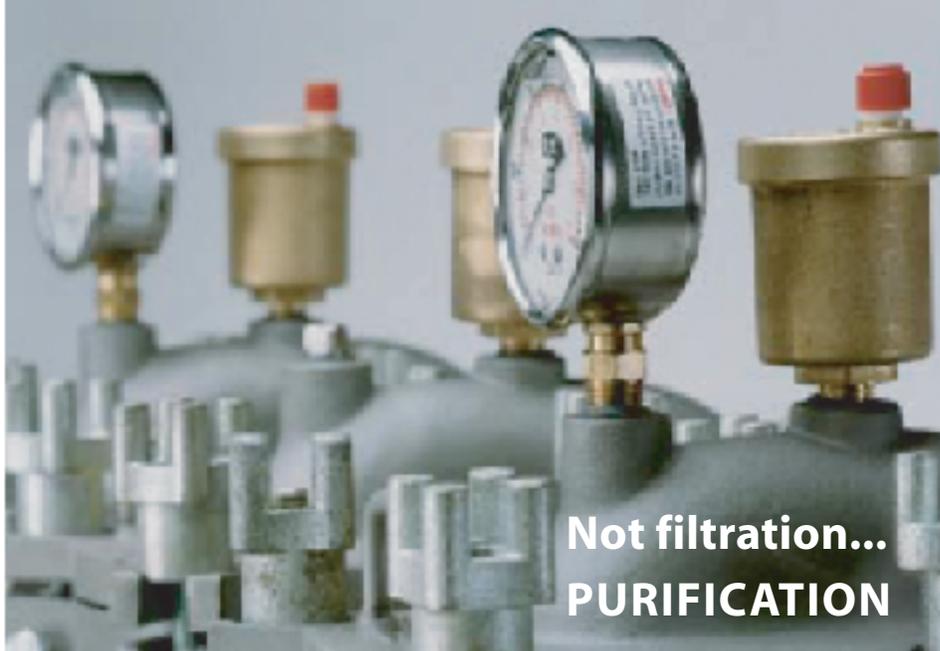
- Peter Lindberg
Plant Manager, Vero Beach
Municipal Power Plant

Before ISOPur:

- Expensive turbine rebuilds
- Sludge & varnish buildup
- Expensive oil disposal

After ISOPur:

- Sludge & varnish removed
- Downtime reduced 200%
- Virtual elimination of oil disposal costs



Not filtration... **PURIFICATION**

ISOPur Fluid Technologies, Inc. develops advanced purification systems for hydraulic oil, lubricating oil, and diesel fuel used in high-performance, mission-critical industrial machinery. Through its patented Balanced Charge Purification (BCP) technology, ISOPur is able to achieve a level of fluid purity unattainable by traditional filtration or centrifugal systems. ISOPur not only continuously purifies oil and fuel to a better than new condition, BCP also scours the internals of the machinery as well. ISOPur can provide a dramatic return on investment by improving plant uptime, reducing maintenance costs, extending the life of expensive capital equipment, and reducing fluid consumption and waste disposal.

ISOPur is committed to defining the fluid purification industry. In an effort to conserve what is quickly becoming a capital resource, non-conducting fluids, the ISOPur BCA technology is able to keep these fluids like new, year after year - *without replacement.*

Discover the **Power of Purity** with ISOPur Fluid Technologies.



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