

## **E855T SERIES**

### **Description**

It is generally recognized that water is an enemy of Turbine lubricating oils. Water in oils impairs its lubricating properties and increases the rate of oxidation, develops sludge formation and causes costly corrosion to equipment. There are many possible ways of water entering the Turbine oil, some of them beyond human control. Modern high quality oils, designed to meet the severe requirements imposed on them by Turbine lubrication, are more inclined to form emulsions. At the same time their performance depends on numerous additives, which are easily dissolved in, or damaged by water. Since it is often impossible to prevent water from entering the lubricating system, it is extremely important to remove it from the oil before it causes permanent damage.

Water and oil are, for practical purposes, two immiscible liquids. If not agitated, water introduced into lubricating oil separates readily by gravity. However, any kind of agitation



can break up the body of water into small droplets, which become dispersed in the oil. Water finely dispersed or emulsified in the oil becomes practically impossible to separate by gravitational means.

Utilizing the coalescing principle of filtration, the **ENERVAC** Model E855T Turbine Oil Purifier is ideal for extending turbine oil life by removing free moisture and particulates. Skid-mounted and self-contained, the unit is designed for unattended operation.



### **Features**

- Automatic, PLC Controlled – Unattended Operation
- Variable Flow Rate; Max. 100 gpm
- ASME Coded Filter Vessels
- Minimal Operating Cost
- Minimal Maintenance
- Centralized Gauge Panel
- NEMA 12 Rated Central Control Panel
- Inlet and Outlet Flow Indicators
- Automatic Water Drain With Water Meter
- Welded Steel Piping
- Ease of Operation

### **ENERVAC CORPORATION**

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## Typical Performance

Parameter	Unit	Before	After
Free Water	PPM	>5,000	<25
Particles > 3 micron			99.0%



## Benefits

- Longer turbine life
- Reduced bearing failures
- Reduced power outages
- Reduction in turbine overhauls
- Precise hydraulic valve operation
- Quicker oil flush cycles

## Latest Developments

Turbine generator sizes have increased to 750 to 1,000 MW units, with oil reservoirs of 20,000 gallons or more not unusual.

These large units are often base load machines, which must operate continuously to justify their high capital cost.

The severe lubrication demands of these modern turbines have resulted in development of turbine lubricating oils containing anti-corrosion, anti-oxidation, anti-foaming and other additives.



Continuous "on-line" demand requires efficient conditioning of the oil to preserve its lubricating properties and the protective functions of its additives.

This demand for continuous turbine operation with little manual attention necessitates a continuous conditioning system capable of maintaining high clarity in the turbine oil reservoir over long operating cycles. The conditioning techniques must not in themselves contribute to deterioration of the turbine oil or depletion of its additives.

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