



Purify various turbine lube oils from steam turbine, gas turbine & Lube/seal oil system for power plants

- ✧ Special Water separation system, remove water effectively
- ✧ Removal of free water, liquid water & dissolved water content
- ✧ Removal of gases
- ✧ Multi-stage Particles Filtration to remove various sizes of solid particles
- ✧ High efficiency heating & reheating
- ✧ On-line & Off-line purify steam and gas turbine oils
- ✧ Working at High Vacuum with low temperature
- ✧ Quick breaking emulsification
- ✧ Hooks (lifting eyes) installed for convenient lifting

FTY SERIES Vacuum Turbine Oil Purification Machine

Application

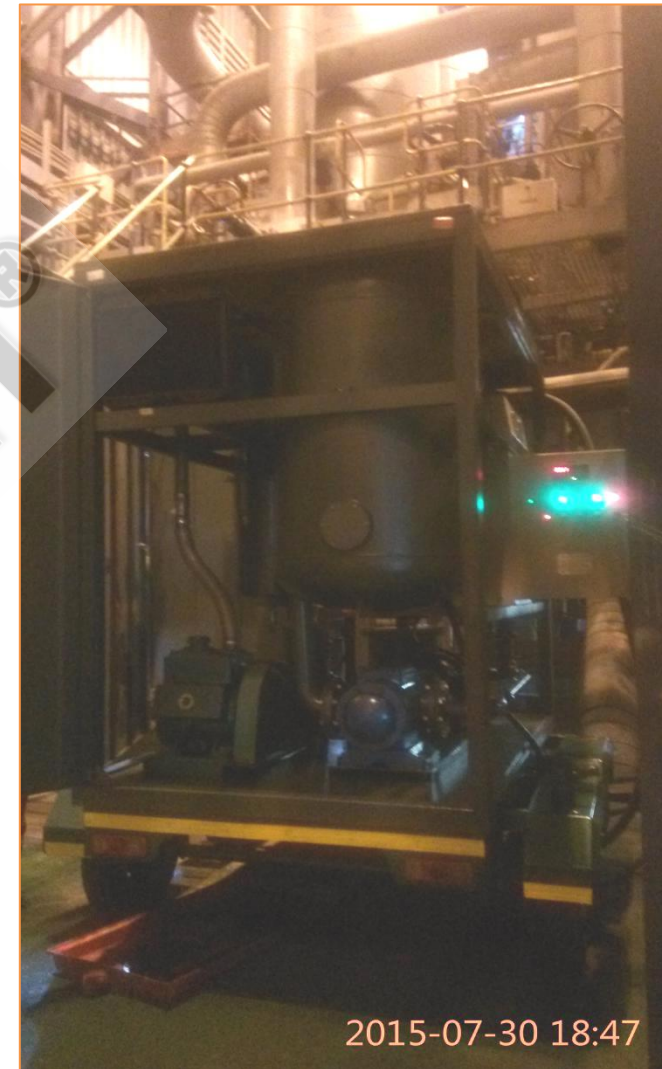
The oil used for lubrication system of turbine generators need maintenance and treatment because it may be mixed with air, water and impurities. Otherwise, it can speed up oil quality turning bad or break down the adjuster and protection system, damage the plain journal bearing, and influence the whole machine running.

In the past, we used pressure type and centrifugal type oil filter to get rid of impurities and water in oil for middle and small equipment. But the operation processes of those two equipment are very complex as well as waste of large quantity of oils and materials. The efficiency of the equipment is very low. Therefore, they are not suitable.

Our **Series FTY Vacuum Turbine Lubricating Oil Purifier** is specially designed for purifying various unqualified turbine oil (such as ISO VG 32/ 46/ 68/ 100, etc.) from steam turbine system, gas turbine system & Fans, especially for serious emulsion turbine oil and it effectively filter the turbo 68 oil without problem, it can quickly and efficiently break emulsification, separate water (emulsified and dissolved water), gas, dirt, particles from oil, so that make sure quality of treated oil to achieve new oil's standard, ensure whole turbine system work safely.

This equipment uses special polymer materials as filter medium combined with vacuum separating technology and water-separation dehydration system to break emulsification, dewater, degas, remove acid and particles, make the badly turbid turbine oil becomes clean.

Why Purification of Turbine Oil is Important?



When in operation, the turbine oil used for cooling, lubrication and speed regulation of various turbine or hydro-turbine sets are easily prone to pollution, more water and impurity content, and emulsification, which seriously affect the operational safety and useful life. The traditional treatment method cannot solve the problem, and is easy to cause waste and environmental pollution.

Our **FTY Turbine oil vacuum dehydrator and filtration system** is specially designed and applied to on-line processing of the turbine oil of the steam engine, gas turbine and water turbine in the field of electricity, chemicals, paper making, metallurgical industries. It can not only ensure the regular work of adjusting system and lubricating system, but also purify low viscosity hydraulic oil and coolant oil.

What Problems Will Happen if Turbine Oil Is Polluted?

- ❖ Rapidly oxidizes and degrades the oil to form acidic substances and corrode metal contact surfaces;
- ❖ The precipitation of the additive in the oil fails, the thickness of the lubricating film is reduced, and the mechanical wear is increased;
- ❖ Lubrication, cooling, and reduced flow properties accelerate metal surface fatigue;
- ❖ Ice crystals formed at low temperatures block components and reduce system rigidity System response is slow and accompanied by irregular motion conduction performance degradation;
- ❖ Higher oil temperature for long time and not cool down;
- ❖ Oil pump and power equipment are damaged by cavitation.

Thanks to absorbing the advanced technology of similar products at home and abroad, our **FTY Turbine oil dehydrator and filtration system** has excellent performance in design, production and cost. The oil purification process and overall performance are winning more and more orders from the world with its advantages of high working vacuum, fast oil filtration speed, oil quality protection and low maintenance.

FTY Turbine oil dehydrator and filtration system provides an extremely cost-effective and environmentally acceptable method of extending turbine oil lifetime to over more years!



Functions & Features of FTY Machine

1. Vacuum dehydration system combined with Special Oil-Water Separator System, rapidly separating and removing various liquid water, free water, trace water, dissolved water, etc.
2. With distinctive removing impurities technique filtering through double FH trapezoidal network and absorbing by high polymer material, this machine can make the β_3 equal or surpass 200 and make the cleanness lower Grade 6 (NAS1638).
3. Duplex-stereo film evaporation technology, equipped with unique and advanced dewatering, degassing components, can rapidly and effectively remove water, gas, particles and volatile matter from the oil.
4. Fast break the emulsification of the oil.
5. Advanced automatic medium cooling system, improving working efficiency and making water content cooled down quickly and removed.
6. Electric control panel with vacuum indicator, pressure indicator, digital temperature controlling system with indicator and automatic shut-down system.
7. Advanced fully automatic temperature controlling system, liquid-level controlling system, pressure protecting system and excellent configuration can ensure operation of the equipment with high performance.
8. Interlock protection system, pressure protection device, interaction of oil inlet and heating, which avoid influence of incorrect manipulation.
9. Hooks (lifting eyes) installed for convenient lifting.



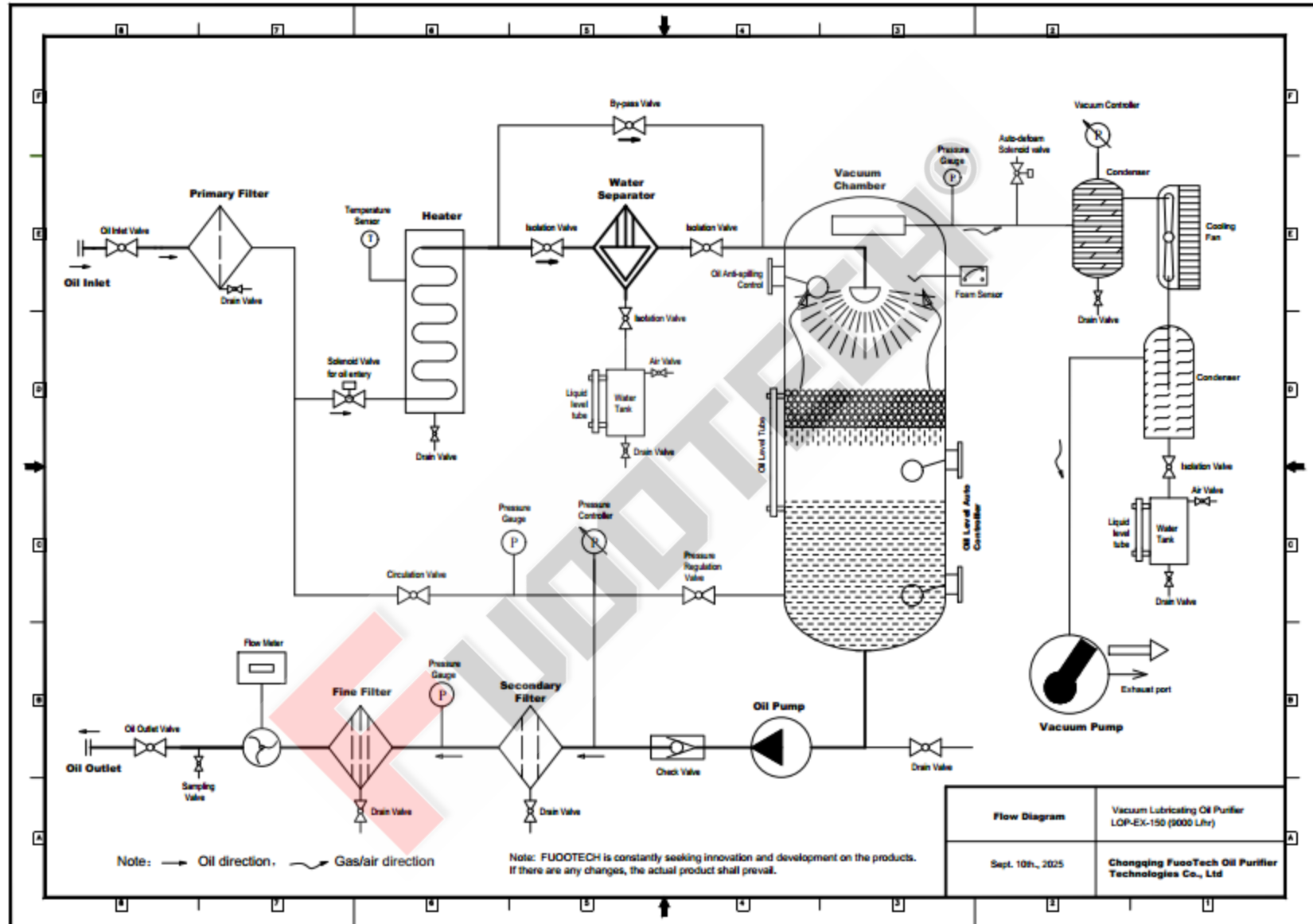
Technical Parameter

Item	Unit	FTY-10	FTY-20	FTY-30	FTY-50	FTY-100	FTY-150	FTY-200	FTY-300
Flow rate	Liter/hour	600	1200	1800	3000	6000	9000	12000	18000
Maximum treatment oil capacity in one tank	Tons	2	5	8	10	16	22	30	45
Working Vacuum Degree	MPa	-0.06 ~ -0.095 MPa							
Working Pressure	MPa	≤ 0.4 MPa							
Temperature Range	°C	20 ~ 80							
Power Supply		380 VAC, 3 Phase, 50 Hz (or as per requirement)							
Heating power	kW	15	18	24	48	60	90	135	180
Total power	kW	17	20	26	52	68	102	151	200
Inlet/outlet caliber	mm	Φ25	Φ25	Φ25	Φ32	Φ42	Φ42	Φ50	Φ65
Noise level	dB(A)	≤85							
Continuous working time	Hours	≥ 200							
Weight	KGS	400	450	530	650	750	900	1200	1550
Dimension	mm	1280× 900× 1550	1350× 950× 1550	1450× 980× 1630	1550× 1050× 1780	1700× 1150× 1960	1800× 1350× 1980	1900× 1400× 2050	1950× 1630× 2090
Oil Result after Filtration	Water content ≤100PPM; Gas content: < 0.1%; Particulate filtration/ Filtering Accuracy: ≤ 1μm; Demulsification Value: ≤15min (GB/F 7305); Cleanliness: ≤NAS1638 Class 6								

The dimension and weight will be changed with changing of technical specs. All the specs can be customized according to client's requirements.
 FUOTECH reserves the rights to change any parts of these specs due to improvement & upgrades without notification.



Flow Diagram



Note: The drawings above are for reference only, they will be updated as the product is upgraded.

Overseas Projects



South Africa



Pakistan



Saudi Arabia



Tanzania



Bangladesh



Malaysia



Cambodia



Dubai, UAE



Zambia



Nigeria



Laos



Zimbabwe

More projects are not listed here

Our Certificates

CERTIFICATES



Recommended Testers for Transformer and Transformer Oil (You Might Be Interested In)

Part I: Oil Testers

- ✧ Transformer Oil BDV Tester
- ✧ Transformer Oil Trace Moisture Content Tester
- ✧ Transformer Oil Acidity Tester
- ✧ Transformer Oil Interfacial Tension Tester
- ✧ Transformer Oil Flash Point Tester (Open/Closed Cup)
- ✧ Transformer Oil Tan Delta Tester
- ✧ Transformer Oil DGA (Dissolved Gas Analyzer) Tester
- ✧ Transformer Oil Kinematic Viscosity Tester
- ✧ Transformer Oil Density Meter
- ✧ Transformer Oil Particle Counter
- ✧ Sf6 Gas purity and Decomposition Tester
- ✧ Portable Dew Point Meter

Part II: Transformer & HV Testers

- ✧ Transformer Load and No Load Loss Tester
- ✧ TTR Transformer Turns Ratio Tester (Portable/Handheld Type)
- ✧ Transformer DC Resistance Tester 1 ~ 100A
- ✧ Transformer Tan Delta and Capacitance Tester 0 ~ 12kV
- ✧ CT PT Analyzer
- ✧ SFRA Transformer Sweep Frequency Response Analyzer
- ✧ VLF Hipot Test Set 30 ~ 90kV
- ✧ Insulation Resistance Tester 0.25 ~ 30kV
- ✧ AC Hipot Tester
- ✧ DC Hipot Tester
- ✧ Circuit Breaker Contact Resistance Tester
- ✧ Grounding Earth Resistance Tester