

TYA SERIES

LUBE & HYDRALIC OIL PURIFIER

ABOUT THE

COMPANY

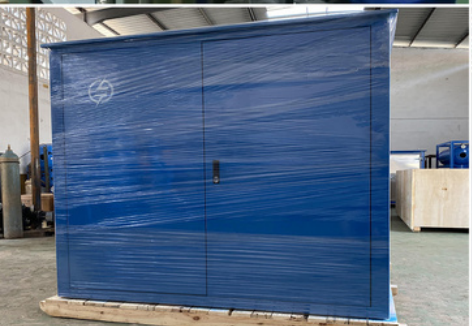














Located in Chongqing, China, we specializes in designing and manufacturing oil purification machines for processing transformer oil, lubricating oil, turbine oil, hydraulic fluids,etc.

With advanced oil filtration technology, our ASSEN® oil purifiers can rapidly remove impurities from oil so as to improve oil quality and extend service life of the oil .

Our products have established a fine reputation in the world market with high quality, fair price, fast delivery and good service.

We also provide customization services for clients, and our machines can be customized to meet end user needs. Looking forward to an opportunity to cooperate with our customers around the globe!









APPLICATIONS

Lube oils are often exposed to high temperatures that can cause sludge and varnish formation. Removal of free and emulsified water prevents formation of these sludge and varnish. ASSEN® TYA Lube & Hydraulic Oil Purifiers specially designed to remove water, gases and solid contaminants from lube oils.

Adopting coalescing water separation and vacuum dehydration technology, the system can rapidly and thoroughly remove all forms of water contents (free, emulsified, and dissolved) from lube oils. The water contents can be reduced to 50 ppm and less.

ASSEN supplies stationary or mobile Vacuum Oil Purifiers depending on the customer's application. The equipment will be mounted on a common base or a trailer and weather-proof housing and explosion-proof enclosure are also optional.

BENEFITS

- save oil change cost
- solve oil disposal problem
- keep equipment working at high efficiency
- protect machinery and reduce maintenance time
- create a cleaner environment

CERTIFICATES



ISO 9001



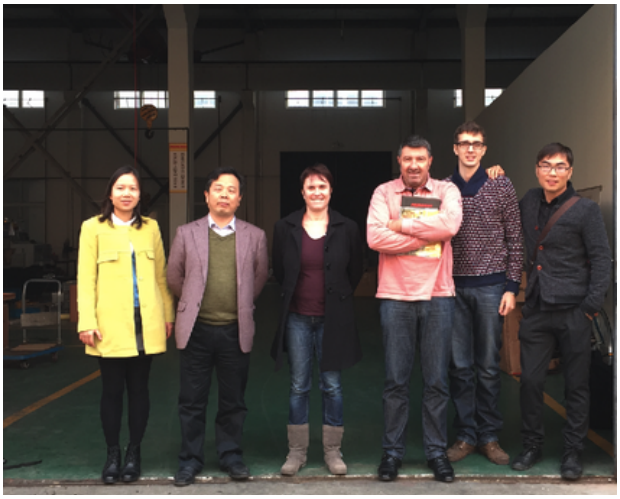
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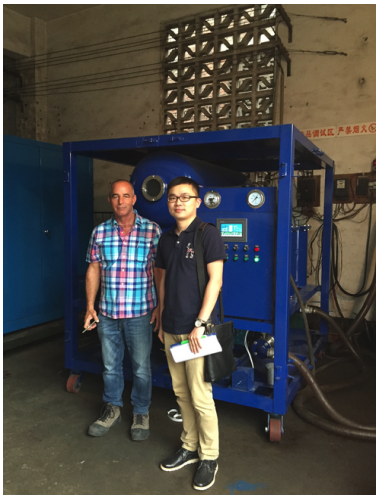


EMSC

CUSTOMERS













sembcorp

BARRICK

ABB

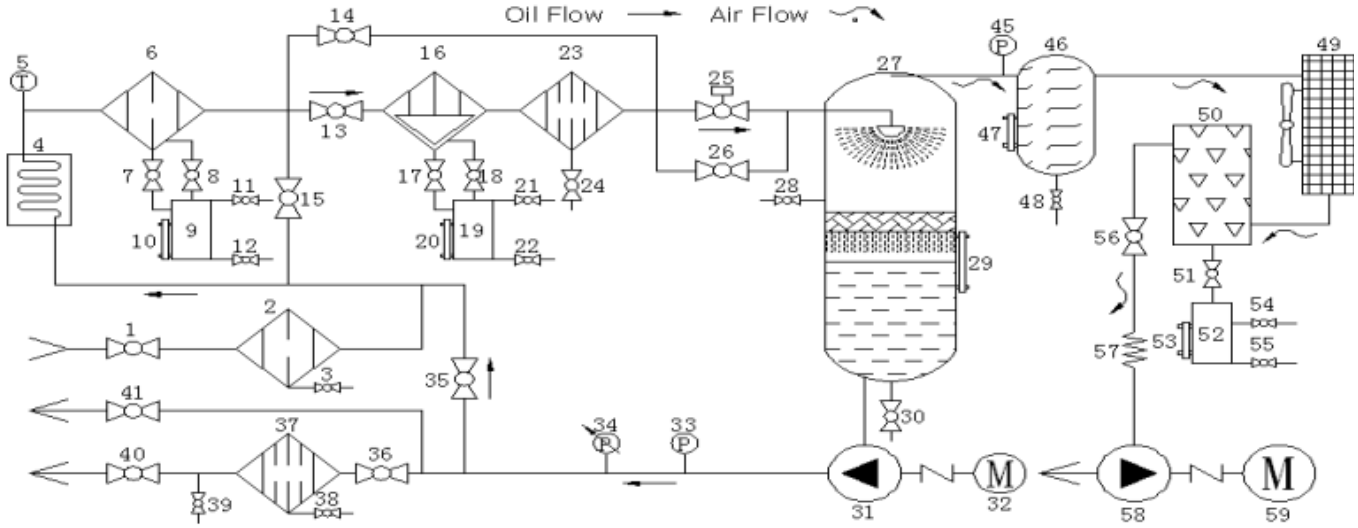
LAFARGE

PetroChina

Saudi Aramco

IMERYS

FLOW DIAGRAM



The oil is drawn into the system and is passed through the Primary Filter(>30 micron). by the use of the vacuum created by the system's vacuum pump. Then the oil flows through the Heater, where the oil temperature is raised to a preset degree.

Since turbine oil usually contains severe water contamination, it need be guided to the Coalescence & Separation Filters where large volume of free water is rapidly removed.

After that, the oil enters into the Vacuum Chamber, in which emulsified and dissolved waters and gasses contained in the oil are thoroughly exposed to vacuum by efficient dispersion and removed through a Vacuum Pumping.

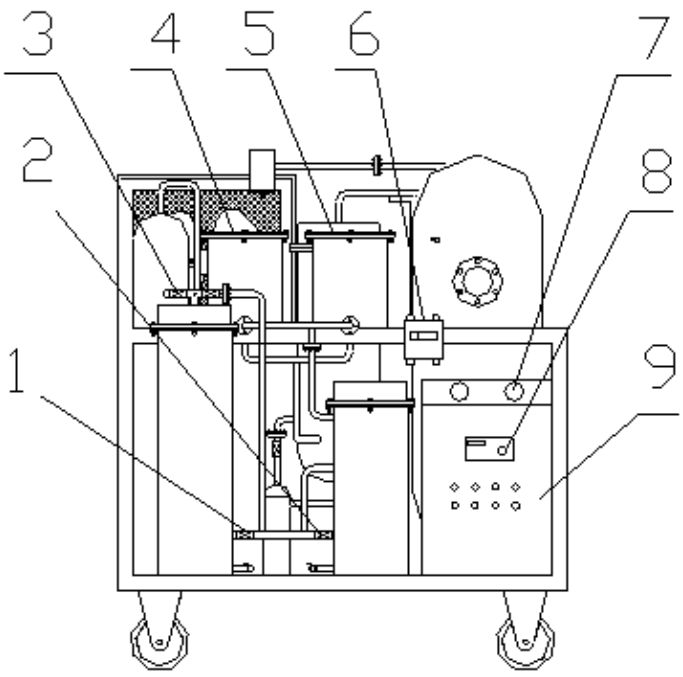
ASSEN® TYA Oil Purifiers use an atomizer inside the Vacuum Chamber for the maximum exposure of oil to the effect of vacuum. The sprayer has a great efficiency in cutting oil into tiny droplets, thus greatly improving dehydration and degasification efficiency.

The oil then flows through a high efficiency fine filter element (5 micron absolute under ISO 4572 code) where a fine polishing of oil takes place. After that, the oil is then discharged by an oil pump through the outlet or flows via the re-circulation valve to be processed again. The vapor and gases generated during the process will be guided to the Cooler where they are liquefied into water, which will then be stored in the Sewage Receiver.

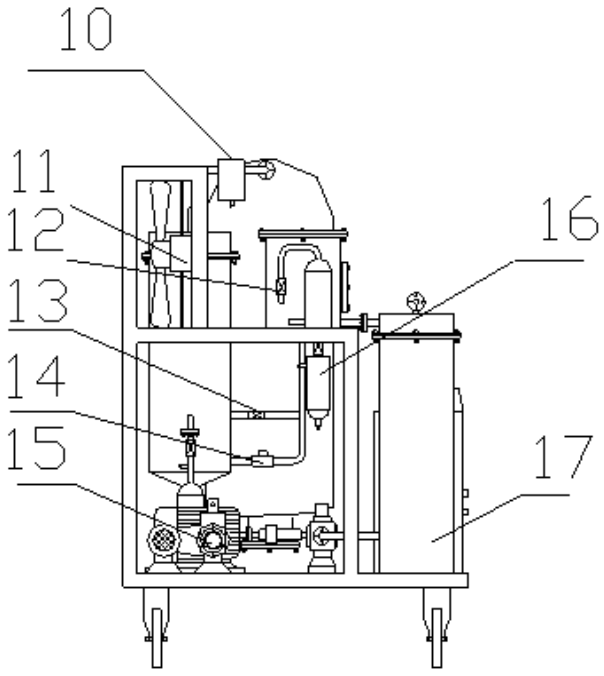
TYA Plant equips with a varnish removal filter,which can effectively remove harmful varnish from oil and lubricating system.

ASSEN® TYA Oil Purification Systems combine maximum simplicity with high safety standards. Various sensors are built in, continually monitoring the most vital parameters. If any of these parameters deviate from normal operation, the purifier will automatically shut down, and relavent alarm lights will start to flash.

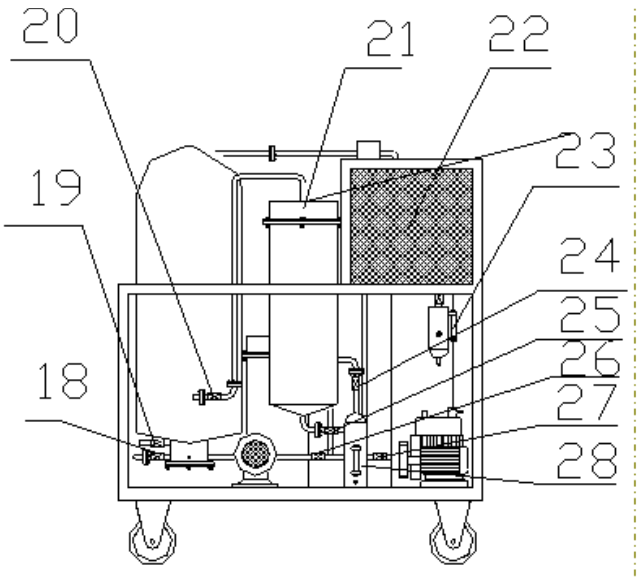
STRUCTURE DRAWINGS



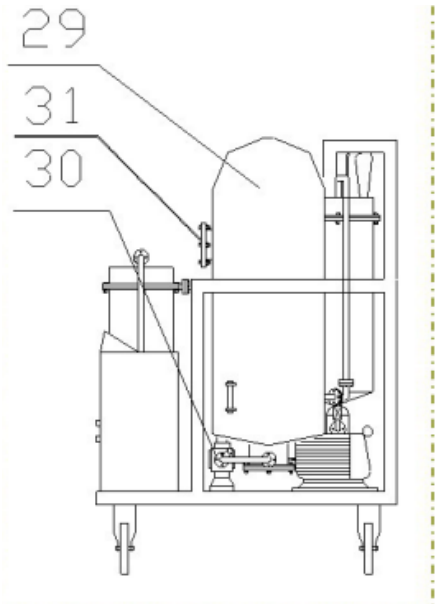
FRONT VIEW
1,2: MANUAL CONTROL VALVE
3. OIL DISCHARGE VALVE
4,5: PRIMARY FILTER
6: PRESSURE CONTROLLER
7: PRESSURE GAUGE
8: TEMPERATURE GAUGE
9: CONTROL PANEL



LEFT VIEW
10: DEFOAMING DEVICE
11: COOLING FAN
12: VACUUM VALVE
13. BYPASS VALVE
14: SOLENOID VALVE
15. PROTECTIVE COVER
16. WATER RECEIVER
17. FINE FILTER



BACK VIEW
18,19,20: CONTROL VALVE
21: COALESCING FILTER
22: PROTECTIVE COVER
23: GLASS VIEWING TUBE
24,25,26,27:CONTROL VALVE
28: WATER CONTAINER



RIGHT VIEW
29: VACUUM CHAMBER
30: OIL PUMP
31: OPTICAL LEVEL CONTROLLER

Note: Reference only. We reserve the right to make changes in the course of technical development of the product.

MAIN COMPONENTS

FILTRATION SYSTEM:

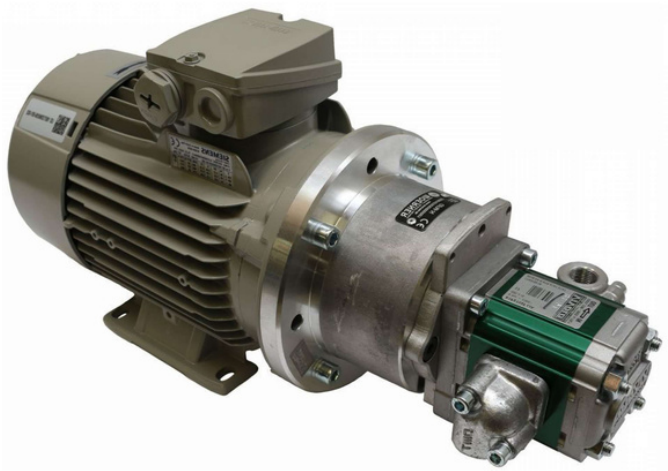
TYA Lube Oil Purifier is equipped with a complete set of filter cartridges that gradually remove solid contaminants from oil.

Primary Strainer eliminate coarse particles from entering the system.

Made of advanced synthetic fiber, Secondary Filter has excellent thermal resistance, further sifts out unwanted contaminants while allowing a smooth flow.

Fine Filter captures 99.5% of particles greater than 1 micron absolute under ISO 4572 element rating code.





OIL TRANSFER SYSTEM:

Positive displacement rotary pump is used for transferring oil throughout the system.

This type of transfer pump creates high pressure and requires low maintenance.

Directly driven by TEFC motor, the pump is mounted on a common base and comes complete with a relief valve.

VACUUM SYSTEM:

For TYA series, high efficient vacuum pump create a powerful vacuum in the oil processing chamber, improves the dehydration and degasification performance of the system.

Besides oil processing, the TYA oil purifiers' vacuum system can also be used as a separate vacuum source for evacuation.





HEATING SYSTEM:

Low-watt density heaters are used to prevent the heat degradation of transformer oil. Heater elements are enclosed in finned tubes, enlarging the heaters' surface(1.5 W/cm²).

The heaters can be divided into multiple groups. Interlocked with Vacuum System and Oil Transfer System to prevent drying burning or stagnant oil buring.

The heaters are automatically controlled by smart thermostat during oil processing.

CONTROL SYSTEM:

HMI touch screen is installed on ASSEN® oil purifier's control panel to demonstrate the oil treatment process vividly. Pilot lights indicate operational status (on/off) of key components and alarm conditions.

TYA oil purifiers are equipped with an advanced PLC module, which performs a more reliable and stable operation compared with the relay-based control system.





MONITORING SYSTEM:

A variety of gauges and sensors are installed onto the TYA Lube Oil Purifier to constantly monitor the status of filter pressure, vacuum degree, oil temperature flow rate, and so on.

With the help of these transmitters, TYA oil purifier can monitor and adjusts the oil treatment process automatically,

OPTIONAL COMPONENTS

Enclosure Housing



Mobile Trailer



Digital Vaccum Gauge



Moisture in Oil Transmitter



Variable Flow Control



Explosion-proof Design



SPECIFICATIONS

Item	Unit	TYA-10	TYA-20	TYA-30	TYA-50	TYA-100	TYA-150	TYA-200	TYA-300
Flow Rate	L/min	10	20	30	50	100	150	200	300
Vacuum Degree	MPa	-0.06 ～ -0.095							
Working Pressure	MPa	≤0.5							
Temperature	℃	20 ～ 80							
Water Content	PPM	≤50							
Cleanness	NAS	≤6 grade							
Power Supply		Any Voltage Hertz Phase as required							
Working Noise	dB(A)	≤75	≤75	≤75	≤78	≤78	≤78	≤80	≤82
Heating Power	KW	19	24	30	40	60	90	120	150
Total power	KW	21	26.5	33	44	65	96	127	159
Inlet/outlet caliber	mm	25	25	25	32	42	50	50	60
Weight	Kg	450	550	650	770	900	1050	1200	1500

Note: The technical data are for reference only. We reserve the right to make changes in the course of technical development of the product.

GUARANTEES:

Chongqing Assen Power Equipment Co.,Ltd. warrants the plant supplied under this specification against defects in material and workmanship under normal use and service for a period of sixteen (16) months from date of shipment or twelve (12) months after the start-up of the system. ASSEN's obligation under this warranty is limited to repairing or furnishing, a similar part to replace any part, which was proven to be defective within the warranty period. We shall not be held responsible for any indirect or consequential damages. The Performance Guarantee will be within limitations as detailed in Duty & Performance paragraph of this specification.

Two (2) copies of Operating & Maintenance Manual are supplied with each purifier. These systems are designed to operate with the utmost simplicity and therefore typically they do not require any prior training to operate. If on-site training is required, please contact Chongqing Assen Power Equipment Co.,Ltd. for additional charges.

CONTACT US

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