

QUICKPETRO



TF CLEAN

PURITY OF
PERFORMANCE



ONLINE THERMIC FLUID CLEANING UNIT



Impurities in Thermic Fluid

Even the most refined Thermic Fluids available in the market are subject to oxidization to some extent especially at elevated temperatures. Such oxidization of Thermic Fluid leads to formation of carbon residues (sludge), which can impair system operations by depositing on heated surfaces of mechanical seals. At the same time, oil soluble products also tend to increase viscosity affecting its flow through the system circuit.

Problems with Lower Quality Oil

- Frequent breakdowns occur even after diligent maintenance
- Relatively high maintenance costs
- Pump failure
- Sediment filtration
- Possible choking of the complete system

TF-Clean is an online thermic fluid cleaning system with an intelligent filter that draws fluids from the system to remove solid particles from the thermic fluid. The filtration is at micron level with the extent of 2 microns. TF-Clean works on the principle of Mechanical Separation Action wherein the fluid is circulated for a predefined number of passes, as recommended by experts. The cleaned fluid is then sent back to the Thermic Fluid System for optimal performance.

Why TF-Clean?

- TF-Clean is a filter that separates solids from liquids at micron level to the extent of 2 microns
- TF-Clean is a 100% online filter i.e. no separate pump is required, or no bypass is needed
- TF-Clean filters by accumulating particles in layers along the surface of the filter cartridge (Solid Muck)
- Clean oil from TF-Clean is routed back to the main Thermic Fluid pump naturally by gravity



TF-CLEAN

- Reduces clogging of pump filters considerably
- Reduces equipment downtime
- Helps maintain quality of thermic fluid
- Improves system performance
- Reduces carbon formation thereby improving heat transfer rate
- Reduces overall maintenance costs significantly
- Increases performance of equipment by reducing component wear and tear

Scope of Supply

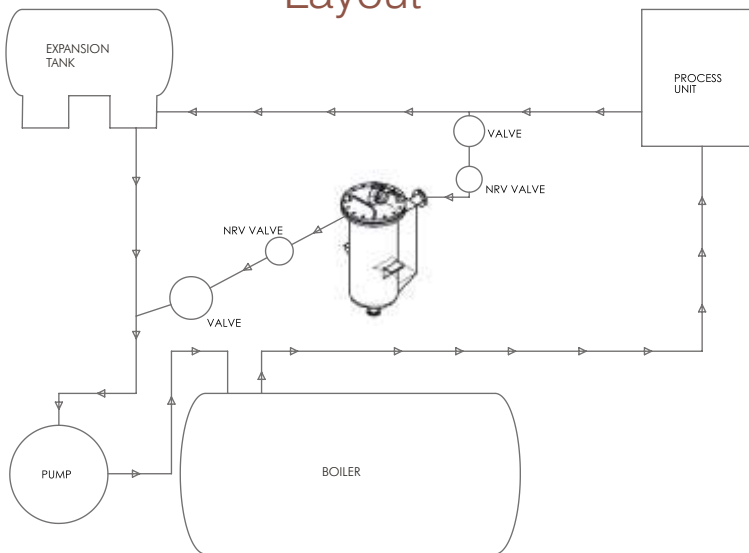
ITEM DESCRIPTION	MAKE	QTY.
M.S FILTER HOSING	QUICK PETRO	1
S,SWIRE MAESH 50 MICRON CARTGE	QUICK PETRO	1
S,SWIRE MAESH 25 MICRON CARTGE	QUICK PETRO	1
S,SWIRE MAESH 10 MICRON CARTGE	QUICK PETRO	1
S,SWIRE MAESH 05 MICRON CARTGE	QUICK PETRO	1

NOTES:

The performance of TF-Clean depends on quality of the oil used. This can only be determined by conducting actual test on site.

It is important to know that continuous passes will ensure minimum breakdown and result in efficient filtration.

Layout

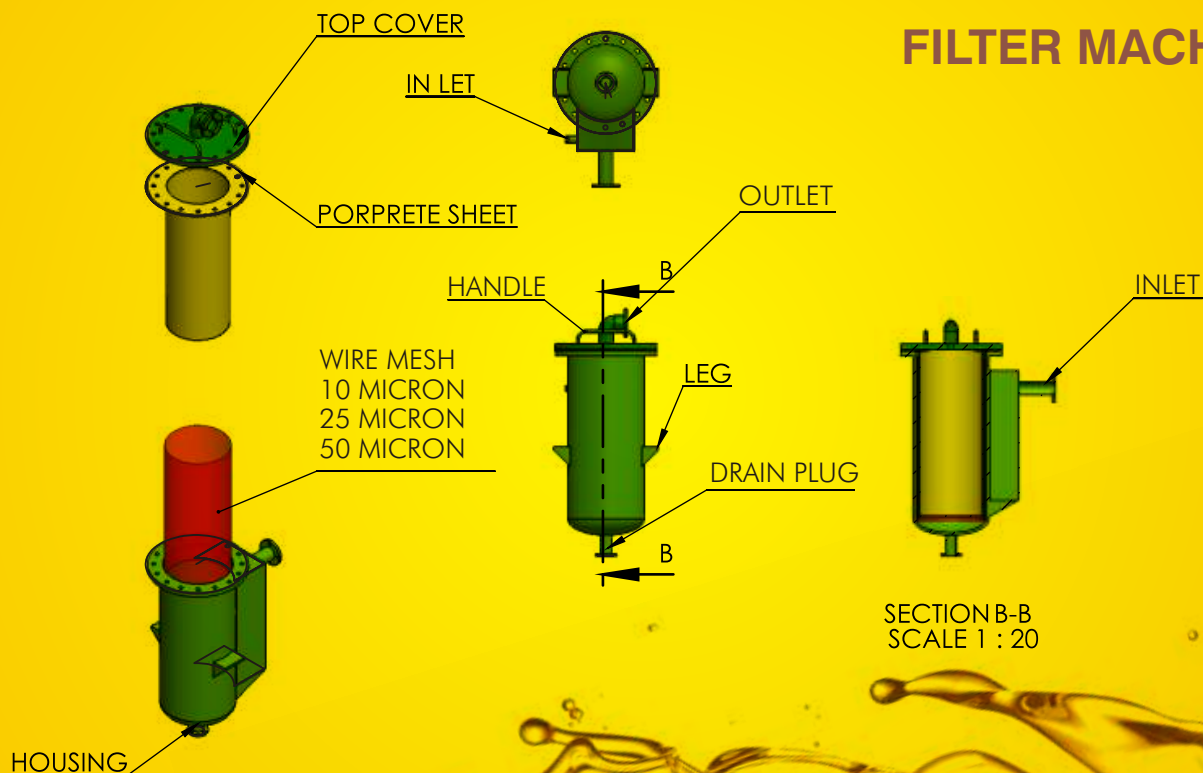


Expectations from the Client

The client is required to ensure the following important considerations:

- Site layout modification if required
- Facilitating inlet piping and interconnecting piping to TF-Clean
- Procuring necessary hardware like matching flanges, fasteners, gaskets etc.
- Conducting any civil, mechanical, electrical, and structural modifications to be done at site
- Performing oil draining and welding works, if any
- Supplying any material other than scope of supply as described above
- Ensuring proper sludge disposal

FILTER MACHINE



Oil degradation products are the major cause of these problems which can be avoided with a continuous fine filtration of the thermic oil. The degradation products are removed from the oil by a combination of adsorption and absorption process. The degradation products deposit at the wire mesh filter and are absorbed into them.

Features

- Temperature rating of 6.5 kg @ 35°C to 0.2 kg @ 300°C
- Hosing available in carbon steel, 304/316 stainless steel
- TF-CLEAN Filter Unit size available in 8", 10", 12", 20", 24"

What is Heat Transfer Fluid?

Over the last 2 decades, industries have been widely using controlled transfer of heat in their applications. In this process, mineral oils, atmospheric pressure are the main catalysts for transfer of heat applications. Mineral oils are non-corrosive, non-toxic and can be easily pumped even at low temperatures. They also do not cause frost damage during winters. At high temperatures, they have satisfactory specific heats and low viscosities that is important from a heat exchange standpoint. From a safety standpoint, they are much less critical than steam or alkaline metals.

Data of Mineral Oil Based Heat Transfer Oils with Different Viscosities

DENSITY AT 15°C G/ML	KINETIC VISCOSITY AT 50°C	VISCOSITY INDEX (VI) MM ² /S °C	POUR POINT °C	FLASH POINT °C
0.86-0.89	5-8	30-60	< -50	125-160
0.90-0.92	15-55	45-50	Ca-40	170-205
0.91-0.93	100-150	40-55	Ca-40	200-228
0.86-0.87	30-35	95-100	Ca-15	210-220

INITIAL BOILING POINT °C	TEMP. AT WHICH VISCOSITY REACHES 300 MM ² /S	TEMP. AT WHICH VISCOSITY REACHES 5 MM ² /S	APPROVED MAX BULK TEMP. °C
260-300	< -30	30-55	250-280
300-330	-10 to +10	90-125	280-310
340-360	20-30	120-135	320-340
340-360	0-5	95-110	320-340

Besides mineral oils, other organic (predominantly aromatic) compounds (short-chain alkylbenzens, dibenzylbenzene derivatives or blends, dimethyl, diphenyle oxides, artificially hydrogenated polyphenols, mixtures of terphenyle and of diphenyle oxide with diphenyle) are also used in non-pressurized plants as heat transfer oils. The recommended maximum temperature for the use of these synthetic products are 20 to 40°C higher than those for minerals oils, depending on the chemicals structure. The densities are always higher, manifesting themselves in somewhat lower specific heats. Alkyl silicates are recommended for plants, which must be started at extremely low temperatures and can be used at bulk temperatures of up to 180°C. The changes must be protected from moisture in order to prevent sludge formation due to hydrolysis.

For more information, please get in touch with our company representative. You can also mail us at quickpetro@gmail.com or visit us at www.quickpetro.com

Important Note:

In view of our constant endeavor to improve the quality of our products, we reserve the right to alter or change specification without prior notice. All photographs shown in this publication are for representative purpose, and to be used for reference only. For actual details and specification, please refer to our company offer document.

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