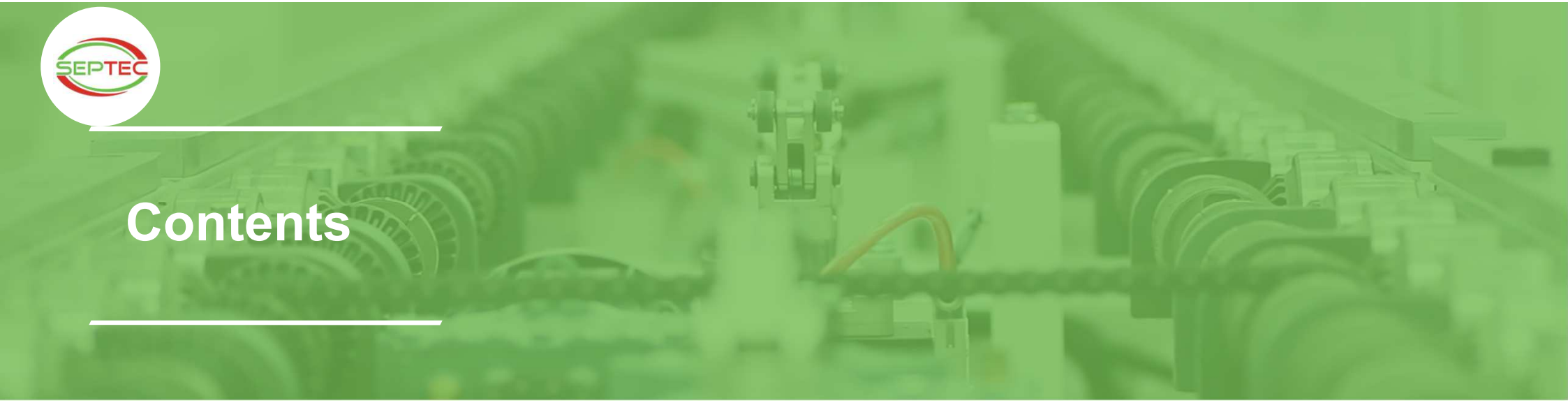
OIL CONTAMINATION CONTROL ONE STOP SOLUTION

SEPTEC Innovative Oil Filtration Units with Advance AI Technology Oil Sensors



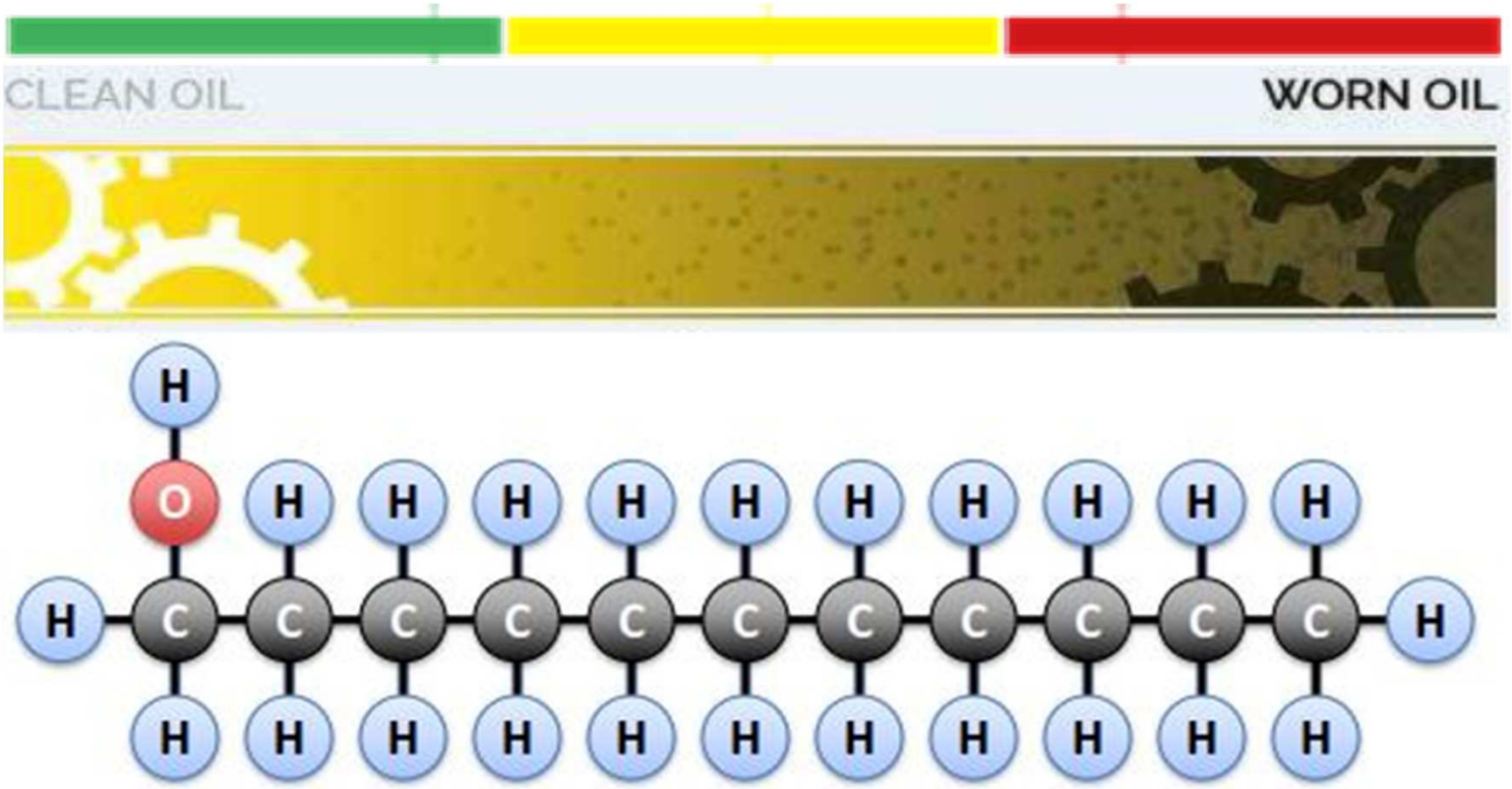
Contents

PART 1 About Company

Since 1994 Tecway International has been successfully identifying, promoting and distributing innovative, high quality and cost effective solutions to the Marine & Offshore Oil and Gas industries within Hong Kong S.A.R & Mainland China.

We have developed and sustained a strong reputation for our ability to recognize suitable products and promote these successfully to our established and extensive customer base.

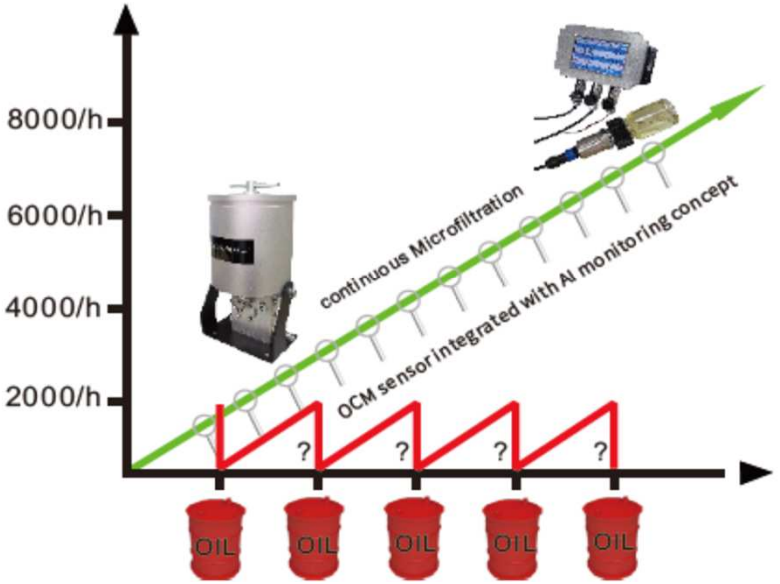
PART 2 General Description

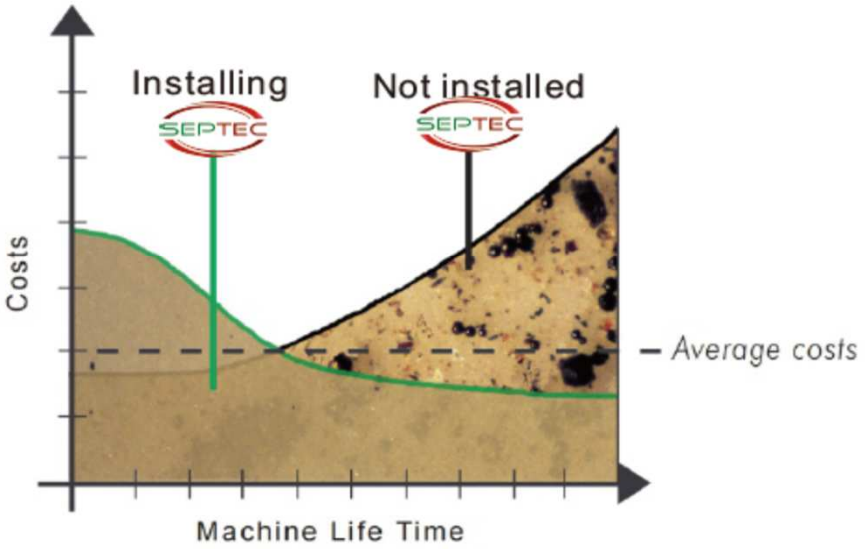


GENERAL
DESCRIPTION

With 80% of oil failures and breakdown are related to particle contamination and also 30% to 40% due to water in oil. Solid contaminants in fluid system vary in size, shape form and quantity as well.

By using our microfiltration technology can remove particles contaminants, oil degradation products as well as water and acidity from oil and fluid, the predicted life time of machine components and oil is expected to be extended by a factor of 2 - 5.

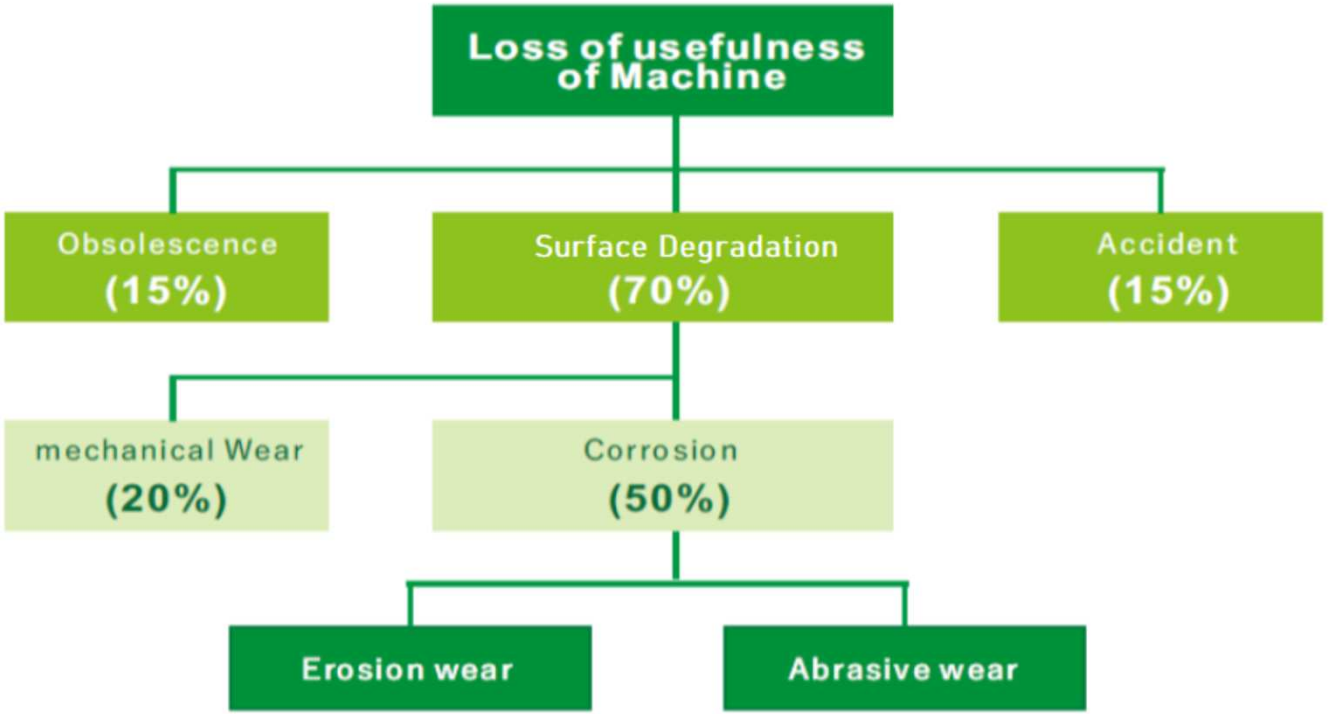




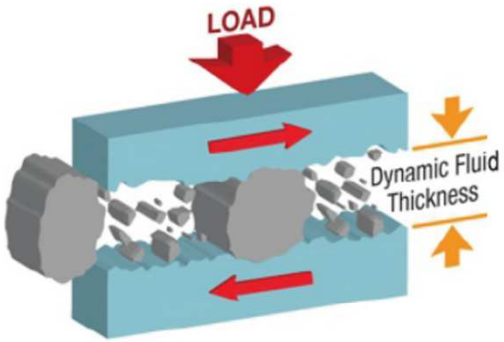
WEAR OF
THE CHAIN REACTION

70% of equipment or machines “ Loss of usefulness ” is caused by either mechanical wear or corrosion, in other word, most equipment fails because of small invisible-to-naked-eye debris , abrasive wear, adhesive wear, fatigue wear, corrosion and erosion wear.

All mentioned wear will damage component, degrade lubricants and eventually cause machine breakdown.



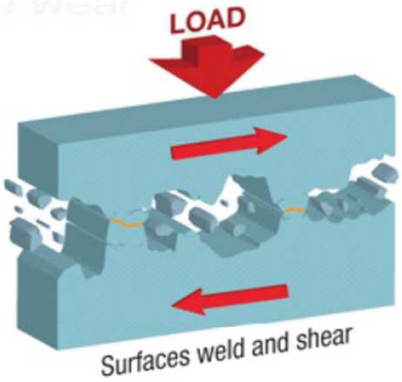
WEAR OF TYPE



Abrasive wear

Abrasive wear effects

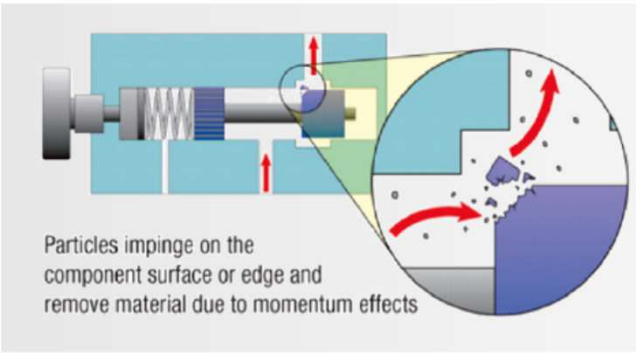
- Dimensional changes
- Leakage
- Lower efficiency
- Generated wear: more wear



Adhesive wear

Adhesive wear effects

- metal to metal contact
- Cold welding
- Adhesion and shearing



Erosive wear

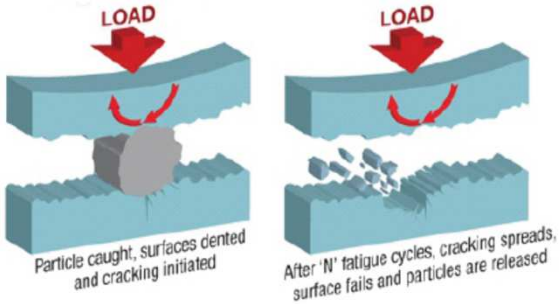
Erosive wear effects

- Slow response
- Spool jamming /stiction
- Surface erosion
- Solenoid burnout

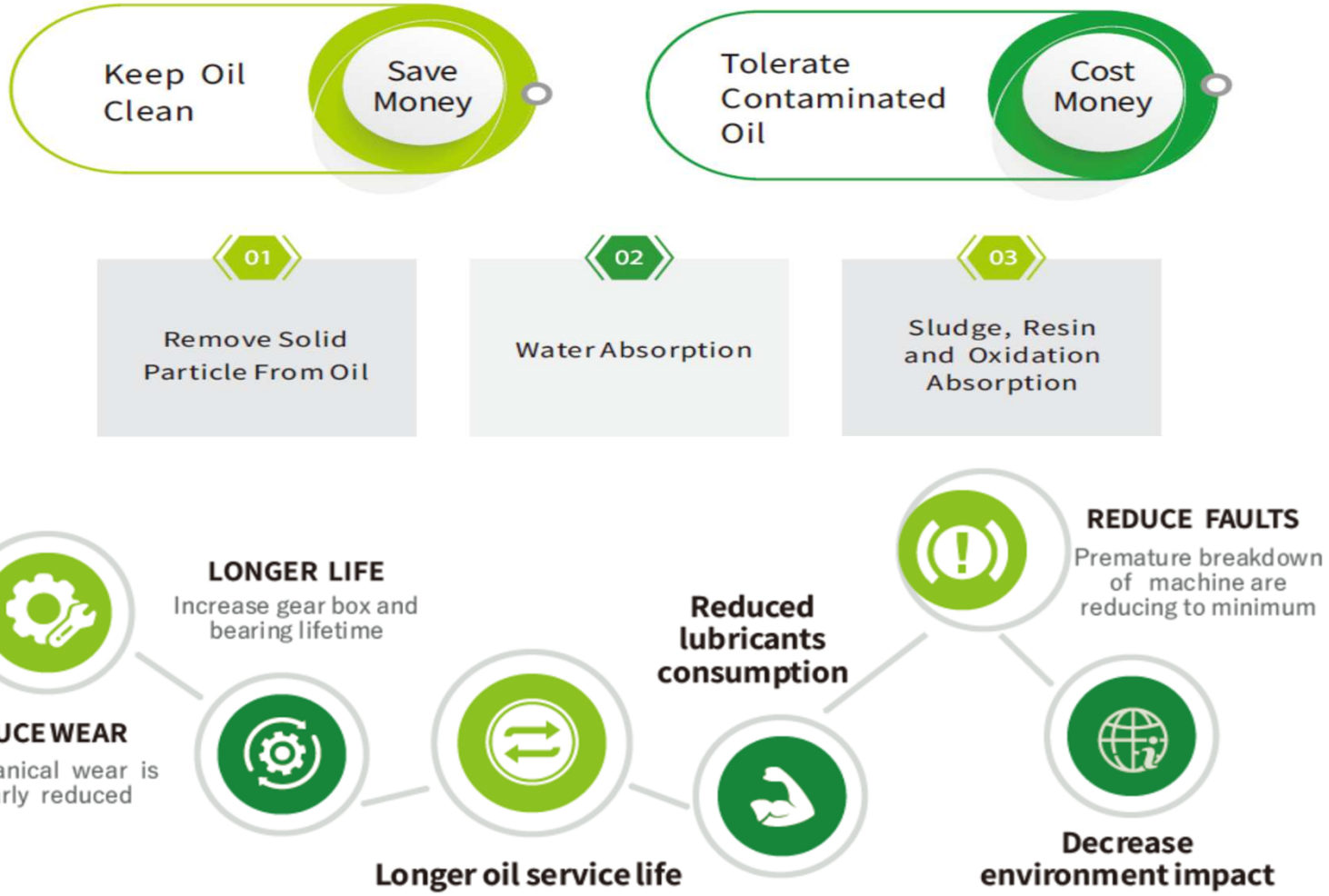
Fatigue Wear

Fatigue Wear effects

- Leakage
- Deterioration of the surface finishing
- Cracks



OIL CLEANIMG WITH
MICROFILTRATION



BENEFIT AND ADVANTAGE OF
MICROFILTRATION TECHNOLOGY

BENEFIT AND ADVANTAGES USING MICROFILTER

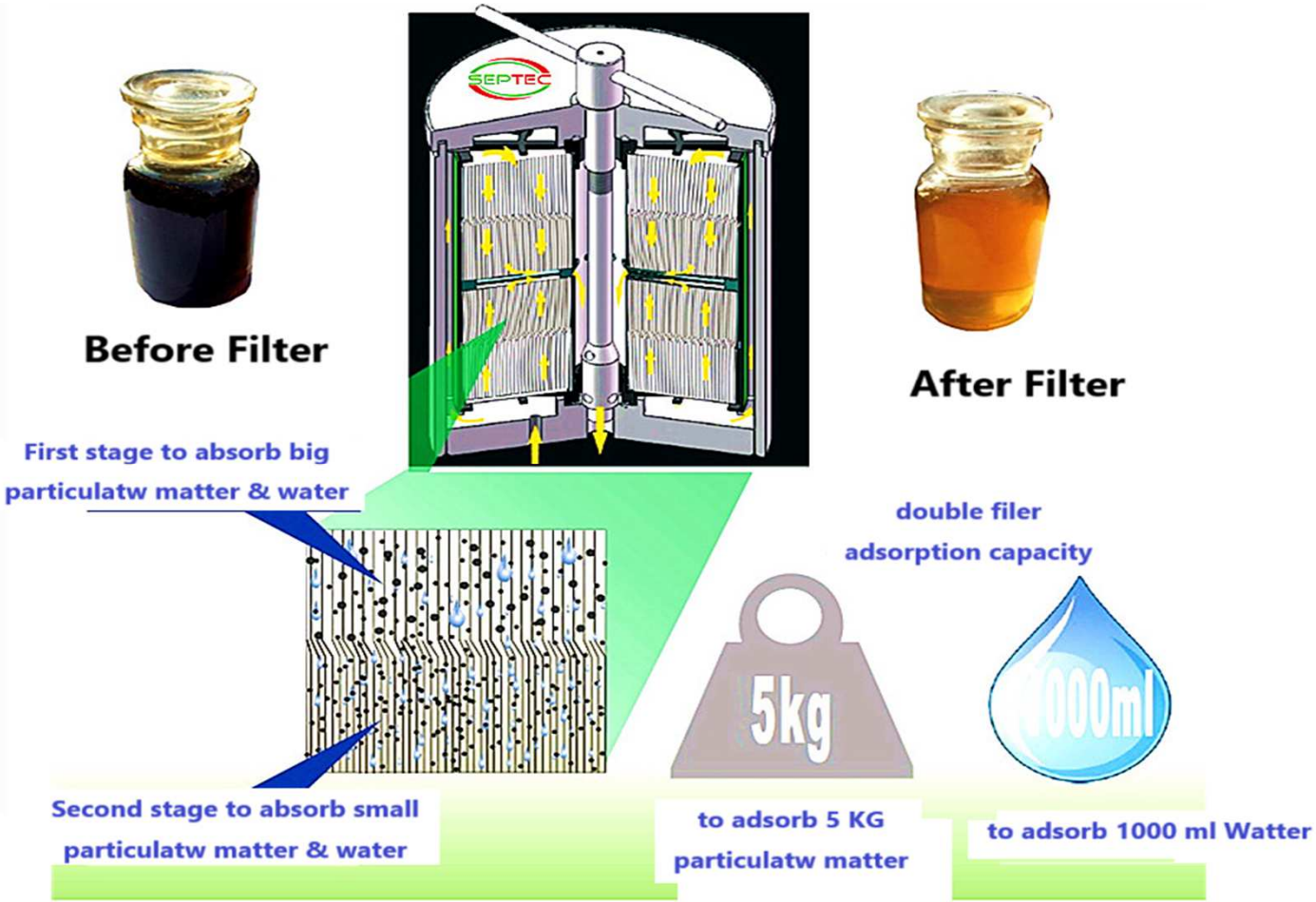
01	Removing of all solid contaminants	05	Reduce the cost on full flow filter
02	Removal water by absorption effect to less than 100ppm	06	Significant reduction of oil consumption and oil disposal cost
03	Eliminating resin and oxidation products	07	Environmental benefit
04	Extend component life	08	Provide significant economic payback
05	Removing ferrous particle from system and could also diagnostic the machine wear		

3 Products Presentation

OIL CONTAMINATION CONTROL TECHNOLOGY

- 3.1 SEP-HPF-10 By-pass Filter
- 3.2 SEP-HPF-10P Off-line Filter with Pump
- 3.3 SEP-HPDS-40P Off-line Filter with Pump
- 3.4 SEP-FU-1 Off-line Portable Filtration Unit with Pump
- 3.5 SEP-FU-2 Off-line Portable Filtration Unit with Pump
- 3.6 Septec Oil Sensor
- 3.7 Mobile Oil Test Kit (MOT)
- 3.8 Oil Condition Monitoring (OCM)
- 3.9 Portable Oil Analysis Test Kit & Particle Counter
- 3.10 Mobile Maintenance and Filtration Service Van

3.0 Micro-Filtration Description



3.1 SEP-HPF-10 By-pass Filter

Specification	SEP-HPF-10
Housing pressure test	180 psi /12.5 bar
Port size (inlet/outlet)	G3/8 G3/8
Dimension	220 x 247 x 438 (Ø x W x H)
Weight	7.4kg
Flow Rate	2L/Min
Inlet Pressure	1.5-3bar
Recommended installation	By pass system only up to 1000L

Application

Micro-Filtration : 1 set

Pressure: Low

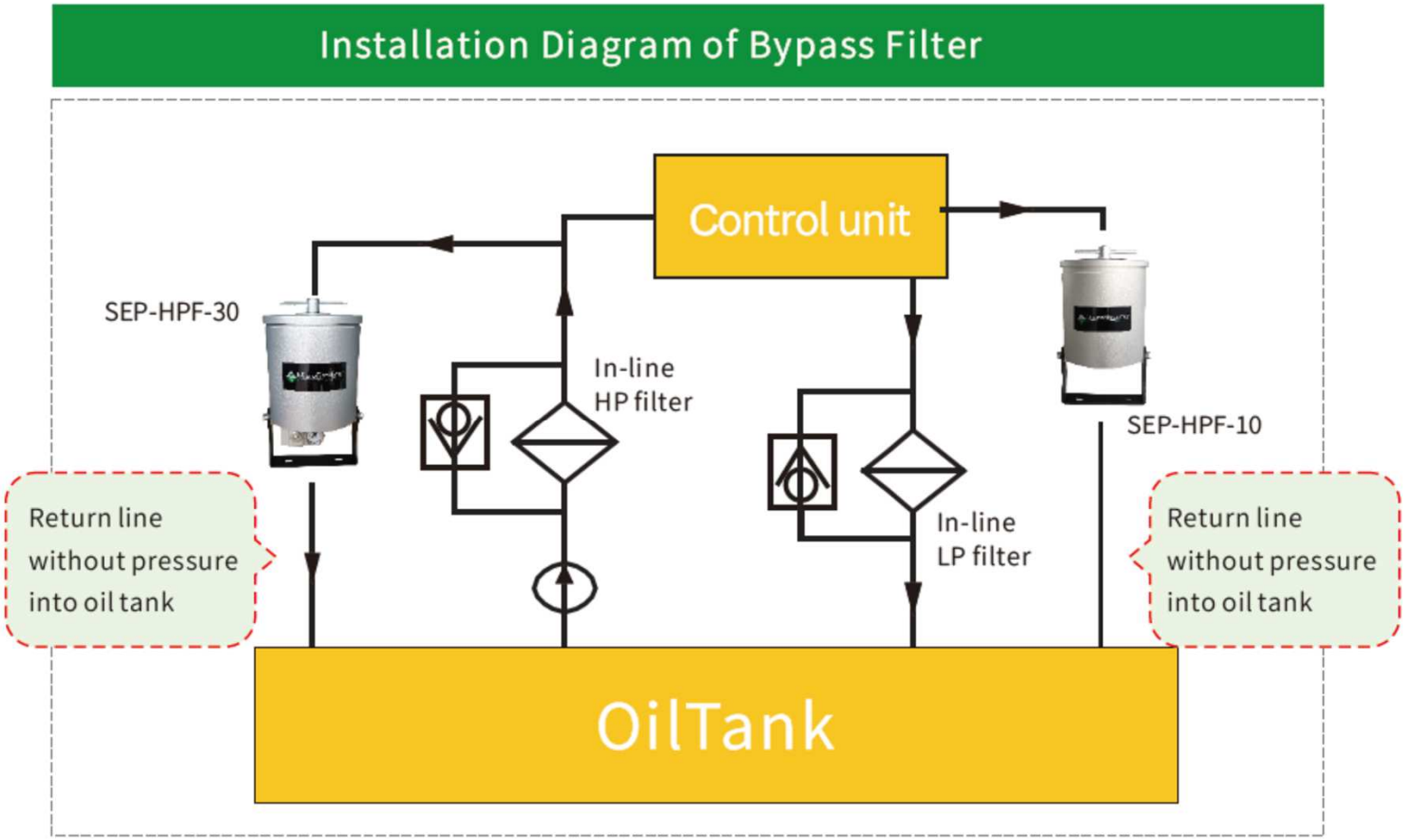
Heater: No

Pump: No

Installation: Off line.

Oil Condition Monitoring (OCM adaptor): No

SEP-HPF-10 By-pass Filter Installation Diagram



3.2 SEP-HPF-10P Off-line Filter with Pump

Specification	SEP-HPF-10P
Housing pressuretested	180 psi /12.5 bar
Port size (inlet/outlet)	G3/8 G3/8
Dimension	220 x 247 x 458 (Ø x W x H)
Weight	7.4kg
Flow Rate	2L/Min
Voltage	24 volt with BLDC motor with pump
Pre-filter	Fine coarse filter and magnetic stick
Recommended installation	system below 1000L

Application

Micro-Filtration : 1 set

Pressure: Low

Heater: No

Pump: Yes

Installation: Off line.

OCM Adaptor: Yes

3.3 SEP-HPDS-40P Off-line Filter with Pump

Specification	SEP-HPDS-40P
Housing pressuretested	180 psi /12.5 bar
Port size (inlet/outlet)	G¼ G⅜
Dimension	235 x 232 x 520 (Ø x W x H)
Weight	14kg
Flow Rate	3l/min (180L/Hrs)
Voltage	24 vole BLDC motor with pump
Pre-filter	Fine coarse prefilter with magnetic stick
Recommended installation	system below 1500L

Application

Micro-Filtration : 2 sets

Pressure: Low

Heater: No

Pump: Yes

Installation: Off line.

OCM Adaptor: Yes

3.4 SEP-FU-1 Off-line Portable Filtration Unit with Pump

Specification	SEP-FU-1
Port Size (inlet/outlet)	G½ G½
Dimension	450X520X730(DxWxL)
Prefilter	prefilter bags, fine coarse filter with magnetic stick
Control	PLC
Over pressure protection	yes
Weight	70kg
Flow Rate	240L/Hrs

Application

Micro-Filtration : 1 set

Pressure: Low

Heater: Yes

Pump: Yes

Installation: Off line.

OCM Adaptor: Yes

3.5 SEP-FU-2 Off-line Portable Filtration Unit with Pump

Specification	SEP-FU-2
Port Size (inlet/outlet)	G¾ G¾
Dimension	450x520x730 (DxWxL)
Prefilter	prefilter bags, fine coarse filter with magnetic stick
Control	PLC
Over pressure protection	yes
Weight	110kg
Flow Rate	480L/Hrs

Application

Micro-Filtration : 2 sets

Pressure: Low

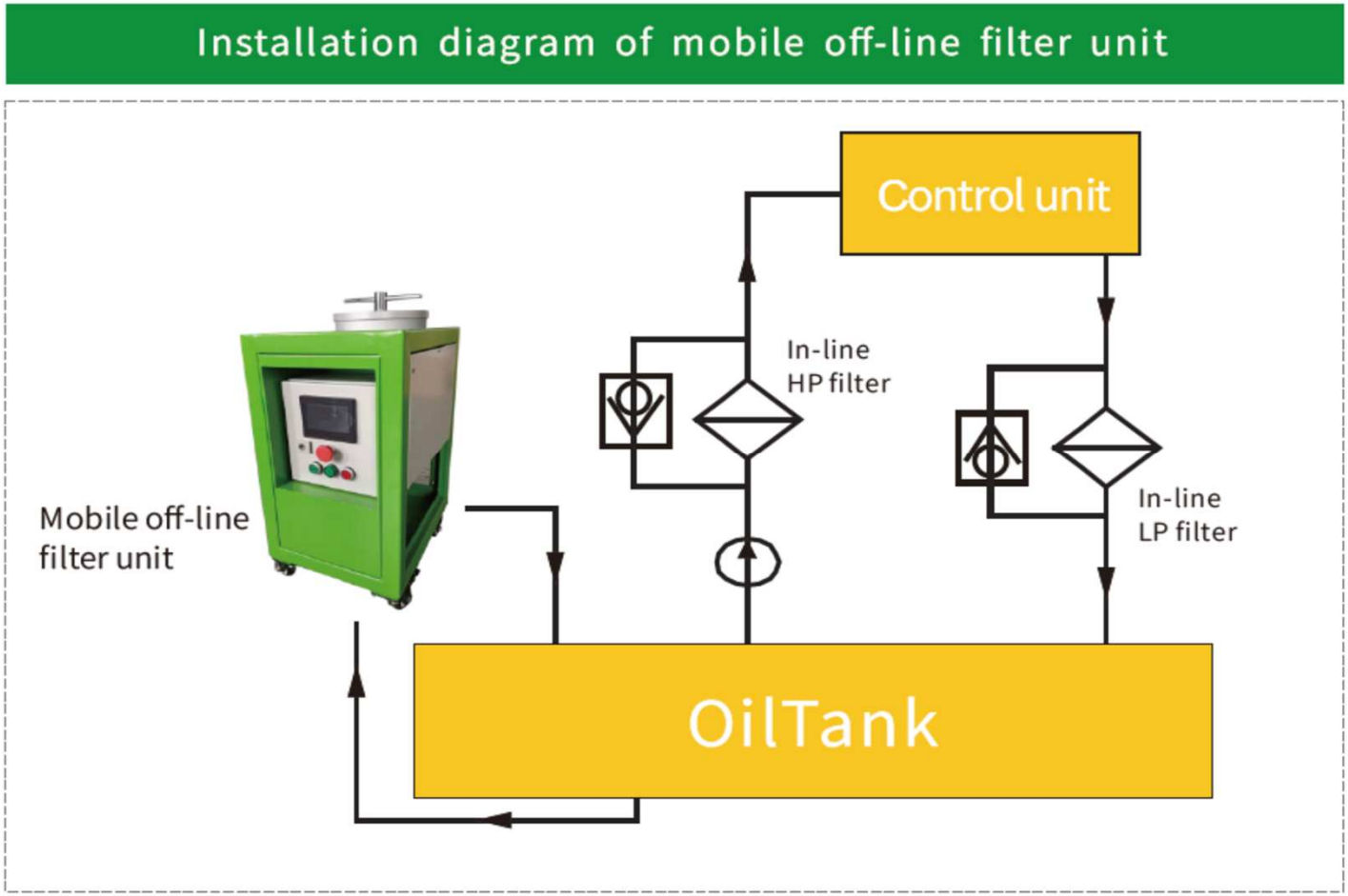
Heater: Yes

Pump: Yes

Installation: Off line.

OCM Adaptor: Yes

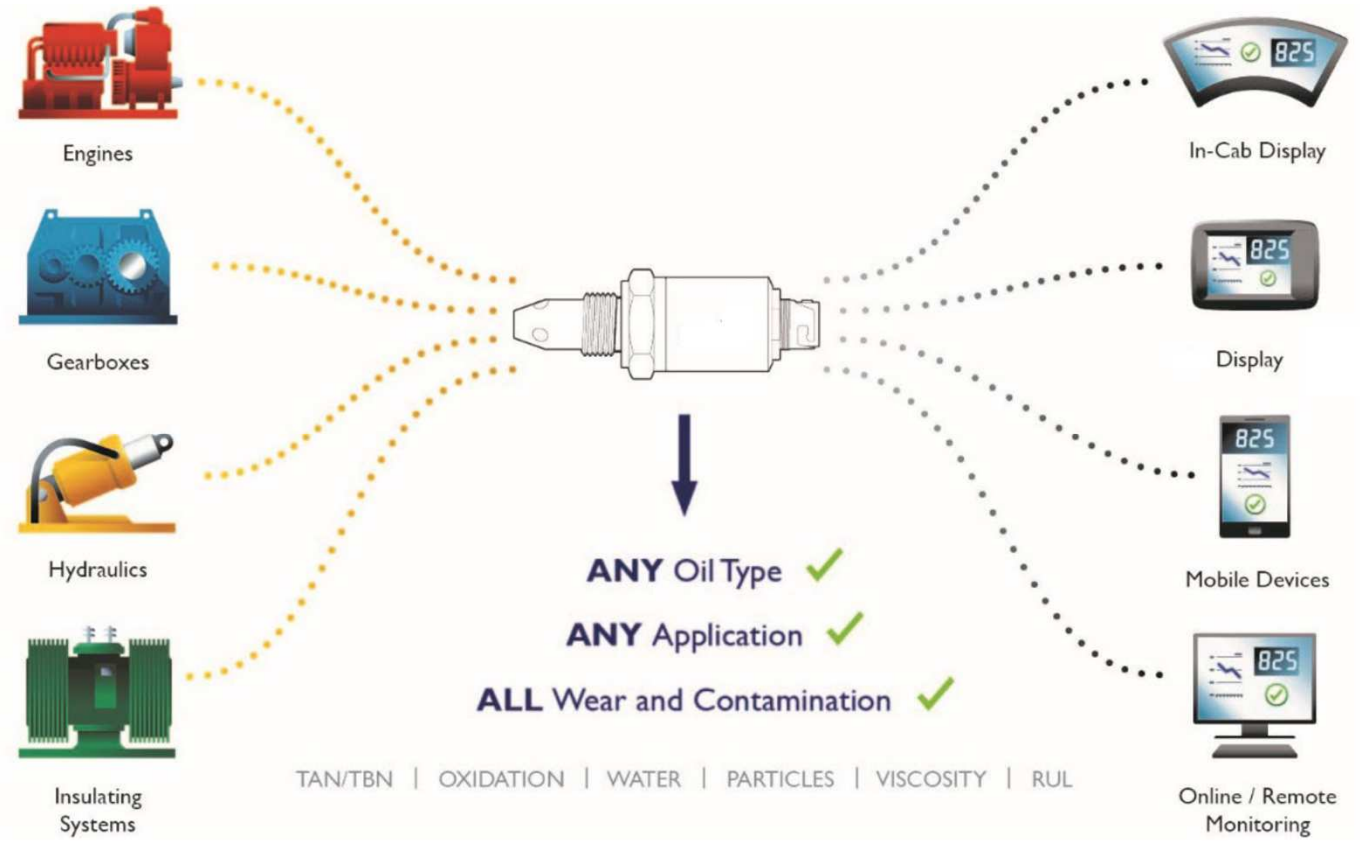
Off-line Filtration Units Installation Diagram



3.6 SEPTEC FSH™ Oil Sensor

FSH™ - Full Spectrum Holistic (FSH) technology delivers an overall picture of real-time oil quality via the TDN Scale and warning alarm integration.

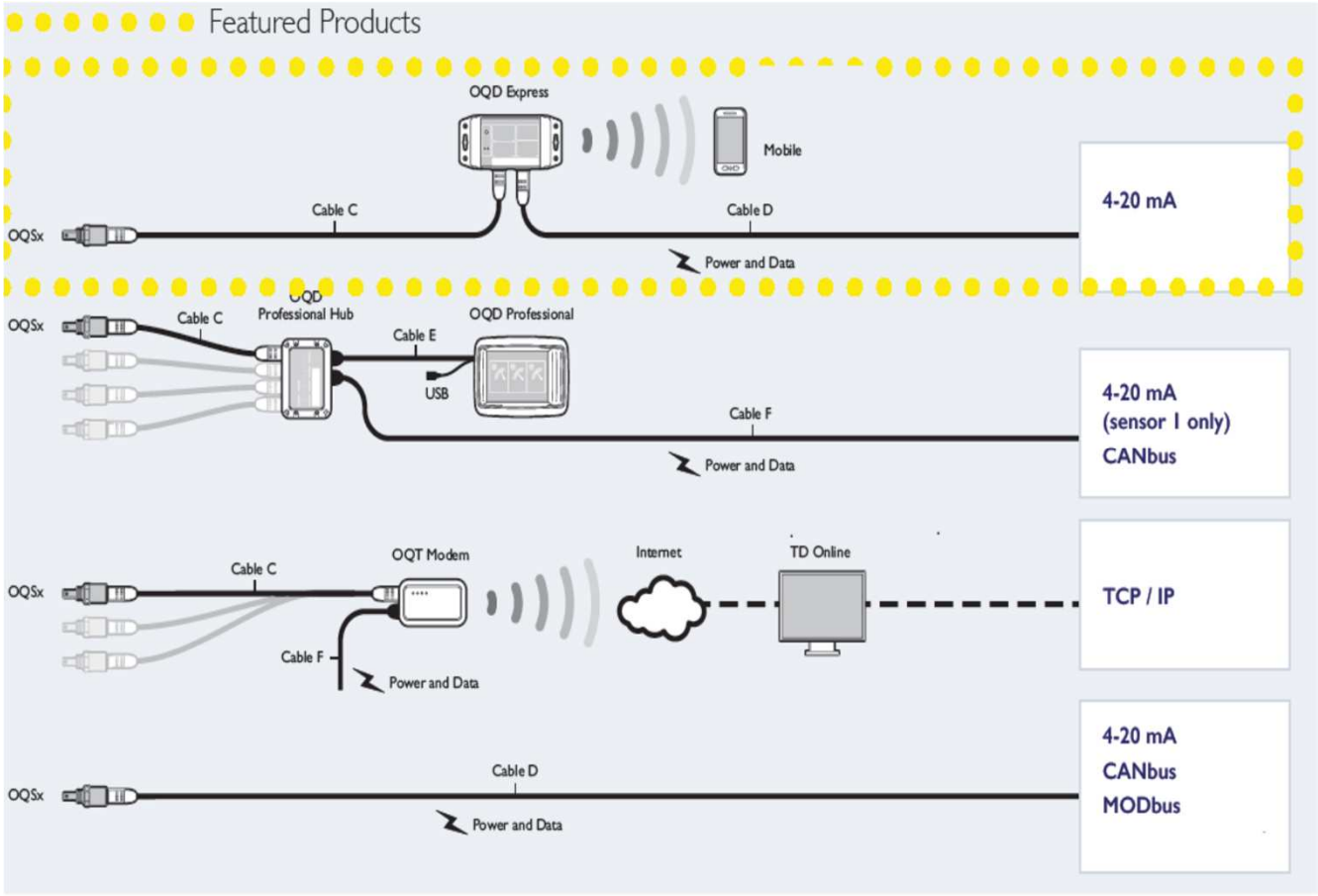
Any change is instantly detected, enabling oil to be accurately monitored from new (clean oil) through to end-of-life (worn oil) in any application.



3.6 SEPTEC FSH™ Oil Sensor

Key Features of the Oil Sensor

- Oil change detection down to 0.01%
- Condition analysis 30 times per second with averaging capabilities for reporting
- Configurable to any oil type (synthetic and mineral)



3.7 Mobile Oil Test Kit (MOT)

SEPTEC have developed easy to use software to enable engineer to get the remaining oil life from the oil in your system utilizing SEPTEC Full Spectrum Holistic (FSH) Oil Sensor.

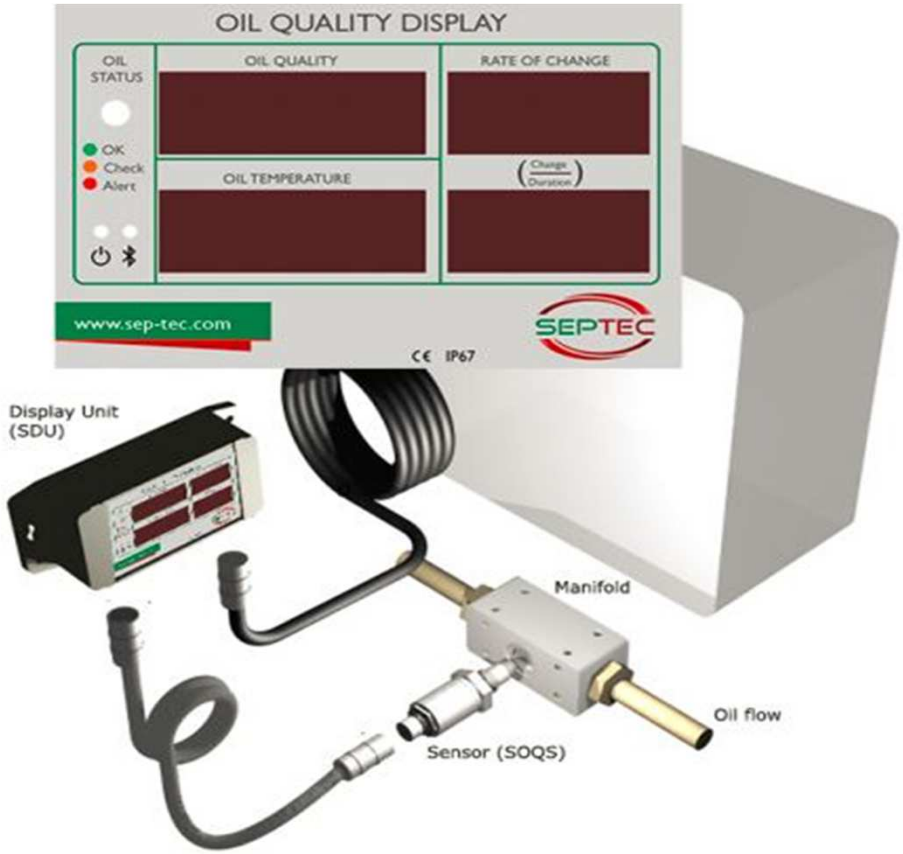
The worlds most advanced portable test kit and the MOT software allows user to analysis an oils remaining life by comparing samples against an ever growing database of oils.

Tests can be carried out and categorized against a specific asset.

3.8 Oil Condition Monitoring (OCM)

SOCM301 is an online real-time monitoring system for oil status.
The purpose of this system is to enable equipment operators to use the memory in Septec display unit to instantly understand the oil status and quality changes. It can minimize equipment failures prolong equipment life and improve productivity.

The system includes a SEPTEC Full Spectrum Holistic (FSH) oil sensor and display panel, pre configured software and installation guide, and is robust and easy to install.



3.9 Portable Oil Analysis Test Kit & Particle Counter

Portable Particle Counter

Fluid analysis is a crucial component for any oil Management.
Our portable article counter is capable of measuring both moisture in oil and cleanliness class with ISO 4406:1999 and NAS 1638.

Portable Oil Analysis Test Kit (OTK)

(include patch test; water in oil test and viscosity comparator)

3.10 Mobile Maintenance and Filtration Service Van

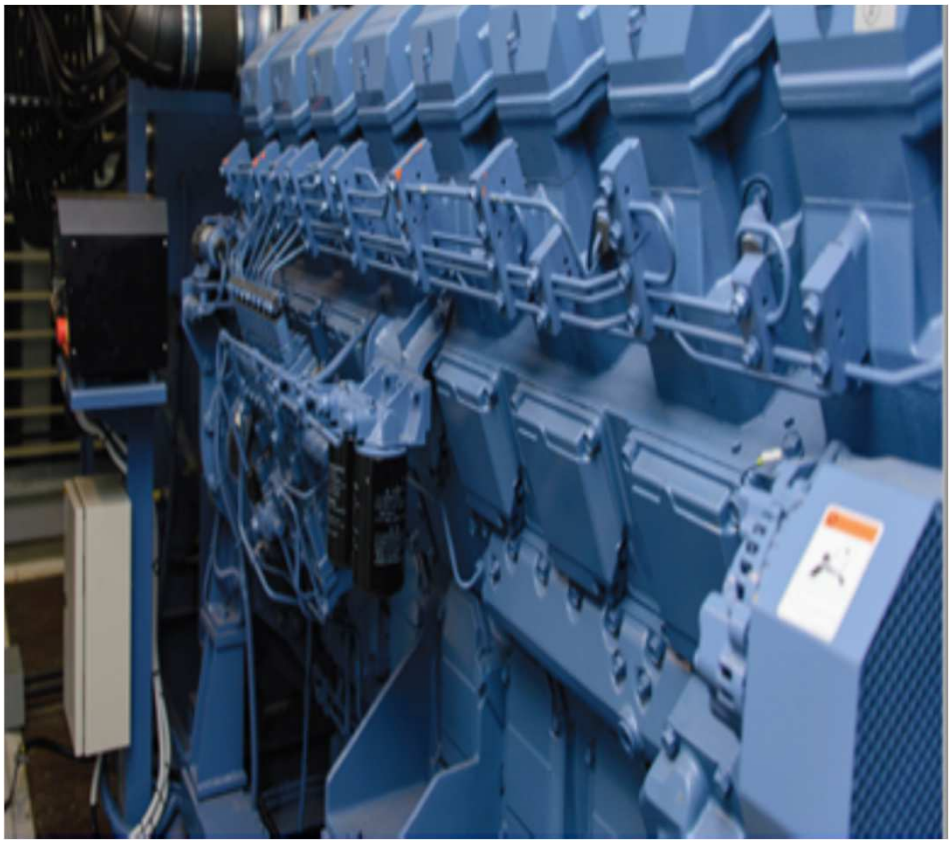
All our equipments are specially designed quick service at site

Our trained service engineers provide on-site:

- Particle count analysis
- On-site patch test
- On site oil sampling for oil analysis
- Provide require spare parts e.g. filter
- Checking Remaining useful life of oil
- Filtration service and flushing

PART 4 Applications

4.2 Application



OIL CONTAMINATION CONTROL TECHNOLOGY

Offshore and marine

Steel mills

Construction machinery

Wind power generation

Injection machineries

Hydraulic system

PART 5 QUESTIONS

THANKS FOR YOUR ATTENTION!

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