

All in One Engineered Oil Reclaiming Mobil Machine is the Top of the Line Technology which make possible the Power Transformers Oil Maintenance to be made ON Line, UNDERLOAD and 100% Auto-matically, with so many advantages: No spills, No old oil disposition, No opening the power transformer, Sulphur removal, color change and recovery of the oil values according with the standard parameters, also big savings with no oil purchases.

### TYPICAL OIL PARAMETERS

PARAMETER	TEST METHOD	BEFORE RECLAIMING	AFTER RECLAIMING
Appearance	Visual	Cloudy Brown	Clear and Transparent
Acid Number (TAN), mg KOH/g	IEC 296; ASTM D-664	0.63	0.01
Corrosive Sulphur	ISO 5662; ASTM D-1275	Corrosive	None Corrosive
Mass Moisture Content , ppm	IEC 733; ASTM D-1533	170	5
Breakdown Voltage, KV	IEC 156; ASTM D-1816	11	74-80
Dielectric Loss Tangent for 90°C	IEC 247; ASTM D-924	4.0	0.001
Bulk Gas Content, %	IEC 60599; ASTM D-3612	12	0.1
Surface Stretching, H/m for 25°C	ISO 6295;ASTM D-2285	22	45
Mechanical Contamination size, microns	ISO 4406	50	5
Oxidizing steadiness: Acid number mg KOH/g	IEC 1125A; IEC-1125B; IP 307		0.2

CLASIFICATION	OIL PROPERTIES				
	Acidity mg KOH/g	Colour	DDF: Dielectric Dissipation Factor at 90C	DDF: Dielectric Dissipation Factor at 90C	IFT: Interfacial Tension (mN/m)
IEC 60422	0.03	2	55-60	0.010-0.015	35
Before Reclaiming	0.157	4.1	68	0.0812	23.5
After Reclaiming	0.009	1.5	80	0.0033	46
After Reclaiming Follow Up (aprox 6-9 Months)	0.014	1.6	74	0.0063	42.3

### GUARANTY

To verify the oil treated we perform our own and third party Lab test to provide the customer the Test and Verification of the Test.

We prove the oil once treated is free of water, and solids and have the parameters Physical, Chemical and Electrical according the standards to be used again in the Power Transformer.

WE ARE NOT THE NUMBER ONE YOU ARE. WE WORK FOR YOU



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AUTOMATED MOBIL, TRANSFORMER OIL RECLAIMING EQUIPMENT

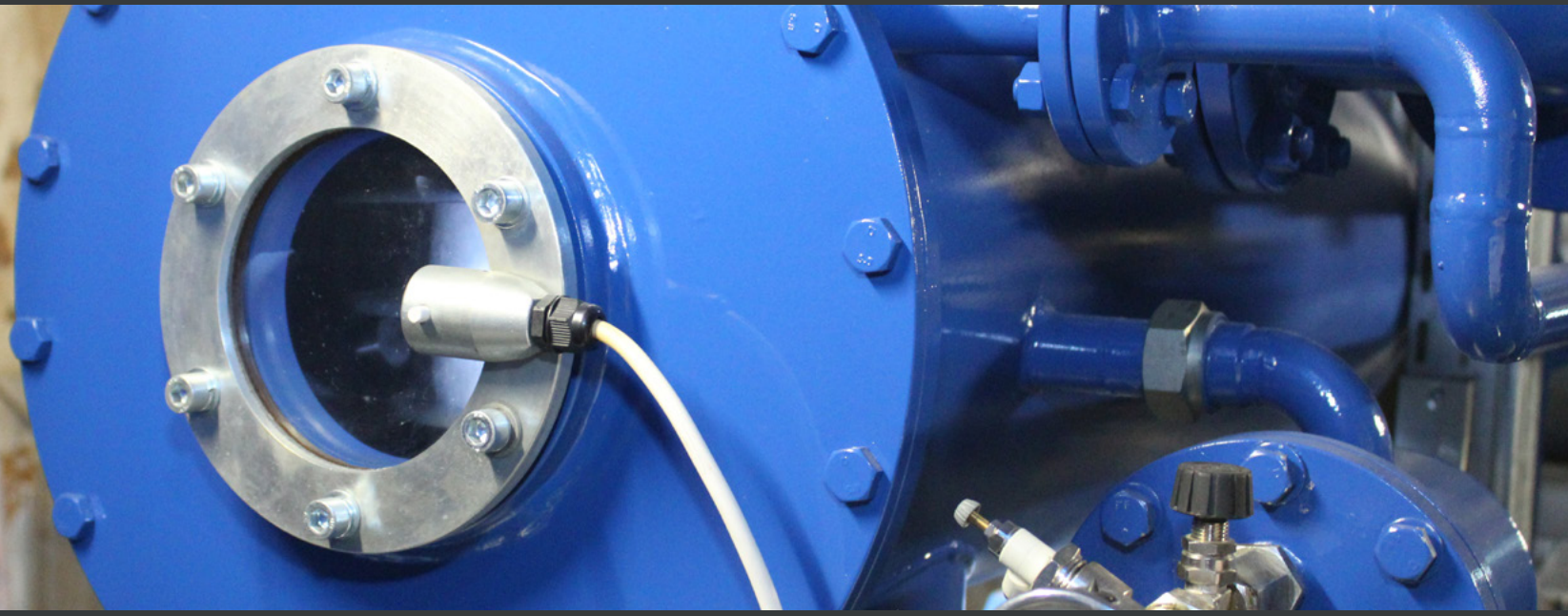


AGED TRANSFORMER  
OIL RECLAIMING

“ON SITE” AND “UNDER LOAD”

This Treatment is to successfully restore the Physical, Chemical and Electrical properties of the Aged Dielectric Oil by removing or reducing Partial, Moisture, Gases, acidity and other oxidation decay products, until the oil is restored in their quality, Like-New.

- The oxidants Absorption products through Absorbent earths
- The filtration using a group of filters
- The Microfiltration at 5 microns
- The Dehydration and Degassing with Vacuum
- The addition of additives

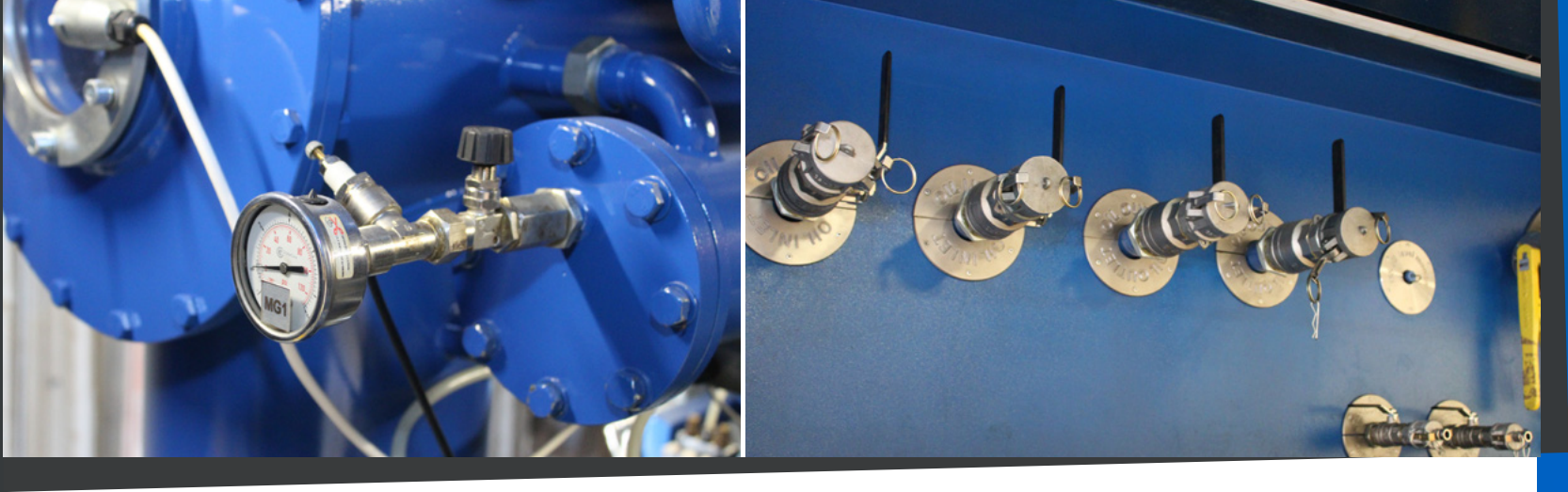


MOBILE EQUIPMENT PERFORMING  
REGENERATION TREATMENT IN  
A POWER TRANSFORMER

With absorption trough Absorbent earths remove colloidal substances in suspension, the oxidation products, the polarization compounds (produces color changes) and the traces of organic acids.

With 5 micron microfiltration, we are able to eliminate carbon, water, sludge or solid micro particles that are in suspension.

With dehydration and vacuum degassing we can reduce the ppm on or under the limits permitted, the dissolved or emulsified water in the oil, while we degasses and remove the most volatile acids in the oil.



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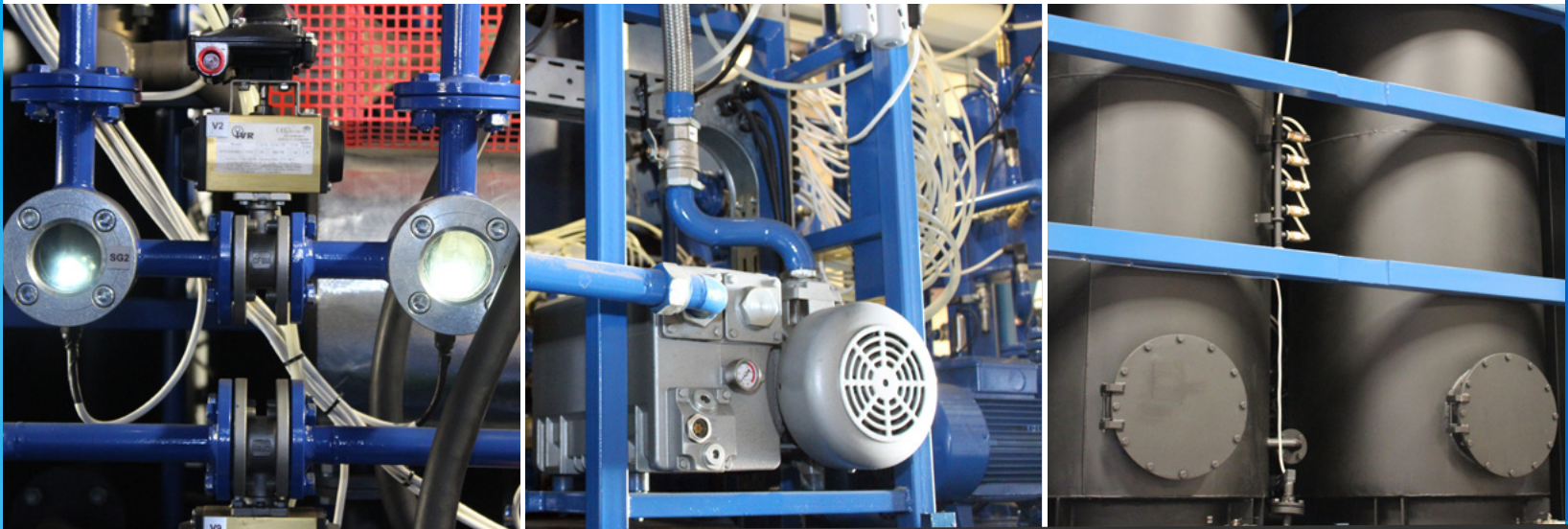
With the addition of additives to the oil we add inhibitors to avoid or make slower the oxidation process in the oil and extend their useful life.

HOW TO PERFORM  
THE TREATMENT

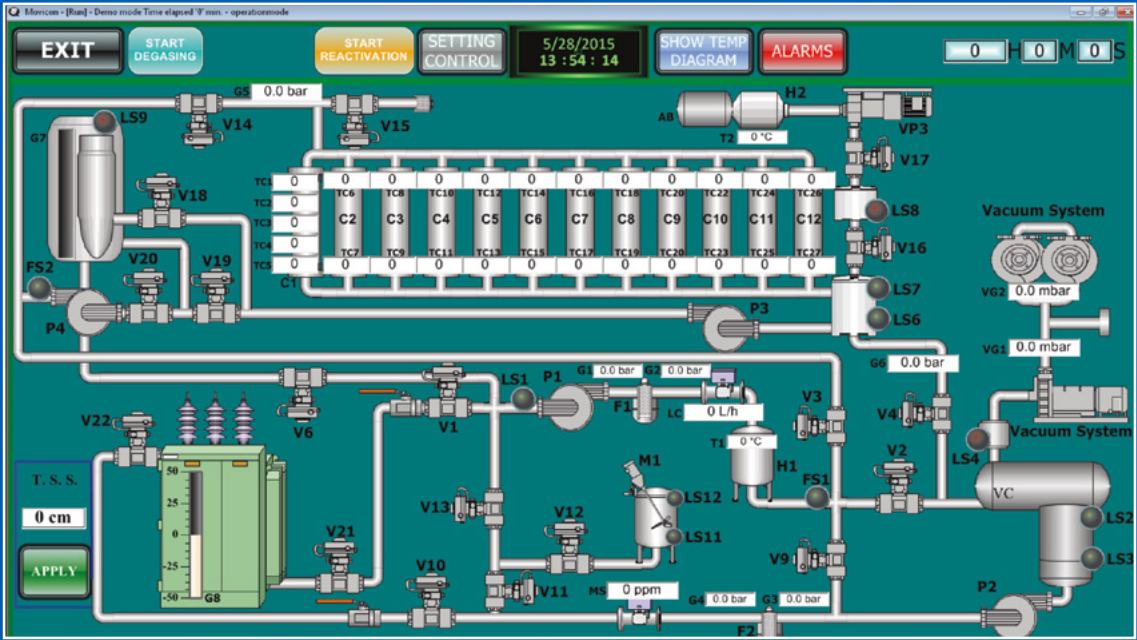
With this treatment the oil is revaluated “ On-Site”and “Under Load” as Like-New condition. With our mobile plant you can do the job on the site, right there, on the substation. The Regeneration process is performed in the substation were the Power Transformer is operating energized, with the purpose of reuse the same oil and at the same time clean and dry the core and the windings.

The statistics show that in most cases it is possible to regenerate up to 95% of the volume of contaminated oil, obtaining the following benefits:

- Decrease in the volume of waste generated.
- High Savings in the Purchase of new oil.
- Reduction cost of waste management.
- Cleaning and dry of the transformer core and windings with advantages in their performance.



100%  
AUTOMATED SYSTEM



- Dehydration
- Degassing
- Redaiming
- Additives Injection
- Safety Operation
- Quality Monitoring
- Sensors: Humidity, Temperature, Oil level, Gas Contained

IMPRESSIVE  
COLOR CHANGES

