OIL POLISHING SYSTEM

TOTAL SOLUTION PROVIDER FOR OIL POLISHING SYSTEM, FUEL SULPHUR REMOVAL AND MORE....

As a technology-driven innovator, we are at the forefront of developing cutting-edge solutions that elevate production quality, enhance automation, and reduce costs across lubricants and oil recycling sectors. For **Lube Oil, Kerosene, Diesel, MHO, Light Diesel Oil, Transformer Oil, Slack wax & other petroleum products** we engineer advanced systems that purify its hydrocarbon structure and eliminate foreign unwanted particles. Our expertise extends to semi-automatic **Loading and unloading stations** in tank farms, **Lube oil polishing systems**, and sophisticated **Sulphur removal technologies** for Diesel, Mixed hydrocarbon oil and Petroleum products.

Whether it's a small-scale application of **20 tons** per day or a large-scale operation of **100 tons** per day, we are persistent in our commitment for creating production plants that has enduring reliability. **Elevar** has not only set the standard domestically but has also expanded its influence across borders and continents, solidifying our reputation as a **Leading supplier of choice.**

Our sister firms

1. ERDOL RAHMEN ENGINEERS PVT LTD, INDIA

Leading manufacturer of fully automatic Used Oil Recycling Plants with WFE, fully automatic Lube Oil Blending Plants and Waste Furnace Oil Recycling Plants

2. GEMINI INTERNATIONAL TRADING FZE, UAE

Leading supplier (exporter) based in UAE for Virgin & Recycled base oil, MHO, Bitumen, Naphtha, Lubricants Additives and all petroleum products

ELEVAR Oil Polishing System

The **ELEVAR Oil Polishing System** is one of the most environmentally friendly and cost-effective solutions available for the **Petroleum Refining** industry. Designed with a focus on sustainability and efficiency, it can purify and deliver superior-quality **Base Oil, Kerosene, Diesel, MHO, Light Diesel Oil, Transformer Oil, Slack wax & other petroleum products** with minimal investment.

At the heart of this system is **ELEPURE™ Catalyst**, a regenerative catalyst developed by **Elevar Engineering Pvt. Ltd.** Using an advanced **adsorption-based method**, the system effectively removes impurities such as **volatile compounds, foreign particles, high sulphur content, and aromatic compounds** from distilled base oils, dark base oils, and dark fuels.

The ELEVAR system significantly enhances the **color, oxidation stability**, and reduces **sulphur content** of base oil and other petroleum products, producing cleaner, more valuable end products. Impressively, the **ELEPURE™ Catalyst** can be **regenerated and reused over at least 150 cycles**, ensuring long-term performance and minimal operational costs.

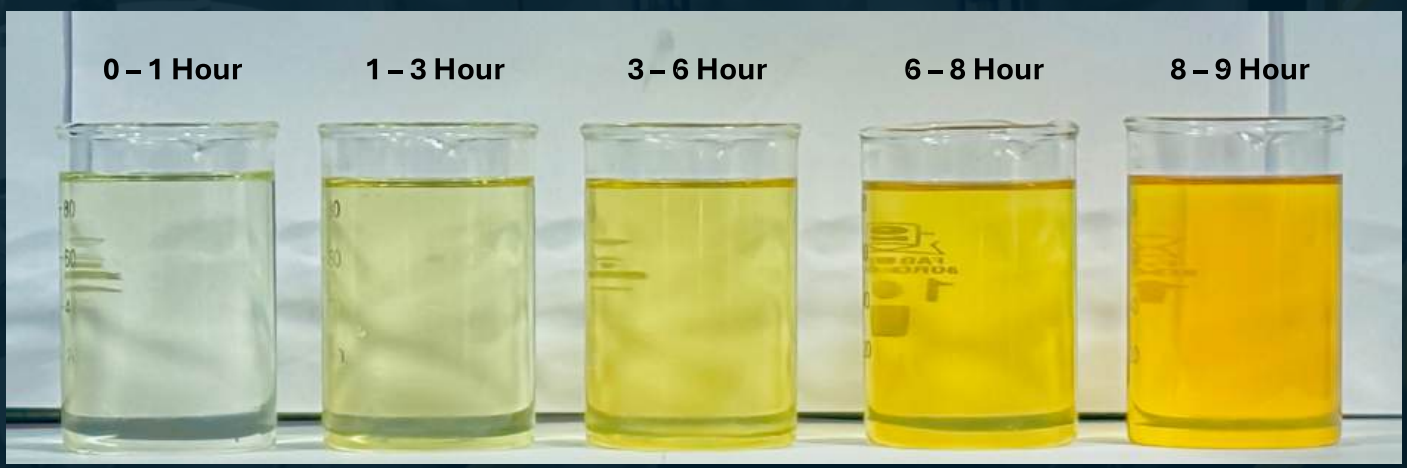
HOW IT WORKS

The ELEVAR Oil Polishing System operates through two-stage process:

1. Polishing using ELEPURE™ Catalyst

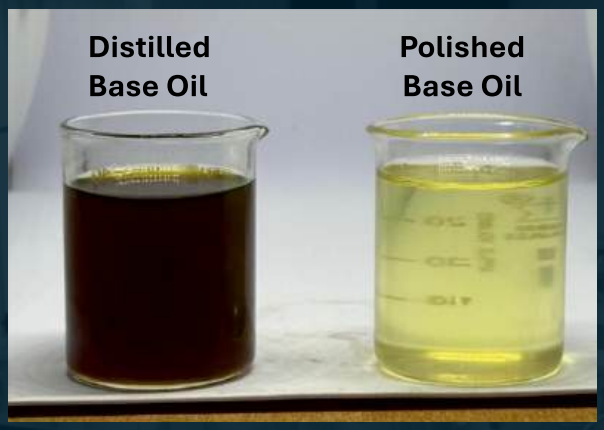
During this stage, used or dark base oil / petroleum product is passed through the system under **precisely controlled pressure, flow rate, and temperature**, customized based on the specific feed characteristics. These parameters are **critical** for achieving optimal polishing results. The system is equipped with a **fully automatic control panel**, which ensures accurate regulation of these variables—eliminating the need for constant human supervision.

By perfect regulation, the system delivers **exceptional quality base oil / petroleum product output**, improving oil color, reducing sulphur content, and enhancing oxidation stability, removing bad smell.



OUTPUT COLORS OF DISTILLED DARK BASE OIL AFTER POLISHING OVER 8 HOUR POLISHING CYCLE

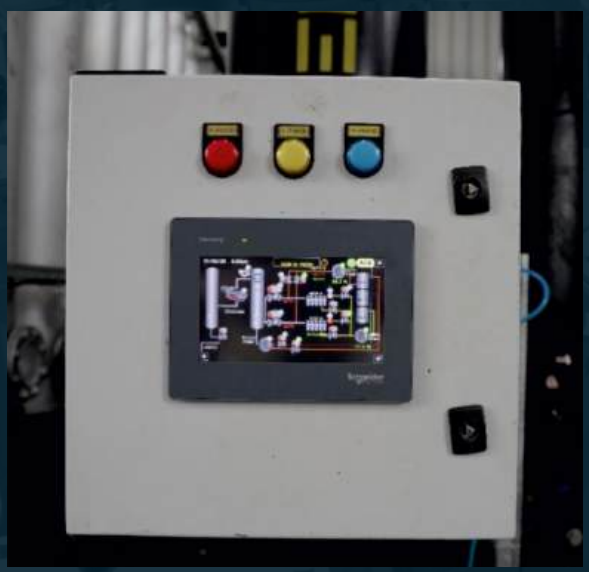
Insight of timeline...



A. Dark base oil or petroleum product is fed into the Oil Polishing System.
B. The feed travels through specialized columns under precisely controlled conditions—**pressure**, **flow rate**, and **temperature**—which are customized based on the characteristics of the feed material.
C. Depending on the feed's properties, it takes approximately **5 to 7 hours** before the first polished material begins to appear.
D. The **initial output** is typically **clear and water-white** in color.
E. Over time, the output color gradually shifts to a **yellowish or orange** shade.
F. This output continues for approximately **8 to 16 hours**, depending on the nature of the feed.
G. During this period, **the average color** of the material in the **final output collection tank** is observed. Once the output reaches the **maximum acceptable color limit**, feeding must be stopped.
H. At this point, the **media inside the columns** is considered saturated and must undergo **regeneration** to prepare it for the next polishing cycle.

2. Regeneration of ELEPURE™ Catalyst

After the polishing cycle is complete, the **ELEPURE™ catalyst** must be regenerated to prepare it for the next cycle. This is done through a **thermal oxidation cleaning process**, which removes accumulated contaminants from the regenerative media surface. The regeneration process is also **fully automated**, managed by the system's built-in automatic controls to ensure proper regeneration of catalyst. Using this system, **Elevar Engineering Pvt. Ltd** guarantees minimum **150+ regeneration cycles** — while maintaining its polishing efficiency




ELEVAR


ELEVAR


SIDE B
37.0 %

APPLICATIONS

Distilled Engine & Lubricating Oils

- ➤ Improves colour
- ➤ Reduces sulphur content
- ➤ Removes smell
- ➤ Improves oxidation stability

Before and after polishing of Lube Oil

Transformer Oil

- ➤ Removes residual impurities
- ➤ Restores dielectric quality
- ➤ Improves colour
- ➤ Removes smell

Before and after polishing of Transformer Oil

MHO, Dark Diesel and Fuels

- ➤ Improves colour
- ➤ Reduces sulphur content
- ➤ Improves combustion quality
- ➤ Improves oxidation stability

Before and after polishing of Light Diesel Oil

PERFORMANCE

1. LUBE OIL

Parameter	Input Base Oil	Output Base Oil
Colour (ASTM D1500)	4	1.5
Smell	Strong odor from aromatics, sulphur, volatile hydrocarbons, and degraded molecules	Non smell
Oxidation Stability	Low	High (stable colour over long period)
Sulfur	High	Reduced by 20% - 60%

2. TRANSFORMER OIL

Parameter	Input Transformer Oil	Output Transformer Oil
Colour (ASTM D1500)	2-3	0
Smell	Varnish like smell due to chemical breakdown and contamination from internal transformer faults or aging processes	Non smell
Oxidation Stability	Low	High (stable colour over long period)

3. LIGHT DIESEL OIL

Parameter	Input Light Diesel Oil	Output Light Diesel Oil
Colour (ASTM D1500)	> 4	1
Smell	Strong odor from oxidised volatile organic compounds (VOCs), sulphur, and other impurities	Pure petroleum smell
Oxidation Stability	Low	High (stable colour over long period)
Sulfur	High	Reduced by 30% - 80%

4. MHO / Diesel / Kerosene

Parameter	Input Fuel	Output Fuel
Colour (ASTM D1500)	2 - 3	0-0.5
Smell	Strong odor from aromatics, sulphur, volatile hydrocarbons, and degraded molecules	Pure petroleum smell
Oxidation Stability	Low	High (stable colour over long period)
Sulfur	High	Reduced by 20% - 80%

Clay and OPS comparison

Parameters	Clay (Filter Press)	OPS (Oil Polishing System)
Color (ASTM D1500)	1.5 - 3 colour	1-1.5
Smell	Bad smell from volatile compounds, aromatics, unsaturated sulphur impurities, burnt smell from oxidised compounds	Non smell
Oxidation Stability	Low stable, colour increase within 2 hrs to 2 weeks from production	Stable colour over very long period
Oil Loss	> 50 Ltr / 1000 Ltr input	< 20 Ltr / 1000 Ltr input
Production cost	> 150 USD /Ton	25 - 35 USD/Ton
Environmental	Hazardous process (Spent clay is hazardous)	Clean Process (Spent media is non hazardous and dry)
EPA Permission	Banned in most countries	Easy
ROI	Very long	1-1.5 Year
Process	Complex and dangerous; Highly skilled operators needed	Easy; any technical person can be trained to operate system easily
Usage	1 time use and throw clay	>150 times usable regenerative media
Disposal	Hard to dispose Spent clay, Buy back not available	Spent media is totally non hazardous and disposal is easy, Buy back is also available

AVAILABLE CAPACITIES

	OPS - 80	OPS - 160	OPS - 240	OPS - 400
Total columns	80	160	240	400
Polishing/Regeneration Columns at a time	40 / 40	80 / 80	120 / 120	200 / 200
Media holdup capacity	20 MT	40 MT	60 MT	100 MT
Production per batch	20 KL ÷	40 KL ÷	60 KL ÷	100 KL ÷
Required space	7 x 16 meter	15 x 16 meter	15 x 24 meter	15 x 40 meter
Required electricity connection	280 kW	560 kW	840 kW	1400 kW
Required manpower for plant operation	1 Operator ÷ 1 Helper	1 Operator ÷ 2 Helper	2 Operator ÷ 2 Helper	2 Operator ÷ 3 Helper
Time per 1 cycle	25 – 30 hours	25 – 30 hours	25 – 30 hours	25 – 30 hours

Why choose ELEVAR Oil Polishing System?

- ✓ Fully automatic plant suitable for American & European industry standards.
- ✓ Long lasting system with all high-grade equipment.
- ✓ Have own 20 KL plant which operates 24 x 7, 365 days.
- ✓ Test your own raw material in Elever's own plant for complete satisfaction.
- ✓ Provides activated catalyst with at least 150 cycle GUARANTEE.
- ✓ Full operation by Touch Screen Control Panel & all automatic valves to reduce human efforts and human errors.

Scan for WhatsApp

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MANUFACTURING UNIT – 1:

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