REGENERA™

ESTER INSULATED
INSTRUMENT TRANSFORMERS

The new Trench Ester Insulated Instrument Transformers Portfolio is the streamlined solution to address the increasing demand by the Energy Operators for **Eco-sustainable** HV Equipment. Trench Group, as Instrument Transformer Leader, has set up an innovative portfolio that uses Ester Fluid as High Voltage Insulation System. Ester is a **Biodegradable** and high-level dielectric performance **Fluid**. The new Trench Ester Insulated Instrument Transformers Portfolio is the streamlined solution to address the increasing demand by the Energy Operators for Eco-sustainable HV Equipment as well enhanced safety requirements.

CURRENT TRANSFORMER ESTER FLUID INSULATED EQUIPPED WITH THE SENSGEAR® MONITORING SYSTEM

CUSTOMER BENEFITS

ENVIRONMENTAL FRIENDLY SOLUTION

The use of Ester Insulated Instrument Transformer reduces the risk of environmental damages in case of insulating liquid leakages.
The insulating fluid is classified as "readily biodegradable" according to OECD 301 biodegradability, adding an increased eco-performance during the whole product lifecycle:

- No pollution hazard during manufacturing, testing and service
- Recycling capabilities at the end of service life which results in much lower disposal costs

PROVEN DESIGN

Trench Ester Insulated Instrument Transformers are based on our conventional and proven design, well known worldwide since long time. Thousands of Trench Instrument Transformers are installed all over the world in every ambient condition to the full satisfaction of our customers.

With the introduction of **Ester Insulated Instrument Transformers** our designers have been able to keep the existing features of our **Mineral Oil** Insulated Portfolio (Performance and Reliability), adding **Eco-friendly** features and an **Extra-Safety** characteristic, thanks to the high fire point.
Trench Ester Insulated Instrument Transformers have the same external dimensions and weights as our standard portfolio of the Mineral Oil Insulated Instrument Transformers. This allows a very quick and easy replacement in case the Customer has already Trench unit installed and wants to replace them looking for a more ecofriendly unit.
Customized, eco-friendly solutions are also available in case the original unit is from a different supplier than Trench.

TRENCH
Sense the **Power**

TRENCH ESTER PORTFOLIO

Trench is able to provide a complete portfolio of Ester Insulated Instrument Transformers that includes Current Transformers, Inductive Voltage Transformers, Combined Transformers and Capacitive Voltage Transformers, available for High Voltage Systems from 72 kV up to 550 KV.

ENHANCED SAFETY

Fire safety is a key concern for users of products filled with insulating liquids such as oil, especially when they are installed in populated areas. Esters have a high fire point, significantly increasing the fire safety of the equipment.

The use of a less flammable K class fluid, such as Ester, brings the following advantages:

- No fire risk in case of major failure: even if Ester ignites, the liquid rapidly ceases to burn
- Low density, non-toxic smoke
- Lower cost for installation and maintenance of eventual fire system equipment
- Less associated insurance costs

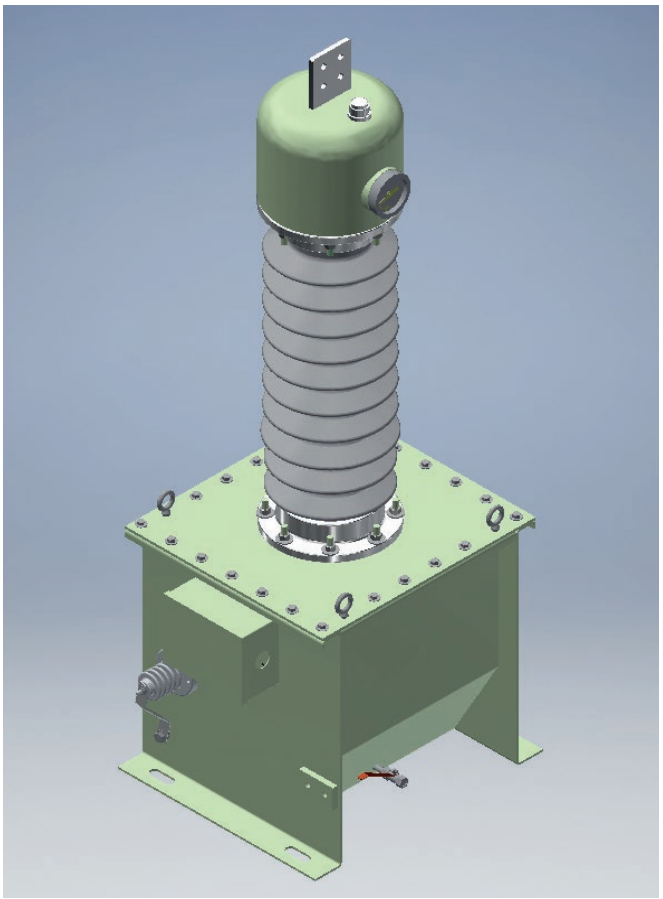
READY FOR ON-LINE MONITORING

Trench products are designed to be connected to on-line monitoring system **SensGear®** that allows the customers to remotely monitor the installed instrument transformers' status:

- Environmental, Safety & Health: fluid leakage remote indication prevents deleterious effect to the environment or even unit breakdown, which could lead to explosions or fires.
- Operational cost reduction: by accessing remote data from the cloud.
- Optimized maintenance activities: according to real needs and not by pre-defined time intervals.
- Reduced risk of loss of earnings due to outages: the overall reliability of the system increases thanks to real time availability of data.

MAIN FEATURES

- High Voltage Insulation is made by using High Quality Paper and Ester Fluid; fine graded bushings optimize the electrical field inside and outside the product.
- Hermetically sealed. A suitable inox steel bellow allows the fluid volume variation and keeps the internal pressure equal to the ambient one, under every service condition
- Fully meeting IEC 61869 Standards requirements
  - Suitable for a wide range of temperature application from -50°C up to 50°C
- Arc Proof Design available
- VFTOs resistance (Very Fast Transient Overvoltages)
- Design for High Seismic requirements available



Discover more about REGENERA™
www.weareregenera.com

For more resources on
Ester Instrument Transformers
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