

AUTUMN NEWSLETTER

Featured in This Edition:

Leakwise Introduces World's First Continuous Field Ethanol Leak Detector And Concentration Monitoring solution

As ethanol becomes increasingly prevalent in modern fuel systems, the need for reliable leak detection has never been more critical. Leakwise is proud to introduce the ID-223ET Ethanol Sensor, our latest innovation in leak detection technology. From E15 to E85 facilities, this groundbreaking sensor ensures comprehensive monitoring of ethanol and gasoline-ethanol mixtures in both wet and dry conditions. Discover how this new technology can transform your facility's safety and compliance standards! [Head to page 2 to learn more...](#)

Table of Contents:

PAGE	2	ID-223ET: Advanced Ethanol Leak Detection Technology
PAGE	3	Transformer Oil Leak Monitoring: Preventing Catastrophic Failures
PAGE	5	Leakwise Leadership: Welcoming Our New Innovation Leader

We will be visiting Salon PETROCHYMIA, Martigues, France, 27-28 November 2024

We will be visiting StocExpo in Rotterdam, Netherlands, from March 12 to 13, 2025.

Come meet us there! Please contact us to schedule a meeting at info@leakwise.com



Exciting News From LEAKWISE: Introducing the ID-223ET Ethanol Sensor!

We're thrilled to announce the launch of our latest innovation in leak detection technology:
ID-223ET, Ethanol in Water Sensor!

Key Features

- Detects Ethanol and Gasoline-Ethanol mixtures in water
- Monitors concentration from 10% to 100% by volume
- Works in both wet and dry containment conditions
- Early spill detection and trend monitoring via relays closure and 4-20mA output

Ideal For

- Ethanol/gasoline blending facilities
- E15 / E85 distribution stations
- Above-ground ethanol storage tanks



LEAKWISE
OIL ON WATER DETECTION SYSTEMS

New ID-223ET Ethanol Sensor

- Detects Ethanol in Water
- 10-100% Concentration Range
- Wet and Dry Containment Conditions
- Early Spill Detection
- Environmental Compliance



Technical Highlights

- Based on the Leakwise High-frequency Electromagnetic Absorption technology
- Multiple models for various water level fluctuations
- System integration with Leakwise PS-220 or SLC-220 controllers

Certifications and Environmental Compliance

ATEX, IECEx, UKEX, cETLus, SIL 2 and more!

Helps ensure regulatory compliance and alerts operators to operational anomalies.

***Protect your facilities, comply with regulations, and
safeguard the environment with Leakwise ID-223ET.***

Oil Leaks from Electrical Transformers: Risks and Solutions

Monitoring oil leaks from electrical transformers is crucial to avoid hazardous situations and environmental contamination. Leakwise oil-on-water detectors are extensively utilized in power generation and distribution facilities, representing a best practice for enhancing the efficiency and promptness of transformer maintenance activities.



Prevent fires and explosions by adopting correct behaviors and adequate technologies

On 17 August 2009, an oil-filled transformer exploded at the Sayano-Shushenskaya hydroelectric power plant in Russia, damaging the penstocks that fed the power plant, the electrical infrastructure, the roof and the walls of the underlying machine room, causing immediate flooding of the rooms occupied by the staff. On 13 May 2014, a devastating explosion and fire occurred inside a mine in western Turkey, caused by the failure to monitor the oil in a transformer, which caused a blackout in the electrical system and the collapse of a part of the underground infrastructure at about 2000 meters below ground: about 780 miners were in the mine and the tragedy left over 232 dead and 300 missing.

In May 2015, during maintenance work at the Indian Point nuclear power plant in Buchanan, 50 km north of Manhattan, a transformer exploded, causing a fire that raised serious safety concerns.

Even in more recent news, there continue to be fire incidents with varying degrees of severity, emphasizing the importance of:

- **Verifying proper transformer operation**
- **Monitoring for dielectric oil leaks**
- **Maintaining cooling and insulation effectiveness**
- **Preventing overheating, short circuits, and explosions**

Beyond safety risks, transformer oil leaks can cause environmental damage through soil infiltration and groundwater contamination. Insufficient oil levels can also accelerate component degradation, reducing transformer lifespan and requiring costly repairs or replacements.

Regulatory Compliance

Regulations establish clear parameters for managing insulating fluids, with specific preventive and corrective measures. Energy sector companies must comply with these regulations, conducting regular tests and maintenance on leak detection systems to avoid penalties and ensure maximum environmental protection.

Effective Transformer Maintenance

Cooling oil may leak from transformers due to:

- **Design and manufacturing defects**
- **Substandard components or materials**
- **Installation errors**
- **Equipment operation beyond load limits**
- **Component degradation from mechanical stress and chemical exposure**

Early Detection is Critical

Proper lifecycle management of oil-cooled and insulated transformers requires the adoption of advanced and reliable technologies.

Leakwise oil-in-water detectors , which operate on the principle of electromagnetic energy absorption, can detect the presence of surface oil layers with thicknesses ranging from 0.3 mm to 100mm and are able to detect variations in the thickness of the oil layer up to 200mm.

These sensors help prevent equipment damage and downtime by improving operational efficiency and can continuously and remotely determine when a contamination event occurs real-time alarm alerts, which can be set based on easily adjustable sensitivity options, allow timely and appropriate actions to be taken.



Lack of regular and correct maintenance can cause small problems to evolve into significant leaks , therefore it is advisable to regularly inspect some critical points: gaskets and seals , to be replaced in case of deterioration; connections and fittings which must not be loose or damaged; the tank , which must not have cracks or signs of corrosion; the level indicator , which must not detect abnormal variations; the safety valves , which must function correctly to avoid overpressure; the substations or containment basins to detect the presence of oil on the surface of the water.

Over 6,500 Leakwise systems have been installed and operating worldwide for decades in a variety of fields : if you are looking for reliable solutions for oil in water detection and if you have specific questions or applications to discuss, we invite you to contact our experts.

More Updates From Leakwise

LEAKWISE Welcomes Dr. Georgy Maikov to Lead Innovation

We are delighted to announce that Dr. Georgy Maikov has joined Leakwise as our Innovation Leader.

With over 15 years of experience in sensor development and water monitoring technologies, he brings valuable expertise to our team. As the founder of AQUALITAS, he successfully developed AI-driven water quality sensors and managed multidisciplinary R&D teams across international projects. Dr. Maikov holds a Ph.D. in Nanotechnology from the Technion, with 25 published peer-reviewed articles in the field, and has led successful product development initiatives in medical devices, Cleantech and industrial applications.



His exceptional blend of technical skills and business insight will play a crucial role in expanding our product offerings and meeting our clients' changing demands. He will focus on advancing our sensor technologies and developing next generation monitoring solutions that maintain Leakwise at the forefront of leak detection technology.

"I am thrilled to join Leakwise, a company renowned for its legacy in leak detection monitoring. My goal is to enhance Leakwise's established technology, developing advanced monitoring systems that redefine standards in environmental protection and industrial safety."

Dr. Georgy Maikov, Innovation Leader at Leakwise

Upcoming Events



**Join Us at Petrochymia 2024,
Martigues, France, 27-28
November 2024, stand E32**



**Join Us at StocExpo 2025 The
World's Leading Bulk Liquid
Storage Event!**