

COST EFFECTIVE ONLINE TESTING FOR YOUR SUBSTATION

TOGETHER WE POWER THE WORLD

The risk of failure within a substation never goes away.

How can you ensure your testing needs are taken care of between outages/disconnections ?

Doble can help you identify the risks for ongoing use of your apparatus before they become a serious problem.

Doble offer a complete solution including

- Partial Discharge
- Infra-red
- SF6 Leak Detection
- Moisture in Oil



Partial Discharge

Harmful Partial Discharge will reveal itself by the electromagnetic energy emitted from the area where the activity is.

Regular surveys provide an invaluable insight into any potential problems.

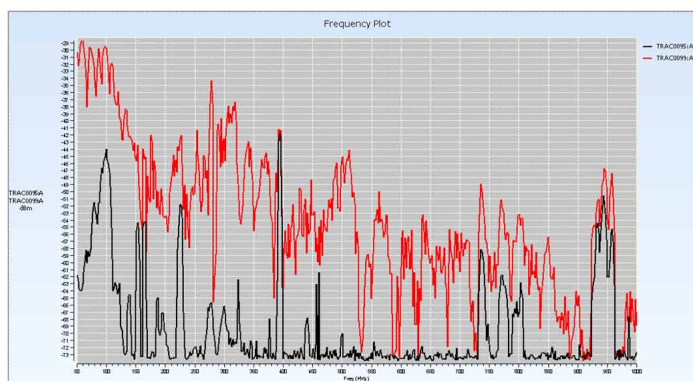
New build substations can also be given a clean bill of health as part of the commissioning process.

Doble would use a variety of techniques including, Radio Frequency Interference, Acoustic Emissions and Ultrasonic.

An RFI survey is often the first stage in detecting and locating sources of partial discharge.

A substation can be surveyed in a short amount of time and any high-lighted areas can then be investigated in greater detail using more focused techniques such as Acoustic or Ultrasonic.

Gas Insulated Substations are often fitted with built in UHF couplers, enabling an improved signal to noise ratio.

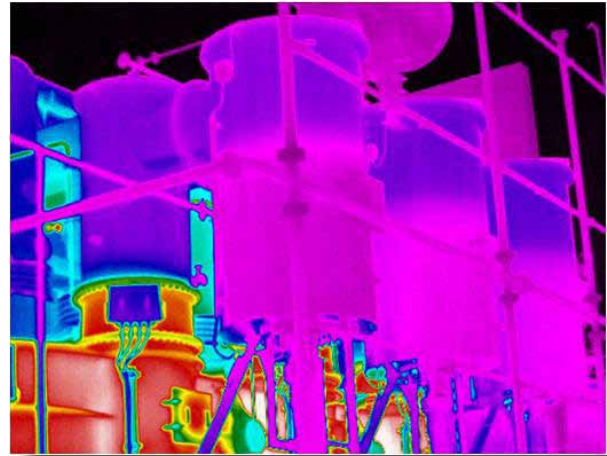


Infra Red

An infrared survey can indicate a number of problems around the substation/powerstation. It is vitally important to catch these problems early, as many of them exist for several months before precipitating a system fault.

Routine scans can detect ;

- Overheating transformer tank problems
- Hot joints on external connections
- Surface contamination
- High circulating currents



SF6 Leak Survey

SF6 or to use its full name Sulfur hexafluoride, is a widely used insulator gas. Its insulation properties are of course well known, however it comes with a price, namely being almost 23,000 times more harmful to the environment than CO2.

It is vital from both an economic and environmental aspect to investigate and repair any leaks as quickly as possible.

Doble use the state of the art Flir GasFindIR LW for this task, which amongst other features provides live video feedback highlighting exactly where the leak is enabling precise repairs to be carried out.



Moisture in Oil

The determination of moisture in insulating liquids is an essential part of any comprehensive maintenance or diagnostic program.

Water is extremely detrimental to most oil filled systems and especially transformers and other liquid-filled electric apparatus.

Knowing the water condition in real time is the best way to guard against harmful conditions that may exist or present themselves.

As oil flows past the sensor in the brass manifold, the ppm of the water in the oil and the temperature of that oil are measured automatically.

It only takes about 2-3 minutes to attach the adapters, and just a few more minutes to get a stable reading once oil is flowing.



AVOID COSTLY UNPLANNED OUTAGES

Let Doble carry out a full suite of online surveys to ascertain the health of your substation.



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