

Background

Due to persistent and frequent tripping of the protection device, our client had carried out a series of Dissolved Gas Analysis on their mineral oil filled transformer. The oil chemist's advice was *"Hydrocarbon gases indicate the possible presence of a metal to metal thermal fault of medium temperature 300-700 Degrees Centigrade" ... "ON AN URGENT BASIS lower the oil and check the Contacts/Joints to the Off-Load Tapchanger looking for signs of overheating/burning."*

The lid mounted hermetically sealed transformer was tightly packed inside a packaged substation, removing the transformer would normally involve expensive 45,000Kg cranes to remove the roof of the substation and then the transformer, such works would also take the transformer out of service for several days thereby resulting in production losses to the solar farm.

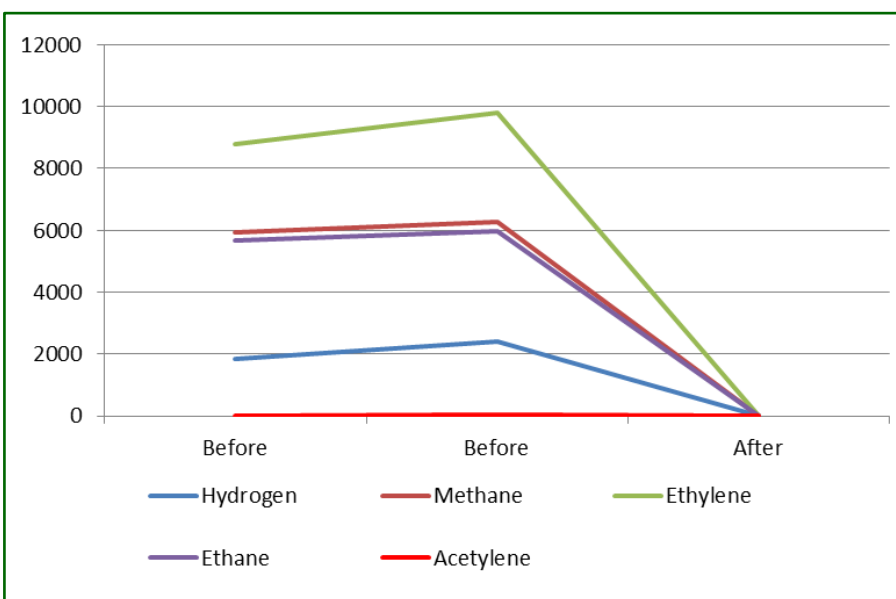
Solution

Eden Transformer Oil were contracted to handle all oil works, de-gas the mineral oil, re-gasket the transformer and, to enable engineers to carry out the inspection of the tapchanger and connections, deploy our especially designed and certified lifting equipment to raise the transformer lid and windings whilst the transformer remained inside the substation.

During one weekday outage the oil was removed and the lid mounted windings lifted to enable the required access for the high voltage engineers to access the tapchanger and connections.

Whilst the engineers carried out their works, Eden purified and degassed the mineral oil using mobile on-site vacuum dehydration purification plant.

When complete, the new lid gasket was fitted and the transformer reassembled and connections re-tested. Oil samples were taken for analysis to confirm the transformer exceeded BS EN 60422:2013 and a new gas datum established for future comparison and measurement.



About Us

Eden was formed by Alan Denbow and Eddie Gregory in August 1985.

Former employees of Burmah Castrol, they realised that the vast majority of electrical engineers were simply replacing expensive transformer oil without fully appreciating the additional technical benefits of purification to the electrical equipment, and that Eden could achieve a more convenient solution at a significantly lower cost.

In more recent years the treatment of transformer oil is the first choice for a cost effective and efficient maintenance program: the increasing cost of new oil, the importance of productivity and equipment downtime, coupled with the environmental benefits of avoiding the transportation of hazardous waste and use of virgin products, are all part of the equation.

As well as providing on-site transformer oil treatment, if needed, Eden can supply and install new or reconditioned insulating liquid and provide all of the on and off-site sampling and analysis to ensure transformers are supervised and maintained according to British Standards (BS EN 60422:2013) and insurance underwriters requirements.

Our online store is ideal for customers requiring smaller quantities of insulating liquids, desiccant breathers, spill kits and other regularly used consumables. All of our products are sourced in the UK and used on site every day by Eden staff, so they are tried and tested in the field.



Registered Address

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Waste Carrier License: CBDU1214230 **Waste Storage Permit :** EPR/BB3506LF