

Production Needs Power: Critical Transformer Monitoring



Critical Transformer Assets in Modern Industry

Production Needs Power

Modern industrial companies depend upon reliable electrical power. **Electrical Transformers** are the key elements in the delivery of that power.

It is crucial to ensure your transformers are operating correctly and to mitigate against unexpected failure. Any such incident can result in **significant loss of revenue** and potentially large additional costs for asset replacement and collateral damage.

Dissolved Gas Analysis (DGA) has long been recognised as the essential part of any transformer monitoring program.

DGA Monitors – what they do for you....

- Avoid unplanned outages and loss of revenue
- Delay capital expenditure
- Target budget where needed
- Lower O&M costs
- Insight into asset condition
- Acts as a low-cost real-time insurance against failures



If we only had one tool in our toolbox to determine the condition of our transformer fleet, Alabama Power would choose DGA as that tool

Danny Bates, Equipment Test Team Leader



GE Energy's Asset Management Equipment

With the addition to the established portfolio in August 2008 of cutting-edge technology and DGA product range from Kelman, GE Energy now offers a comprehensive range of products, software, services, expertise and customer support for management of critical transformer assets.



Kelman TRANSFIX - online DGA

Full 8-gas DGA + moisture



Kelman TAPTRANS - online DGA

Full 8-gas DGA + moisture for main tank and tap changer in one system



Kelman MINITRANS - online DGA

Cost-effective on-line DGA
Discretely reads 3 key gases + moisture



HYDRAN - composite DGA

On-line composite gas + moisture DGA
Embedded transformer modelling



Kelman TRANSPORT X - portable DGA

Portable 7-gas DGA + moisture
Reliable results in minutes
Rugged and simple to use



Kelman MULTITRANS - online DGA

Full 8-gas DGA + moisture
Multi tank gas analyser

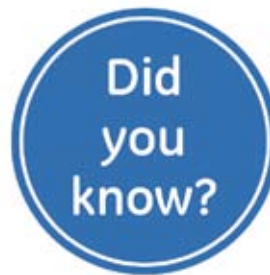
Asset Optimization Service - Complete Transformer Management

- End to End Coverage
- Advanced Monitoring Technology
- Sophisticated software analysis tools
- Remote Condition Assessment
- On-site Diagnosis
- Consulting Services



Kelman TAPTRANS in modern industry

As well as on-line monitoring of critical transformers, monitoring of tapchangers is becoming essential to avoid expensive failure. **TAPTRANS** is a new concept whereby the transformer and tapchanger can be monitored for dissolved gas concentrations in a single unit.



LTC failure is one of the single most common mode of transformer failure?



The TAPTRANS provides me with crucial information allowing me to analyze gases within our critical transformers allowing us to perform condition based maintenance, minimizing downtime and providing substantial annual savings

Chris Birkbeck - Nucor Steel



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