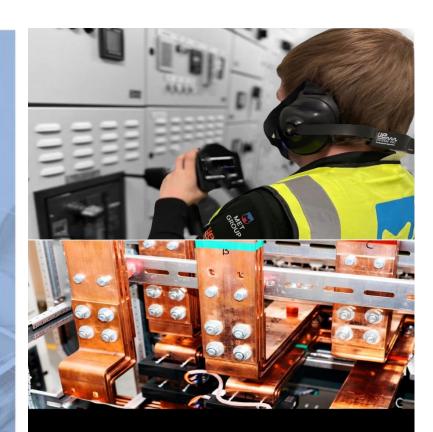


Get Infront of the problems

NON INTRUSIVE PREDICTIVE MAINTENANCE SHOWCASE







services@metgroupuk.com

INNOVATION SHOWCASE - MET Group

The Challenge

BACKGROUND: LV & HV Electrical Testing until recent years has relied on blind, costly planned shut downs. Businesses are having to be reactive to issues/faults and this incurs a cost in both money and time.

MET Group's leading-edge solutions allow clients to maintain operations whilst being able to identify faults in a predictive and non-intrusive capacity across ALL HV/LV assets, down to final distribution The subsequent reporting allows the client to isolate the areas of concern as identified in the report, minimising the overall shutdown timeframe.

Condition Based Monitoring allows for 24/7 364 monitoring with the addition of energised reaction teams.

THE PROBLEM:

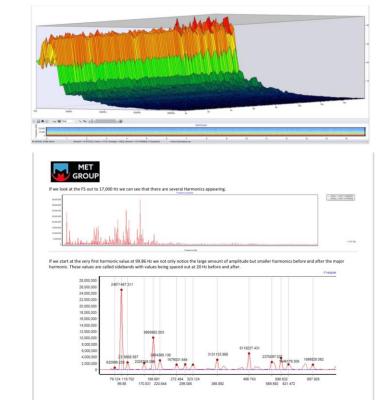
- Travel Hubs, Data and Finance Sector Clients can not shut down areas of the business.
- Massive Cost associated to unplanned reactive shutdowns
- Electrical Testing often takes a back seat to operational needs.
- Current providers striking off large areas of distribution as limitation No alternative option offered.







When view this in a 3D Spectrogram there is not enough clear signal to give us the stunning images, we would expect to see in the Time Domain since the amplitude of the unit was to high when the sound wave was captured. The First Spectrogram 3D has the Frequency Domain on the left going to the center and from the center the Time Domain with the vertical representing the amplitude.



MET GROUP INTRODUCES ULTRASONIC TESTING

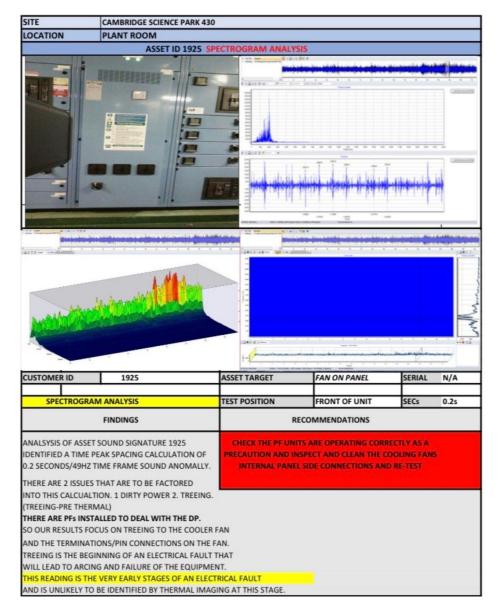
ULTRASONIC INSPECTION AND REPORTING

In Depth on site and post visit analysis. Ultrasound picks up everything the human ear can not hear. MET Group engineers listen to the internals of all the HV, LV and Mechanical Plant Assets. This leading-edge solution allows us to identify faults/issues at the pre-thermal and thermal state on electrical assets and to identify sounds out of the frequency range of the human ear, or that are drowned out by Mechanical Plant, in order to identify faults in mechanical plant motors. The sound signature is translated into 3D Graphs and the Engineers can assess and identify through the software and their extensive experience the exact fault and the work needed to bring the asset back to optimal efficiency. This allows for the planned maintenance to be targeted, getting rid of the need for long, laborious, costly and unnecessary shutdowns, and allowing for shorter term isolations to work in the reported issues. The information is saved and MET Group engineers conduct trending analysis in order to identify and report on progressive issues.

This is the most advanced form of Electrical and Mechanical Testing in the World.

This service can inspect but is not limited too: •Transformers •LV/HV Switch complete •Busbars/Risers & Elevated Busbars •Distribution Panels •Distribution Boards •HVAC/Plant •Water Pumps



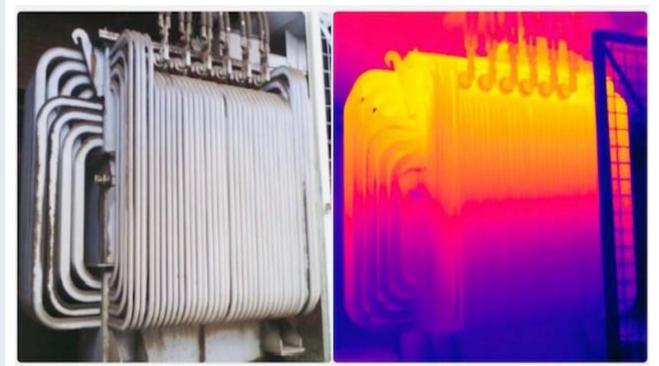


MET GROUP INTRODUCES THERMOGRAPHIC TESTING

THERMOGRAPHIC INSPECTION & REPORTING

In Depth on site and post visit analysis. Thermography picks up everything the eye can not see. MET Group's highly experienced engineers can find issues in their finite infancy. This is then reported on, with findings, conclusion and recommendation of work. This should always be done with the panels removed. Some clients prefer the non-intrusive option of Ultrasonic only, but for those who want the full service, MET Group Engineers utilise Thermography as a second stage to the service, ensuring all faults/issues are identified and reported against. The information is saved and cross checked each visit for trending analysis. Arc Flash Calcultations are carried out prior to removing any panels.





MET GROUP INTRODUCES ULTRASONIC & THERMOGRAPHY TO DISTRIBUTION BOARDS

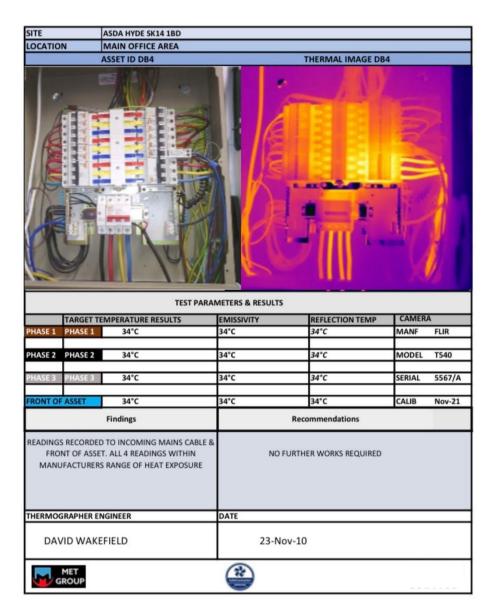
FIXED WIRING WITH THE ADDITION OF INDEPTH ULTRASONIC AND THERMOGRAPHIC TESTING

Inclusive of Ultrasound and Thermography to the DB's. Many clients have areas they can not shut down and have several DB's that are being struck off as limitations. MET Group ensures that every asset has some form of testing that is reported against and has certification post inspection.

Additional services include: **Power Factor Correction ACB Testing Energy Surge Spike Testing**

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INNOVATION SHOWCASE - MET Group

MET GROUP INTRODUCES – MET PRO SOFTWARE

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MET GROUP INTRODUCES CONDITION BASED MONITORING

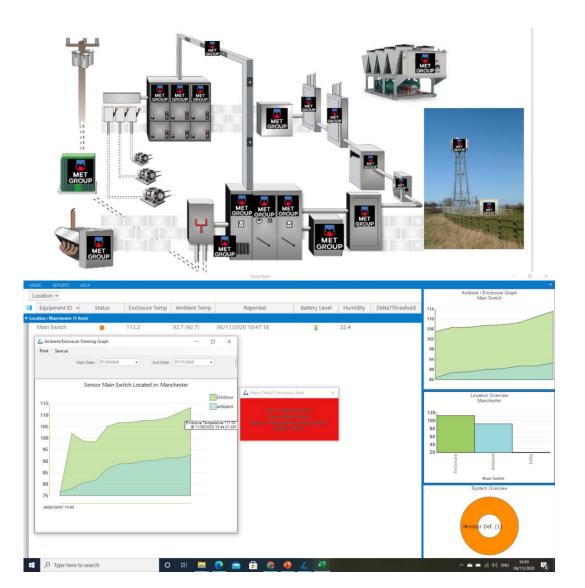
CONDITION BASED MONITORING

MET Groups leading edge technology can monitor the operating temperatures of all the clients' critical electrical assets. We can provide sensors that report through a gateway to the software. The client receives live reporting via desktop, tablet or mobile phone. A built-in alarm system triggers if the asset temp surges. MET Group provide energised emergency response teams who can deploy to site, get in front of the asset under load and assess, isolate and if required fix.

The software can be web or client computer based. The technology comes with data tag technology as an addition, allowing for more fluid engineering inspection. Complete with reporting system.

This service can monitor HV/LV Mains, Chillers, Mobile Phone Masts, Wind Farms and more.





BUSINESSES EMBRACING ENERGISED TESTING & CONDITION BASED MONITORING





INNOVATION SHOWCASE - MET Group

MET GROUP



IMPLEMENTATION **PROVEN TECHNOLOGY AND SERVICE** ROI Minimising Shut Down Time Adopted as the leading form of electrical distribution Extension of Life Expectancy Site and DWG Survey -of Electrical Distribution monitoring and testing in the Quotation Less Costly than laborious Finance, Data and -Manufacturing Sectors shut downs