

Intrusive Maintenance



Intrusive Maintenance - How do you comply with the relevant standards?

It is extremely important that electrical switchgear and other associated plant such as transformers are inspected and maintained to ensure safety, reliability and a generally high performance.

Whether you have Lucy Electric high or low voltage switchgear or products by other manufacturers, there is always a need to complete some kind of inspection or maintenance to varying degrees throughout the products lifespan.

What does it involve?

Many know intrusive maintenance as actually switching off the switchgear and actively maintaining the equipment as opposed to non-intrusive maintenance which typically doesn't involve a shutdown and involves visual inspections and non-intrusive testing. Depending on your site arrangements, the intrusive maintenance will require a planned shutdown for a period of time to enable typical checks such as the following to be completed;

- Protection testing
- Oil changes or SF6 gas pressure checks
- Operation of the switchgear and check the mechanism as required
- Checking connections via cable or busbars

But how often should you maintain your switchgear?

The principle measure from BS 6626 (referenced below) lists the following considerations;

the type of switchgear

- whether it contains oil, sulphur Hexafluoride or a vacuum
- the manufacturer's instructions
- its age
- how often it is operated
- its maintenance history

It is fair to say that different types of switchgear require different maintenance scopes and frequencies. An oil circuit breaker may well require a more intrusive and regular check than an SF6 ring main unit for example.

A maintenance plan / frequency should be recommended by either your internal technical HV/LV switchgear specialist or an external specialist such as Lucy Electric.

How about the paperwork?

It is essential that you keep records of any maintenance, inspections, faults and other events. In addition to this you should keep records of the assets that are installed along with any test documentation. The aforementioned will help ensure compliance with the relevant standards and will also assist you to cross-reference maintenance results to assess any degradation in test results between maintenance visits for example.

Relevant Information;

As well as being able to purchase the below documents, the Health & Safety Executive (HSE) publishes some very relevant guidance documents on their website?



- BS 6626:2010 (Maintenance of electrical switchgear and control gear for voltages above 1 kV and up to and including 36 kV. Code of practice)
- BS 6423:2014 (Code of practice for maintenance of low-voltage switchgear and control gear) and others regulatory standards.
- Electricity at Work Act
- Health & Safety & Work Act
- HSG 230 Guidance document

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