CONDITION ASSESSMENT SOLUTIONS

HIGH VOLTAGE POWER CABLES

SAFE, RELIABLE & EFFECTIVE DIAGNOSTIC SERVICES FOR BOTH NEW & AGED HV CABLE ASSETS

Safety & Reliability are key KPI's for all modern power networks. Integral Power deploys latest test techniques & highly experienced test engineers who can accurately assess the condition of your cable assets while predicting any failures.

INTEGRAL POWER

POWER CABLE DIAGNOSTICS

BACKGROUND

Our cable diagnostic test techniques can accurately quantify and qualify the condition of HV power cables. This can help you lower unnecessary cable replacements while giving you the assurance you need for reliable operation.

TAN Δ / DISSIPATION FACTOR

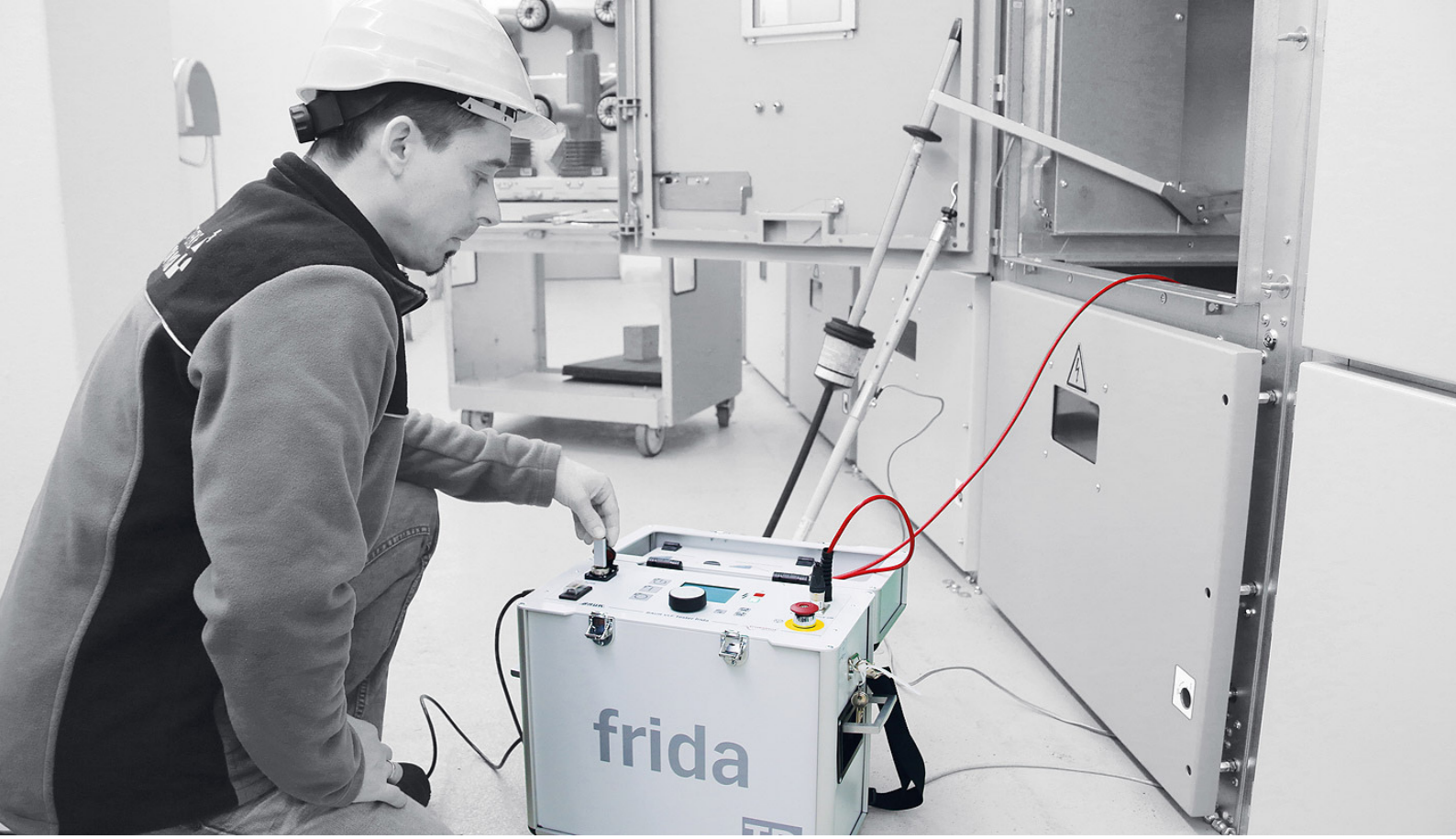
The Tan Delta, also known as the Dissipation Factor test is a non-destructive test that is mostly conducted at modest voltage levels over a relatively short period of time. The overall condition of the cable's insulation system is thoroughly assessed and then graded in 3 categories, i.e. Critically Aged, Moderately Aged and Like New.

HIGH POTENTIAL WITHSTAND

Commonly refers to as HiPot, this test generally conducted at one of 3 frequencies DC (0Hz), VLF (0.1/0.01Hz) & AC (50Hz). In order to assess the capacitive behaviour of the cable insulation, the IEEE 400 along with IEC 60502 recommend the VLF (Very Low Frequency) test. Integral Power utilises VLF technology in cable HiPot testing.

SHEATH WITHSTAND

The Sheath Withstand test is a very simple, yet seldom utilised test. It is very effective in verifying the integrity of the cable's outer sheath. A high voltage is applied to the cable sheath for specific interval and the leakage current is then measured. Generally a leakage of 1 mA per kilometre of cable is regarded to be acceptable.



PARTIAL DISCHARGE

Partial Discharge (PD) is a very effective diagnostic test that can not only assess the insulation but also locate defects (including electrical trees) in shielded power cables. There are two types of partial discharge diagnostic testing techniques that Integral Power deploys:

ONLINE PARTIAL DISCHARGE

On-line PD (testing and monitoring) can be performed without switching the circuit out of service. This test technique uses electric field and ultrasound wave detection to diagnose and locate areas of high PD activity.

OFFLINE PARTIAL DISCHARGE

Whilst this test requires that the cable be switched out of service for the test to be performed, it is proven to be highly accurate with statistically significant correlation studies (85% - 95%).

KEY BENIFITS

Predict Failures
Enhanced Safety
Improved Reliability
Prioritised Replacement
Lower Asset life-cycle Costs
Accurate Condition Assessment

To learn more visit us on www.integralpower.com.au or get in touch with one of our experienced test engineers. Call 1300 206 964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YOUR HV CABLES
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