



Test Facilities

The High Voltage Test laboratory of Smit Transformatoren BV is fully equipped to perform routine-, type-, and special tests on all types of Power Transformers and Reactors.

ROUTINE TESTS

Routine tests can be performed in accordance with almost any standard e.g.

- IEC
- ANSI
- VDE
- BS



View of test bay



Functional test of secondary installation

PRELIMINARY MEASUREMENTS

- functional test of secondary wiring, including electronic equipment
- check on current transformers
- calibration of temperature indicators, Hydran, etc.
- check on fiber optic temperature sensors

DIELECTRIC TESTS

e.g. Impulse test

A unique overshoot control unit is used during Impulse tests.

Measurements are performed with a sophisticated Impulse Measurement System

- 100 MHz sample time
- 4-channels
- 10 bit vertical resolution



SIDAS measuring system



Impulse generator 2400 kV

LOSS MEASUREMENT
e.g. enhanced powerloss measurement system

consisting of:

- zero-flux current transformers
- gas-capacitor based voltage dividers
- high precision Watt meters
- overall accuracy at pf. 0.01 better than 0.5% (50 PPM)



Loss measurement



Sound measurement

SOUND MEASUREMENTS

- sound pressure tests
- octave band measurements
- sound intensity measurements
- frequency band measurements

With Brüel & Kjær 8-channel pulse system

SPECIAL TESTS
e.g. Frequency Response Analyses (FRA)

- in Lab or on Site
- 10 bit vertical resolution
- max. 100 MHz sample time
- frequency resolution better than 100 Hz per point



FRA measurement



Generator assembly

POWER SUPPLY

- 2 identical generators
- 20 MVA each
- both running at 50 or 60 Hz
- max. Capacitive Compensation Power 184 MVA_r

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