Frequency Variable Series Resonant Test Systems For Power Cable On-Site Testing

THE ADVANCED SOLUTION FOR HIGH VOLTAGE AC TESTING
Frequency Variable Series Resonant Test Systems for Power Cable On-Site Testing

General

agea-kull on site cable test sets work according the series resonant principle. They are modular constructed and especially designed for the requirements of on-site testing. Easy to handle and robust reactors with the possibility of series and parallel connection of more units allow an optimised adaptation of the system to the load capacitance. Transport and control containers enable a world-wide transportation by ship and truck. For air freight transportation, special housings are available. For erection of the test set on site, only a common truck crane is required.

In difference to other on-site test techniques as 0.1Hz, DC or oscillating wave, resonant test sets generate a voltage stress for the insulation similar to the operating condition. This gives the test result more evidence and is nowadays the preferred on-site test method. The systems are in line with IEC 60060-3

Partial Discharge Measurements

The testing can be accompanied by a partial discharge measurement. The static frequency converter generates only four switching impulses per cycle which do not disturb the PD-pattern or can be suppressed by gating if a suitable measuring system is used.

Ambient Conditions

The test sets are designed to be operated at fine weather conditions all over the world - on the land or off shore.

Examples of Test Sets

280/560kV Test Set for High Voltage Cables

Converter: 150kVA
Exciter: 25kV 150kVA
Reactors: 6x DSH6W 360H, 280kV
Divider: 600kV, 3.3nF
Frequency: 20-250Hz
Max. Load: 1µF up to 280kV
260nF up to 560kV

< Test configuration
560kV with
6 reactors
DSH6W

40/80kV Test Set for Medium Voltage Cables

Converter: 75kVA
Exciter: 2kV 50kVA
Reactors: 2x DSH5 12H, 40kV
Divider: 100kV, 20nF
Frequency: 20-250Hz
Max. Load: 10µF up to 40kV
2.6µF up to 80kV

< Test set overview
During operation, the system remains in the container

One of two transport containers (with control room)

Transport arrangement in the container