**Impulse Testing**
A world-wide novelty in respect of High-Voltage testing of power transformers on site is a high-performance mobile impulse generator. The equipment enables ABB to perform impulse tests on transformers and reactors on site up to a rated voltage of 750 kV. The equipment generates a load-voltage up to two million volts, simulating the impact of a lightning bolt into a power transformer. This method easily verifies the condition of the transformers insulation system at the customer site. This applies i.e. after shipment of new or repaired units, when checking the condition of the transformer and for failure localization. The equipment has also set new standards in manageability. All components have been installed in a modified 40ft standard container. The tower can be lifted up with the help of hydraulic jacks so erection, commissioning and testing takes no longer than one day.

**Lightning and Switching**
The lightning and switching impulse test on a power transformer is a routine test for transformers with rated voltages greater than 300 kV. The purpose of the test is to verify the insulation integrity for transient voltages, caused either by atmospheric phenomena (lightning), network disturbances or switching operations.

**Testing and Result Evaluation**
Testing will be carried out according to DIN 60 060. Transformer of various designs can be tested due to the modular design of the impulse generator. The test results get assessed and evaluated by experienced repair experts.
Capabilities
- Lightning impulse test up to 1800 kV
- Switching impulse test up to 1300 kV
- Failure localization during LI / SI test

Applications
- After shipment and erection of repaired or new transformers
- After TrafoSiteRepair™
- High value, important and critical units during maintenance
  shut downs for condition assessment
- Before commissioning a spare transformer
- After failure for diagnosis and fault detection

Preparations needed for impulse testing
- Fully erected
- Completely disconnected
- Switched off
- Grounded
- Located at a place with sufficient clearance (i.e. transformer
  foundation), and equipped by HV-bushings with measurement
  taps

Dimensions and storing position of the Mobile Test System
- The impulse test unit is installed in a modified 40ft container
  with the following standard dimensions:
  - Length: 12, 19 m (24 m during testing)
  - Width: 2, 44 m
  - Height: 2, 59 m (10m during testing)
  - Total weight: 27 t

ABB’s AC testing system is also part of the TrafoSiteTesting™
Family, enabling applied voltage testing and induced voltage
testing.

Just call your local ABB Specialist

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