



Application: Substation Apparatus HV Testing

Application Description

Within a substation, there are many different types of electrical apparatus that require some form of high voltage testing, whether it's withstand/proof testing, Insulation Resistance measurement, hipot leakage current testing, and many other tests that do not require high voltage AC or DC voltage. Some of the mentioned tests require AC high voltage, some use DC voltage, and some can use either. Most HV testing of electrical substation apparatus is best done with AC voltage, although many use DC, since DC hipots are smaller, lighter, and less expensive than AC. Users should check with the Maintenance Manuals for the recommended testing methods for their apparatus.

Possible Solutions

High Voltage, Inc. produces many types of high voltage testers, some for general use that can be applied to many items needing testing and some that are designed for specific applications, although may also be useful for testing other objects. Below is a list of some of the items that HVI is able to offer an AC, DC, VLF, or Resonant test set to meet the necessary testing requirements.

Switchgear, circuit breakers, vacuum bottles, bus ducts, terminations, insulators, arrestors, hot sticks, rubber gloves, rubber blankets, insulating liquids, reclosures, transformers, motors and generators, is phase bus, capacitors, aerial lift devices, etc.

HVI Product Solutions

Below is a summary of the HVI products used for testing substation apparatus and cable. The products from HVI are generally smaller, lighter, and less expensive than others. We know testing best and can help to make sure the correct equipment is selected. Talk to HVI first and take a fresh look, especially at the use of AC rather than DC voltage.

Oil Dielectric Testers

60kVac & 100 kVac



Test Cells

DC Hipot/Megohmmeters



80 kVdc
10 mA

100 kVdc
10 mA

300 kVdc

VLF 0.1 Hz. AC Hipots & Tan Delta



30 kVac @ 0.1 Hz.

Solid State VLF
34 kVac @ 0.1 Hz.

Tan Delta
65 kV

AC Hipots & Dielectric Testers



50 kVac @ 3 kVA
Single piece cable



100 kVac @ 3 kVA



12/6 kVac @ 6 kVA



120/60 kVac 7 kVA



50 kVac @ 10

