

SECONDARY INJECTION TESTING

Secondary injection tests are performed by injecting currents into the relay terminals to determine that the relay is operating correctly and in accordance with its settings. Such tests are usually carried out in the substations on the existing panels provided for the purpose.

These tests include injecting currents of various magnitudes from minimum operations all the way up to 6 or 10 times current setting and measuring the relay operating time. Both Over current and Earth fault schemes are tested on the protection relays. Some relays have additional settings which need to be taken into consideration, such as instantaneous over current, earth fault or Sensitive earth fault settings.

If the protection relay being off characteristic during the secondary injection test it might have an effect on the co-ordination with other schemes in the network causing unnecessary nuisance tripping of the supply.

Having performed these tests you have done all that is reasonable to prove the correct operation of the protection scheme.

