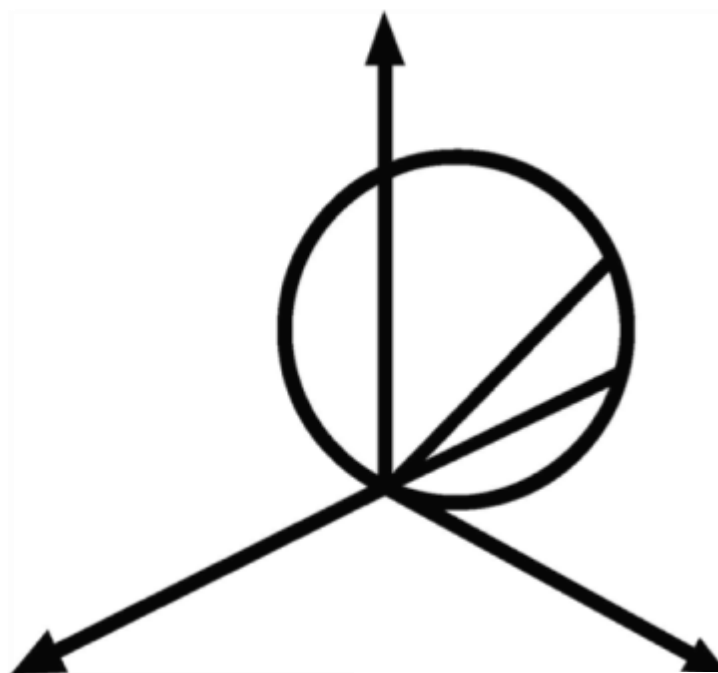


Swedish Neutral Workshop 2013

Neutral Treatment – Arc Suppression Coil & Earth Fault Protection

2 days



Swedish Neutral AB

Workshop Neutral Treatment – Arc Suppression Coil & Earth Fault Protection

An Arc Suppression Coil is a device that is connected to the transformer neutral to limit the capacitive earth fault current flowing when an earth fault occurs in a high or medium voltage network. This method of system grounding is called resonance grounding. Resonance grounding has been used in Central and Eastern Europe as well as in the Scandinavian countries for many decades. The Arc Suppression Coil was invented in 1917 by Waldemar Petersen and is therefore also referred to as a Petersen Coil. The Petersen coil chokes the fault current below the level of self-extinction for overhead networks (< 35A). By this action all transient faults in overhead networks can be cleared without feeder tripping. The basic principle of the Arc Suppression Coil has remained unchanged since 1917 and its excellent properties have been mirrored by low outage rates in the networks where it has been used.

The Arc Suppression Coil in combination with automatic tuning and earth fault location provides the best earth fault protection traditional neutral treatment has to offer.

Swedish Neutrals workshop “Neutral Treatment – Arc Suppression Coil & Earth Fault Protection” offers a concise introduction to these devices with theoretical introduction to a hands on approach with training exercises in our own analogue Net Model.

Target Audience

Utilities distributing electricity in a high voltage network.

Industries maintaining their own high voltage network.

Goal of the Workshop

To gain good basic understanding of resonant earthing and hands on experience using and commissioning the ASC with Automatic Tuning and Earth Fault Location.

Venue

The SN Workshop Neutral Treatment – Arc Suppression Coil & Earth Fault Protection is held in Swedish Neutrals facilities in Stockholm – Kungsängen, Sweden.

Contact information

Please send your enquiry to mail@swedishneutral.se

Program Materials

Each participant will receive:

- GFN User Manual
- Workshop Power Points & materials
- Copy of NMTerm for personal use

Content of the Workshop

Day 1

- **Introduction Neutral Treatment**
 - Grounding concepts of the world
 - Resonant Earthing

- **Arc Suppression Coil**
 - Why is the ASC needed?
 - How to specify the size of the ASC
 - The different available ASC designs
 - U0-Injector
 - Neutral Earthing Resistor

Day 2

- **Automatic Tuning Device**
 - Why is the ATD needed?
 - Important settings of the ATD
 - Two ATD in parallel in one network
 - Using the terminal software of the ATD (NMTerm)
 - Understanding the Alarms of the ATD
 - Understanding the Event File of the ATD
 - Installing the ATD in the substation
 - Commissioning the ATD

- **Earth Fault Locator**
 - Why is the EFL needed?
 - How to specify the EFL (number of feeders)
 - Using the terminal software of the EFL (NMTerm)
 - Understanding the Alarms of the EFL
 - Understanding the Event File of the EFL
 - Installing the EFL in the substation
 - Commissioning the EFL
 - SAEFL – a special type EFL