

## COURSE DESCRIPTION

# CHS502 – Transformer II

## Transformer Maintenance

**Course goal**

To study and improve his knowledge about the modern techniques available for transformer maintenance and lifetime prolongation.

**Participant profile**

Design, planning, engineering and maintenance staff, project manager. Experience in the field of electricity network and supply industry.

**Prerequisites**

Electrical or mechanical engineering degree, technical qualifications or equivalent. Basic knowledge about power transmission and distribution.

**Course type**

This course runs as a face-to-face classroom course. Time 9:00AM until 5:00PM CET. Training Training with maximum 8-10 participants.

**Learning methods and tools**

Lectures, demo, practical exercises, videos, self-study.

Laptop is not required. Presentations will be given on USB key to the participants.

**Duration**

3 days

**Price**

2550.-CHF / participant

**Topics**

- **Oil analysis (contamination and aging factors):** oil type, chemical properties, dissolved gas analysis, furans analysis, aging factors, results interpretation, supervision and maintenance guide (CEI 60422), etc.

- **Advanced diagnostic:** ratio, winding resistances, winding insulation to ground, core insulation to ground, frequency response analysis (FRA), dielectric frequency response (DFR), transformer power factor test (tan d), bushing power factor test (tan d), etc.

- **Hands-on training:** electrical diagnostic measurement on a distribution transformer, one 60 [kV] bushing, use of a dissolved gas measurement portable device, etc.

- **Maintenance & repair:** check-list, *periodicity, on-site Inspection, repair technics, oil treatments, active part drying, etc.*

- **On-line monitoring:** sensors, "e-devices", aggregator system, examples, asset health solution

- **Evaluation and ranking of a transformer fleet**

