

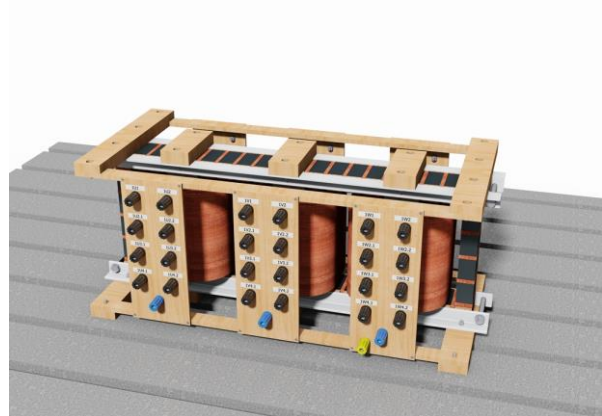
# Large Power Phase Shifting Transformers

## Technical data

- Cross- and linear regulating transformers:
  - Three-phase three-leg transformer
  - Three-phase five-leg transformer
- Tertiary winding

Rated Power	6.9 kVA
Rated Voltage	400 V / 400 V
Rated Current	10 A / 10 A
Relative short-circuit voltage	10 %
Rated Frequency	50 Hz
Rated magnetic flux density	1.5 T
Vector Group	variable

Testing ABB AG – Bad Honnef



## Equipment

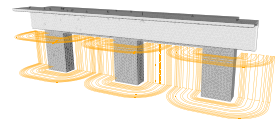
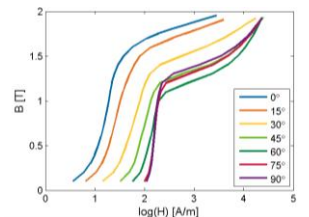
- 4-Quadrant amplifier  
Spitzenberger and Spies PAS 15000
  - Adjustable, variable load
  - Simulation of faults
  - Unsymmetrical load
- Analysis of output: Yokogawa WT 1800
  - Wattmeter
- Multimeter Fluke 45
- Additional coils to measure local flux density

### Measurement capabilities

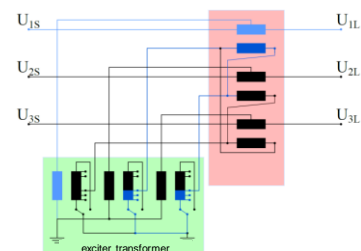
Voltage, Current	Yokogawa WT1800
Power measurement	Yokogawa WT1800
Temperature measurement	Measurement Computing USB - TC
Local Fluxdensity	Fluke 45

## Current application/ Opportunities

- Validate numerical transformer models.
- Develop and validate material models.
- Model anisotropic material.



- Identifying of load-dependent flux density variations inside the core.
- Demonstrator for adjustable transformers.



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