RITZ – Cast Resin Power Transformers in Glass-Fibre-Vacuum Technology (GVT) are in operation for energy distribution in many different applications.

For this customer-specific project in Nairobi/Kenya the Transformer with 1000 kVA power rating is mounted in an enclosure with IP33 protection, together with three RITZ- Voltage Transformers type VES17,5-0,2. This Transformer unit is connected directly to a Siemens Switchgear 8DJH for medium voltage distribution networks via 12 kV cable. The switchgear is gas insulated (SF-6) and mounted in an enclosure with IP44 protection. Both enclosures are flanged to each other, providing a compact unit.

Project-specific requirements for Transformers and Swithgear:

Type: DTR101000

TECHNICAL DATA:
Rated Power [kVA] AN: 1000
Rated High Voltage [V]: 11000
Taps [%]: +5,0%/+2,5%/−2,5%/−5,0%
Rated Low Voltage [V]: 415
Rated Frequency [Hz]: 50
Vector Group Symbol: Dyn11
Impedance [%]: 6 at 75°C
No Load Losses P0 [W]: 2200
Load Losses Pk [W]: 9900 at 75°C
Ambient temperature max [°C]: 40
Insulation Level HV: LI95AC38
Insulation Level LV: LI-AC3
Elevation above sea level: 1750 m

Including SF-6 switch gear from Siemens
Rated Operational Voltage [V]: 12000
Rated High Voltage [V]: 11000
Rated Operational Current [A]: 630
Rated Frequency [Hz]: 50
Ambient temperature [°C]: -5 – 40
Insulation Level: LI75AC28

Including 3 pc. VT VES17,5-0,2 11kV/√3 // 110V/√3, 20 VA, cl. 0,2, mounted on the Transformer

Including metering device for current and voltage

Enclosure IP33 for indoor use for transformer
Design: Fully galvanised 2mm sheet steel enclosure
Surface: Powder-coated
Colour: RAL 7035
Dimensions approx.: L=2250 W=1450 H=2500 mm
Floor mounted
Grounding bar
12 kV cable from transformer to switch gear, 3x1x35mm², N2XSY
250A plug for connecting to SF-6 switch gear
Connection to transformer by cable termination

Enclosure IP44 for indoor use for Switchgear
Design: Fully galvanised 2mm sheet steel enclosure
Surface: Powder-coated
Colour: RAL 7035
Dimensions approx.: L=900 W=1450 H=2100 mm
Front side with two hinged doors and handle
HV Cable from the bottom through undrilled cable gland plates
Mounting of the SF6 switch gear 8DJH RRL / 8DJH LL into the enclosure
Provision to flange to the transformer enclosure

DESIGN CHARACTERISTICS:
Protection: IP00
Conductor Material: Copper
Cooling: AN
Class of temperature HV/LV: F/F
Environmental class: E2
Climatic class: C2
Fire behaviour class: F1
Operation: Continuous
Applicable Standard: IEC 60076-1/60076-11

Scale drawing: Distribution transformer with 1000 kVA transformer mounted in an IP33 enclosure and Siemens switch gear 8DJH mounted in an IP44 enclosure

Wirges, Februar 2011