شركة المحولات
STC
السعودية المحدودة

THE SAUDI TRANSFORMERS CO. LTD.

Pad Mounted
Distribution Transformers
75 kVA-2000 kVA

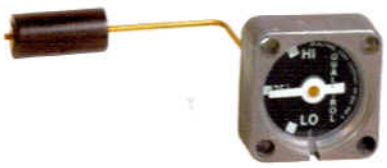
ANSI C57.12.00

Accessories

The unit is supplied with the following accessories as a minimum:

① Oil Level Indicator

This gauge is located in the low-voltage compartment and indicates oil level variation.



② Dial Type Thermometer

A thermometer indicates the liquid temperature near the top of the tank. The temperature-sensitive element is mounted in a leak proof well, permitting removal of the device without lowering the liquid level. These devices are usually furnished with an additional pointer (red in colour), to show the highest temperature attained since last reset.

③ Pressure Relief Device

A standard pressure relief device, located on the tank above the liquid level, relieves excessive internal tank pressure automatically and reseals at a lower positive pressure. It can be manually operated by grasping the end-cap and slowly pulling it away from the tank until pressure is relieved.

④ Pressure Vacuum Gauge

A pressure vacuum gauge is located in the low-voltage compartment above the bushings in the air space. The gauge indicates whether the gas space in the tank is under a positive or negative pressure.

⑤ Drain and Filter Device Valve with sampler device

⑥ Lifting / Moving / Jacking Ground Pads

⑦ Bolted Main Cover

⑧ Bolted Hand hole cover

The following additional accessories may be supplied on request:

⑩ Winding Temperature Indicator

⑪ Pressure Relay

⑫ Thermometer with Alarm & Trip Contacts

Factory Test

Routine test are performed in accordance with standards including ANSI C57.12.90, latest edition. The tests include:

Resistance Measurement Test
Ratio Error
Polarity and Phase Relation
No-load loss and Excitation Current measurment
Impedence Voltage and Load Loss measurment
Applied and Induced Potential Tests

Optional

Temperature rise Test
Noise Level Test
Impulse Test

Certified copies of all test reports shall be provided upon completion of the tests, prior to shipment.

Electrical Characteristics

KVA: 75, 112.5, 150, 225, 300, 500, 750, 1000, 1500, 2000
Phase: 3
Liquid type: ..... Mineral oil uninhibited or inhibited
Temperature rise: .... 65°C for winding
Cooling: ..... OA
Altitude, above sea level: 1000m.
Frequency: ..... 60 Hz.
Winding conductor: Copper
High voltage: ..... 13.8KV, 7.2KV, 4.16KV @ 95 KV BIL[1]
Low voltage: ..... 208V, 220V, 231V, 380V, 480V, 30 kV BIL[2]

High voltage connection: delta
Low voltage connection: Star } [3]
De energised taps: .. 2*±2.5%
Vetor group: ..... Dyn1[4]

1. *95KV is not applicable for all ratings.*
2. *Other ratings are available on request.*
3. *Other connections are available on request.*
4. *Other groups are available on request.*

Pad Mounted Distribution Transformers

GENERAL

The transformers are compartmental type, self cooled and tamper resistant for mounting on a pad. The transformers primary side is dead front or live front and arranged for loop or radial feed.

The transformer(s) are rated for continuous operation at full load at 65ºC temperature rise with a 24 hour average ambient temperature of 30ºC without loss of life expectancy.

CONSTRUCTION

Tank

The transformer(s) are supplied with sealed tank construction of sufficient strength. In addition, the minimum tank withstand pressure is in accordance with ANSI standards. The cover is gasketed hand hole.

Compartments

The high and low voltage cable terminating compartments are located side-by-side separated by a rigid metal barrier. Each compartment has a separate door, designed to provide access to the high voltage compartment only after the low voltage door has been opened. The low voltage door has a handle operated, three point latching mechanism designed to be secured with a single padlock. Both doors are equipped with lift-off stainless steel hinges and door stoppers to secure them in the open position. Doors are mounted flush with the cabinet frame.

Compartments are designed for cable entry from bottom and are sized to the minimum dimensions.

Paint Finish

The transformer(s) are thoroughly cleaned prior to painting. The tank and all metal parts are shot blasted and immediately primed with rust inhibiting primer. The finish coat consists of Mat finish alkyds enamel paint. The transformer is painted with RAL 7033 shade. Other colours can be applied on request.

Core and Windings

The core comprises of three legged stacked construction. High grade, grain oriented non-aging silicone coated core steel is utilised. Magnetic flux densities are kept well below saturation to allow for a minimum over voltage excitation.

The core is properly annealed to reduce stresses induced during manufacturing.

The core frame is designed to provide maximum support to the core and coil assembly. The core frame is bolted to ensure maximum short circuit strength.

The transformers are of two winding type, of cylindrical coil construction using foil as low voltage conductor and a round or rectangular wire as high voltage conductor. All windings are made of copper.

The core and coil assembly are designed and manufactured to meet the short circuit requirements of ANSI C57.12.90. Immediately after the drying process, the core and coils are tanked and placed under a full vacuum to be filled with insulating oil.

High Voltage Bushings

High voltage bushings consist of bushing wells and 300 amp load break bushing inserts designed to mate with either Elastimold, 3M or equivalent. The high voltage bushings are covered with a dust cover which remains on it during handling and storage.

Low Voltage Bushings

The low voltage side is provided with moulded epoxy spade terminals with NEMA hole spacing. Porcelain bushings can be supplied on request.

Load Break Switch

The primary switch is oil immersed with hook stick operating handle located in the primary compartment. The two position or four position, gang operated, spring-loaded toggle switch is rated 300A.

Tap changer

The off load tap changer is fixed on the high voltage winding for voltage regulation, operation. The pad lockable tap changer is located within the primary compartment. The tap changer must be operated when the transformer is in the de-energized position.

Expulsion Fuses (Optional)

There are oil immersed expulsion type fuses. These fuses serve to isolate the transformer from the primary system in the event of winding failure and are replaceable through the hand hole cover on the transformer tank.

Bay-O-Net Fuses

Bay-O-Net fuses are housed in externally removable fuse holder and are available with either a fault sensing or an overload sensing device. The fuse holder is hot stick operable and is capable of breaking transformer load current.

Load Break Dry-Well Fuse Holder

The current limiting fuses are housed in load break dry well fuse holders and are used in applications where the fault current exceeds the interrupting capacity of the expulsion type fuse.

Efficient POWER is our Objective

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