

PADMOUNT DISTRIBUTION TRANSFORMER SPECIFICATION:

1) SCOPE:

- 1.1) This specification defines general requirements for oil filled, sealed type, PADMOUNT distribution transformers with ratings of 150 KVA to 5000 KVA OA, 3 phase, 60 hertz, 65 degrees C rise with a high voltage up to and including 34.5 KV, 150KV BIL.
- 1.2) The transformer will be two winding.
- 1.3) The high voltage will be provided with a no-load tap changer with full capacity taps, two 2½% below and two 2 ½% above rated voltage.
- 1.4) Insulation levels will be as follows:
 - 35KV – 150KV BIL
 - 25KV – 125KV BIL
 - 15KV – 95KV BIL
 - 5KV – 60KV BIL
 - 480V – 30KV BIL
- 1.5) The transformer will have standard impedance per ANSI and comply with appropriate sections of the latest editions of ANSI C57.12

2.0) CONSTRUCTION:

2.1) Core.

The wrapped core will be built with high grade; grain orientated silicon steel laminations. The core grounded internally with no access from the outside of the tank

2.2) Coils.

Coils will be aluminum or copper, rectangular, layer type. They shall be suitably bonded and braced to provide adequate short circuit strength verified by actual test and/or field experience or by industrially recognized design programs.

2.3) Tank and Radiators

The tank shall be free from oil leaks shall withstand pressure of 7 lbs. Radiators will be flat panel design and welded to the tank. The tank lid will be welded to the tank.

2.4) Cabinet

Cabinet shall be of mild steel and tamper resistant. Hinged doors have three point locking mechanism. A barrier separates HV and LV compartments.

3.0) BUSHINGS.

3.1) HV Bushings shall be porcelain

3.2) LV Bushings

LV's with KV rating through 1.2 kv shall have black epoxy cast bushings

LV's with ratings above 1.2 kV shall be porcelain and be ANSI 70 light gray

4.0) ACCESSORIES.

- 4.1) Magnetic liquid level gauge without contacts.
- 4.2) Dial type liquid temperature indicator without contacts.
- 4.3) Provisions for Pressure vacuum gauge provided
- 4.4) Combination 1-inch drain/filter/sample valve and a 1-inch upper filter plug
- 4.5) Two ground pads, one each in the HV and LV compartment shall be provided
- 4.6) Jacking and lifting facilities
- 4.7) Nameplate
- 4.8) Tap changer will have visual indication of tap position.
- 4.9) A 5 lb pressure valve

5.0) OIL

The transformer will be shipped with new inhibited oil, certified to be less than 1PPM of PCB's. At the time of shipment, the space above the oil level will be purged with dry nitrogen and sealed at a positive pressure.

6.0) PAINT

- 6.1) The internal surface of the tank and underside of the lid will be shot blasted.
- 6.2) The external surface of the tank will be shotblasted, primed and painted with padmount green. The total dry film thickness of the paint will be 5 mils.
- 6.3) Touch up paint will be provided; one spray can of primer and one spray can of finish paint.

7.0) DRAWINGS

- 7.1) Outline and nameplate drawings will be provided within one week of the order.
- 7.2) Installation and maintenance manuals will be shipped with the transformer.

8.0) QUALITY SYSTEM AND TESTS

- 8.1) An approved quality system or ISO 9001 registration is required. Quality control records must be maintained for review on request. At any time during manufacture, access must be made available for in-process inspections and for witnessing the performance of tests. Seven days notice is required of testing dates.
- 8.2) Routine tests will be performed in accordance with ANSI requirements. A detailed test report shall be submitted and approved before shipment.

SALES NOTE: - The following is offered only as a reminder of some options available.

Ratings – OA/FA with fans contacts on oil temperature gauge plus control cabinet. Ratings as in ISO

Gauges – additional gauges e.g. winding temp gauge with contacts, rapid rise pressure relay/seal in relay,

Provision to mount L/A's

Detachable rads with valves

Dead front bushings

Loop feed

LBOR switch

55/65 rise

Tests – temperature rise test – impulse – sound level

CT's

Alternative liquids