| PSGSG 2014-15/001 | **Product Specifications** For **Cast, instrument voltage Transformer for MV GIS** | Product | GVM-36 |
|---|---|---|---|
| | | Rev | 01 |
| | | Date | 21.04.2014 |

**1.0 Application :**

Resin cast, instrument voltage transformers are envisaged for use in medium voltage systems. The step-down inductive voltage transformer provides a voltage signal proportional to the system voltage to drive protection relays and metering systems.

**2.0 VT Specifications :**

2.1 Material

Core : CRGO, Ribbon

Wire : Enamelled HC copper

Insulation : Resin treated mylar or equivalent

Shields/Conductors : HC copper/aluminium

Hardware : Admirality brass/treated carbon steel

2.2 Finish : RA 0.8(Die to be polished and hard chrome plated)

2.3 Ratios, burdens and accuracy etc. :

| | |
|---|---|
| 2.31 Primary voltage, kV | : 33.0±10%, 50Hz±3% |
| 2.32 Neutral Earthing | : Unearthed |
| 2.33 Ratio | : 33kV/√3 / 110/√3 |
| 2.34 Insulation class | : Class B or better |
| 2.35 Secondary thermal current (Amps) | : 6 |
| 2.36 Long duration current (8h) Amps | : 6 |
| 2.37 Over voltage factor | : 1.2 Continuous & 1.9 for 8 hrs |
| 2.38 Accuracy class | : 0.5/3P |
| 2.39 Burden, VA | : 100 |
| 2.40 Standard | : IEC-60044-2 & IS 3156 |
| 2.41 Configuration | : Single phase |
| 2.42 Partial discharge level | : <10 PC @ 1.2 Un |
| 2.43 Basic Impulse Level | : ±175 kVp (1.2 x 50 μs) |

**3.0** General

The transformer primary/secondary coil assembly shall be made using a insulating former (compatable to epoxy resin). The coil shall feature a metallic shield at the H.T. terminal, which shall provide support to the transformer HT terminal. Before assembly the CRGO core shall be cleaned of all contaminants like greases and dust. The faces shall be parallel and polished clean before assembly. The core and the coil assembly shall be tested for ratio error and VA burden prior to assembly in the mould for epoxy casting. The cast transformer shall be verified for ratio and accuracy after casting. A test certificate for each transformer shall be issued with transformer serial number.

**4.0** Markings:

Rating plate :

4.1 The manufacturer's name or other mark by which he may be readily identified.
4.2 A serial number or a type designation, preferably both.
4.3 The rated primary and secondary voltage
4.4 Rated frequency
4.5 Rated output and the corresponding accuracy class
4.6 Highest system voltage
4.7 Rated insulation level
4.8 Rated voltage factor and corresponding rated time
4.9 Class of insulation if different from Class A

**5.0** Packing:

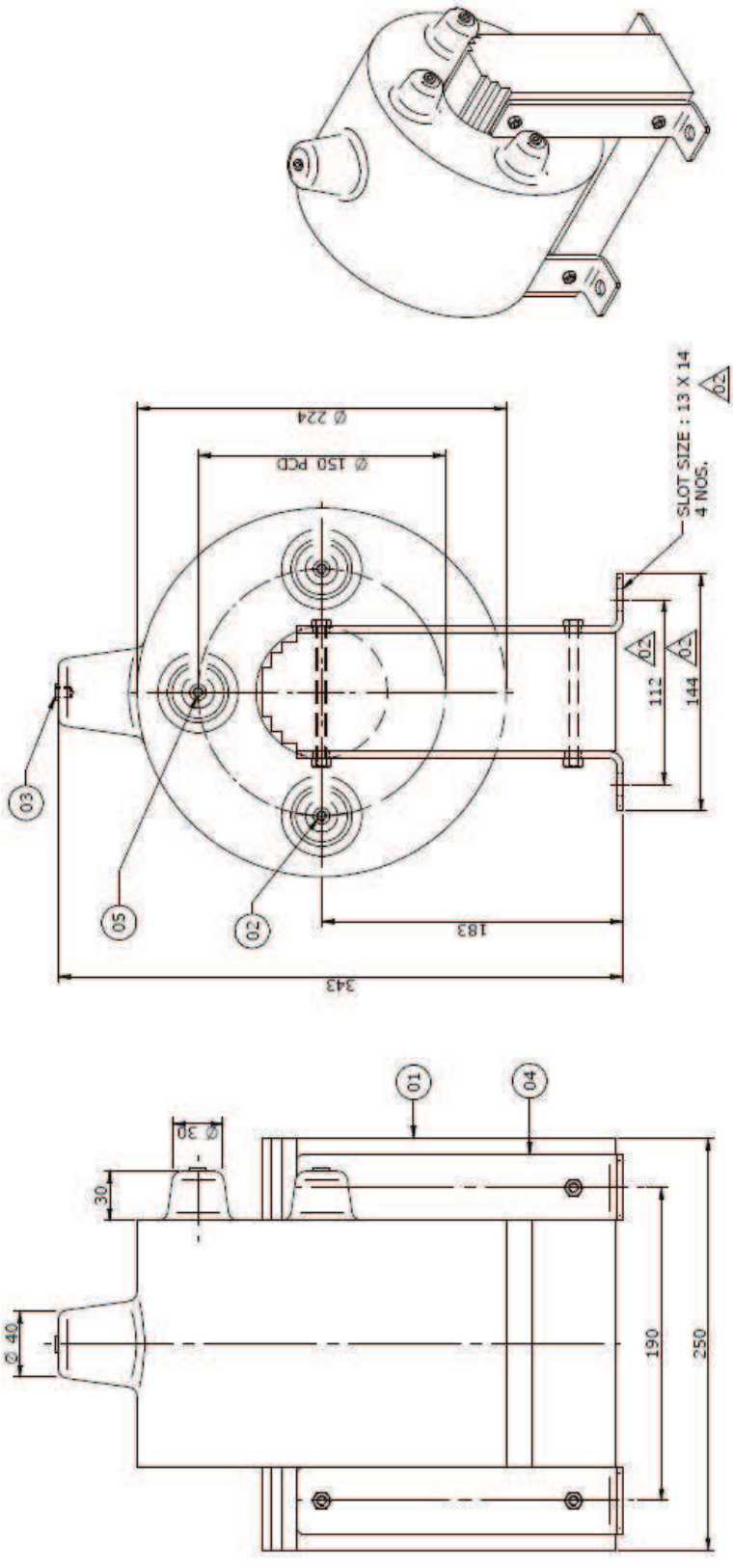
Special thermocol/PUF cavities shall be designed similar to the casting mould for packing the transformer. Prior to placing the transformer in packing box a polyethelyne cover shall be used to bag the transformer. The two half of the cavity shall be strapped using plastic straps.

**6.0** Test & Guarantee Certificate :

A Guarantee certificate against defects shall be provided by the supplier for each transformer.

# EPOXY CAST VOLTAGE TRANSFORMER FOR 33kV GIS

Drawing No. VT.dwg

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|---|---|
| 05 | PRIMARY WINDING NEUTRAL TERMINAL (N) |
| 04 | MOUNTING CLAMP |
| 03 | PRIMARY TERMINAL M5 |
| 02 | SECONDARY TERMINAL M5 |
| 01 | CORE |