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## **H.V. VOLTAGE TRANSFORMERS**

### **SAFETY FEATURES**

1. The paper insulation, to a great extent, has been machine applied with the high accuracy and density.
2. The primary winding is of double enameled cooper wire which has been constantly monitored during the winding operation by an electronic monitor to detect faults in the insulating layer.
3. Special vacuum drying process resulting in extremely low residual humidity of the paper.
4. Quality non-aging transformer oil. Further dried and degassed at our factory.
5. Low partial discharge-levels (PD) (<50pC even at test voltage) confirms the high quality of all components of the insulation system. PD test is performed as a routine test on each VT.
6. The active part is housed outside the porcelain reducing the possibility of the shockwave from electrical failure rupturing the porcelain.
7. The top seal plate acts as a burst protection diaphragm.
8. Hermetic sealing against humidity and gasses guarantees long life insulation and maintenance free operation. By means of a ground visible indicator, the expansion chamber gives warning of an over or under pressure condition.
9. Special shields on the top and bottom of the high-voltage winding act to ensure that high-voltage impulse waves are capacitively coupled to ground. This shielding reduces the possibility of an insulation failure during transient conditions (i.e. lighting strike).
10. A ground shield is positioned between the high-voltage and low-voltage windings to ensure that transient conditions on the high-voltage winding are not coupled to the low-voltage winding, thus protecting the connected equipment from damage.

These provisions and more than 50 years of experience results in the highest possible operational reliability and safety for Ritz voltage transformers.