H.V. CURRENT TRANSFORMERS

SAFETY FEATURES

1. Machine-applied paper insulation with high accuracy and density for both the toroidal and straight section of the active part resulting in a superior insulation system.

2. Special vacuum drying process resulting in extremely low residual humidity of the paper.

3. Quality non-aging transformer oil, which is further dried and degassed at our factory.

4. 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 CT.

5. The active part is housed outside the porcelain reducing the possibility of a shockwave from an electrical failure rupturing the porcelain.

6. Very short primary conductors centrally located pass through the toroidal core housing without touching it. This results in maximum thermal and dynamic strength with no impairment of the insulation safety. Due to the short primary conductors, the inductance of the primary winding is extremely low, which means that the voltage developed across the primary winding during a system short-circuit is low. This coupled with "built-in" spark gaps between the conductors, results in a primary by-pass protector not being necessary.

7. The core housing has a fault-current carrying connection to ground eliminating the possibility for secondary arcs within the porcelain.

8. Insulation coordination of the secondaries is designed such that if there is a short-duration open-circuit on the secondary terminals, a protective spark gap will arc, limiting the voltage to a safe level.

9. The top seal plate acts as a burst protection diaphragm.

10. Hermetic sealing against humidity and gasses guaranties 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.

All these provisions and more than 50 years experience result in the highest possible operation reliability and safety of Ritz CT's.