UTB TRANSFORMERS

Transformer Re-condition Process Outline

1.) Brought into shop & unloaded
2.) Visual Inspection
    a. Once unloaded in the shop, a visual inspection is done to check for any failed components (bushings, radiators, etc.) that may require immediate attention.
3.) Preliminary testing (if applicable)
    a. In the case that it is unknown whether a unit needs to be repaired or must undergo a complete re-wind, preliminary testing is done to help determine the initial condition of the transformer.
    b. The preliminary tests performed will depend on information gathered from the customer about the exposure/operation of the transformer and its condition.
        i. Preliminary tests for this purpose can include (but are not limited to):
            1. Winding Resistance
            2. Winding Insulation Resistance
            3. Turns Ratio
            4. Core Insulation Resistance (core Ground)
            5. Insulation Power Factor (Moisture)
            6. Bushing Power Factor
            7. Sweep Frequency

At this point the transformer will be classified as either a re-condition or a re-wind

Re-condition

1.) If preliminary testing indicates that no further inspection is necessary, skip to step 4, otherwise continue on.
2.) Cut & Pull
    a. The oil will be drained from the transformer, the lid will be cut off and the core/coils will be removed.
3.) Core/coil/lead structure inspection/evaluation
    a. The core, coils and lead structure will be inspected for any defects, such as: insulation breakdown, core ground issues, structural failure, and clearance issues.

4.) Recommendations
    a. Based on the preliminary testing and/or evaluations we will make recommendations to the customer of any repair work needed to the unit.
5.) Repair unit
    a. Any repair work needed will be performed, including, but not limited to: tank fabrication, bushing repair/replacement, gauges, radiators, lead structure, core/coils, tap changer(s), and fans.
6.) Tanking
    a. The core/coils are then put back into the tank.
7.) New mineral oil
    a. The oil will be VAC processed back into the unit (if applicable, and according to the suitability of the tank).
8.) Testing
    a. The transformer will then be tested according to the latest ANSI/IEEE standards and/or standard process for testing re-condition units (see attached) and any specific tests requested by the customer.
9.) The unit will then be sanded/sandblasted and painted with ANSI 70 paint.