INSTRUCTIONS

LIQUID FILLED NETWORK TRANSFORMERS

NETWORK TRANSFORMERS are enclosed in pressure-tight tanks and are shipped properly filled with liquid ready for installation. Therefore the entrance of moisture into the windings during transit is prevented and it is seldom necessary to dry the transformers prior to installation.

INSTALLATION

Inspection. All transformers are carefully tested at the factory and are in good condition when shipment is made, but it is desirable to inspect each transformer immediately after delivery and again just before placing it in service.

This should include a check of the liquid level and dielectric strength of the liquid. If the dielectric strength is less than 22 Kv, or if there is any evidence of moisture, the transformer should be dried. See separate instruction leaflet on determination of dryness and methods of drying out.

Location. Self-cooled network transformers depend entirely upon the surrounding air to carry away their heat. For this reason care must be taken to provide adequate ventilating facilities.

Moving Transformer. Lifting holes are provided in four of the "Yukon" coolers for lifting the complete transformer. The transformer should be lifted only by the means provided, and spreaders should be used to obtain a balanced lift when necessary. Transformers should not be moved or lifted by placing jacks or any other devices against or under valves or other fittings. "Yukon" coolers may be used for jacking.

Grounding and Making Connections. The transformer tank should be solidly and permanently grounded by making connection to the ground pad provided for that purpose near the bottom of the tank.

Terminal board, tap changer, or other connections should never be changed with voltage on the transformer. Do not make any connections except those indicated on the diagram instruction plate.

Cable connections to the high voltage terminal chamber or pothead should be made according to the instructions given in a separate leaflet.

Gaskets. Network transformer gaskets are made of a high grade of cork and Buna-N and this material should be used for any gasket replacements. See separate instruction leaflet on gaskets for detailed gasket installation instructions.

Pipe Fittings. If it is necessary to remove any valves, plugs, etc., at installation, care should be taken to prevent damage to the threads. Before installing any pipe fitting the threads should be thoroughly cleaned to remove dirt, grease, etc. After cleaning, apply cement M-7386-1 to the threads of each fitting. Immediately screw the proper fittings together tightly.

Pressure Testing. All Network Transformers are pressure tested at the factory and shipped free of leaks. After installation and before voltage is applied, it is desirable to pressure test each transformer, especially if any fittings or covers have been removed and replaced during the installation. Dry compressed nitrogen or air should be used at a test pressure of 7 lbs. per square inch for a period of six hours. It is suggested that the air space above the oil be blown out with nitrogen, all vents closed and the pressure test applied. The test pressure can best be limited by the use of a regulating valve on the nitrogen cylinder. A check for leaks above the liquid level may be made with a solution of soap and water applied to all gasketed-joints, screwed-fittings and wiping-sleeve connections.

Paint. Network Transformers are finished with a special paint M-7664-1. A sufficient quantity of this paint in pint containers as S#1075 595 is furnished with each transformer to "touch up" any places damaged during the process of installation.

Liquid. The liquid used with Westinghouse transformers should be that which is supplied with them, or a liquid specifically approved by the Company. Westinghouse transformer oil or Inerteen is shipped either in the case with the transformer, in tank cars, or in steel drums provided with screw bungs, which are sealed before shipment. All liquid should be carefully inspected and tested before using. For methods of handling and testing liquid, see instructions on this subject.

Dryness of Oil and Windings. There is no absolute method of telling when the insulation of a transformer is dry, but proper measurements of insulation resistance from the high voltage windings to the low voltage windings and to the core and from the low voltage windings to the core, will serve as approximate means of determining its condition. See instruction leaflet on determination of dryness and methods recommended for drying out.

RENEWAL PARTS

In case renewal parts are required, the order should include a description of the parts required together with the serial and shop order numbers of the transformer. Order from nearest Westinghouse Office.

WESTINGHOUSE ELECTRIC CORPORATION
SHARON PLANT • TRANSFORMER DIVISION • SHARON, PA.

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