

with a color indicator plug that warns of moisture pickup in the canister by a color change from blue to pink.

A book entitled "Activated Alumina Maintenance Program" (1955, Aluminum Company of America, Pittsburgh, Penn.), describes procedures to keep mineral oil transformers in good condition and prevent moisture pickup by using a drying-breather containing activated alumina. This drying arrangement works equally well for askarel transformers.

Recognizing the moisture problem in mineral oil filled transformers, Westinghouse has developed a small cone that fits onto the hand-hole opening. Moisture vapor condenses on the inside surface of the cone, trickles down into a trough at the base, then flows away through a small tube lead-

ing to a container attached to the side of the transformer.

This gets us into the area of gadgets or mechanical devices. Consequently, it is important to remember that on new units, the transformer makers know the fundamental and proper design approaches required to keep out moisture in transformers. On existing equipment, they can suggest a variety of additional mechanical steps if such guidance is requested.

When buying equipment, the user should specify whether new units are for outdoor installation or will be used in a high moisture area. If so, he should assume any slightly increased cost for designed-in moisture protection. It will more than pay for itself because askarel units that are kept free of moisture require no other maintenance.

Up until now, moisture protective devices have received little attention; doubtless because even without them, the percentage of askarel transformer failures has been very low, regardless of location or use.

To avoid even these few possible failures, Monsanto felt it worthwhile to print an easy-to-follow, easy-to-practice Maintenance Guide. It is available on request. It shows how "check-ups" on the condition of askarel insulation can be done simply and practically without extraneous, elaborate, and meaningless testing.

However, since the guide describes such maintenance in a directive sense with only barest explanation, this article provides the interpretive background on the significance of the various tests for transformer askarel.

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