SWITCHBOARD PLUGS
NOS. 109 AND 110
TESTS

1. GENERAL:

1.01 This section describes a method of testing Nos. 109 and 110 switchboard plugs for wear and tip alignment, by means of the Nos. 106-A and 111-A gauges, respectively.

1.02 The Nos. 309 and 310 plugs (special) can also be tested by the gauges noted.

1.03 The gauges can also be used for straightening bent plugs.

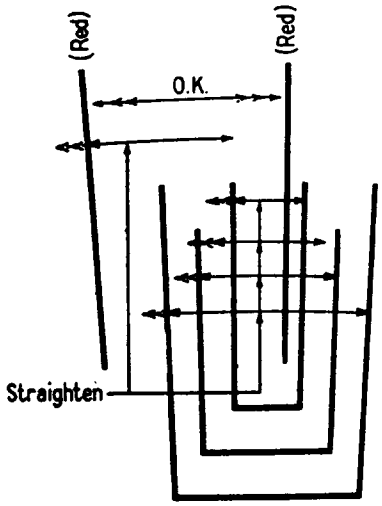
2. APPARATUS:

2.01 No. 106-A Gauge (for No. 109 plugs).

2.02 No. 111-A Gauge (for No. 110 plugs).

3. METHOD:

3.01 Before using the gauge, check to see that it is in proper adjustment by inserting the steel checking plug furnished as part of the gauge, into the gauging hole at the bottom of the gauge. The pointer should rest directly above the right hand red line. See Fig. 1.



NOTE: Lines with arrow-heads do not appear on gauge.

Fig. 1.

3.02 If the gauge is out of adjustment, loosen the set screw that holds the bushing in place in the gauging hole and rotate the bushing to a new position such that the correct reading of the pointer is obtained when the bushing is relocked in place. The bushing can be rotated by engaging the pin of the checking plug with the slot in the bushing and turning the knurled handle of the plug.

3.03 Inspect the switchboard plug for defective or missing insulating bushings, for defective sleeves or plug shells, for loose, missing, burred or projecting plug shell screws, etc. Corded plugs having only minor defects such as cracked or slightly chipped insulating bushings or small pieces of insulating bushing missing, need not be replaced. Uncorded plugs having these, or more serious defects, should not be reused. Defective shells or screws should be replaced.

3.04 Gauge the dead collar of the plug by means of the slot on the front of the plug gauge. In doing this allow the plug to rest so that the collar is in contact with the slot opening and rotate the plug through at least a half revolution. If the collar enters the slot without pressure being exerted on the plug, the plug should be replaced. No attempt should be made to force the plug into the slot. If the dead collar is sufficiently off center to be noticeable to the eye or if it is loose enough so that this condition can be detected by pressure of the fingers, the plug should be considered defective and should be replaced even though it meets the gauge requirement.

3.05 Insert the plug to be checked into the gauging hole, and rotate the plug through at least one complete revolution, taking care not to exert either sidewise or lengthwise pressure on the plug. If the pointer remains between the two red lines, the plug is satisfactory.

3.06 If the pointer reaches or passes the left hand red line, but does not reach or pass the right hand red line, the plug should be straightened. This can be accomplished by inserting the tip in the shallow hole provided in the gauge at the side of the gauging hole and exerting a sidewise pressure on the plug. If the plug is withdrawn from the gauging hole when the pointer is at the extreme right, and without rotation, is inserted in the straightening hole, pressure towards the right will tend to bend the plug in the proper direction. After bending the plug until it appears straight to the eye, regauge. Care should be taken not to bend the plug too far, so as to eliminate the necessity for

bending it back again, as each bending operation tends to weaken the plug.

3.07 If the pointer reaches or passes to the right of the right hand red line, an attempt to straighten the plug should be made only if the following requirement is met, since any plug not meeting this requirement is worn to the point that straightening and reusing it is not considered advisable: The pointer at its extreme left position should be appreciably further from the right hand red line than in its extreme right position, as determined by the U shaped black lines. See Fig. 1. For instance, if the pointer in its extreme right position rests directly above one of the black lines, its extreme left position should be directly above or to the left of the associated black line. No attempt should be made to straighten plugs that do not meet this requirement and any such plugs should be replaced. Furthermore, if the pointer passes to the right of the extreme right hand black line, no attempt should be made to straighten the plug, as it is probably bent too far to be safely reused.

3.08 Reinspect the plug for defective or missing insulating bushings. Corded plugs having only minor defects such as cracked or slightly chipped insulating bushings, or small pieces of insulating bushing missing need not be replaced. Uncorded plugs having these, or more serious defects, should not be reused.

4. REPORTS:

4.01 Any required record of this inspection should be entered on the proper form.