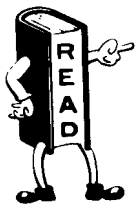
MEASURING CLEARANCES AND SEPARATIONS FOR AERIAL PLANT

1. GENERAL

1.01 This section covers the methods and tools that shall be used to measure clearances and separations in aerial plant.

1.02 It is reissued to include the use of the Measuring Pole and the requirement for use of Insulating Gloves.



1.03 *At no time may contact be made with a foreign conductor or insulator regardless of the measuring device used.*

2. MEASURING SEPARATIONS AT THE POLE

2.01 For safety reasons, the methods and tools employed to determine or measure separations **should not expose the workman to foreign potentials.** In connection with selecting the proper location for telephone attachments on jointly used poles, be guided by the above, as well as by the following.

2.02 If any voltage supply circuits are in place, use a standard measuring rule or approved equivalent free from metallic strips or edging. **Insulating gloves must be worn.** Measure from nonmetallic parts of the supply structure, such as a wood crossarm, or measure along the surface of the wood pole, and make adjustments for the difference in elevation or position of the foreign wires, metallic parts of the structure, etc.

2.03 If supply circuits are not in place at the time telephone attachments are to be placed, obtain from your Supervisor the location of the lower limit of the supply company's space and the separation to be provided from that point to the telephone attachments. Measurements may be made with measuring rules, linen tapes, etc., if no supply circuits are present.

3. MEASURING CLEARANCES AND SEPARATIONS IN THE SPAN

3.01 For safety reasons, the methods and tools to be employed in determining or measuring clearances and separations in the span should not expose the workman to foreign potentials.

3.02 The tools that can be used to measure clearances and separations are of four general groups depending on the plant involved and the manner in which the tool is used.

Group 1

Tools that are either attached to or passed over the telephone wire, strand, etc., being measured such as clearance measuring lines, linen tapes, and ropes. When these tools are used, contact is made with the item of telephone plant being measured and their use is, therefore, confined to measuring the height of telephone wires, cables, strands, etc., on which hazardous voltages are ordinarily not present. They are **not to be used** to measure the height of supply wires or other foreign wires. They **are not to be used** if there is any possibility of contact with supply wires or other foreign wires. All lines, linen tapes, ropes, etc., used for this purpose must be dry and free from metallic strands or threads.

Group 2

Tools that are raised adjacent to the line and are used as reference markers, such as: tree pruner handles, pike poles, sectional rods of wood, bamboo, etc. While such tools are not intended to make contact with the item of

plant being measured, the possibility of a contact due to a swinging conductor or an unsteady measuring pole makes it necessary to confine the use of these measuring poles to the following:

- Measuring the height of telephone wires, cables, strands, etc.
- Measuring the vertical clearance or separation between telephone wires, cables, strands, etc.

Group 3

Tools specifically intended and approved for use in measuring clearances and separations where supply conductors are concerned. The B Clearance Rule and the Measuring Pole are intended for this purpose. Insulating gloves must be worn when power conductors are present and are within reach of the rule or pole. (Use of the rule and pole is covered in Section 081-220-104.)

Group 4

Tools of the optical type such as a transit, teleheight, sextant, hand level, range finder, hitemeter, clearance meter, etc. Tools of this type may be used in determining and computing the height of telephone and supply wires, cables, strands, etc., as well as the vertical clearance and separation between telephone wires, cables, strands, etc., and supply wires, cables and guys of all voltages.

3.03 Table A summarizes the recommendations covered in Groups 1 through 4.

TABLE A

TOOLS RECOMMENDED FOR USE WHEN MEASURING CLEARANCES AND SEPARATIONS IN THE SPAN

TOOLS (BY GROUPS)	TELEPHONE LINE WIRES, CABLES, GUYS, AND DROP WIRES	SUPPLY CABLES, MULTIGROUNDED NEUTRAL WIRES, GUYS, AND 0-750 VOLT SUPPLY WIRES	ALL OTHER SUPPLY WIRES	REMARKS
GROUP 1 CLEARANCE MEASURING LINES, NONMETALLIC LINEN TAPES, ROPES, ETC.	YES	MUST NOT BE USED	MUST NOT BE USED	TOOLS MUST BE DRY AND FREE OF METALLIC STRANDS OR THREADS
GROUP 2 TREE PRUNER HANDLES, PIKE POLES, RODS OF WOOD, BAMBOO, ETC.	YES	NO	MUST NOT BE USED	–
GROUP 3 B CLEARANCE RULE, MEASURING POLE	YES	YES	YES	WEAR INSULATING GLOVES IF POWER CONDUCTORS ARE PRESENT AND WITHIN REACH
GROUP 4 TRANSITS, SEXTANTS, RANGE FINDERS, HAND LEVELS, TELEHEIGHTS, HITEMETERS, ETC.	YES	YES	YES	–