ELECTRICAL SAFETY PRECAUTIONS

CDP M-233 (ALL)

(To Be Posted At All Main and Auxiliary Switchboards; Radio, Radar and Sonar Switchboards and Panels)

1. Because of the danger of fire, damage to material, and personal injury, all repair and maintenance work on electrical equipment shall be done by duly authorized and assigned persons only.

2. When an electrical circuit is to be overhauled or worked on, the main supply or cutout switches in each circuit shall be secured in the "open" position and tagged.

3. All electrical leads shall be considered as being ALIVE until tested with suitable meter or a suitable test lamp which is positively known to be in good condition.

4. As a general rule use only one hand for switching. Keep the other hand clear. Touch only one switch at any one time.

5. Before closing a switch make sure that:

   a. The circuit is ready and, in the case of rotating machinery, the appliance is ready to turn.

   b. Men near moving machinery are notified that the circuit is to be energized.

   c. Proper fuses are installed for protection.

   d. Circuit breakers and all other circuit-protective devices are properly set and operative.

6. Energized switchboards are the greatest source of danger. No work shall be undertaken on a live switchboard until all other possibilities for supplying necessary vital circuits have been exhausted, the circumstances have been explained to the commanding officer, and his approval for work to proceed has been obtained. When repair work is approved by the commanding officer and is undertaken on an energized circuit, it shall be accomplished by an electrician's mate under the supervision of an experienced engineer officer. The following precautions shall, in all cases where work of this nature is to be performed, and where practicable, be taken.

   a. Provide ample light for illumination.

   b. Remove loose clothing.

   c. Insulate worker from ground with dry wood, several layers of dry canvas, or sheet of phenolic insulating material, rubber or sandpaper.

   d. Cover working metal tools with insulating rubber tape (NOT FRICTION TAPE) as far as is practicable.

   e. Insulate with rubber tape live metal parts near the place where the work is to be done.

   f. Use only one hand if practicable in accomplishing the work.

   g. A rubber glove should be used on the hand not used for handling tools. If the work in hand allows same, rubber gloves should be worn on both hands.

   h. Have men stationed by circuit breakers or switches, and telephones manned if necessary, to expedite securing of circuits in the event of casualty.

   i. A man qualified in first aid for electric shock shall stand by during the entire period of repair.

7. Cleaning of energized switchboards, panels, boxes, etc., shall be limited to removing loose dirt with a painter's duster having no metallic part and made of soft bristles about 4" long.

8. Use of alcohol for cleaning electrical equipment should be avoided and it should never be used on energized equipment or near electrical equipment from which a spark is possible.

9. Risk of accidental personal contact with live circuits always exists. This contact may result due to loss of balance, slipping of a metal object, etc. As a general rule, persons working around live circuits shall not approach closer than 1 foot regardless of voltage except to accomplish a particular mission. Always STOP, LOOK, THINK!

10. In case of an electrical fire—

    a. De-energize the circuit.

    b. Report casualty to the OOD by messenger or telephone.

    c. Secure ventilation in the vicinity.

    d. Extinguish the fire.

    e. THE USE OF CO_2 FIRE EXTINGUISHER DIRECTED AT THE BASE OF THE FLAME IS ALWAYS BEST FOR ALL ELECTRICAL FIRES. While other mediums may be used, the location, amount of open space, gases formed by the extinguishing medium, etc., must be considered. STOP, LOOK, THINK!

11. THE USE OF BARE FINGERS FOR DETERMINING WHETHER A CIRCUIT IS ENERGIZED IS STRICTLY FORBIDDEN. LOW voltage can be as LETHAL as high voltage. Use a suitable appliance for testing any circuit.

12. Covers for all fuse boxes, junction boxes, lever type boxes, and wiring accessories in general shall be habitually closed.

13. In general, cables which are installed where they will be subject to mechanical injury shall be protected within such exposure zones by suitable metal casings.

14. Portables cables shall be carefully selected and shall be of the proper length and cross-setional area to carry the current required. Spliced, portable cables are extremely dangerous and shall not be used.

15. The electrical charge retained by electrical machinery (especially amplifiers) when secured is, in certain cases, sufficient to cause severe shock. BE SAFE. Discharge it to ground before working on it. Prior to touching a condenser which is connected to a de-energized circuit, or which is disconnected entirely, short-circuit the terminals.

16. If open-type electrical apparatus is in operation when the presence of explosive vapor is detected, the apparatus shall be de-energized by means of switches located OUTSIDE the dangerous space. The switches shall be opened ONLY after it has been assured that all persons are clear of the dangerous space.

17. No person shall take loose metal parts, or liquids, near or above a switchboard or other open electrical apparatus. No person shall go above open electrical apparatus without first removing all metal from his pockets. STOWAGE OR INSERTION OF FOREIGN ARTICLES IN OR NEAR SWITCHBOARDS, CONTROL APPLIANCES, PANELS, ETC., IS FORBIDDEN.

KILL THE BOARD BEFORE IT KILLS YOU!