



DEPARTMENT OF THE NAVY
MILITARY SEA TRANSPORTATION SERVICE, PACIFIC
N.S.C., OAKLAND, CALIFORNIA 94625

MSTSPAC 9600
P-25
18 August 1969

MSTSPAC NOTICE 9600

From: Commander, Military Sea Transportation Service, Pacific
To: Distribution List

Subj: Shipboard electrical safety; shock fatality from an extension light

Ref: (a) NAVSHIPS NOTICE 9600 of 25 June 69 (NOTAL)
(b) NAVSHIPS TECH MANUAL Chapter 60
(c) NAVSHIPINST 9640.33 of 10 April 69

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1. Purpose. The purpose of this Notice is to provide information enumerated in reference (a) on the circumstances surrounding the subject incident and to cite the safety practices designed to prevent recurrence.

2. Accident. Reference (a) stated the investigative report indicated the following:

a. A petty officer, an MM3(SS), was killed while attempting to relamp or repair an extension light. He and an FN(SS) were working on opposite sides of an engine in a submarine. The light had been hung by its hook on an oil line inside the engine block so that both men could work and see by it. After a while the light went out. The MM3(SS) shouted to the MM1(SS) on the upper level, "Plug my light back in." The MM1(SS) said, "Your light is plugged in tight" and asked if he needed a bulb. The MM3(SS) replied to the effect that he didn't need a bulb but be sure that the plug was in. The MM1(SS) said this was not clear due to the noise level and shouting. The FN(SS) said the MM3(SS) took the light and started to work on it. The next that either the MM1(SS) or FN(SS) heard was a rattling noise. The MM1(SS) dropped down the ladder and found the victim hunched forward clutching the light, which was sparking, to his chest.

b. The wire guard and bulb were intact except that one of the guard flange screws was backed out as would be required to relamp the light. Burns were found on the victim's chest and wrist.

c. The extension light used was identified as FSN 6230-299-5917, two conductor, 50 feet of cable, wire guard with reflector and hook, splashproof, rough service, item 282 as catalogued by the Illustrated Shipboard Shopping Guide, FSC 6230, dated 1 November 1966.

d. The extension light had not been tested, inspected and marked or tagged to indicate approval or non-approval by the Electrical Division personnel.

e. Responsible supervisory personnel were not aware that an

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ungrounded extension light was in use and, although steps had been taken on prior occasions to remove such lights and to procure proper ones, no safety certification or periodic tests and inspections were carried out as required by the ship's existing directives.

3. Discussion

a. The report stated that the precise cause of the electrical shock was not determined. However, it was the opinion of the investigating officer that the victim had most probably made contact with the energized lamp socket, through a slit in the protective rubber sheath.

b. All hands recognize that this accident would probably not have occurred had the following safety rules in reference (b) been observed:

(1) De-energize electric equipment before servicing it or repairing it; Article 60-22.3e.

(2) Use only authorized portable electric equipment which has been tested by the Electric Shop. Articles 60-22.3(a) and 60-27(8).

c. The extension light used by the victim was not authorized for shipboard use in that it did not meet the safety requirements of reference (b) in the following respects:

(1) The guard was ungrounded and could become energized directly by a broken lamp filament.

(2) The extension cable was not three-conductor. The third conductor is used to complete the ground circuit between the guard and the ground contact of the electrical plug.

(3) The lamp was not completely enclosed by a glass globe for water tightness and protection against lamp breakage.

(4) The upper portion of the rubber handle had slits (to allow it to fit past the local on-off switch) which lead to the energized socket.

d. Information on authorized extension lights was disseminated in reference (c).

4. Action

a. Masters shall establish periodic inspection and tagging procedures for all hand-held portable electric equipment including extension cords and extension lights using (reference b) Article 60-27(8) as a guide.

b. Insure that repairs of portable electric equipment are made by qualified and authorized personnel only.

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- c. Caution all personnel of the potential danger of defective electrical equipment and warn each crew member not to hold out electric equipment, for their convenience, from the ship's program of periodic tests as outlined in reference (b), Article 60-27(8).
- d. Insure that new men are thoroughly indoctrinated in safety precautions and procedures and insure that all new men understand the precautions and procedures thoroughly before assigning tasks where portable electric equipment is used.
- e. Insure that this Notice is given wide dissemination.

5. Cancellation. This Notice is cancelled when the above action has been taken and for record purposes on 31 December 1969.

R. A. HUBBARD

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