MILITARY STANDARD

SHIPBOARD GUIDED MISSILE LAUNCHING SYSTEM SAFETY REQUIREMENTS, MINIMUM

TO ALL HOLDERS OF MIL-STD-1658(OS):

1. Add new paragraphs to the following pages:

Page 3, add

3.11 Firing Circuit. All circuits Used to control and sequence functions required to ignite the rocket motor.

3.12 Ignition Circuit. The electrical circuit, from the ignition power source, used to provide energy for igniting the rocket motor.

Page 5, paragraph 5.14 to 5.14.6, delete and substitute:

5.14 Firing Circuit. An inadvertent firing shall not be possible without the occurrence of at least two independent failures when there is power available to the ignition circuit, and at least three independent failures when no power is applied to the ignition circuit.

5.14.1 The ignition circuit to the missile shall be interrupted until firing is imminent. Both the "hot" side and return side of the ignition circuit shall be interrupted. Interlocks shall be provided in the firing circuit to insure proper missile/launching system prelaunch conditions are satisfied before ignition is allowed.

5.14.2 Prior to completion of the ignition circuit the portion of the ignition circuit nearest to the missile shall be electrically interrupted by an electro-mechanical device such as open relay or switch

5.14.3 The ignition circuit hot and return sides shall be isolated from ground except that for missile rounds employing grounded bridge squib circuits, a firing transformer having isolated primary and secondary wiring may be used with one side of the secondary wiring grounded.

5.14.4 The ignition circuit wiring shall be isolated from other wiring and cables in the system in accordance with OD 30393. This may be accomplished by shielding or by the physical separation of the wiring.

5.14.5 Filtering or other techniques shall be used to ensure that shipboard noise and spikes on the power lines due to start up or shut down of heavy equipment, etc. do not inadvertently trigger the ignition of a rocket motor.

Page 7, paragraph 5.30, delete and substitute:

5.30 All DC wiring runs through the same cable or conduit as AC wiring shall be adequately shielded to prevent induced voltages. Conductors occupying the same raceway shall each be provided with sufficient insulation to prevent breakdown from the highest voltage cable in that raceway.

Page 7, paragraph 5.31, delete and substitute:

5.31 The selection and installation of electric cables used in the launching system shall meet the requirements of NAVSHIPS 0902-001-5000, Section 304. Cables subject to mechanical damage because of their location in areas involving personnel or equipment operations shall be protected against such damage.

2. Retain this notice and insert before table of contents.

3. Holders of MIL-STD-1659(OS) will verify that page changes indicated herein have been entered. This notice will be retained as a checksheet. This issue is a separate publication. Each notice is to be retained by stocking points until the Military Standard is completely revised or cancelled.

Custodian:
NAVY-OS

Preparing Activity:
NAVY-OS

(Project No. 1440-N052)

FSC 1440