



SAFETY MANAGEMENT MANUAL

10.2 MAINTENANCE OF CRITICAL SYSTEMS

Originator:

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Approved By:

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1. Purpose

The purpose of this procedure is to set forth the concept of critical systems and equipment within the Safety Management System for vessels operated by Woods Hole Oceanographic Institution.

2. Definition

Critical System or Equipment – The equipment or technical systems that the sudden operational failure of may result in hazardous situations.

3. General

The ISM Code calls for the identification of equipment and technical system that are considered critical and the procedures set in place to insure that these systems are adequately maintained and that there be specific measures established aimed at promoting the reliability of such equipment or systems. These measures should include the regular testing of stand-by arrangements and equipment or technical systems that are not in continuous use.

Each vessel that Woods Hole Oceanographic Institution operates is arranged differently. The configuration and the stand-by systems designed to each vessel are also different. This procedure attempts to identify critical systems common to the vessels in general. Each vessel shall have within its own procedures the specific listing of the critical equipment and systems and provide the specific information on the stand-by arrangements and the maintenance procedures established to insure reliability.

It is recognized that all pieces of equipment are important to the proper operation of the vessel. The critical equipment and systems identified in this procedure are those felt to meet the ISM Code criteria. These must be addressed in vessel specific procedures.

Critical Equipment or Systems

Main Propulsion

Reduction gears or Thruster Systems

Ship's Service System

Emergency Electrical Power System

Steering Systems

Fire Pump

Bilge System

Fuel Oil Purification System

Fire Detection System



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The vessel specific guidelines called for herein shall contain the following information about each critical component listed.

- Operational procedures to insure redundancy (i.e. two ship's generators on the line while entering port.)
- Rotation of equipment (i.e. changing the lead steering pump each month.)
- Periodic tests performed on standby equipment (i.e. testing emergency generator.)
- The preventative maintenance schedule for the specific components
- The pieces of equipment in the vibration analysis system and the frequency of monitoring.
- The pieces of equipment in the lube oil analysis program and the frequency of sampling.

Critical pieces of equipment are to be identified in the SafeNet system in the Maintenance Module. Critical equipment will be assigned the letter "A" code on the equipment identification screen.

Within this concept of critical equipment and systems is a requirement to identify critical spare parts. Once a piece of equipment has been designated a critical piece of equipment, the spare parts associated with that piece of equipment become items that needed to be identified. This shall be accomplished by determining the "minimum ordering quantity" for each spare part. Only those spare parts considered critical will have a minimum ordering level. SafeNet has the capability of running a minimum ordering level report either on individual pieces of equipment or for each individual vessel.

4. Responsibility

Ultimately the maintenance of the vessel rests with the Master of the vessel. This responsibility is delegated to each department for the efficient maintenance of the vessel. Department heads having equipment under their maintenance responsibility must monitor the maintenance of critical pieces of equipment. In addition, departments heads must insure that critical parts are reordered when they drop below the minimum ordering level established.

5. Recording

Maintenance activities are to be recorded in the SafeNet Fleet Management System. Each department head must insure that the maintenance performed by their departments is entered in this management system.