



DEPARTMENT OF THE NAVY
COMMANDER MILITARY SEALIFT COMMAND
914 CHARLES MORRIS CT SE
WASHINGTON NAVY YARD DC 20398-5540

REFER TO:

COMSCINST 9200.1
N7
16 July 2001

COMSC INSTRUCTION 9200.1

Subj: PERIODICALLY UNATTENDED MACHINERY SPACE OPERATION ON
MSC SHIPS

- Ref:
- (a) ABS Rules for Building and Classing Steel Vessels, 1994, Part 4 Section 11
 - (b) Code of Federal Regulations 46, part 62.50
 - (c) Code of Federal Regulations 46, part 61.40
 - (d) USCG Navigation and Inspection Circular No. 1-69
 - (e) USCG Navigation and Inspection Circular No. 6-84
 - (f) Code of Federal Regulations 33, part 329
 - (g) Code of Federal Regulations 46, part 15, subpart F
 - (h) 46 United States Code (Annotated) "Shipping", §8104. "Watches"
 - (i) Civilian Marine Personnel Instructions (CMPI): Instruction 610, Hours of Work and Premium Pay
 - (j) COMSCINST 3121.9A, Standard Operating Manual
 - (k) Memorandum of Agreement between the United States Coast Guard and Military Sealift Command, 10 November 1997
 - (l) Code of Federal Regulations 46, part 4.05

1. Purpose. To provide a consistent standard for operating “periodically unattended” machinery spaces on Military Sealift Command (MSC) ships.
2. Applicability. The requirements of this instruction apply to MSC owned civilian mariner (CIVMAR) manned ships which are classed with the American Bureau of Shipping (ABS) as “ACCU” or “ACBU” in accordance with reference (a) and which have an annotated US Coast Guard (USCG) Certificate Of Inspection (COI) to operate the vessel’s engineering plants as “periodically unattended”.
3. Discussion. References (a) through (h) identify regulatory cites that govern the operation of periodically unattended machinery spaces on MSC ships. Since regulatory requirements are subject to change, these cites should be checked to ensure that they are current before referring to or quoting them. MSC currently operates several classes of ships that are classed with the ABS as “ACCU” or “ABCU” (reference (a)). Ships

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classed with the ACCU or ABCU symbol are those which have the means to control and monitor the propulsion machinery and propulsion machinery space from the navigating bridge and from a centralized control and monitoring station installed within or adjacent to a periodically unattended machinery space. This designation serves as the basis for the USCG to modify the COI manning requirements to operate the ship's engineering plant as "periodically unattended". The modification to the COI and the automated operation of the machinery plant permits engineers to perform regular maintenance and repair work during normal working hours and allows for a rotating designated licensed engineer to respond to alarm conditions after normal working hours.

4. Policy. Masters and Chief Engineers on those ships whose COI has been modified to operate the machinery plant in the periodically unattended mode, shall ensure that engine room operation and management complies with ABS rules, USCG regulations, reference (i), and other regulatory requirements, including those cited in references (a) through (h).

5. Action. On ships whose COI has been modified for periodically unattended machinery space operation:

a. Program Managers shall ensure that ships for which they are responsible meet necessary regulatory requirements, particularly those contained in references (a), (b), (c), (d) and (e), to maintain the ship's unattended engine room certification.

b. The Master shall coordinate the changeover to the periodically unattended mode with the Chief Engineer when maneuvering standby conditions are completed and when the ship is no longer in "Navigable Waters of the United States". For the purposes of this instruction, "Navigable Waters of the United States" are defined by reference (f) as anywhere within three nautical miles of the United States coastline. In coordination with the Chief Engineer, the Master shall establish the normal unattended period. Unattended machinery space periods will normally run from 1700 hrs to 0800 hrs. The scheduling of these periods shall depend on operational requirements and shall comply with reference (g). In addition, the Master shall establish standing orders that:

(1) Broadly describe scenarios during which the Bridge Watch Officer may typically recommend and request re-establishment of a fully manned engine room. These orders shall prescribe specific procedures for Deck Watch Officers to follow in initiating this recommendation and request.

(2) In coordination with the Chief Engineer, establish the amount of time that should transpire before the Bridge Watch Officer calls the Duty Engineer to:

(a) Inform the Duty Engineer of an unacknowledged alarm.

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(b) Re-establish voice contact in the machinery space after a specified amount of time.

(c) Inform the Duty Engineer of a dead-man alarm.

(3) Specify the amount of time that should transpire without contact from the Duty Engineer before the Bridge Watch Officer should contact the Chief Engineer.

c. The Chief Engineer shall:

(1) Maximize use of the ship's unattended capability while at sea, at anchor and in port.

(2) Adopt unattended operation as the normal operating condition of the ship subject to the agreement of the Master and satisfactory condition of the specified unattended machinery alarm and control systems.

(3) Not allow-unattended operation when:

(a) Operating in the "Navigable waters of the United States," as defined in paragraph 5b of this instruction.

(b) In restricted maneuvering situations or operating in close proximity to other vessels when it would be considered imprudent, due to the likelihood of major engine movements that could result in the automation control parameters being exceeded.

(c) Conducting Underway Replenishment operations.

(d) Local port regulations expressly prohibit unattended machinery space operation, or when fueling operations are occurring, or when cargo operations in port render unattended operation impractical.

(e) Conducting tank cleaning, ballasting or other operations requiring the use of large fluctuating loads on boilers or generators.

(f) The Master or Chief Engineer decides that it is necessary for the engine room to be manned, due to adverse weather or traffic conditions (the circumstances determining this decision shall be entered in the Bridge Watch Officer's LogBook).

(g) At fire and emergency stations.

(h) Bridge control of main engines is not available.

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(i) The fire detection system or any of its components covering the Main, Auxiliary and Steering Machinery compartments are inoperative.

(j) Critical alarms or trips affecting machinery essential to the safe navigation and operation of the vessel are inoperative. This includes the link between the machinery alarm system and the engineers call out alarm, the control station on the bridge, and fire alarms. It also includes items that could have an environmental effect such as fuel oil, bilge water, tank high level alarms, etc.

(k) Any item of machinery essential to the safe navigation and operation of the vessel is inoperative or malfunctioning.

(l) Firefighting or damage control systems are not available for immediate use or fire pump activation is inoperative from the bridge, or emergency declutch/stop systems or remote ventilation operation systems are inoperative or malfunctioning.

(m) The Chief Engineer's or Duty Engineer's cabin or bridge unattended machinery space alarms (visual or audible) are inoperative or malfunctioning.

(n) The engineer's assistance alarm or the dead-man alarm does not activate on non-acceptance of an alarm.

(o) Bridge starting/changeover systems for steering gear and telemotor systems are inoperative or malfunctioning.

(p) There are other circumstances where the Chief Engineer deems the use of unattended machinery space operation inappropriate.

(4) When not limited by any of the above scenarios, initiate periodically unattended machinery space operation. The Chief Engineer shall ensure that the below actions, programs and procedures are established and followed before commencing periodically unattended machinery space operation.

(a) Weekly testing the activation of the engineer's assistance and dead-man alarms due to non-acceptance of an alarm and entering the results in the Engine Room LogBook.

(b) Implementing a testing program for all alarms, safety devices and trips throughout the unattended machinery space system in accordance with USCG regulations.

(c) Maintaining a record of testing, set points and satisfactory operation of trips to ensure that the vital system and safety features continue to operate in a safe,

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reliable manner per USCG regulations. This record shall be available for inspection by the USCG and ABS.

(d) Maintaining and repairing machinery or control and monitoring systems to meet certification requirements. If the repairs for the machinery or control and monitoring systems exceed the capabilities of the ship's force or require parts not on board, the Chief Engineer shall ensure that a Casualty Report (CASREP) is issued in accordance with reference (j), reporting the ship's inability to satisfy conditions for safe periodically unattended machinery space operation. This includes reporting to the USCG through the CASREP if machinery or control and monitoring systems are unreliable or have degraded since the time of certification in accordance with references (k) and (l).

(e) Specifying instructions in the Chief Engineer's standing orders regarding the testing of controls and alarms that must be undertaken each time before unattended machinery space operations can commence. These tests and procedures are established during the certification of the vessel by the USCG and must be maintained in order to satisfy USCG requirements (references (b), (c) and (d)). The standing orders shall also address specific procedures and practices for the Duty Engineer when the machinery plant is operating in the unattended mode. The Chief Engineer shall ensure that the Engine Department is fully aware of these instructions and that these procedures are accomplished each time the machinery plant transitions from a manned to unmanned condition and during the period that the machinery plant is operating in the unattended mode. Any change to these procedures will require MSC and USCG approval. As a minimum, the Chief Engineer shall include the following requirements in his standing orders:

(1) A functional test of the vital and non-vital alarm circuits and audible and visual indicators in the Machinery Control Room before commencing unattended operations.

(2) A functional test of the vital and non-vital alarm circuits and audible and visual indicators on the bridge before commencing unattended machinery space operations.

(3) A thorough inspection of machinery spaces to ensure operating conditions; fuel, bilge, header tank and lubricating levels are safe before commencing unattended machinery space operations and for the period until the next planned inspection of the machinery space by the engineer on duty.

(4) An entry in the Engine Room LogBook for all alarms that occur during unattended machinery space operation. Log entries shall include the machinery affected, actual time of the alarm, its cause and method of correction.

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(5) Instructions describing the actions to be taken in the event of an alarm condition during unattended machinery space operations.

(6) Orders that the Duty Engineer not disable vital alarms while in the unattended machinery space condition and that non-vital alarms only be disabled or time delays altered with prior approval from the Chief Engineer.

(7) Orders that the Duty Engineer notify the Bridge Watch Officer immediately before entering the unattended machinery space and notify the Bridge Watch Officer when leaving the space.

(f) Ensure that entry into the engine room while in the unattended machinery space mode is restricted to the Duty Engineer and other persons specifically authorized by the Chief Engineer. As a minimum, the Chief Engineer shall ensure that access doors to the machinery space are closed and that they carry appropriately worded '**ENTRY PROHIBITED**' signs indicating the times during which special restrictions apply.

(g) Ensure that the assigned Duty Engineer inspects the machinery spaces at 2300 hours when operating in the unattended condition. In addition, the Chief Engineer shall coordinate with the Master the conducting of routine fire and flooding rounds by the Deck Department on Watch.

(h) In coordination with the Master, establish engineering and bridge communication routines. During periods when the bridge is unmanned, i.e., while in port or at anchor, the reporting chain shall be established via the gangway watch.

(i) Nominate the Duty Engineers for the 1700 – 2400 hour period and the 0001 – 0800 hour period and issue contact telephone number(s) to the Bridge Watch Officer.

(j) Ensure that adequate rest periods are allowed in accordance with reference (h) for personnel on duty for a prolonged time during an unattended machinery space period.

(k) Annotate in a separate and dedicated LogBook disabled non-vital alarms, changed set points, altered time delays or other alarm edit functions.

(l) Countersign all entries into the Engine Room LogBook and examine the Engine Room LogBook on a daily basis to ensure that it is up to date and ready for examination by Regulatory Agencies, Classification Societies and Headquarters Authorities as required.

(m) Ensure that the plant is completely prepared for the annual USCG Automation Test (reference (c)). The Chief Engineer shall ensure that sufficient test equipment is available onboard, is in good working order and has a valid certificate of calibration to enable accurate testing and setting of alarms and safety devices. The Chief Engineer shall also ensure that a grooming program is established and maintained on all alarms, safety devices and trips throughout the automation system.

(n) Ensure that engineering staff is trained for the ship's USCG Approved Automation Test to verify proper functioning of the automation systems and to ensure familiarity prior to USCG recertification.

d. The Duty Engineer shall:

(1) Be responsible for the safe and efficient operation of the ship's machinery, including electrical equipment and all machinery in the unattended machinery space for the period he is assigned as Duty Engineer.

(2) Perform inspection of machinery spaces before the end of the routine working day and during the unattended period as specified by the Chief Engineer.

(3) Adhere to all provisions of the Chief Engineer's Standing Orders.

e. The Mate on Watch shall:

(1) Ensure that the Dead Man Alarm is activated during unattended machinery space periods, at sea, in port, or at anchorage.

(2) Ensure that the roving deck watch performs thorough rounds of all machinery spaces, motor rooms, and pump rooms during unattended periods in port or at anchorage and report any observed abnormalities to the Duty Engineer, Chief Engineer, or other senior engineer as designated by the Chief Engineer.

(3) Inform the Master when the unattended machinery space condition is set.

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(4) Call the Duty Engineer for designated and scheduled rounds after the routine working day.

(5) Call engine room dayworkers at the time designated by the Chief Engineer.

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Distribution:

COMSCINST 5215.5

List I (Case A, B, C)

SNDL 41B (MSC Area Commanders)

41C (NFAF East/West)

T-100 (Masters, civil service manned ships)

T-107 (Masters, Fast Combat Support Ships)

Copy to:

SNDL 41E (APMC)