

SHIP SYSTEM Hull Structure	SUBSYSTEM Superstructure	MRC CODE R-	
SYSTEM Hull Deck	EQUIPMENT Superstructure and Fittings	RATES GS-11/12	MH 24.0
MAINTENANCE REQUIREMENT DESCRIPTION 1. Conduct SEMAT assessment procedure for superstructure and fittings (15011).		TOTAL MH 24.0 ELAPSED TIME 24.0	
SAFETY PRECAUTIONS 1. Forces afloat comply with NAVOSH Program Manual for Forces Afloat, OPNAVINST 5100.19 series. 2. Exercise caution in vicinity of electrical equipment, operating machinery and open access openings. 3. Comply with ship's regulations for working above deck; wear safety harness and line.			
TOOLS, PARTS, MATERIALS, TEST EQUIPMENT			
MATERIALS			
1. [1609] Magnifier	6. [2384] Tape, measuring, 1/2" steel, 72", push-pull rewind	PAGE 1 OF 6	
TOOLS	7. Utility knife, No NSN -- W/C provide		
1. [0611] Hammer, hand, Scaling, 1 LB	MISCELLANEOUS		
2. [1161] Scraper, ship, Type 1, carbon steel, angle bent end	1. Ships Drawings (as required)		
3. Tape measure, 25', No NSN -- W/C provide	2. NAVSEA S9AA-AB-GOS-10 General Specifications for Overhaul of Surface Ships, Sect 100, 120		
4. [1198] Screwdriver, flat tip, 6", general purpose	3. [1365] NSTM Chapter 100, 120		
5. [2271] Flashlight, Type 3, style 1, explosive proof			
NOTE: Numbers in brackets can be referenced to Standard PMS Materials Identification Guide (SPMIG) for stock number identification.			
PROCEDURE			
NOTE 1: Accomplish assessment before availability, after availability and before deployment.			
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NOTE 2: Number of personnel and man-hours assigned is average for DD-class ships and may require adjustment for larger class of ships.

Preliminary

- a. Obtain a copy of Repair Inspection Requirements list for the applicable ship to be assessed.
- b. Obtain all necessary drawings required to accomplish the assessment of the superstructure.
- c. Review JSNs from the ship's CSMP for discrepancies to be assessed under this procedure.

1. Conduct SEMAT Assessment Procedure for Superstructure and Fittings.

WARNING Exercise caution in vicinity of electrical equipment, operating machinery and open access openings.

WARNING Comply with ship's regulations for working above deck; wear safety harness and line.

- a. Conduct a visual and hammer assessment of interior and exterior areas of the superstructure (main deck and above) aboard ship (see 1.h. and 1.i.). Examples of items to be assessed but not limited to are:
 - (1) Bulkheads and decks.
 - (2) Expansion joints (if applicable).
 - (3) Structural stanchions.
 - (4) Handrails.
 - (5) Coamings.
 - (6) Bridge gratings.
 - (7) Bulwarks.
 - (8) Ladders (vertical and inclined).
 - (9) Bi-metallic and/or Huck bolt connections.
- b. Assess bulkheads and decks. Items to look for, but not limited to, are:
 - (1) Material condition of bulkheads and decks.
 - (a) Buckling and cracked welds.
 - (b) Holes and pitting.
 - (c) Rust, scale, and peeling paint.
 - (d) Bi-metallic joints and Huck bolted or riveted joints for corrosion/exfoliation.

NOTE 3: Dissimilar metals can cause rapid exfoliation, general corrosion, stress corrosion, and pitting of aluminum alloys. Aluminum deck house to steel deck connections (particularly riveted joints) should be probed for exfoliation. Examine discharge and pass-through piping through aluminum bulkheads and decks, steel tiedown fittings in aluminum decks and view ports in aluminum bulkheads for evidence of corrosion.

- c. Assess stiffeners for the following:
 - (1) Material condition of stiffeners.
 - (a) Deterioration, fractures, distortion, buckling, and cracked welds.
 - (2) Brackets, chocks and collar plates.
 - (3) Drain holes.
 - (4) Butt alignment.

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- (5) Obvious liquid traps, especially in horizontal stiffening.

NOTE 4: Compartments in superstructure which tend to collect sea water such as fan rooms should have drains assessed; horizontal stiffeners in such compartments should have positive drainage. Safety rails, life lines, and fittings shall have scale permanently removed and metal assessed for thinning.

- d. Assess rivets and Huck bolts for the following:
 - (1) Material condition.
 - (a) Deteriorated, loose, missing, cracked, and signs of leakage.
- e. Assess ladder for the following:
 - (1) Material condition of ladder, fasteners, clips, and brackets.
 - (a) Deterioration.
 - (b) Missing, odd sized bolts, nuts, washers, and clips.
 - (c) Cracks in ladders.

NOTE 5: Visual assessment of welded areas requires removing the paint in the assessment area if there is evidence of paint cracking or chipping. A magnifying glass (5x or greater) is to be used to verify existence of cracks.

- f. Assess foundation for the following:
 - (1) Material condition of foundations.
 - (a) Buckling and cracked welds.
 - (b) Rust, scale, and peeling paint.
 - (c) Completely welded and properly welded.
 - (d) Drain holes.
- g. Assess paint condition for the following:
 - (1) Material condition.
 - (a) Blisters, peeling paint and apparent increase in paint film thickness which may indicate hidden corrosion.

NOTE 6: During SEMAT assessment, pay particular attention to the areas listed below for each class of ship: step 1.h. is for FFG-7 Class and step 1.i. is for CG-47 Class.

- h. For FFG-7 Class ships, assess aluminum superstructure for cracks, particularly in the following areas:
 - (1) Deck house sides: port and starboard, main deck to 02 level, frames 196 and 236 in way of knuckles; in particular, 02 level, coaming and superstructure side at 01 level. Look for both horizontal and vertical cracks.
 - (2) 02 deck plating in way of transverse butt welds at frames 201, 220, and 236. Particularly assess welds along entire lengths.
- i. For CG-47 Class ships, assess aluminum superstructure for cracks, particularly in the following areas:

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NOTE 7: Figure 1 corresponds to following numbers which designate areas to be assessed. Starboard side shown. Port and starboard side to be assessed.

- (1) Assess 01 level deck along forward corners of deck house. Specifically, check toe of weld connecting deck to deck house for 4 feet both inboard and aft of deck house corner at FR 138.
- (2) Assess 01 level deck plate area from deck house at FR 138 to 4 feet forward of deck house, port to starboard. Specifically, check for cracking and check for plate deformation greater than 3/4 inch. Pay special attention to sheer knuckle weld seam along FR 136.
- (3) Assess weld connection 01 level deck coaming, port and starboard, to forward corners of deck house at FR 138.
- (4) Assess deck coaming and outboard edges of 01 level deck for 4 feet forward from weld connecting coaming to deck house corner at FR 138.
- (5) Assess outboard shell plating area, port and starboard. Area of concern is from 01 deck level to 2 feet below deck level, 3 feet forward, and 2 feet aft of weld connecting deck coaming to forward deck house corner at FR 138.

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- (6) Assess 01 level deck hatches near FR 138. Applicable hatch numbers are:
 - 01-140-1 and 01-144-1 on all CG-47 Class ships
 - 01-134-1 on the CG-47 and CG-48
 - 01-136-2 on the CG-49 and subsequent ships
- (a) Assess corners of deck openings for cracks; check for crack initiation on both above and below deck surfaces. Check welds, both inside and outside, connecting hatches to deck.
- (7) Assess corners of deck openings for MK-41 missile launcher on CG-52 and subsequent ships. Access to interior of forward VLS is required.
- (8) Assess 4 feet of 01 level deck inboard of deck coaming, forward of deck house. Assess for cracks and deformation of deck plating between longitudinal stiffeners. Report all cracks and any deformations greater than 3/4 inch.

NOTE 8: If any cracks or deformation are found in steps 1.i.(2) or 1.i.(8), accomplish step 1.i.(9).

- (9) Assess (from main deck) 01 level longitudinal stiffeners for tripping (beam rotation) in area of observed damage. Remove any insulation required to verify a tripped stiffener.

NOTE 9: Monitor damage and initiate paperwork to make repairs at the earliest opportunity. Document all findings and repairs.

2. All discrepancies identified shall be noted on applicable SEMAT discrepancy identification forms (2-K or Material Assessment Form).

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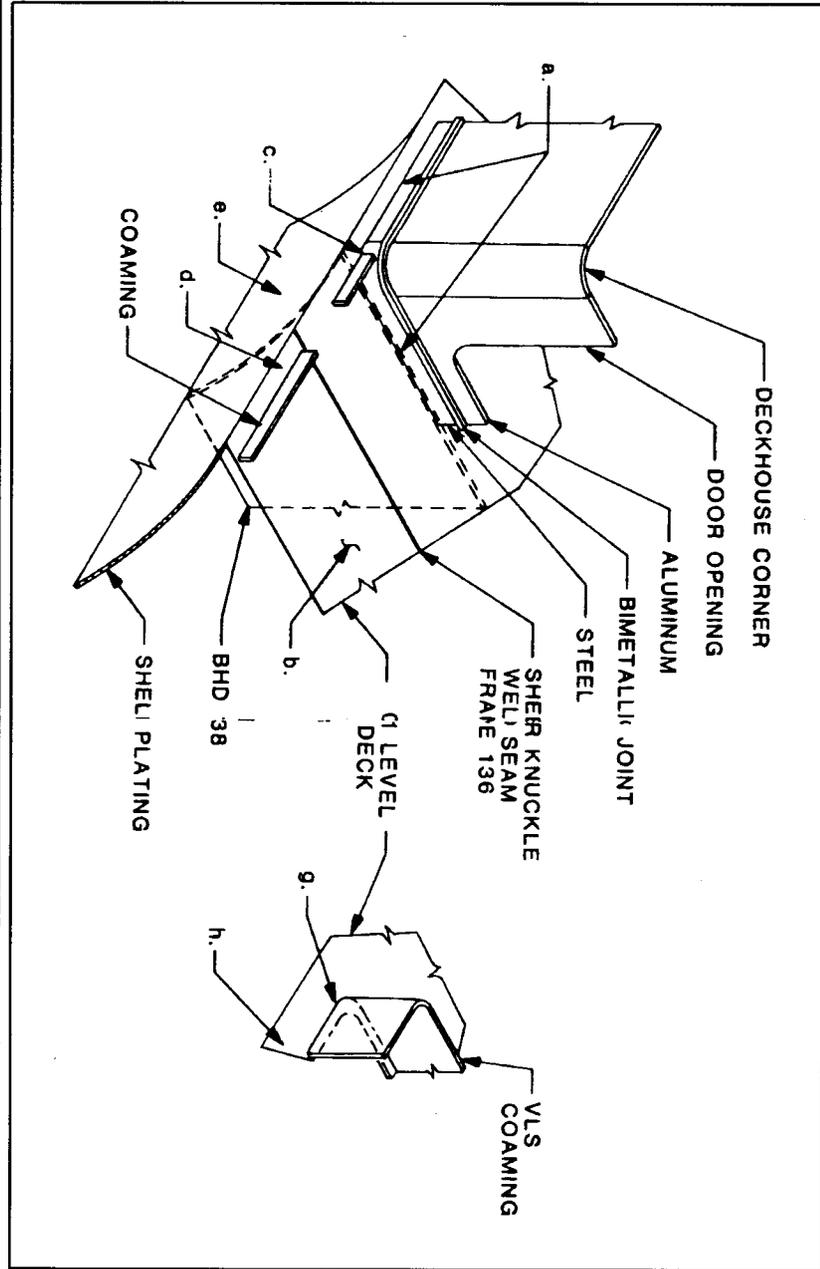


Figure 1