

NAVSEA
STANDARD ITEM

FY-11

ITEM NO: 009-05
DATE: 24 JUL 2009
CATEGORY: I

1. SCOPE:

1.1 Title: Temporary Accesses; provide

2. REFERENCES:

2.1 Standard Items

2.2 MIL-STD-1689, Fabrication, Welding, and Inspection of Ships Structure

2.3 29 CFR 1915, Occupational Safety and Health Standards for Shipyard
Employment

3. REQUIREMENTS:

3.1 Submit one legible drawing or sketch of each proposed access cut and a list of each proposed bolted/riveted access removal to the SUPERVISOR 3 working days prior to making cut or removing bolted/riveted access. For a nuclear-powered vessel, submit drawing/sketch of proposed access cut to the SUPERVISOR 5 working days prior to making cut or removing bolted/riveted access.

3.1.1 Submittal of drawing or sketch is not required for those access cuts authorized on a NAVSEA-approved drawing.

3.1.2 The drawing or sketch shall include, as a minimum, the following information:

3.1.2.1 A plan and elevation view specifying the location of the access by deck, frame, and distance from the center line or deck edge and showing location of adjacent penetrations, bulkheads, framing, welds, and riveted joints within 12 inches of the proposed cut.

3.1.2.2 Location and number of previous cuts visible in each plate and the cutback of existing welds as required by 2.2.

3.1.2.3 Temporary structural reinforcement required to prevent distortion of ship structure.

3.1.2.4 Thickness and type of material of plating and structural members to be cut. Include source or document/drawing number which identifies material requirements.

3.1.2.5 A description of the temporary access closure or enclosure.

3.1.2.6 Include a copy of the weld procedure or approved weld procedure number with the proposed access sketch.

3.1.3 List of bolted/riveted access covers shall include location, designation, and classification as identified on ship's damage control charts.

3.1.4 Provide all drawing titles and numbers (including applicable sub-tier), and technical documentation used to accomplish the requirements of 3.1.

3.2 Ensure that access cut boundaries conform to the requirements of 2.2 and the following:

3.2.1 Boundaries may extend across one or more frames as required for size of opening.

3.2.2 Are sized and located to accomplish the requirements of the Job Order.

3.2.2.1 **Verify** access requirements on NAVSEA drawings **conform to these same requirements**.

3.2.3 Weld riveted plates using a single V-weld with glass cloth conforming to MIL-C-24576, Type One, Class One, to prevent fusion between backing member and plate.

3.2.3.1 Remove existing rivets within 6 inches of a cut and install new rivets in accordance with 2.2.

3.2.3.2 Round patches 2 feet in diameter or less shall be dished 1/16-inch to 1/8-inch.

3.2.4 Are at least 3 inches minimum to 6 inches maximum width for oblong cuts with circular ends and have a radius of one-half the width.

3.2.5 Are sized so that the smallest dimension of a square or rectangular cut is 12 inches. For cuts less than 24 inches, minimum radius of each corner shall be 3 inches; for cuts 24 inches and greater, minimum radius of each corner shall be 6 inches. Exception to this corner radius criteria is where cut terminates at an existing weld.

3.2.6 Utilize the same boundaries as used for prior cuts unless the requirements of this Standard Item have been violated.

3.2.6.1 Annotate violations on the drawing or sketch required by 3.1.

(V)(G) "INSPECT LAY OUT"

3.3 Lay out access on both sides of the structure to be cut, in accordance with **the approved** drawing or sketch.

3.3.1 Prior to cutting access in the ship/vessel's structure and after layout checkpoint, accomplish positive verification of access parameters by the tapping method, heat method, or drilling of pilot hole in the path of the cut to be accomplished. For a nuclear-powered vessel, drilling a pilot hole is the only allowed method for positive verification.

3.4 Accomplish the requirements of 2.3 for guarding of access openings.

3.4.1 Remove temporary guarding after installation of access plates. Chip and grind surfaces flush in way of removals.

3.5 Install a temporary coaming with a minimum height of 4 inches around access cuts through decks. Tack-weld the coaming to the deck and seal the deck joint with caulking compound.

3.5.1 Remove the temporary coaming after installation of access plate. Chip and grind surfaces flush in way of removals.

3.6 Cut access in accordance with **the approved** drawing or sketch.

3.7 Remove bolted/riveted access.

3.7.1 Clean and preserve gasket faying surfaces.

3.7.2 Chase and tap exposed threaded areas.

3.8 Protect ship from weather and contamination.

3.8.1 Fabricate temporary closures, using fire retardant material, prior to removing plates or cutting access openings.

3.8.1.1 Closures shall be constructed to protect the access from inclement weather and entry of contaminants.

3.8.1.2 Horizontal deck closures shall support a minimum of 150 pounds per square foot.

3.8.1.3 Closures shall be fitted with fasteners that permit rapid installation and removal.

3.8.2 Install closures whenever access is not in use.

3.9 Maintain watertight integrity of waterborne ship.

3.9.1 Fabricate and install watertight enclosures prior to removing plates or cutting access openings that do not provide a minimum of 4 feet of freeboard.

3.9.1.1 Maintain watertight integrity to a level 4 feet above the maximum anticipated draft.

3.10 Maintain watertight integrity of ship in dry dock.

3.10.1 Provide temporary access closure plates and fasteners prior to removing plates or cutting access openings below 4 feet of waterborne freeboard.

3.10.1.1 Closure plates shall be available on short notice for emergency sealing of the temporary access openings.

3.10.2 Seal access openings with closure plates when conditions warrant.

3.10.3 Secure openings at the end of each shift not immediately followed by another shift engaged in dry dock work.

3.11 Remove the temporary closures when no longer required.

3.12 Install the access plate in accordance with the **approved** drawing or sketch.

3.12.1 Accomplish the requirements of 009-12 of 2.1 for installation and inspection of the access plate.

3.12.1.1 Accomplish nondestructive testing with acceptance criteria for: new welds, existing welds extending 6 inches beyond cutbacks, 24 inches of riveted joints within 12 inches of new welds, and repaired riveted joints including 12 inches either side of the repairs. Acceptance criteria for the welds adjacent to the cutbacks shall be limited to an absence of crack indications. Nondestructive test requirements for closure shall include closure plates and small access plates.

3.12.2 Install the bolted/riveted access.

3.12.2.1 Use new gasket material conforming to MIL-PRF-900 and fastener material conforming to MIL-DTL-1222, Grade 304.

3.12.2.2 Install new rivets for riveted access plates in accordance with 2.2.

(V) "CHALK TEST"

3.13 Accomplish a chalk test on structural closure in way of temporary access. Chalk imprint shall be centered with 100-percent contact.

3.14 Accomplish the requirements of 009-25 of 2.1 for the water hose or local air hose test of each watertight/airtight closure. Allowable leakage: None.

4. NOTES:

4.1 None.