

T6485-AA-DSP-010

NAVSEA Technical Publication

MATERIAL REQUIREMENTS FOR SHIPBOARD SANITARY
SPACES

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NAVSEA TECHNICAL PUBLICATION

MATERIAL REQUIREMENTS FOR SHIPBOARD SANITARY SPACES

This specification is approved for use by the Naval Sea Systems Command (NAVSEA), Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense. Unless otherwise specified, all references to NAVSEA in this document and its appendices refer to the NAVSEA Materials and Environmental Engineering Group.

1. SCOPE

1.1.Scope. This specification covers the general requirements for material selection and space configuration criteria that shall be used in the design and installation of low maintenance, extended life shipboard sanitary spaces.

2. APPLICABLE DOCUMENTS

2.1.General. The documents listed in this section are specified in Sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification, or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in Sections 3 and 4 of this specification, whether or not they are listed.

2.2.Government documents.

Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

SPECIFICATIONS

FEDERAL

FF-S-85	-	Screw, Cap, Slotted and Hexagon Head
FF-W-92	-	Washer, Flat (Plain)
A-A-3002	-	Mirrors, Glass

DEPARTMENT OF DEFENSE

MIL-PRF-3135	-	Deck Covering Underlay Materials
MIL-DTL-16377	-	Fixtures, Lighting; and Associated Parts; Shipboard Use, General Specification for
MIL-PRF-24613	-	Deck Covering Materials, Interior, Cosmetic Polymeric
MIL-DTL-24441	-	Paint, Epoxy-Polyamide, General Specification for
MIL-PRF-23236	-	Coating Systems for Ship Structures
MIL-PRF-32038	-	Shipboard Furniture, Fixtures, Fittings, and Accessories, General Specification for
MIL-S-46106	-	Adhesive-Sealants, Silicone, RTV, One-Component

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MIL-S-46146	-	Adhesives-Sealants, Silicone, RTV, Noncorrosive (for Use with Sensitive Metals and Equipment)
MIL-PRF-81733	-	Sealing and Coating Compound, Corrosion Inhibitive
STANDARDS		
FEDERAL		
A-A-3002	-	Commercial Item Description, Mirrors, Glass
DEPARTMENT OF DEFENSE		
DOD-STD-2003	-	Electric Plant Installation Standard Methods for Surface Ships and Submarines
MIL-STD-1689	-	Fabrication, Welding and Inspection of Ships Structure

GSO S9AA0-AB-GOS-010/GSO - General specifications for overhaul of Surface ships.

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or www.dodssp.daps.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

NAVSEA STANDARD ITEMS

009-32	-	Cleaning and Painting Requirements; accomplish.
NAVSEA Drawings		
804-1385920	-	Sanitary Piping System Water Closet Piping Installation
804-1385922	-	Sanitary Piping System-Urinals Piping Installation.
804-1648663	-	Locker, Cleaning Gear Stowage
804-4623540	-	Bulkhead, Metal Joiner, Honeycomb
804-5773931	-	Insulation For Compartments, Acoustic and Thermal-Installation Details
804-5959214	-	Piping Insulation – Installation Details
810-1385832	-	Mounts, Shock for Vitreous China Water Closets, Pedestal Mounted.
810-1385772	-	Mounts, Shock for Vitreous China Urinals, Back Mounted
593-1	-	Design Data Sheet for Vacuum Collection CHT Systems

NAVSEA Technical Publications

S9086-CH-STM-010/CH-074	-	Welding and Allied Processes
S9086-K9-STM-010/CH-330	-	Naval Ships' Technical Manual Chapter 330, Lighting
S9086-RK-STM-010/CH-505	-	Naval Ships' Technical Manual Chapter 505, Piping Systems
S9086-RQ-STM-010/CH-510	-	Naval Ships' Technical Manual Chapter 510, Heating, Ventilating, And Air Conditioning Systems For Surface Ships

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S9086-VD-STM-010/CH-631	-	Naval Ships' Technical Manual Chapter 631, Volume 1, Preservation Of Ships In Service - General
S9086-VD-STM-020/CH-631	-	Naval Ships' Technical Manual Chapter 631, Volume 2, Preservation Of Ships In Service-Surface Preparation And Painting
S9086-VD-STM-030/CH-631	-	Naval Ships' Technical Manual Chapter 631, Volume 3, Preservation Of Ships In Service - Surface Ship/ Submarine Applications
S9086-VG-STM-010/CH-634	-	Naval Ships' Technical Manual Chapter 634, Deck Coverings
S9086-VH-STM-010/CH-635	-	Thermal, Fire and Acoustic Insulation
T9640-AA-PRO-010/HAB	-	Shipboard Habitability Design Practices Manual
T9640-AB-DDT-010/HAB	-	Shipboard Habitability Design Criteria Manual
T9500-AA-PRO-100	-	CHT System Design Criteria Manual
PPI 63400-001	-	RENOVATE / REPAIR / HEAD (DECK).

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or www.dodssp.daps.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3. Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the document that are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of the documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

A240/A240M	-	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
A312/A312M	-	Standard Specification for Seamless and Welded Austenitic Stainless Steel Pipes
C1028	-	Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
C1048	-	Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass
C373	-	Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Porous Whiteware Products
F22	-	Standard Test Method for Hydrophobic Surface Films by the Water Break Test
F718	-	Standard for Shipbuilders and Marine Paints and Coatings Product/ Procedure Data Sheet

(Application for copies of ASTM documents should be addressed to American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959)

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AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- A108.4 - Installation of ceramic tile with organic adhesives or chemical resistant, water cleanable tile-setting and -grouting epoxy
- A108.13 - Installation of load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone
- A112.19.2M - Vitreous China Plumbing Fixtures
- A112.19.3 - Stainless Steel Plumbing Fixtures (Designed for Residential Use)
- A118.3 - Specifications for Chemical Resistant, Water Cleanable Tile-Setting and Grouting Epoxy and Water Cleanable Tile Setting Epoxy Adhesive
- A118.10 - Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations

(Application for copies of ANSI documents should be addressed to American National Standards Institute, 25 West 43rd Street, New York, NY 10036)

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA

- NASM25027 - Nut, Self-Locking, 250°F, 450°F, and 800°F

(Application for copies of NASM documents should be addressed to Aerospace Industries Association of America, Inc., 1250 Eye Street, N. W., Washington, DC 20005-3924)

TILE COUNCIL OF AMERICA (TCA)

- BSR A137.1 - Ceramic Tile

(Application for copies of TCA documents should be addressed to Tile Council of America, Inc., 100 Clemson Research Blvd., Anderson, SC 26625)

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

- SSPC-PA 2 - Measurement of Dry Coating Thickness with Magnetic Gages
- SSPC-QP 1 - Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures)
- SSPC-SP1 - Solvent Cleaning
- SSPC-SP-2 - Soap & water wash and hand sanding
- SSPC SP-3 - Power Tool Cleaning
- SSPC SP-10/NACE No. 2 - Near-White Blast Cleaning
- SSPC SP-11 - Power Tool Cleaning to Bare Metal
- SSPC SP-15 - Commercial Grade Power Tool Cleaning

(Application for copies of SSPC publications should be addressed to The Society for Protective Coatings, 40 24th Street 6th Floor, Pittsburgh, PA 15222-4656)

SOCIETY OF AUTOMOTIVE ENGINEERS

- AMS-QQ-S-763A - Steel, Corrosion Resistant, Bars, Wire, Shapes, and Forgings

(Application for copies of SAE publications should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

2.4. Order of precedence. In the event of a conflict between the text of this document and the references cited herein the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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3. REQUIREMENTS.

3.1. General. The requirements of this document are mandatory. Deviations in the selection of materials or design are not allowed without prior approval of the designated NAVSEA Technical Warrant Holder.

3.2. Fixtures. Low maintenance, extended life shipboard sanitary spaces shall include one or more of the following appliances or fixtures: commode, shower stall, lavatory unit with sink, and privacy partition, each of which is formed of a material that is highly resistant to salt atmosphere or salt water corrosion. For ships whose CHT system capacity is limited, urinals as specified below may be installed in spaces identified by the applicable Type Commander. Installation of utility sinks as specified below for ease of deck cleaning and maintenance is also optional.

3.2.1. Waterclosets.

3.2.1.1. Commodes. Commodes shall be porcelain (see 6.2). CRES commodes shall not be utilized without prior approval from the designated Technical Authority. Additionally, all vacuum waterclosets should include integral vacuum mechanical components that are accessible from inside the sanitary space without requiring removal of the fixture. Each commode shall be fitted with a manual type flushometer unless Vacuum CHT is installed when a VAC flushing control system and associated valve will be installed. All commodes shall have an isolation valve installed prior to the flushometer so that each flushometer can be isolated for maintenance without having to shut off the main valve controlling all commodes.

3.2.1.1.1. CRES commodes.

3.2.1.1.1.1. CRES commodes shall not be utilized without prior approval from the designated Technical Authority.

3.2.1.1.2. Porcelain commodes. Porcelain commodes shall be manufactured in conformance with ASME A112.19.2M.

3.2.1.1.3. Foundations and mounting. Commode foundations and mounting shall be in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.1.2. Watercloset hardware.

3.2.1.2.1. Doors. Honeycomb doors shall be used, fabricated from 100% CRES 316 L or better (aluminum honeycomb with CRES coverings shall not be used). The doors shall be mounted in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.1.2.2. Toilet paper dispensers. Toilet paper dispensers shall be fabricated from 304 series CRES or better. The dispenser shall be designed such that cleaning will not affect the toilet paper.

3.2.1.2.2.1. Mounting. Toilet paper dispensers shall be mounted in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.1.2.3. Sanitary napkin receptacles. Where required, sanitary napkin receptacles shall be fabricated from 304 series CRES or better.

3.2.1.2.3.1. Mounting. Sanitary napkin receptacles shall be mounted in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.2. Urinals. Urinals shall be Porcelain (see 6.2). CRES urinals shall not be utilized without prior approval from the designated technical authority. All urinals shall have an isolation valve installed prior to the flushometer so that each flushometer can be isolated for maintenance without having to shut off the main valve controlling all urinals.

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3.2.2.1. CRES urinals. CRES urinals shall not be utilized without prior approval from the designated technical authority.

3.2.2.2. Porcelain urinals. Porcelain urinals shall be manufactured in conformance with ASME A112.19.2M.

3.2.2.3. Foundations and mounting. Urinal foundations and mounting shall be in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.3. Showers. The shower shall be an anti-scald balanced pressure unit. An open design shower assembly shall be used. The showerhead shall be moveable or fixed and shall include a water saving cutout device. Individual isolation valves for both hot and cold piping for each shower must also be installed. Piping and connections shall be in accordance with NSTM Chapter 505.

3.2.3.1. Drying area door. Where a curtain plate extending to the overhead exists, a drying area door shall be fitted to isolate the shower area from the rest of the space to assist in controlling the humidity.

3.2.3.2. Shower curtains. Shower curtains shall be 7-gage plastic minimum, opaque white vinyl film. The curtains shall be antibacterial, anti-fungal and flame resistant. There shall be top, bottom and side hems that are either stitched, or heat sealed. Corrosion resistant grommets, on 6-in center (maximum) shall be installed for hanging.

3.2.3.2.1. Shower curtain rod. Shower curtain rod should be CRES 304L or better, and installed in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.3.3. Grab bars and footrests. As a safety feature, grab bars shall be installed. As a comfort and convenience feature footrests shall also be installed. Grab bars and footrests shall be fabricated from CRES 304 series, and shall be mounted in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.4. Lavatory units. Lavatory assemblies, from 1 to 3 bowls, shall be one-piece integral units with integrally welded bowls and shall meet the requirements of ANSI A-112.19.3. To minimize seams and the resultant maintenance requirements, the sink assembly should be installed as a one-piece unit. The countertop shall have a 1/2-inch marine edge on the front and sides, and a minimum 3-inch backsplash. The countertop shall be drilled with three 1 5/16-inch holes for a 4-inch center-set valve for each bowl. The countertop should be fabricated from 16-gage minimum and bowls from 18-gage minimum 316L or 316LN CRES or better. Piping shall meet the requirements of NSTM Chapter 505. Individual isolations valves for hot and cold to each sink shall be installed. Under-sink piping shall remain exposed for ease of maintenance and repair.

3.2.4.1. Foundations and mounting. Lavatory unit foundations and mounting shall be in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.5. Faucets. Faucets shall be single lever, commercial grade unit, with a pop-up type drain stopper.

3.2.6. Mirrors. Mirrors shall be in general accordance with A-A-3002, except that the glass used in the construction shall be heat tempered meeting the requirements of ASTM C1048, Kind FT, and that the material used for the frames should be CRES type 316 series or better. The mirrors shall be the full width of the lavatory, generally 24-inches, and shall be a minimum of 24-inches high.

3.2.6.1. Foundations and mounting. Mirror foundations and mounting shall be in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

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3.2.7. Shelves. Shelves shall be fabricated from 316L CRES or better. Shelf sizes and mounting details shall be in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.8. Waste receptacles. Waste receptacles shall be fabricated from 316 series CRES or better, installed in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.9. Paper towel dispensers. Paper towel dispensers shall be installed in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.2.10. Deck Drains.

3.2.10.1. Bronze. Bronze deck drains, in accordance with NAVSEA S9086-RK-STM-010/CH-505 shall be used. Drains shall be located to minimize standing water.

3.2.10.2. Composite. Composite materials shall not be utilized without prior approval from the designated Technical Authority.

3.3. Bulkheads and partitions.

3.3.1. Materials.

3.3.1.1. Honeycomb panels. Honeycomb panels may shall be used as dividing partitions between water closets and showers. Honeycomb panels should not be used as end boundary bulkheads, or any other application where the panel must run to the deck. Panels shall be fabricated from 100% CRES steel, 316L or better, and shall be completely sealed around edges to prevent water intrusion

3.3.1.2. Sheet metal panels. Sheet metal panels shall be used as boundary bulkheads. Panels shall be CRES 316L or better fabricated from 16-gage sheet

3.3.1.3. Composites. Composite materials shall not be utilized without prior approval from the designated Technical Authority.

3.3.2. Installation.

3.3.2.1. Foundations and mounting. Because one of the primary failure modes of sanitary space deck coverings is caused by water intrusion from deck penetrations, and to minimize the effort required for deck maintenance privacy partitions shall be suspended from the bulkhead/overhead so that there are minimal deck supports. The end shower partitions shall extend to the deck; shower partitions separating shower stalls shall terminate 12-inches from the deck. A 2-inch raised deck divider may be installed between individual showers so as to prevent water from running into adjacent shower units. In decontamination sanitary spaces all shower partitions shall extend completely to the deck. Joiner bulkhead installation and mounting shall be in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance. Joiner bulkhead installations located below decks subject to excessive load deformation, such as for spaces located on the 03 level of an aircraft carrier, shall employ deflection brackets as identified in NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.3.2.2. Burrs, corners, sharp or rough edges. All burrs, corners, sharp or rough edges of metal that are liable to cause injury to personnel, unsightliness of the equipment, or that may hamper cleaning or maintenance shall be ground smooth.

3.3.2.3. Painting. Paints shall be selected IAW guidance in NAVSEA Standard Item 009-32.

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3.4. Deck coverings.

3.4.1. Materials. The deck covering system shall consist of underlayment, a waterproof membrane, and porcelain tiles with epoxy adhesive and grout.

3.4.1.1. Porcelain tile. Unglazed porcelain tile and tile trim pieces shall be in accordance with BSR A137.1 (ANSI 137.1) and shall be 3-inch square. The tile shall be unglazed and shall have a minimum coefficient of friction of 0.6 (wet) when tested per ASTM C1028. The maximum water absorption shall be impervious when tested in accordance with ASTM C373.

3.4.1.2. Tile adhesive and grout. Tile adhesive and grout shall be epoxy, water cleanable and meet the requirements of ANSI A118.3.

3.4.1.3. Deck covering underlay. Deck covering underlay shall be lightweight (1 lb/ft² or less at 1/4 inch thickness), and conform to MIL-PRF-3135.

3.4.1.4. Waterproof membrane. The waterproof membrane shall conform to ANSI A118.10 and shall be certified by the manufacturer to be compatible with both the underlayment and the installed deck covering.

3.4.2. Deck Installation Requirements:

3.4.2.1. Primer application. An anticorrosive primer shall be applied to the prepared steel deck, before underlayment is installed. The anticorrosive primer shall conform to PPI #63400-001, Renovate / Repair / Head (Deck).

3.4.2.2. Deck Drains: A CRES ring, whose top finished surface is slightly below the finished surface of the deck, shall be installed around deck drains, with the tile abutting the ring.

3.4.2.3. Underlay: Underlay shall be installed to slope the deck towards the drains. A minimum of 1/8-inch per foot slope shall be maintained for general decks and 1/4-inch per foot in shower stalls. The underlayment shall be installed directly over the primed steel deck,

3.4.2.4. Waterproof membrane: The waterproof membrane shall be installed over the underlayment in accordance with ANSI A108.13. So that the paint system on the bulkheads can overlap the membrane, the membrane shall extend upward on vertical surfaces a minimum of 2-inches above the top of the deck covering coaming.

3.4.2.5. Porcelain Tile Decks:

3.4.2.5.1. The Porcelain tiles shall be installed over the waterproof membrane.

3.4.2.5.2. Where the tile abuts a bulkhead, a 3-inch minimum high ceramic cove base with a bull nose top, shall be installed on vertical surfaces. To provide for ease of cleaning, the areas formed between bulkhead and stiffeners (T or L) shall be filled with either underlay or lightweight concrete to a minimum distance of 4-inches above the finished deck surface. The top surface of the filled areas shall be sloped 30 to 45 degrees towards the deck to facilitate drainage.

3.5. Lighting and electrical installations.

3.5.1. Lights.

3.5.1.1. Lavatory lights. One lavatory light, MIL-F-16377/58, SYM 351 shall be installed above each lavatory unit. Where overhead interferences prevent the installation of lights over the lavatory unit, lavatory light units, type 470, MIL-F-16377/5A may be used, mounting in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

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3.5.1.2. General space lighting. A lighting survey shall be conducted. Sufficient lights shall be installed to meet or exceed the illumination requirements established by NSTM Chapter 330. Light fixture output shall be enhanced by the installation of specular reflectors.

3.5.2. Space heaters. Existing steam-type space heaters shall be replaced with electric space heaters where sufficient electrical power is available. If new electric heaters are used, or if existing steam heaters are retained, they shall be relocated so that they are no closer than 18 inches to the deck. Housings or louvers for existing and/or new space heaters shall either be electrostatic powder coated with a TGIC polyester thermosetting powder, or be fabricated from 304 series CRES.

3.5.3. Electric hand driers. Electric hand driers shall be installed in accordance with NAVSEA Standard Drawing(s) for Sanitary Spaces or NAVSEA approved guidance.

3.6. Ventilation. A ventilation survey shall be conducted. Sufficient ventilation shall be established to meet or exceed the ventilation requirements established by NSTM Chapter 510. Failure to meet the minimum requirements shall be reported to the Type Commander for resolution.

3.6.1. Ventilation Screens. Existing ventilation screens and diffusers shall be replaced in kind.. Ventilation screens shall have a privacy cover over the screens leading to public areas.

3.7. Number and types of fixtures (fixture ratio). The number and types of fixtures shall comply with NAVSEA T9640-AB-DDT-010/HAB.

4. Verification.

4.1. Responsibility for inspection. The contractor is responsible for the performance of all inspection requirements as specified in the base document and in the applicable appendix of this specification. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1. Performance of inspection. The performance of the inspections or tests set forth in this specification does not relieve the contractor of his responsibility to provide a product that meets all requirements of this specification.

4.2. In-process inspections. Inspections, identified herein as a checkpoint, are to be completed for Sanitary Space (Head) installations. Responsible Government Representative certified inspector shall be given prior notice and shall perform an inspection of each process when the checkpoints are reached.

5. PACKAGING

5.1. No requirements. There are no packaging requirements.

6. NOTES

6.1. Intended use. This specification is intended to provide the general requirements for acquisition of stainless steel sanitary spaces.

6.2. Acquisition requirements. Acquisition documents must specify the following, in addition to any additional requirements from the applicable appendix:

- a. Title, number, and date of this specification.
- b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1, 2.2 and 2.3).

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- c. Urinal Material (if required) (see 3.2.2)
- d. Commode material (see 3.2.1.1).
- e. Closed or open shower piping (see 3.2.3)
- f. Whether or not to install footrests (see 3.2.3.3)
- g. Type of panels to be used for construction of partitions (see 3.3.1.1)
- h. Type of surface preparation (see paragraph 3.3.2.2)
- i. Type of coating (see paragraph 3.3.2.2)
- j. Type of surface preparation for repairs (see paragraph 3.3.2.2)
- k. Material, color and sizes, where applicable, of deck covering materials to be used (see 3.4.1)
- l. Type of lavatory light fixture (see 3.5.1)
- m. Number and type of fixtures (see 3.7).

6.3. Technical manuals. The requirement for technical manuals should be considered when this specification is applied on a contract. If technical manuals are required, specifications and standards that have been authorized and assigned an Acquisition Management Systems Control (AMSC) number must be listed on a separate Contract Data Requirements List (DD Form 1423), which is included as an exhibit to the contract. The technical manuals must be acquired under separate contract line item in the contract.

6.4. Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Products List QPL, whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from <http://www.nstcenter.com> under the "Navy Community" tab.