



## DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND  
1333 ISAAC HULL AVE SE  
WASHINGTON NAVY YARD DC 20376-0001

IN REPLY TO  
NAVSEAINST 9997.3A  
SEA 04XQ  
31 JAN 06

### NAVSEA INSTRUCTION 9997.3A

From: Commander, Naval Sea Systems Command

Subj: DOCKING OFFICER MINIMUM QUALIFICATION REQUIREMENTS

Ref: (a) OPNAVINST 4700.7J

Encl: (1) Academic Requirements for the Qualification of Docking Officers  
(2) Practical Requirements for the Qualification of Docking Officers  
(3) Sample Certification Letter for Docking Officers

1. Purpose. To establish the requirements, as directed by reference (a), for the qualification and certification of officers who are directly responsible for docking and undocking operations in U.S. Navy-operated graving docks and floating dry docks.

2. Cancellation. NAVSEAINST 9997.3 of 29 December 1992 and Change Transmittal 1 of 8 November 1995.

3. Background. The responsibilities vested in officers directly responsible for docking and undocking operations in U.S. Navy-operated drydocking facilities dictates that such officers be specially trained and qualified for their duties. Docking Officer qualifications are certified by Immediate Superiors-in-Command (ISICs), Shipyard Commanders, Supervisors of Shipbuilding (SUPSHIPS) and Regional Maintenance Centers (RMCs). This instruction establishes the minimum qualification requirements for the certification of Docking Officers. Enclosures (1) and (2) are intended as guides for initial training of Docking Officers and retraining of officers who have had previous experience in dry dock operations, but who have not maintained their qualification or who must obtain certification for a type of dry dock facility different from that which they were previously qualified. In addition, these personnel shall be required to pass the NAVSEA Dry Dock Safety Certification Program course examination administered by NAVSEA 04XQ2 (available to download at <http://www.usnavydrydocks.com>) as a prerequisite to qualification as a Docking Officer by the local command. Personnel meeting these requirements and certified by their ISIC, Shipyard Commander, SUPSHIP or RMC, shall be called "Docking Officers".

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#### 4. Applicability

a. For fleet activities, Fleet Commanders or their designated certifying authority, retain the final authority for the qualification of Docking Officers that are assigned responsibilities for operation of drydocking facilities under their command.

b. Shipyard Commanders, SUPSHIPS and RMCs shall be the certifying authority for Docking Officers who are assigned responsibilities for the operation of drydocking facilities under their command.

c. Satisfactory completion of the qualification requirements specified herein shall be a prerequisite to the certification of a Docking Officer by all certifying authorities. These requirements apply to officers currently in training and not yet certified, and may be applied to currently certified officers upon transfer to another facility at the discretion of the certifying authority.

d. Once certification is granted, the Docking Officer must participate in a minimum of one docking every six months to maintain qualification. The participation will include review of a docking drawing, check of build-up papers and ballasting and deballasting plans, and involvement in an actual docking evolution.

e. Docking Officers who fail to maintain their qualification will be retrained and reexamined following the provisions of this instruction prior to being recertified. In this case, the certifying authority will prescribe which academic and practical requirements need to be completed again for recertification and which may be waived for a particular candidate.

f. A complete, documented record will be maintained for each Docking Officer's qualifications, including a copy of the current certification letter (enclosure (3)), a copy of written examinations, a record of practical training and a record of dockings performed after certification.

#### 5. Action

a. The certifying authority shall ensure that all prospective Docking Officers have met the requirements in enclosure (1), through satisfactory completion of written examinations, prior to certification of their qualifications in

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writing. This includes the requirement for passing the NAVSEA Dry Dock Safety Certification Program course examination administered by NAVSEA 04XQ2 (available to download at <http://www.usnavydrydocks.com>). In addition, the command's local written examination will cover information particular to the type of dry dock facility for which the prospective Docking Officer is seeking qualification. Prospective Docking Officers must also meet the requirements in enclosure (2) prior to certification of their qualifications. The practical requirements shall cover information particular to the type of dry dock facility (or facilities) for which the prospective Docking Officer is seeking qualification.

b. The certifying authority shall ensure that all prospective Commanding Officers or Officers-in-Charge of floating dry docks have satisfied the aforementioned requirements. In cases where there is a lack of certified Docking Officers, the certifying authority may issue an interim qualification for six months or until operational conditions permit full qualification. This interim qualification will be based on the availability within the command or organization of other officers who have been certified as Docking Officers who shall conduct all dockings and undockings during this interim period.

c. In cases where Commanding Officers or Officers-in-Charge of floating dry docks have failed to keep their Docking Officer qualifications current, the certifying authority should designate, in writing, the requirements that must be satisfactorily completed for recertification, per the instructions in paragraph 4 above.

d. The certifying authority shall establish procedures within their commands or organizations to ensure that their prospective and current Docking Officers are certified and maintain their qualifications per this instruction. Commanding Officers or Officers-in-Charge will recommend to their certifying authorities, officers to be certified as Docking Officers, who have completed the requirements of enclosures (1) and (2) and who have otherwise demonstrated to the Commanding Officer or Officer-in-Charge that they possess the professional competence required of Docking Officers.

e. The certification procedure shall include training programs and qualification requirements for the qualification of personnel to man the various stations required to safely dry dock ships and will include procedures to ensure that only

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persons so qualified will man the stations during the docking and undocking evolutions.

f. The certification authorities are encouraged to make their dry dock facilities available on a "not-to-interfere" basis, to assist in the practical training and qualification of Docking Officers, including those assigned on a temporary basis. Arrangements for conducting such training shall be made directly between the requesting command and the certifying authority for the drydocking facility, citing this instruction.

g. A Docking Officer Personnel Qualification Standard (PQS) for floating dry docks that is consistent with this instruction is available from the Chief of Naval Education and Training (CNET). The PQS is available to Shipyard Commanders, ISICs, SUPSHIPS and RMCs having a dry dock capability. It is also available to Commanding Officers or Officers-in-Charge of floating dry docks. The PQS can be modified and supplemented locally, and then administered to prospective Docking Officers to evaluate their understanding of drydocking principals, their knowledge of different types of docking facilities, and their familiarity with local facilities, procedures, and operations.

6. Reports and Forms. Forms NAVSEA 9997/1 through 9997/6 may be downloaded from website <http://www.usnavydrydocks.com>.



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ACADEMIC REQUIREMENTS FOR THE QUALIFICATION OF DOCKING OFFICERS

1. To become a qualified Docking Officer, candidates shall satisfactorily complete a course of instruction and pass the command's written examination. In addition, candidates must pass the NAVSEA Dry Dock Safety Certification Program course examination (available by download from <http://www.usnavydrydocks.com>). The command's local course of instruction and examination shall cover the following information:

a. Duties and responsibilities of the Docking Officer:

(1) Article 0871 United States Navy Regulations 1990, Department of the Navy, Washington, D.C., Responsibilities for Safety of Ships and Craft at a Naval Station or Shipyard.

(2) Article 0872 United States Navy Regulations 1990, Department of the Navy, Washington, D.C., Ships and Craft in Drydock.

b. Specific information on docking and undocking:

(1) Naval Ships' Technical Manual Chapter 997, Docking Instructions and Routine Work in Dry Dock, NAVSEA S9086-7G-STM-010/CH-997.

(2) Naval Ships' Technical Manual Chapter 096, Weight and Stability, NAVSEA S9086-C6-STM-010/CH-096.

(3) Naval Ships' Technical Manual Chapter 079-Volume 1, Damage Control, Stability and Buoyancy, NAVSEA S9086-CN-STM-010/CH-079V1.

(4) Naval Ships' Technical Manual Chapter 079-Volume 2, Damage Control, Practical Damage Control, NAVSEA S9086-CN-STM-020/CH-079.

(5) Naval Ships' Technical Manual Chapter 245, Propellers, NAVSEA S9086-HP-STM-010/CH-245.

(6) Naval Ships' Technical Manual Chapter 631-Volume 1, Preservation of Ships in Service-General, NAVSEA S9086-VD-STM-010/CH-631V1.

(7) NAVSEA Forms 9997/1 through 9997/5, "Docking Report Forms".

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(8) General specifications for the care of ship during construction or overhaul as applicable:

(a) General Specifications for Overhaul of Surface Ships (GSO), NAVSEA S9AA0-AB-GOS-010, section 045

(b) General Overhaul Specifications for Deep Diving SSBN/SSN Submarines, NAVSEA 0902-018-2010, section 9020-2

(9) NAVSEA INSTRUCTION 11420.1, Drydocking and Launching Facilities Safety Certification Criteria for U.S. Navy Ships.

(10) MILITARY STANDARD MIL-STD-1625, Safety Certification Program for Drydocking Facilities and Shipbuilding Ways for U.S. Navy Ships.

c. Docking and undocking of ships.

(1) Standard procedures and principles covering the operation of facilities, emphasizing:

(a) Nomenclature

(b) Safety Precautions

(c) Sequence of operations in the evolution

(d) Use of divers during drydocking and undocking

Additionally, when assigned to an activity having floating dry docks:

(e) Developing pumping plans

(f) Monitoring of longitudinal deflection

(g) Operation of hauling blocks

(2) Facility Certification Report:

(a) Enclosure III, Operational limitations

(b) Enclosure IV, Organization and manning

(c) Enclosure V, Normal maintenance schedule and procedures

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(d) Enclosure VI, Operating procedures

(e) Enclosure VII, Protection of the ship during the lay period

d. Docking drawings for naval ships, to include the following:

(1) Stern Reference Point (SRP).

(2) Utilization of Table of Offsets for side blocks.

(3) Side block build-up (especially relationship among values for points A, B, and C, and bevel across bilge blocks).

e. Docking Notices, use of tide tables, agenda for Docking Conferences, Undocking Notices and agenda for Undocking Conferences. Preparation of sample documents may be required by the certifying officer to enhance understanding and proficiency.

f. Preparation of dry dock layout sheet (block build-up papers) for each major class of ship normally docked at the facility. Specific topics of interest include:

(1) Verification of build-up of blocks and arrangement in accordance with ship's docking drawing and dock layout sheet.

(2) Docking and undocking calculations in accordance with NSTM Chapter 997, MIL-STD-1625 and other applicable docking or launching calculations.

(3) Selection and construction of keel and bilge blocks and the requirements for cribbing and shoring.

(4) Knuckle loading.

(5) Special blocking techniques such as stern support towers or shoring, hauled or hinged blocks and blocks completed or modified by divers during the evolution.

g. Unusual conditions and/or circumstances for major occurrences such as:

(1) Hurricane or typhoon.

(2) Earthquake and tsunami.



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(3) High winds.

(4) Thunderstorm flash flooding.

h. Previous drydocking incidents and discussion of causes and ways they might have been avoided.

i. For dry docks that dock nuclear powered ships, demonstrate knowledge of:

(1) Operating requirements of the reactor plant during a docking evolution, dry dock support services required by the reactor plant and required safety precautions.

(2) Radiological procedures and precautions employed when a nuclear powered ship is in dry dock.

j. Demonstrate knowledge and familiarity with the casualty procedures applicable to the facilities being qualified to operate. Procedures should cover the following:

(1) Equipment malfunctions.

(2) Failure of remote control or indicating systems.

(3) Fire in the dry dock or dry dock spaces.

(4) Fire in drydocked ship.

(5) Flooding of dry dock tanks or basin.

(6) Loss of electrical power to all or part of the dock.

k. Factors of drydocking ships, such as:

(1) Trim, list and maximum draft prior to and during the drydocking evolution.

(2) Draft at landing.

(3) Draft of instability.

(4) Maximum keel block loading (LT/FT), including unusual loading conditions due to large overhang or interrupted keel blocks.

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- (5) Maximum knuckle block loading.
- (6) Stability during landing.
- (7) Floating dry dock and ship combined stability during the five phases of the docking and undocking evolution.
- (8) Differences among various types of docking facilities and their varied effects on ship stability.
- (9) Effect of tide on docking facility.
- (10) Change of ship's characteristics during the lay period in the dry dock.
- (11) Utilization of the ship's damage control books, inclining experiments, tank sounding tables/curves, Displacement and Other (D&O) Curves, and the last docking report.
- (12) Changing ship's weight (amount and location) during the lay period.
- (13) Selection of various types of blocking, and the types of woods and fastening arrangements used in their construction.
- (14) Setting docking block reference plane.

2. General information that shall be reviewed includes:

- a. NAVSEA Dry Dock Safety Certification Program course text, reference material and problem sets, 2002, (available to download at <http://www.usnavydrydocks.com>)
- b. Operating manuals, data books and damage control books of floating dry docks.
- c. "Safety of Floating Dry Docks in accordance with MIL-STD-1625A", by Robert G. Wasalaski, NAVSEA, 1981 (available to download at <http://www.usnavydrydocks.com>).

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PRACTICAL REQUIREMENTS FOR THE QUALIFICATION  
OF DOCKING OFFICERS

Prior to qualification as a Docking Officer, the following practical factors shall be completed under the supervision of a qualified Docking Officer:

1. Attend and participate in the following evolutions, as applicable:
  - a. Two docking conferences.
  - b. Two dockings (build-up papers, check blocks, land ship).
  - c. Two undocking conferences.
  - d. Two undockings.
2. Prepare the following for each class of ship normally drydocked by the facility:
  - a. Two docking or undocking notices for the particular facility being used.
  - b. Two docking reports.
  - c. Two dry dock build-up papers.
  - d. Two pumping plans (for floating dry docks).
3. Conduct the following:
  - a. Two docking conferences.
  - b. Two undocking conferences.
  - c. Four complete dockings (prepare build-up papers, check blocks, perform calculations, including pumping plan for floating dry docks, land ship, etc.).
  - d. Four complete undockings (including calculations).

Note: When it is impractical for prospective Docking Officers to obtain the required practical experience at the command or organization in a timely manner, they shall be assigned temporary duty at a similar naval activity for training and qualification. The number of evolutions listed may be increased

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or decreased at the option of the certifying authority,  
commensurate with the workload in the area and the ability of  
the candidate.

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SAMPLE CERTIFICATION LETTER FOR DOCKING OFFICERS

From: (Certifying Authority)  
To: (Individual Concerned)  
Via: (Commanding Officer or Officer-in-Charge, if appropriate)

Subj: CERTIFICATION OF QUALIFICATION AS DOCKING OFFICER

Ref: (a) NAVSEAINST 9997.3

1. Having met the requirements of reference (a) by passing the NAVSEA Dry Dock Safety Certification Program course examination, by passing a written examination, and by demonstrating practical ability to safely dock/undock ships in (type of dry dock or class of floating dry dock), you are hereby certified as a qualified Docking Officer for the aforementioned type or class of dry dock.

2. This certification shall remain in effect so long as you actively participate in a minimum of one docking per six month period in each type of facility for which qualified, but will be revoked upon transfer from your present command or organization.

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