

AMERICAN BOAT AND YACHT COUNCIL, INC., NEW YORK, N.Y.

STANDARDS AND RECOMMENDED PRACTICES FOR SEWAGE TREATMENT DEVICES FOR
MARINE TOILET WASTE, INCLUDING THEIR INSTALLATION

Project A-8

1. Scope

These recommended practices or standards apply to devices designed to treat human waste discharged through marine toilets for pollution abatement as may be required by appropriate regulatory agencies.

2. Definitions

The following terms are defined for purposes of this section :

a. *Most Probable Number (MPN)*.—A statistical measure of the number of coliform organisms present and indicator of the degree of pollution from human sources.

b. *Detention Time*.—The time or period that the sewage is retained in the device.

c. *Septic Action*.—The biological decomposition of organic matter in the absence of air accompanied by the production of unpleasant odors.

(Note: A more precise and technical treatment of these definitions may be found in "Glossary Water and Sewage Control Engineering" prepared by Joint Committee representing American Public Health Association, American Society of Civil Engineers, American Water Works Associations, Federation of Sewage Works Associations.)

3. Effluent requirements

A sewage treatment for marine toilets should discharge an effluent meeting the following minimum standards:

- a. Free of unsightly solids.
- b. Meeting the minimum requirements of regulatory agencies, or containing a most probable number (MPN) of coliform bacteria not exceeding 240 per hundred milliliters (ML).

4. Pretreatment of solids

Prior to disinfection, solids shall be sufficiently divided into fine particles to permit the required degree of disinfection necessary to meet the minimum effluent standards set forth in Paragraph 3.

5. Disinfecting agent

The disinfecting agent shall meet the following conditions:

- a. Be easily obtainable.
- b. Constitute minimum hazard when handled or stored and form no dangerous gases.
- c. Be sufficiently effective in relation to the detention time of the device to meet the effluent requirements set forth in Paragraph 3.

6. Materials

- a. Materials used shall be such as to withstand the corrosion effects of the sewage, the disinfecting agent and the flush water.
- b. Materials used should have chemical and/or galvanic compatibility.

7. Design and construction

The device shall:

- a. Be of ample strength for safe operation.
- b. Incorporate a detention chamber of size sufficient to produce an effluent which complies with the requirements set forth in Paragraph 3.
- c. Be of the type which does not depend on septic action as part of its treatment.
- d. Prevent the escape of dangerous gases or obnoxious odors to boat interiors.
- e. Provide for ease of cleaning, ease of maintenance, and ease of replenishment of the disinfecting agent.
- f. Function automatically with the operation of the marine toilets.
- g. Not require too frequent replenishment of the disinfectant.