



U. S. Department of Homeland Security

United States Coast Guard

Certificate of Approval

Coast Guard Approval Number: 159.015/10175/1

Expires: 02 June 2031

SEWAGE POLLUTION PREVENTION EQUIPMENT
TYPE II MARINE SANITATION DEVICE (MSD)

AHEAD SANITATION SYSTEMS
329 Hardware Road
Broussard LA 70518

Model(s): AT-10STP, AT-10STP-D, AT-18STP, AT-25STP, AT-35STP, AT-35STP-D

This Type Approval Certificate documents that the above listed Type II Marine Sanitation Devices, within the limitations below, have been verified to conform with the requirements for the operational discharge methods by Title 33 Code of Federal Regulations (CFR) Part 159 and IMO MARPOL Annex IV Regulation 9/Resolution MEPC.227(64).

Supporting documentation including the system drawings, environmental conformance reports, operations manuals, validated Independent Laboratory (IL) report, and additional operational & installation limits are listed in the Appendix of this certificate.

Operational and Installation Limitations/Authorizations:

The models listed above may not be installed in hazardous areas.

The models listed above comply with the requirements of Title 33 CFR 159.97 and may be installed aboard inspected vessels.

This Type Approval Certificate includes the above listed Type II MSDs manufactured during the period of validity of this certificate. A copy of this certificate should be carried on board a vessel fitted with this equipment at all times. This type approval remains valid for equipment manufactured at any time during the period of validity of this certificate, even after the expiration date has passed.

A plate or durable label containing data of the manufacturer's name, type and serial numbers, hydraulic loading, and date of manufacture should be fitted on each sewage treatment plant.

*** End ***

THIS IS TO CERTIFY THAT the above-named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date hereon unless sooner canceled or suspended by proper authority.



GIVEN UNDER MY HAND THIS 2nd DAY OF
JUNE 2026, AT WASHINGTON D.C.

J. D. BALDASSINI
Chief, Engineering Division
BY DIRECTION OF THE COMMANDANT

TERMS: The approval of the item described on the face of the Certificate has been based upon the submittal of satisfactory evidence that the item complies with the applicable provisions of the navigation and shipping laws and the applicable regulations in Title 33 and/or Title 46 of the Code of Federal Regulations. The approval is subject to any conditions noted on this Certificate and in the applicable laws and regulations governing the use of the item on vessels subject to Coast Guard inspection or on other vessels and boats.

Consideration will be given to an extension of this approval provided application is made 3 months prior to the expiration date of this Certificate.

The approval holder is responsible for making sure that the required inspections or tests of materials or devices covered by this approval are carried out during production as prescribed in the applicable regulations.

The approval of the item covered by this certificate is valid only so long as the item is manufactured in conformance with the details of the approved drawings, specifications, or other data referred to. No modification in the approved design, construction, or materials is to be adopted until the modification has been presented for consideration by the Commandant and confirmation received that the proposed alteration is acceptable.

NOTICE: Where a manufacturer of safety-at-sea equipment is offering for sale to the maritime industry, directly or indirectly, equipment represented to be approved, which fails to conform with either the design details or material specifications, or both, as approved by the Coast Guard, immediate action may be taken to invoke the various penalties and sanctions provided by law including prosecution under 46 U.S.C. 3318, which provides:

"A person that knowingly manufactures, sells, offers for sale, or possesses with intent to sell, any equipment subject to this part (*Part B. of Subtitle II of Title 46 U.S.C.*) and the equipment is so defective as to be insufficient to accomplish the purpose for which it is intended, shall be fined not more than \$10,000, imprisoned for not more than 5 years or both."

SUPPORTING DOCUMENTATION

Design and Construction Drawings:

Ahead Sanitation Drawing, "AT-10STP," Rev. C, dated December 15, 2025 (AT-10STP)
Ahead Sanitation Drawing, "AT-10STP-D," Rev. C, dated December 15, 2025 (AT-10STP-D)
Ahead Sanitation Drawing, "AT-18STP," Rev. C, dated December 15, 2025 (AT-18STP)
Ahead Sanitation Drawing, "AT-25STP-D," Rev. C, dated December 15, 2025 (AT-25STP-D)
Ahead Sanitation Drawing, "AT-35STPD-D," Rev. C, dated December 15, 2025 (AT-35STP-D)

Operations Manual:

"Type II Sewage Treatment Plan Installation and Operation Manual for Ahead Tank STP Models AT-10STP – AT-35STP and AT-10STPD-D – AT-35STP-D," Rev. --, dated June 1, 2016

Independent Laboratory Report:

TEi Testing Services Report No. TS-P00974 dated May 20, 2016 (Biological Efficacy Report)

Limits of Hydraulic Loading and Biochemical Oxygen Demand (BOD) without nitrification:

Model Name:	Maximum Throughput:	BOD Maximum Consumption:
AT-10STP	0.21 m ³ /day	0.90 kg/day
AT-10STP-D	0.21 m ³ /day	0.90 kg/day
AT-18STP	0.33 m ³ /day	1.62 kg/day
AT-25STP	0.33 m ³ /day	2.25 kg/day
AT-35STP	0.42 m ³ /day	3.15 kg/day
AT-35STP-D	0.42 m ³ /day	3.15 kg/day

TEST DATA AND RESULTS OF TESTS CONDUCTED ON SAMPLES FROM THE SEWAGE TREATMENT PLANT IN
ACCORDANCE WITH IMO RESOLUTION MEPC.227(64)

The sewage treatment plant was tested and produced an effluent which, on analysis, produces:

- .1 a geometric mean of no more than 100 thermotolerant coliforms/100 ml;
- .2 a geometric mean of total suspended solids of 35 Qi/Qe mg/l if tested ashore or the maximum total suspended solids not exceeding (35 plus x) Qi/Qe mg/l for the ambient water used for flushing purposes if tested on board;
- .3 a geometric mean of 5-day biochemical oxygen demand without nitrification (BOD5 without nitrification) of no more than 25 Qi/Qe mg/l;
- .4 a geometric mean of chemical oxygen demand (COD) of no more than 125 Qi/Qe mg/l;
- .5 a pH between 6 and 8.5

The sewage treatment plant can operate at angles of inclination of 22.5° in any plane from the normal operating position.

Tested Sewage Treatment Plant, Type:	Ahead Tank STP Sewage Treatment Plant, Type II
Manufactured by:	Ahead Sanitation Systems, Inc.
Organization conducting the test:	TEi Testing

System tested:	Ahead Tank Model AT-10STP
Designed hydraulic loading:	0.21 m ³ /day
Designed organic loading (BOD):	0.90 kg/day
Number of effluent samples tested:	40
Number of influent samples tested:	40
Raw sewage (influent) quality: total suspended solids (TSS):	667 mg/L
Maximum hydraulic daily loading value (50% of max) :	0.11 m ³ /day
Minimum hydraulic daily loading value (10% of max):	0.02 m ³ /day
Average hydraulic daily loading value (20% of max, twice per day):	0.04 m ³ /day
Total nitrogen influent quality:	15.8 mg/L
Total nitrogen effluent quality/reduction percentage:	0.78 mg/L; 95.6% reduction
Total phosphorus influent quality:	9.30 mg/L
Total phosphorus effluent quality/reduction percentage:	.05 mg/L; 99.5% reduction
Dilution Compensation Factor (Qi/Qe):	1.0 Qi/Qe

APPENDIX
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Geometric Mean of the Thermotolerant Coliform Count:	14 tcu/100mL
Geometric Mean of Total Suspended Solids:	6.2 mg/L
Geometric Mean of BOD5:	10.2 mg/L
Chemical Oxygen Demand (COD):	32.0 mg/L
pH of effluent:	7.1 at 22.3 °C
Type of disinfectant used:	Chlorine
If Chlorine – residual chlorine:	None
Maximum:	0.5 mg/L
Minimum:	0.1 mg/L
Geometric mean:	0.2 mg/L

Was the sewage treatment plant tested with:	
Fresh water flushing:	Yes
Salt water flushing:	No
Fresh and salt water flushing capable:	Yes
Greywater added:	Yes 20% black water to 80% grey water

Was the sewage treatment plant tested against the environmental conditions specified in section 5.0 paragraph 5.9 of resolution MEPC.227(64):	
Temperature:	Yes
Humidity:	Yes
Inclination:	Yes
Vibration:	Yes
Reliability of electrical and electronic equipment:	Yes

Limitations and the conditions of operation are imposed:	
Salinity:	None
Temperature:	None
Humidity:	None
Inclination:	None
Vibration:	None

*** END ***