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5760
April 13, 2020

VIA EMAIL: mark.riggio@kuraray.com; ian.cavanaugh@kuraray.com

Hyde Marine
Attn: Mark Riggio
2000 McClaren Woods Drive
Pittsburgh PA 15108

ALTERNATE MANAGEMENT SYSTEM ACCEPTANCE - UPDATE

The Coast Guard has completed its review of the Alternate Management System (AMS) application submitted by Hyde Marine, Inc., for the Hyde Guardian ballast water treatment system (BWTS), as well as additional materials submitted with the new type approval certificate issued by DNV-GL on behalf of the Norwegian Maritime Authority. Three prior AMS acceptance letters, issued in 2013, and 2017, correspond to earlier models of the Hyde Guardian BWTS with varying treatment rated capacity (TRC) up to 6,000 cubic meters/hour (m³/h). This revised letter grants AMS acceptance in accordance with the requirements of 33 CFR 151.2026 for additional Hyde Guardian BWTS models, as detailed in the DNV-GL type approval certificate No. TAP000020S issued on January 22, 2020.

The following Hyde Guardian models, which operate by applying ultra-violet (UV) radiation, are accepted for use as an AMS in U.S. waters:

- Models HG60U with a TRC of 60 m³/h;
- Models HG100U with a TRC of 100 m³/h;
- Models HG150U with a TRC of 150 m³/h;
- Models HG250U with a TRC of 250 m³/h;
- Models HG300U with a TRC of 300 m³/h;
- Models HG500U with a TRC of 500 m³/h;
- Models HG750U with a TRC of 750 m³/h;
- Models HG1000U with a TRC of 1,000 m³/h;
- Models HG2000U with a TRC of 2,000 m³/h;
- Models HG3000U with a TRC of 3,000 m³/h;
- Models HG100UX with a TRC of 100 m³/h;
- Models HG150UX with a TRC of 150 m³/h;
- Models HG250UX with a TRC of 250 m³/h;
- Models HG300UX with a TRC of 300 m³/h;

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- Models HG500UX with a TRC of 500 m³/h;
- Models HG750UX with a TRC of 750 m³/h;
- Models HG1000UX with a TRC of 1,000 m³/h;
- Models HG2000UX with a TRC of 2,000 m³/h; and
- Models HG3000UX with a TRC of 3,000 m³/h.

The Hyde Guardian BWTS is assigned the following AMS identification number:

AMS-2020-Hyde-Guardian-001

Coast Guard acceptance of the Hyde Guardian BWTS as an AMS does not accord or imply conformance to or compliance with any other Federal, state, or local water discharge effluent limitations that may apply to the vessel on which the AMS operates or the regulatory regimes and locations within which it operates. The owner and operator of the vessel must comply with all applicable laws, regulations, and treaties, including the Clean Water Act and associated provisions of the Vessel General Permit (VGP); the Federal Insecticide, Fungicide, and Rodenticide Act of 1972, as amended (FIFRA); other Coast Guard safety regulations and requirements; and other applicable laws and regulations.

In accordance with 33 CFR 151.2026 (a)(5), the AMS application required the submittal of a type approval application for the BWTS. The type approval information submitted with the AMS application does not have any bearing on the type approval status of the BWTS, nor does Coast Guard acceptance of the Hyde Guardian BWTS as an AMS indicate that the BWTS meets requirements for Coast Guard type approval.

The following conditions apply for the operation of the Hyde Guardian AMS in U.S. waters:

1. The AMS manufacturer must comply with all the general conditions of certification stipulated in the TA certificate issued by DNV-GL on behalf of the Norwegian Maritime Authority, as referenced above. Revocation of type approval by the approving authority will result in revocation of this AMS acceptance. Copies of all reports required under the stated conditions of use must be submitted to the Office of Environmental Standards (OES-3) at the following address or email:

COMMANDANT (CG-OES-3)
United States Coast Guard Stop
7509 2703 Martin Luther King
Jr. Ave SE Washington DC
20593-7509
e-mail: environmental_standards@uscg.mil

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2. Installation and repairs of the AMS must be performed in accordance with the manufacturer's instructions and approved by the flag administration or its representative.
3. Operation and maintenance must be conducted in accordance with all specifications and limiting conditions stipulated on the TA certificate and with the manufacturer's instructions, including any limitations posed by the environment (for example, water quality, temperature, salinity, or other parameters) or vessel operations (for example, voyage duration, pumping rates, or other constraints). The following specific conditions apply:
 - a. **Flow rates:** The flow rate of ballast water through the system should not exceed the treatment rated capacity (TRC) for the installed system, as specified on the TA certificate.
 - b. **UV intensity:** The system is designed to deliver a minimum UV dose of 170 mJ/cm². If the dose falls below 170 mJ/cm², the flow should automatically reduce to maintain the minimum dose requirement. If the minimum dose cannot be maintained by the system, an audible and visual alarm is triggered.
 - c. **Differential pressure across the filter:** The minimum inlet pressure and maximum operating pressure are 1 bar and 10 bar, respectively. The system is set to back flush automatically at 0.3 bar pressure differential. An audible and visual alarm is triggered when excessive back flushing (three or more consecutive back flushes) or high differential pressure (≥ 0.3 bar) occurs.

A historical record documenting that the system has been operated within these criteria, including a record of any alarm conditions, any deviations from the manufacturer's operating instructions, or any conditions and requirements noted above, shall be available for review onboard the vessel.

4. Salinity is not a limiting condition for the Hyde Guardian BWTS.
5. If installed on a U.S. flag vessel, it must be shown that the system and installation comply with or provide an equivalent level of safety to the requirements of 46 CFR Subchapter F (Marine Engineering) and Subchapter J (Electrical Engineering). All electrical equipment located within hazardous areas must be explosion proof or intrinsically safe as certified by an independent laboratory recognized by USCG per 46 CFR 111.105-7.
6. Use of the AMS is specified in the ship's ballast water management plan (BW plan), required by 33CFR 151.2050(g). The BW plan must identify the following: (1) the ballast water management practices to be used in the event the AMS cannot be used, and (2) the personnel responsible for the operation, maintenance, and repair of the BWTS. An up-to-date record of the operation,

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maintenance, and repair of the BWTS must be maintained onboard the ship.

7. Any change in design, materials, manufacturing, or intended operational conditions of this BWTS without prior notification to, and acceptance by, the U. S. Coast Guard will automatically invalidate this AMS acceptance. Prior to any such change, the manufacturer of an AMS must notify the Commanding Officer, U. S. Coast Guard Marine Safety Center (MSC), at the following address or e-mail:

Commanding Officer (MSC) Attn:
Marine Safety Center
U.S. Coast Guard Headquarters
2703 Martin Luther King Jr. Ave. SE
Washington, DC 20593-7509
e-mail: msc@uscg.mil

The notification must include the following: (1) a description of the change, the reason it is required, and its intended advantages; (2) an explanation of any effect of the change on installation, operation, maintenance, or repair requirements; and (3) an indication of whether or not the original configuration of the BWTS will be discontinued.

8. If the installed AMS does not operate properly when treating ballast water intended for discharge in U.S. waters, the person directing the movement of the vessel must ensure that the problem is reported to the nearest Coast Guard Captain of the Port (COTP) or District Commander as soon as practicable. The Coast Guard shall be notified of any treatment system or component failures, any irreparable or recurring damage to components of the AMS, frequent process upsets or out-of-bounds operating conditions, or other situations or process-related conditions that may reduce treatment effectiveness. The vessel may continue to the next U.S. port of call, subject to the directions of the COTP or District Commander, as provided by 33 CFR 160.
9. All transport and handling of chemicals required for proper operation of the AMS must be conducted in accordance with 46 CFR 147 (Hazardous Ships' Stores), 49 CFR 171- 180 (Hazardous Materials Regulations), and 46 CFR 98.30 (portable tanks), as appropriate.
10. Use of the AMS must be reported in the ship's ballast water management reports submitted to the National Ballast Information Clearinghouse, accessible online at <https://invasions.si.edu/nbic/>, as required by 33CFR 151.2060, as follows:
 - a. Report the AMS identification number, located toward the beginning of this letter and in bolded text, in "Vessel Information" section in the space labeled

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"Onboard BW Management System" and;

- b. In the "Ballast Water History" section, for each tank for which the AMS was used, select the "Event" as "Onboard Treatment" for one of the reported tank events (e.g., Discharge, Onboard treatment, Source).

The Coast Guard may suspend, withdraw or terminate the acceptance of this BWTS as an AMS in accordance with 46 CFR 2.75-40, 2.75-50(a) and 2.75-50(b), respectively.

A copy of this letter shall be provided to each vessel with this installed AMS and shall be available for review when the vessel is operating in U.S. waters.

I thank you for your dedicated efforts to seek out AMS acceptance, and we look forward to working with you throughout the type approval process. If you have any questions concerning this letter, you may contact Ms. Debbie Duckworth of my staff at (202) 372-1429 or Debbie.Duckworth@uscg.mil.

Sincerely,



S. T. BRADY
Captain, U.S. Coast Guard
Office of Operating and
Environmental Standards