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November 16, 2015

Zhejiang Yingpeng Marine Equipment Manufacturer CO., Ltd  
Dongpu Industrial Area  
Zhejiang, Wenling, China 317500  
Attn: Vivien Lin

### ALTERNATE MANAGEMENT SYSTEM ACCEPTANCE

The Coast Guard has completed its review of the Alternate Management System (AMS) application submitted by Zhejiang Yingpeng Marine Equipment Manufacturer CO., Ltd, for the YP ballast water management system (BWMS). This letter grants AMS acceptance in accordance with the requirements of 33 CFR 151.2026 for the YP BWMS models specified below, as type approved by the China Classification Society on behalf of the People's Republic of China, as detailed in type approval certificate No. ZG13T00051\_2 issued on February 28, 2015.

The following Zhejiang Yingpeng YP BWMS models are accepted for use as an AMS in U.S. waters:

- YP-300 BWMS with a treatment rated capacity (TRC) of 300 cubic meters/hour (m<sup>3</sup>/h)
- YP-500 BWMS with a TRC of 500 m<sup>3</sup>/h
- YP-800 BWMS with a TRC of 800 m<sup>3</sup>/h
- YP-1200 BWMS with a TRC of 1,200 m<sup>3</sup>/h

The YP models are assigned the following AMS identification number:

AMS-2015-YP-BWMS-001

Coast Guard acceptance of the YP BWMS 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 BWMS. The type approval information submitted with the

AMS application does not have any bearing on the type approval status of the BWMS, nor does Coast Guard acceptance of the YP BWMS as an AMS indicate that the BWMS meets requirements for Coast Guard type approval.

The following conditions apply for the operation of the YP BWMS in U.S. waters:

1. The AMS manufacturer must comply with all general conditions of certification stipulated in the type approval certificate issued by the China Classification Society on behalf of the Maritime Safety Administration of the People's Republic of China, 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)  
U.S. Coast Guard Stop 7509  
2703 Martin Luther King Jr. Ave SE  
Washington DC 20593-7509  
e-mail: environmental\_standards@uscg.mil
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 type approval 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 YP model, as specified on the type approval certificate. The minimum permissible flow rate for the YP BWMS varies by model. The BWMS control unit monitors ballast water system flow and automatically adjusts a flow control valve so that ballast water can gain enough UV radiation. If actual flow is less than rated flow, the control system can reduce power output to the UV sterilization units so that exposure dose can be maintained within the working design range.
  - b. **Differential pressure across the filter:** This BWMS is equipped with an automatic backwashing filter consisting of three weave-wire units installed in a single housing. The filter is designed to remove organisms greater than 50 um in size. The filter is kept clean of debris by a self-cleaning process that uses incoming ballast water if the differential pressure across the filter element exceeds 0.5 bar (7 PSI).

- c. **UV intensity, transmittance, and dosage:** The instruction manual for the YP BWMS specifies a design UV dose range of 190 to 350 milli-Joules per square centimeter (mJ/cm<sup>2</sup>). A UV light intensity sensor installed in the reactor cavity detects UV intensity produced by the UV lights. The BWMS control unit measures ballast water flow rate and UV intensity and adjusts exposure doses of UV lights automatically to ensure that doses are within the working range. When the system detects that UV doses are below lower limit, an alarm activates and it is necessary to clean the natural quartz socket tubes with the use of the mechanical cleaning plate and to adjust power output of the UV sterilization unit. The control system records and displays working hours of UV tubes and illumination intensity of UV rays, in order to ensure correct working conditions of UV tubes. When tubes are damaged or working light intensity of tubes cannot meet design requirements, the control system displays the fault location on the touch screen and sends audio and visual alarms.

A historical record documenting that the system has been operated within these criteria, including a record of any alarm conditions, shall be made available for review onboard the vessel.

4. Because the YP BWMS has not been adequately tested in freshwater, its use as an AMS is limited to the treatment of marine and brackish water with a practical salinity unit (PSU) concentration greater than 1.
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 must be specified in the ship's ballast water management plan (BW plan), required by 33CFR 151.2050(g). The BW plan must identify: (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 BWMS. An up-to-date record of the operation, maintenance, and repair of the BWMS must be maintained onboard the ship.
7. Any change in design, materials, manufacturing, or intended operational conditions of this BWMS 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 Stop 7410  
4200 Wilson Blvd, Suite 400  
Arlington VA 20598-7410  
e-mail: [msc@uscg.mil](mailto:msc@uscg.mil)

The notification must include (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 BWMS 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, irreparable 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.
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, as required by 33 CFR 151.2060, as follows:
  - a. In Section 4, report the number of tanks treated by the AMS in the space labeled "Underwent Alternative Management,"
  - b. In Section 4, write the AMS identification number (AMS-2013-YP MK II-001) in the space labeled "Please specify alternative method(s) used, if any," and;
  - c. In Section 5, in the middle section titled "BW MANAGEMENT PRACTICES" identify the management method as "ALT" under the heading "Method (ER/FT/ALT)" for each tank for which the AMS was used.

Subj: AMS ACCEPTANCE LETTER

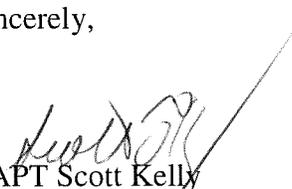
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The Coast Guard may suspend, withdraw, or terminate the acceptance of this BWMS as an AMS in accordance with 46 CFR 2.75-40, 2.75-50(a) and 2.75-50(b), respectively.

A copy of this letter shall be provided to each vessel with this AMS installed 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. Regina Bergner of my staff at (202) 372-1431 or Regina.R.Bergner@uscg.mil.

Sincerely,



CAPT Scott Kelly  
Chief, Office of Operating and Environmental  
Standards