



Ministero delle infrastrutture e della mobilità sostenibile

Ministry of sustainable infrastructures and mobility

Comando generale del Corpo delle Capitanerie di porto

Italian Coast Guard Headquarters

CERTIFICATO DI APPROVAZIONE DEL PROTOTIPO DEL SISTEMA DI CONTROLLO, TRATTAMENTO E GESTIONE DELL'ACQUA DI ZAVORRA

TYPE APPROVAL CERTIFICATE OF BALLAST WATER MANAGEMENT SYSTEM

Si certifica che il sistema di controllo e gestione dell'acqua di zavorra descritto di seguito è stato esaminato e provato in accordo ai requisiti delle specifiche contenute nel Codice per l'approvazione dei sistemi di controllo, trattamento e gestione dell'acqua di zavorra di cui alla Risoluzione MEPC.300(72). Il presente certificato ha validità solo per il sistema di controllo e gestione dell'acqua di zavorra sotto riferito.

This is to certify that the ballast water management system listed below has been examined and tested in accordance with the requirements of the specifications contained in the Code for Approval of Ballast Water Management Systems (IMO Resolution MEPC.300(72)). This certificate is valid only for the Ballast Water Management System referred to below.

Nome del sistema di controllo e gestione dell'acqua di zavorra:

Name of Ballast Water Management System:

MIURA BMWS

Costruttore del sistema di controllo e gestione dell'acqua di zavorra:

Ballast Water Management System manufactured by:

MIURA CO.LTD.

7 Horie, Matsuyama, Ehime

799-2696 Japan

Designazione del tipo e modello e incorporanti:

Under type and model designation and incorporating:

SYSTEM MODEL	TREATMENT RATED CAPACITY[m ³ /h]	FILTER UNIT	UV UNIT
HK-200(E)	200	200F(E)A	06U,06UE,06UY,200U,200UE
HK-300(E)	300	300F(E)/300F(E)A	08U,08UE,08UY,300U,300UE
HK-400(E)~6000(E)	400~6000	200F(E)A 300F(E)/300F(E)A 450F(E)/450F(E)A 600F(E)/600F(E)A 900F/900F(E)A Achieved by units which maintain filtration area of TRC x 0.004m ² or more	06U,06UE,06UY,200U,200UE 08U,08UE,08UY,300U,300UE Achieved by using multiple units in parallel or series depend on treatment capacity

* There are 5 types of filter which the flow rate is 200m³/h, 300m³/h, 450m³/h, 600m³/h and 900m³/h.

* UV unit is configured by aligning 2 types of model including the model in which the flow rates are 200 m³/h and 300 m³/h in parallel or in series.

* Miura BWMS consists of combination of 5 models filter and 2 models UV unit.

* Up to two UV units can be installed in series. In that case, the TRC is twice the value of the TRC of the installed UV unit.

In case of installation in series, it is necessary to use same value of the UV units TRC.

* Multiple units of control panel can be installed in parallel for treating larger than 900m³/h at ballasting operation and/or larger than 1,200m³/hr ballast water in deballasting operation.

* The TRC for deballasting operations is dependent on the TRC of the UV units. It is therefore possible to have a larger TRC for deballasting than ballasting; several UV units can be installed which have a higher TRC than the installed filter.

Altri equipaggiamenti prodotti da:

Other equipment manufactured by:

vedasi appendice al Certificato N. 24-2 rilasciato il 30/03/2021.

see appendix attached to Certificate No. 24-2 dated on 30/03/2021.

Apparecchiatura/disegno di vista d'assieme n.:

To equipment/assembly drawing No.:

LIST NO.	DOCUMENTS	DATE
01-M0-207	Final Report for USCG Type Approval HK-R system of Miura Co.,Ltd.	31 December 2019
01-M0-208	Verification Testing Report for Land-Based test of the HK-(E)R System	20 December 2019
01-M0-209	TQAP for Verification testing for HK-300R system	27 June 2019
01-M0-210	QAPP for Land-Based testing of BWMS	06 July 2018
01-M0-211	01-M0-100E : Procedure of Shipboard Test 01-M0-126 : Report of Shipboard Early Test	12 November 2018 05 December 2018
01-M0-212	Verification Testing Report for Shipboard testing of the HK-(E)R System	27 June 2019
01-M0-213	TQAP for Shipboard testing for HK=300R system	19 December 2018
01-M0-214	QAPP for Shipboard testing of BWMS	31 July 2018
01-M0-215A	Environmental Test Report R-16176 Rev.G : RetlifNSF SGS-R19-2884-EN00 : SGS SGS-R19-2887-EN00 : SGS SGS-E19-0138 : SGS SGS-E19-0139 : SGS FLI 12-14-086 : Labotech LIC 12-18-017 : Labotech LIC 12-19-021 : Labotech LIC 12-20-034 : Labotech LIC 12-20-168 : Labotech	29 October 2018 19 December 2019 19 December 2019 19 December 2019 19 December 2019 28 November 2014 08 February 2018 15 February 2019 31 March 2020 30 October 2020
01-M0-090	Readiness Evaluation test report 01-M0-089 : Type Approval Test Report 01-M0-090 : Functional Test Reprot	

01-M0-054N	OPERATION MANUAL	18 December 2020
01-M0-052J	SPECIFICATIONS	19 June 2020
01-M0-040H	SPECIFICATIONS	12 April 2019
01-M0-193D	BILL OF MATERIALS (STANDARD)	18 December 2020
01-M0-192D	BILL OF MATERIALS (EXPLOSION PROOF)	18 December 2020
01-M0-106K	Electrical Equipment List	18 December 2020
01-M0-170A	KR Salinity sensor functional test plan & check list	01 October 2019
01-M0-050G	CFD analysis and capacity development in Filter System of Miura BWMS	08 April 2019
01-M0-177	The calculation of irradiation dose of UV reactor	16 October 2019
01-M0-183	CFD Validation Test Report of Miura BWMS HK-R	11 December 2019
01-M0-216	Report of Regrowth Test	24 December 2020

Manuals for MIURA BWTS:

Manuale n. 01-M0-054N datato 18/12/2020.
Manual No. 01-M0-054N dated 18/12/2020.

Capacità nominale di trattamento – TRC (m³/h):

Da 200 a 6000 m³/h.
From 200 to 6000 m³/h.

Copia del presente certificato di Tipo Approvato deve essere sempre mantenuta a bordo di ogni nave dotata del sistema di controllo e gestione dell'acqua di zavorra descritto.

A copy of this Type Approval Certificate shall be carried on board of each ship fitted with this Ballast Water Management System at all times.

La documentazione relativa al riferimento al protocollo di prova ed una copia dei risultati dei test di prova devono essere disponibili a bordo ai fini ispettivi.

Documentation related to the test protocol and copy of the test results shall be available for inspection on board the ship.

Il presente Certificato di Tipo Approvato è emesso sulla base dell'approvazione originariamente rilasciata dal Ministero del Territorio, Infrastrutture, Trasporti e Turismo del Giappone (riferimento: Certificato n. 24-2 in data 30/03/2021).

This Type Approval Certificate is issued based on approval by Ministry of Land, Infrastructure, Transport and Tourism of Japan (reference: Certificate No. 24-2 dated on 30/03/2021).

Limitazioni imposte alle condizioni operative:

Limiting operating conditions imposed:

Temperatura acqua/ Water temperature: 0-50°C/0-50 °C
Salinità/Salinity: No limitazioni/No limitations

Come descritte nell'Appendice al Certificato n. 24-2 rilasciato in data 30/03/2021 dal Ministero del Territorio, Infrastrutture, Trasporti e Turismo del Giappone.

As described in the Appendix to the Type Approval Certificate No. 24-2 issued on 30/03/2021 by Ministry of Land, Infrastructure, Transport and Tourism of Japan.

Altre restrizioni imposte:

Other restrictions imposed including the following:

Vedasi Certificato n. 24-2 rilasciato in data 30/03/2021 dal Ministero del Territorio, Infrastrutture, Trasporti e Turismo del Giappone.

See Type Approval Certificate No. 24-2 issued on 30/03/2021 by Ministry of Land, Infrastructure, Transport and Tourism of Japan.

Rilasciato il 14/06/2022

Issued on

Valido fino al 09/01/2026

Valid until

**IL CAPO REPARTO
SICUREZZA DELLA NAVIGAZIONE E MARITTIMA**

Amm. Isp. (CP) Luigi GIARDINO

*The Head of Safety of Navigation
and Maritime Security Department
Rear Admiral UH (ITCG) Luigi GIARDINO*

Allegati:

Attachments:

Certificato di Tipo Approvato n. 24-2 rilasciato in data 30/03/2021 dal Ministero del Territorio, Infrastrutture, Trasporti e Turismo del Giappone e risultati dei test originali.

Type Approval Certificate No. 24-2 issued on 30/03/2021 by Ministry of Land, Infrastructure, Transport and Tourism of Japan and original test results.