



# Marine Safety Center

## BWMS Type Approval Status



<i>Approved</i>						
Application Received	Manufacturer (Country)	Model	Independent Laboratory	System Type	Capacity	Certificate Issued* (Amended)
20 Sep 2016	Optimarin (Norway)	OBS/OBS Ex	DNV	Filtration + Ultraviolet	100 – 3,000 m <sup>3</sup> /h	02 Dec 2016 (20 Apr 2022)
21 Sep 2016	Alfa Laval (Sweden)	PureBallast 3.0/3.1	DNV	Filtration + Ultraviolet	85 – 3,000 m <sup>3</sup> /h	23 Dec 2016 (16 Dec 2021)
23 Sep 2016	TeamTec BWMS AS (Norway)	Oceansaver MK II	DNV	Filtration + Electrolysis	200 – 7,200 m <sup>3</sup> /h	23 Dec 2016 (05 Nov 2021)
24 Jan 2017	Sunrui (China)	BalClor	DNV	Filtration + Electrolysis	50 – 8,500 m <sup>3</sup> /h	06 Jun 2017 (Pending)
31 Mar 2017	Ecochlor, Inc. (USA)	Ecochlor, EcoOne, EcoOne Hybrid BWTS	DNV	Filtration + Chemical Injection	500 – 16,200 m <sup>3</sup> /h	10 Aug 2017 (Pending)
02 May 2017	ERMA FIRST (Greece)	Erma First FIT	Lloyd's Register	Filtration + Electrolysis	100 – 3,740 m <sup>3</sup> /h	18 Oct 2017 (14 Apr 2021)
31 Oct 2017	Techcross, Inc. (Republic of Korea)	ECS & ECS-A	Korean Register	Electrolysis	150 – 12,000 m <sup>3</sup> /h	05 Jun 2018 (16 Oct 2020)
28 Sep 2017	S&SYS Co., Ltd (Republic of Korea)	Purimar	Korean Register	Filtration + Electrolysis	250 – 10,000 m <sup>3</sup> /h	15 Jun 2018 (Pending)
12 Mar 2018	BIO-UV Group (France)	BIO-SEA	DNV	Filtration + Ultraviolet	55 – 1,400 m <sup>3</sup> /h	20 Jun 2018 (Pending)
09 Apr 2018	Wärtsilä Water Systems, Ltd. (UK)	Aquarius EC	DNV	Filtration + Electrolysis	250 – 4,000 m <sup>3</sup> /h	30 Aug 2018 (02 Dec 2021)
31 May 2018	Hyundai Heavy Industries Co., Ltd. (Republic of Korea)	HiBallast	DNV	Filtration + Electrolysis	75 – 10,000 m <sup>3</sup> /h	26 Oct 2018 (17 Apr 2020)
09 May 2018	Headway Technology Co., Ltd. (People's Republic of China)	OceanGuard	DNV	Filtration + Electrolysis	65 – 5,200 m <sup>3</sup> /h	06 Nov 2018 (7 Mar 2022)
29 Mar 2018	JFE Engineering Corporation (Japan)	BallastAce	Control Union	Filtration + Chemical Injection	500 – 4,000 m <sup>3</sup> /h	13 Nov 2018 (6 May 2021)

\*Some manufacturers have requested multiple amendments to their Type Approval Certificates. The first date is the date when the original certificate was issued, and the date in parentheses is the date of the current amendment. Copies of Type Approval Certificates can be found at <http://www.dco.uscg.mil/msc/Ballast-Water/TACs/>, or by visiting the USCG Approved Equipment List at: <http://cgmix.uscg.mil/Equipment/Default.aspx>.

Revised 25 April 2022



# Marine Safety Center

## BWMS Type Approval Status



<i>Approved</i>						
Application Received	Manufacturer (Country)	Model	Independent Laboratory	System Type	Capacity	Certificate Issued* (Amended)
30 Mar 2018	Panasia Co., Ltd. (Republic of Korea)	GloEn-Patrol	DNV	Filtration + Ultraviolet	50 – 6,000 m <sup>3</sup> /h	14 Dec 2018
03 Mar 2018	De Nora (USA)	BALPURE	Lloyd's Register	Filtration + Electrolysis	400 – 8,570 m <sup>3</sup> /h	19 Dec 2018 (17 Dec 2020)
20 Jul 2018	Scienco/FAST (USA)	inTank BWTS	DNV	Electrolysis + Chemical Injection	Up to 200,000 m <sup>3</sup>	01 Feb 2019 (23 Sep 2021)
18 Oct 2018	DESMI Ocean Guard A/S (Denmark)	CompactClean	Lloyd's Register	Filtration + Ultraviolet	35 – 3,000 m <sup>3</sup> /h	16 Apr 2019 (04 Feb 2022)
19 Oct 2018	Wärtsilä Water Systems, Ltd. (UK)	Aquarius UV	DNV	Filtration + Ultraviolet	50 – 1,000 m <sup>3</sup> /h	02 May 2019 (26 Apr 2021)
21 Sep 2016/ 18 Mar 2019	Alfa Laval (Sweden)	PureBallast 3.2	DNV	Filtration + Ultraviolet	85 – 3,000 m <sup>3</sup> /h	15 May 2019 (27 Sep 2021)
19 Oct 2018	Cathelco Ltd (UK)	Evolution	Lloyd's Register	Filtration + Ultraviolet	55 – 1,500 m <sup>3</sup> /h	25 Jun 2019
13 Jun 2019	COSCO Shipbuilding Industry Co., Ltd. (China)	Blue Ocean Shield (BOS)	DNV	Filtration + Ultraviolet	100 – 3,200 m <sup>3</sup> /h	09 Sep 2019 (25 Sep 2020)
01 Apr 2019	Hyundai Heavy Industries Co., Ltd. (Republic of Korea)	EcoBallast	Korean Register	Filtration + Ultraviolet	250 – 2,160 m <sup>3</sup> /h	07 Oct 2019
16 Apr 2019	Miura Co., Ltd. (Japan)	HK-(E)C	DNV	Filtration + Ultraviolet	160 – 900 m <sup>3</sup> /h	28 Oct 2019 (10 Mar 2021)
28 Jun 2019	HANLA IMS Co., Ltd. (Republic of Korea)	EcoGuardian	Korean Register	Filtration + Electrolysis	130 – 4,000 m <sup>3</sup> /h	05 Nov 2019 (9 Feb 2021)
23 Jan 2019	Miura Co., Ltd. (Japan)	HK-S(E)	NSF International	Filtration + Ultraviolet	200 – 900 m <sup>3</sup> /h	08 Jan 2020
19 Jul 2019	BAWAT A/S (Denmark)	BAWAT BWMS Mk2	Lloyd's Register	Heat	50 – 5,000 m <sup>3</sup> /h	04 Mar 2020 (26 Feb 2021)

\*Some manufacturers have requested multiple amendments to their Type Approval Certificates. The first date is the date when the original certificate was issued, and the date in parentheses is the date of the current amendment. Copies of Type Approval Certificates can be found at <http://www.dco.uscg.mil/msc/Ballast-Water/TACs/>, or by visiting the USCG Approved Equipment List at: <http://cgmix.uscg.mil/Equipment/Default.aspx>.

Revised 25 April 2022



# *Marine Safety Center*

## *BWMS Type Approval Status*



<i>Approved</i>						
<b>Application Received</b>	<b>Manufacturer (Country)</b>	<b>Model</b>	<b>Independent Laboratory</b>	<b>System Type</b>	<b>Capacity</b>	<b>Certificate Issued* (Amended)</b>
30 Mar 2018/ 30 Sep 2019	Panasia Co., Ltd. (Republic of Korea)	GloEn-Patrol 2.0	DNV	Filtration + Ultraviolet	50 – 6,000 m <sup>3</sup> /h	19 Mar 2020
30 Aug 2018	NK Co., Ltd. (Republic of Korea)	NK-O3 BlueBallast II	Lloyd's Register	Ozone	200 – 8,000 m <sup>3</sup> /h	23 Mar 2020
27 Sep 2018	NK Co., Ltd. (Republic of Korea)	NK-O3 Blue-Ballast II Plus	Lloyd's Register	Ozone	200 – 8,000 m <sup>3</sup> /h	23 Mar 2020
27 Dec 2019	Hyde Marine Inc. (USA)	Guardian-US	DNV	Filtration + Ultraviolet	60 – 3,000 m <sup>3</sup> /h	29 Apr 2020
31 Dec 2019	Miura Co., Ltd. (Japan)	HK-(E)R	Korean Register	Filtration + Ultraviolet	200 – 900 m <sup>3</sup> /h	07 May 2020 (30 Apr 2021)
13 Jan 2020	Techcross, Inc. (Republic of Korea)	ECS-Hychlor	DNV	Filtration + Electrolysis	300 – 8,000 m <sup>3</sup> /h	11 May 2020
27 Nov 2018	Semb-Eco Pte, Ltd. (Singapore)	LUV U1	Lloyd's Register	Filtration + Ultraviolet	500 m <sup>3</sup> /h	27 May 2020
04 Feb 2020	Kuraray Co., Ltd. (Japan)	Microfade II	Control Union	Filtration + Chemical Injection	250 – 2,000 m <sup>3</sup> /h	24 Jun 2020
12 Jun 2020	oneTank, LLC (USA)	oneTank	DNV	Chemical Injection	Up to 4,000 m <sup>3</sup> /tank	14 Sep 2020 (Pending)
17 Jun 2020	Elite Marine Corp. (China)	Seascape	DNV	Filtration + Ultraviolet	80 – 5,000 m <sup>3</sup> /h	16 Oct 2020
30 Jan 2020	Panasonic Environmental Systems & Engineering Co., Ltd. (Japan)	ATPS-BLUESys	DNV	Electrolysis	150 – 3,600 m <sup>3</sup> /h	21 Oct 2020
31 Jul 2020	Knutsen Ballast Water AS (Norway)	KBAL BWMS	Lloyd's Register	Pressure Vacuum + Ultraviolet	400 - 3,000 m <sup>3</sup> /h	05 Nov 2020 (26 Jan 2022)
28 Sep 2020	Alfa Laval (Sweden)	PureBallast 2.0	DNV	Filtration + Ultraviolet	250 – 2,500 m <sup>3</sup> /h	30 Dec 2020

\*Some manufacturers have requested multiple amendments to their Type Approval Certificates. The first date is the date when the original certificate was issued, and the date in parentheses is the date of the current amendment. Copies of Type Approval Certificates can be found at <http://www.dco.uscg.mil/msc/Ballast-Water/TACs/>, or by visiting the USCG Approved Equipment List at: <http://cgmix.uscg.mil/Equipment/Default.aspx>.

Revised 25 April 2022



# *Marine Safety Center BWMS Type Approval Status*



<i>Approved</i>						
<b>Application Received</b>	<b>Manufacturer (Country)</b>	<b>Model</b>	<b>Independent Laboratory</b>	<b>System Type</b>	<b>Capacity</b>	<b>Certificate Issued* (Amended)</b>
09 Oct 2020	TeamTec BWMS AS (Norway)	Senza BWMS	DNV	Chemical Injection	375 – 3,750 m <sup>3</sup> /h	11 Feb 2021 (16 Jul 2021)
28 Sep 2020	SKF Marine GmbH (Germany)	SKF BlueSonic BWMS	DNV	Filtration + Ultraviolet + Ultrasound	100 – 1,500 m <sup>3</sup> /h	14 Apr 2021 (7 Apr 2022)
30 Dec 2020	Wuxi Brightsky Electronic Co. (China)	BSKY	Korean Register	Separation + Ultraviolet	80 – 6,000 m <sup>3</sup> /h	27 Apr 2021 (28 Feb 2022)
07 Jun 2019	Evoqua Water Technologies Ltd. (United Kingdom)	SeaCURE	PIA	Filtration + Electrolysis	500 – 6,000 m <sup>3</sup> /h	08 Jun 2021 (16 Dec 2021)
31 May 2021	Jiangsu Nanji Machinery Co. Ltd. (China)	NiBallast	DNV	Filtration + Deoxygenation	100 – 4,000 m <sup>3</sup> /h	10 Sep 2021
23 Apr 2021	Hyundai Heavy Industries Co., Ltd. (Republic of Korea)	HiBallast NF	KIOST	Electrolysis	75 – 10,000 m <sup>3</sup> /h	27 Oct 2021
27 Jul 2021	RWO GmbH (Germany)	CleanBallast-OBS	DNV	Filtration + Electrolysis	500 – 3,000 m <sup>3</sup> /h	16 Dec 2021
03 Jun 2021	Norwegian Greentech AS (Norway)	NGT BWMS	DNV	Filtration + Ultraviolet	27 – 609 m <sup>3</sup> /h	24 Feb 2022
10 May 2021	Atlantium Technologies Ltd. (Israel)	Purestream	LR	Filtration + Ultraviolet	100 – 1,500 m <sup>3</sup> /h	21 Apr 2022

\*Some manufacturers have requested multiple amendments to their Type Approval Certificates. The first date is the date when the original certificate was issued, and the date in parentheses is the date of the current amendment. Copies of Type Approval Certificates can be found at <http://www.dco.uscg.mil/msc/Ballast-Water/TACs/>, or by visiting the USCG Approved Equipment List at: <http://cgmix.uscg.mil/Equipment/Default.aspx>.

Revised 25 April 2022



# Marine Safety Center BWMS Type Approval Status



<i>Under Review</i>						
<b>Application Received</b>	<b>Manufacturer (Country)</b>	<b>Model</b>	<b>Independent Laboratory</b>	<b>System Type</b>	<b>Capacity</b>	<b>Certificate Issued* (Amended)</b>
12 Jan 2022	oneTank, LLC (USA)	oneTank	DNV	Chemical Injection	Up to 4,000 m <sup>3</sup> /tank	14 Sep 2020 (Pending)
28 Jan 2022	Ecochlor, Inc. (USA)	Ecochlor, EcoOne, EcoOne Hybrid BWTS	DNV	Filtration + Chemical Injection	500 – 16,200 m <sup>3</sup> /h	10 Aug 2017 (Pending)
16 Mar 2022	TeamTec BWMS AS (Norway)	Senza BWMS	DNV	Chemical Injection	375- 3,750 m <sup>3</sup> /h	11 Feb 2021 (Pending)
4 April 2022	S&SYS Co., Ltd (Republic of Korea)	Purimar	Korean Register	Filtration + Electrolysis	250 – 10,000 m <sup>3</sup> /h	15 Jun 2018 (Pending)
22 April 2022	BIO-UV Group (France)	BIO-SEA	DNV	Filtration + Ultraviolet	55 – 1,400 m <sup>3</sup> /h	20 Jun 2018 (Pending)
22 April 2022	Sunrui (China)	BalClor	DNV	Filtration + Electrolysis	50 – 8,500 m <sup>3</sup> /h	06 Jun 2017 (Pending)

\*Some manufacturers have requested multiple amendments to their Type Approval Certificates. The first date is the date when the original certificate was issued, and the date in parentheses is the date of the current amendment. Copies of Type Approval Certificates can be found at <http://www.dco.uscg.mil/msc/Ballast-Water/TACs/>, or by visiting the USCG Approved Equipment List at: <http://cgmix.uscg.mil/Equipment/Default.aspx>.

Revised 25 April 2022