



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	65 – 3,000 m ³ /h	02-Dec-2016 (31-Mar-2023)
21-Sep-2016	Alfa Laval (Sweden)	PureBallast 3.0/3.1	DNV	Filtration + Ultraviolet	85 – 3,000 m ³ /h	23-Dec-2016 (Pending)
23-Sep-2016	TeamTec BWMS AS (Norway)	Oceansaver MK II	DNV	Filtration + Electrodialysis	200 – 7,200 m ³ /h	23-Dec-2016 (9-Nov-2022)
24-Jan-2017	Sunrui (China)	BalClor	DNV	Filtration + Electrolysis	50 – 8,500 m ³ /h	06-Jun-2017 (03-Jun-2022)
31-Mar-2017	Ecochlor, Inc. (USA)	Ecochlor, EcoOne, EcoOne Hybrid	DNV	Filtration + Chemical Injection	500 – 16,200 m ³ /h	10-Aug-2017 (25-May-2023)
2-May-2017	ERMA FIRST (Greece)	Erma First FIT	Lloyd's Register	Filtration + Electrolysis	100 – 3,740 m ³ /h	18-Oct-2017 (28-Sep-2023)
31-Oct-2017	Techcross, Inc. (Republic of Korea)	ECS & ECS-A	Korean Register	Electrolysis	150 – 12,000 m ³ /h	05-Jun-2018 (25-May-2023)
28-Sep-2017	S&SYS Co., Ltd (Republic of Korea)	Purimar	Korean Register	Filtration + Electrolysis	250 – 10,000 m ³ /h	15-Jun-2018 (30-May-2023)
12-Mar-2018	BIO-UV Group (France)	BIO-SEA	DNV	Filtration + Ultraviolet	55 – 1,400 m ³ /h	20-Jun-2018 (20-Jun-2023)
9-Apr-2018	Wärtsilä Water Systems, Ltd. (UK)	Aquarius EC	DNV	Filtration + Electrolysis	250 – 4,000 m ³ /h	30-Aug-2018 (11-Aug-2023)
31-May-2018	Hyundai Heavy Industries Co., Ltd. (Republic of Korea)	HiBallast	DNV	Filtration + Electrolysis	75 – 10,000 m ³ /h	26-Oct-2018 (17-Apr-2020)
9-May-2018	Headway Technology Co., Ltd. (People's Republic of China)	OceanGuard	DNV	Filtration + Electrolysis	65 – 5,200 m ³ /h	06-Nov-2018 (07-Mar-2022)
29-Mar-2018	JFE Engineering Corporation (Japan)	BallastAce	Control Union	Filtration + Chemical Injection	500 – 4,000 m ³ /h	13-Nov-2018 (02-Oct-2023)

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30-Mar-2018	Panasia Co., Ltd. (Republic of Korea)	GloEn-Patrol	DNV	Filtration + Ultraviolet	50 – 6,000 m ³ /h	14-Dec-2018 (10-Nov-2022)
3-Mar-2018	De Nora (USA)	BALPURE	Lloyd's Register	Filtration + Electrolysis	400 – 8,570 m ³ /h	19-Dec-2018 (17-Dec-2020)
20-Jul-2018	Scienco/FAST (USA)	inTank BWTS	DNV	Electrolysis + Chemical Injection	Up to 200,000 m ³	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 ³ /h	16-Apr-2019 (04-Feb-2022)
19-Oct-2018	Wärtsilä Water Systems, Ltd. (UK)	Aquarius UV	DNV	Filtration + Ultraviolet	50 – 1,000 m ³ /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 ³ /h	15-May-2019 (Pending)
19-Oct-2018	Cathelco Ltd (UK)	Evolution	Lloyd's Register	Filtration + Ultraviolet	55 – 1,500 m ³ /h	25-Jun-2019
13-Jun-2019	COSCO Shipping Heavy Industry Technology Co., Ltd. (China)	Blue Ocean Shield (BOS)	DNV	Filtration + Ultraviolet	100 – 3,200 m ³ /h	09-Sep-2019 (26-Aug-2022)
1-Apr-2019	Hyundai Heavy Industries Co., Ltd. (Republic of Korea)	EcoBallast	Korean Register	Filtration + Ultraviolet	250 – 2,160 m ³ /h	7-Oct-2019
16-Apr-2019	Miura Co., Ltd. (Japan)	HK-(E)C	DNV	Filtration + Ultraviolet	160 – 900 m ³ /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 ³ /h	05-Nov-2019 (09-Feb-2021)
23-Jan-2019	Miura Co., Ltd. (Japan)	HK-S(E)	NSF International	Filtration + Ultraviolet	200 – 900 m ³ /h	8-Jan-2020
19-Jul-2019	BAWAT A/S (Denmark)	BAWAT BWMS Mk2	Lloyd's Register	Heat	50 – 5,000 m ³ /h	04-Mar-2020 (Pending)

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30 Mar 2018/ 30 Sep 2019	Panasia Co., Ltd. (Republic of Korea)	GloEn-Patrol 2.0	DNV	Filtration + Ultraviolet	50 – 6,000 m ³ /h	19-Mar-2020 (10-Nov-2022)
30-Aug-2018	NK Co., Ltd. (Republic of Korea)	NK-O3 BlueBallast II	Lloyd's Register	Ozone	200 – 8,000 m ³ /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 ³ /h	23-Mar-2020
27-Dec-2019	Hyde Marine Inc. (USA)	Guardian-US	DNV	Filtration + Ultraviolet	60 – 3,000 m ³ /h	29-Apr-2020 (15-Feb-23)
31-Dec-2019	Miura Co., Ltd. (Japan)	HK-(E)R	Korean Register	Filtration + Ultraviolet	200 – 900 m ³ /h	07-May-2020 (21-Feb-2023)
13-Jan-2020	Techcross, Inc. (Republic of Korea)	ECS-Hychlor	DNV	Filtration + Electrolysis	300 – 8,000 m ³ /h	11-May-2020
27-Nov-2018	Semb-Eco Pte, Ltd. (Singapore)	LUV U1	Lloyd's Register	Filtration + Ultraviolet	500 m ³ /h	27-May-2020
4-Feb-2020	Kuraray Co., Ltd. (Japan)	Microfade II	Control Union	Filtration + Chemical Injection	250 – 2,000 m ³ /h	24-Jun-2020
12-Jun-2020	oneTank, LLC (USA)	oneTank	DNV	Chemical Injection	Up to 4,000 m ³ /tank	14-Sep-2020 (15-Jun-2022)
17-Jun-2020	Elite Marine Corp. (China)	Seascape	DNV	Filtration + Ultraviolet	80 – 5,000 m ³ /h	16-Oct-2020
30-Jan-2020	Panasonic Environmental Systems & Engineering Co., Ltd. (Japan)	ATPS-BLUEsys	DNV	Electrolysis	150 – 3,600 m ³ /h	21-Oct-2020
31-Jul-2020	Knutsen Ballast Water AS (Norway)	KBAL BWMS	Lloyd's Register	Pressure Vacuum + Ultraviolet	400 - 3,000 m ³ /h	5-Nov-2020 (13-Sep-2023)
28-Sep-2020	Alfa Laval (Sweden)	PureBallast 2.0	DNV	Filtration + Ultraviolet	250 – 2,500 m ³ /h	30-Dec-2020

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9-Oct-2020	TeamTec BWMS AS (Norway)	Senza BWMS	DNV	Chemical Injection	375 – 3,750 m ³ /h	11-Feb-2021 (10-Jan-2023)
28-Sep-2020	SKF Marine GmbH (Germany)	SKF BlueSonic BWMS	DNV	Filtration + Ultraviolet + Ultrasound	100 – 1,500 m ³ /h	14-Apr-2021 (07-Apr-2022)
30-Dec-2020	Wuxi Brightsky Electronic Co. (China)	BSKY	Korean Register	Separation + Ultraviolet	80 – 6,000 m ³ /h	27-Apr-2021 (28-Feb-2022)
7-Jun-2019	Evoqua Water Technologies Ltd. (United Kingdom)	SeaCURE	PIA	Filtration + Electrolysis	500 – 6,000 m ³ /h	08-Jun-2021 (15-Jun-2023)
31-May-2021	Jiangsu Nanji Machinery Co. Ltd. (China)	NiBallast	DNV	Filtration + Deoxygenation	100 – 4,000 m ³ /h	10-Sep-2021 (06-Sep-2023)
23-Apr-2021	Hyundai Heavy Industries Co., Ltd. (Republic of Korea)	HiBallast NF	KIOST	Electrolysis	75 – 10,000 m ³ /h	27-Oct-2021 (31-Oct-2021)
27-Jul-2021	RWO GmbH (Germany)	CleanBallast-OBS	DNV	Filtration + Electrolysis	500 – 3,000 m ³ /h	16-Dec-2021
3-Jun-2021	Norwegian Greentech AS (Norway)	NGT BWMS	DNV	Filtration + Ultraviolet	27 – 609 m ³ /h	2/24/2022 (Pending)
10-May-2021	Atlantium Technologies Ltd. (Israel)	Purestream	LR	Filtration + Ultraviolet	100 – 1,500 m ³ /h	21-Apr-2022
31-May-2022	Langh Tech Oy AB (Finland)	LanghBW	DNV	Filtration + Ultraviolet	300 – 600 m ³ /h	16-Sep-2022
3-Jun-2022	AQUASTAR Co., Ltd (Republic of Korea)	AquaStar	Korean Register	Electrolysis	200- 5,000 m ³ /h	7-Nov-2022
16-Mar-2023	Shanghai Electric Cyeco Environmental Technology Co., Ltd (China)	Cyeco	DNV	Filtration + Ultraviolet	100- 1,600 m ³ /h	21-Jun-23

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<i>Under Review</i>						
Application Received	Manufacturer (Country)	Model	Independent Laboratory	System Type	Capacity	Certificate Issued* (Amended)
18-Nov-2022	SAMKUN CENTRURY Co., Ltd.	ARA Plus+	KR	Filtration + Ultraviolet	150 – 1,300 m ³ /h	(Pending)
16-Feb-2023	Techcross, Inc. (Republic of Korea)	ECS-HYCLHOR 2.0	LR	Electrolysis	250 – 8,000 m ³ /h	(Pending)
6-Mar-2023	BAWAT A/S (Denmark)	BAWAT BWMS Mk2	LR	Heat	5 – 5,000 m ³ /h	4-Mar-2020 (Pending)
3-Apr-2023	Semb-Eco Pte, Ltd. (Singapore)	LUV U1	LR	Filtration + Ultraviolet	500 m ³ /h	27-May-2020 (Pending)
17-May-2023	HANLA IMS Co., Ltd. (Republic of Korea)	EcoGuardian NF	Korean Register	Electrolysis	130 – 6,000 m ³ /h	(Pending)
24-Aug-2023	Alfa Laval (Sweden)	PureBallast 3.0/3.1	DNV	Filtration + Ultraviolet	85 – 3,000 m ³ /h	23-Dec-2016 (Pending)
24-Aug-2023	Alfa Laval (Sweden)	PureBallast 3.2	DNV	Filtration + Ultraviolet	85 – 3,000 m ³ /h	15-May-2019 (Pending)
7-Sep-2023	Norwegian Greentech AS (Norway)	NGT BWMS	DNV	Filtration + Ultraviolet	27 – 609 m ³ /h	2/24/2022 (Pending)

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