



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 ³ /h | 02 Dec 2016 (Pending) |
| 21 Sep 2016 | Alfa Laval (Sweden) | PureBallast 3.0/3.1 | DNV | Filtration + Ultraviolet | 85 – 3,000 m ³ /h | 23 Dec 2016 (04 Apr 2019) |
| 23 Sep 2016 | TeamTec BWMS AS (Norway) | Oceansaver MK II | DNV | Filtration + Electrodialysis | 200 – 7,200 m ³ /h | 23 Dec 2016 (05 Nov 2021) |
| 24 Jan 2017 | Sunrui (China) | BalClor | DNV | Filtration + Electrolysis | 50 – 8,500 m ³ /h | 06 Jun 2017 (09 Jun 2020) |
| 31 Mar 2017 | Ecochlor, Inc. (USA) | Ecochlor BWTS | DNV | Filtration + Chemical Injection | 500 – 16,200 m ³ /h | 10 Aug 2017 (18 Sep 2020) |
| 02 May 2017 | ERMA FIRST (Greece) | Erma First FIT | Lloyd's Register | Filtration + Electrolysis | 100 – 3,740 m ³ /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 ³ /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 ³ /h | 15 Jun 2018 (29 Nov 2021) |
| 12 Mar 2018 | BIO-UV Group (France) | BIO-SEA | DNV | Filtration + Ultraviolet | 55 – 1,400 m ³ /h | 20 Jun 2018 (Pending) |
| 09 Apr 2018 | Wärtsilä Water Systems, Ltd. (UK) | Aquarius EC | DNV | Filtration + Electrolysis | 250 – 4,000 m ³ /h | 30 Aug 2018 (06 Jan 2021) |
| 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) |
| 09 May 2018 | Headway Technology Co., Ltd. (People's Republic of China) | OceanGuard | DNV | Filtration + Electrolysis | 65 – 5,200 m ³ /h | 06 Nov 2018 (05 May 2020) |
| 29 Mar 2018 | JFE Engineering Corporation (Japan) | BallastAce | Control Union | Filtration + Chemical Injection | 500 – 4,000 m ³ /h | 13 Nov 2018 (06 May 2021) |

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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 |
| 03 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 (Pending) |
| 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 (27 Sep 2021) |
| 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 Shipbuilding Industry Co., Ltd. (China) | Blue Ocean Shield (BOS) | DNV | Filtration + Ultraviolet | 100 – 3,200 m ³ /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 ³ /h | 07 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 (9 Feb 2021) |
| 23 Jan 2019 | Miura Co., Ltd. (Japan) | HK-S(E) | NSF International | Filtration + Ultraviolet | 200 – 900 m ³ /h | 08 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 (26 Feb 2021) |

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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 |
| 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 |
| 31 Dec 2019 | Miura Co., Ltd. (Japan) | HK-(E)R | Korean Register | Filtration + Ultraviolet | 200 – 900 m ³ /h | 07 May 2020 (30 Apr 2021) |
| 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 |
| 04 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 (04 Nov 2021) |
| 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 and 3,000 m ³ /h | 05 Nov 2020 (Pending) |
| 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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| 09 Oct 2020 | TeamTec BWMS AS (Norway) | Senza BWMS | DNV | Chemical Injection | 375 – 3,750 m ³ /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 ³ /h | 14 Apr 2021 |
| 30 Dec 2020 | Wuxi Brightsky Electronic Co. (China) | BSKY | Korean Register | Separation + Ultraviolet | 80 – 6,000 m ³ /h | 27 Apr 2021 |
| 07 Jun 2019 | Evoqua Water Technologies Ltd. (United Kingdom) | SeaCURE | NSF International | Filtration + Electrolysis | 500 – 6,000 m ³ /h | 08 Jun 2021 (Pending) |
| 31 May 2021 | Jiangsu Nanji Machinery Co. Ltd. (China) | NiBallast | DNV | Filtration + Deoxygenation | 100 – 4,000 m ³ /h | 10 Sep 2021 |
| 23 Apr 2021 | Hyundai Heavy Industries Co., Ltd. (Republic of Korea) | HiBallast NF | KIOST | Electrolysis | 75 – 10,000 m ³ /h | 27 Oct 2021 |

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| <i>Under Review</i> | | | | | | |
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| 10 May 2021 | Atlantium Technologies Ltd. (Israel) | Purestream | LR | Filtration + Ultraviolet | 100 – 1,500 m ³ /h | Pending |
| 03 Jun 2021 | Norwegian Greentech AS (Norway) | NGT BWMS | DNV | Filtration + Ultraviolet | 30 – 1,274 m ³ /h | Pending |
| 09 Jul 2021 | BIO-UV Group (France) | BIO-SEA | DNV | Filtration + Ultraviolet | 55 – 1,400 m ³ /h | 20 Jun 2018 (Pending) |
| 27 Jul 2021 | RWO GmbH (Germany) | CleanBallast-OBS | DNV | Filtration + Electrolysis | 500 – 3,000 m ³ /h | Pending |
| 10 Sep 2021 | DESMI Ocean Guard A/S (Denmark) | CompactClean | DNV | Filtration + Ultraviolet | 35 – 3,000 m ³ /h | 16 Apr 2019 (Pending) |
| 14 Sep 2021 | EcoChlor, Inc. (USA) | EcoOne | DNV | Chemical Injection | 500- 16,200 m ³ /h | 10 Aug 2017 (Pending) |
| 29 Oct 2021 | Evoqua Water Technologies, Ltd. (United Kingdom) | SeaCURE | PIA | Filtration + Electrolysis | 500 – 6,000 m ³ /h | 08 June 2021 (Pending) |
| 11 Nov 2021 | Knutsen Ballast Water AS (Norway) | KBAL BWMS | Lloyd’s Register | Pressure Vacuum + Ultraviolet | 400 and 3,000 m ³ /h | 05 Nov 2020 (Pending) |
| 18 Nov 2021 | Optimarin (Norway) | OBS/OBS Ex | DNV | Filtration + Ultraviolet | 100 – 3,000 m ³ /h | 02 Dec 2016 (Pending) |

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