



# *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>
20 Sep 2016	Optimarin (Norway)	OBS/OBS Ex	DNV GL	Filtration + Ultraviolet	167 – 3,000 m <sup>3</sup> /h	02 Dec 2016 (03 Nov 2017)
21 Sep 2016	Alfa Laval (Sweden)	PureBallast 3	DNV GL	Filtration + Ultraviolet	150 – 3,000 m <sup>3</sup> /h	23 Dec 2016 (21 Dec 2017)
23 Sep 2016	TeamTec OceanSaver AS (Norway)	OceanSaver MK II	DNV GL	Filtration + Electrodialysis	200 – 7,200 m <sup>3</sup> /h	23 Dec 2016 (18 Oct 2017)
24 Jan 2017	Sunrui (China)	BalClor	DNV GL	Filtration + Electrolysis	50 – 8,500 m <sup>3</sup> /h	06 Jun 2017 (05 Jan 2018)
31 Mar 2017	Ecochlor, Inc. (USA)	Ecochlor BWTS	DNV GL	Filtration + Chemical Injection	500 – 16,200 m <sup>3</sup> /h	10 Aug 2017 (26 Apr 2018)
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 (25 Sep 2018)
31 Oct 2017	Techcross, Inc. (Republic of Korea)	Electro-Cleen	Korean Register	Electrolysis	150 – 12,000 m <sup>3</sup> /h	05 Jun 2018
28 Sep 2017	Samsung Heavy Industries Co., Ltd (Republic of Korea)	Purimar	Korean Register	Filtration + Electrolysis	250 – 10,000 m <sup>3</sup> /h	15 Jun 2018 (20 Jul 2018)
12 Mar 2018	BIO-UV Group (France)	BIO-SEA B	DNV GL	Filtration + Ultraviolet	55 – 1,400 m <sup>3</sup> /h	20 Jun 2018
09 Apr 2018	Wärtsilä Water Systems, Ltd. (UK)	Aquarius EC	DNV GL	Filtration + Electrolysis	250 – 4,000 m <sup>3</sup> /h	30 Aug 2018
31 May 2018	Hyundai Heavy Industries Co., Ltd. (Republic of Korea)	HiBallast	DNV GL	Filtration + Electrolysis	75 – 10,000 m <sup>3</sup> /h	26 Oct 2018
09 May 2018	Headway Technology Co., Ltd. (People's Republic of China)	OceanGuard	DNV GL	Filtration + Electrolysis	65 – 5,200 m <sup>3</sup> /h	06 Nov 2018
29 Mar 2018	JFE Engineering Corporation (Japan)	BallastAce	Control Union	Filtration + Chemical Injection	500 – 3,500 m <sup>3</sup> /h	13 Nov 2018

\*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 13 November 2018