

Ballast Water Management System's approved by the Liberian Maritime Authority as of 1 March 2018

No	Ballast Water Management System								
	BWMS Manufacture	BWMS Name	Country	Process	Models approved	Type Approval certificates			
1	TECHCROSS INC	Electro-Cleen System	Korea	Filtration +Electrolysis/ Electrochlorination	ECS-450B, EX-ECS-600B. ECS 1000-A, EX-ECS-1000B				
2	NEI Treatment Systems, LLC	Mitsubishi VOS System	USA	Deoxygenation + Cavitation	VOC-500 to VOS-6500				
3	Ecochlor, INC.	Ecochlor BWT System	USA	Filtration + ClO ₂	Ecochlor Series 75, Series 100, Series 150, Series 200, Series 250, Series 300				
4	PANASIA CO., LTD.	GloEn-Patrol	Korea	Filtration + UV	GloEn-P250, GloEn-P300, GloEn-P350 & 350-EX, GloEn-P500, GloEn-P700, GloEn-P750, GloEn-P750-EX, GloEn-P900, GloEn-P1000 & P1000-Ex, GloEn-P1200, GloEn-P1200-EX, GloEn-P1500-ExGloEn-P3000				
5	Hyde Marine Inc.	Hyde GUARDIAN	USA	Filtration + UV	HG450, HG2500X				
6	Wuxi Brightsky Electronic CO., Ltd.	BSKY BWMS	China	Filtration+ UV	BSKY250, BSKY500, BSKY700, BSKY1000, BSKY 900X2				
7	Alfa Laval Tumba	Pure Ballast 2.0 Pure Ballast 3.0	Sweden	Filtration + Advance Oxidation Technology	Pure Ballast 2.0, Pure Ballast 3.0.3.0EX, Pure Ballasst 3.1/3.1Ex				
8	Hyundai Heavy Industries	HiBallast	Korea	Filtration + Electrolysis	HiB-2000-Ex, HiB-2000				
9	JFE Engineering Corporation	JFE BallastAce	Japan	Filtration + Cl ₂	BallastAce-1500				

10	Samkun Century Co.	ARA Plasma	Korea	Filtration +Plasma + UV	ARA Plasma BWTS ARA-068				
11	Miura Co., Ltd	Miura BWMS	Japan	Filtration + UV	Miura BWMS 200 ~ 1800 m3/h				
12	NK Co., Ltd	BlueBallast	Korea	Ozone + Br ₂	BlueBallast NK-O3-250, NK-03-150				
13	Qingdao Headway Technology Co., Ltd	Oceanguard	China	Filtration + Electrocatalysis	Oceanguard HMT 50 ~ HMT 4000				
14	Sunrui Marine Environmenr Engineering Co., Ltd	BalClor BWMS	P.R. China	Filtration + Electrolysis	BC-300, BC-500, BC-1000, BC-1500, BC-2000, BC-2500, BC-3000, BC-3500, BC-4000, BC-5000, BC-6000, BC-7000				
15	Ocean Saver AS	MK II	Norway	Filtration + Electrolysis	MK II - 3200 and 5200 m3/h				
16	Trojan Marinex	Trojan Marinex	Canada	Filtration + UV	BWT 150-1500				
17	Erma First ESK Engineering Solutions S.A.	Erma First BWTS FIT/Erma First BWTS	Greece	Filtration + Electro-Chlorination	ERMA FIRST BWTS FIT Model (Filters): FIT300, FIT400, FIT600, FIT1000, FIT1500, FIT 2000 ERMA FIRST BWTS Model (Cyclones): 500, 800, 1000				
18	Samsung Heavy Industries Co., Ltd	Purimar TM Ballast Water Management System,	Korea	Filtration + Electro-Chlorination	SP-100				
19	Veolia Water Technologies Deutschland GmbH	CleanBallast	Germany	Filtration + Electrolysis	CleanBallast 500-1				
20	Shanghai Cyeco Environmental Technology Co., Ltd.	Cyeco	China	Filtration + UV	Cyeco - B1000				
21	Wartsila Water Systems Ltd.	Wartsila Aquarius	United Kingdom	Filtration + Electrolysis, Filtration + UV	AQ-3000-EC AQ-250-UV/UVX				

Ballast Water Management System's under review by the Liberian Maritime Authority as of 1 March 2018									
1	Evoqua Water Technologies, LLC	SeaCURE	USA	Filtration + Electrolysis					
2	Optimarin A/S	Optimarin Ballast System	Norway	Filtration + UV					
3	COSTCO Shipping Heavy Industry Co., Ltd.	Blue Ocean Shield	China	Filtration + UV					
4	Kuraray Co., LTD.	Microfade BWMS	Japan	Filtration + Calcium Hypochlorite					

NOTE:
Approval of Active Substances: If BWMS uses Active Substances, Active Substances is needed to be approved by IMO to evaluate environmental risk in accordance with G9 (Resolution MEPC. 169(57)).
Approval of BWMS: BWMS is needed to be approved by the administration to evaluate efficacy in accordance with G8 (Resolution MEPC. 174(58)) taking into consideration guidance provided in BWM.2/Circ.28 as amended by BWM.2/Circ.43.