

Table (1) – List of ballast water management systems that make use of Active Substances which received Basic Approval from IMO¹

	Name of the system and proposing country	Name of manufacturer	Date of Basic Approval
1	Peraclean® Ocean (subsequently changed to SEDNA® Ballast Water Management System (Using Peraclean® Ocean)), Germany	Degussa GmbH, Germany	24 March 2006
2	Electro-Clean (electrolytic disinfection) system (subsequently changed to Electro-Cleen™), the Republic of Korea	Techcross Ltd. and Korea Ocean Research and Development Institute (KORDI)	24 March 2006
3	Special Pipe Ballast Water Management System (combined with Ozone treatment), Japan	Japan Association of Marine Safety (JAMS)	13 October 2006
4	EctoSys™ electrochemical system, Sweden	Permascand AB, Sweden, subsequently acquired by RWO GmbH, Germany	13 October 2006
5	PureBallast System, Sweden	Alfa Laval/ Wallenius Water AB	13 July 2007
6	NK Ballast Water Treatment System, the Republic of Korea (subsequently changed to NK-O3 BlueBallast System (Ozone))	NK Company Ltd., the Republic of Korea	13 July 2007
7	Hitachi Ballast Water Purification System (ClearBallast), Japan	Hitachi, Ltd. /Hitachi Plant technologies, Ltd.	4 April 2008
8	Resource Ballast Technologies System, South Africa	Resource Ballast Technologies (Pty) Ltd.	4 April 2008
9	GloEn-Patrol™ Ballast Water Management System, the Republic of Korea	Panasia Co., Ltd.	4 April 2008
10	OceanSaver® Ballast Water Management System, Norway	MetaFil AS (subsequently changed to OceanSaver AS)	4 April 2008
11	TG Ballastcleaner and TG Environmentalguard System (subsequently changed to JFE Ballast Water Management System), Japan	The Toagosei Group (TG Corporation, Toagosei Co. Ltd. and Tsurumi Soda Co. Ltd.)	10 October 2008
12	Greenship Sedinox Ballast Water Management System, the Netherlands	Greenship Ltd	10 October 2008
13	Ecochlor® Ballast Water Treatment System, Germany	Ecochlor, INC, Acton, the United States	10 October 2008

¹ More comprehensive information regarding the systems approved until October 2012 is available in document BWM.2/Circ.34/Rev.1.

Table 1 (continued)

	Name of the system and proposing country	Name of manufacturer	Date of Basic Approval
14	Blue Ocean Shield Ballast Water Management System, China	China Ocean Shipping (Group) Company (COSCO)	17 July 2009
15	Hyundai Heavy Industries Co., Ltd. (HHI) Ballast Water Management System (EcoBallast), the Republic of Korea	Hyundai Heavy Industries Co., Ltd. the Republic of Korea	17 July 2009
16	AquaTriComb™ Ballast Water Treatment System, Germany	Aquaworx ATC GmbH	17 July 2009
17	SiCURE™ Ballast Water Management System, Germany	Siemens Water Technologies	26 March 2010
18	Sunrui Ballast Water Management System (subsequently changed to BalClor Ballast Water Management System), China	Qingdao Sunrui Corrosion and Fouling Control Company	26 March 2010
19	DESMI Ocean Guard Ballast Water Management System, Denmark	DESMI Ocean Guard A/S	26 March 2010
20	Blue Ocean Guardian (BOG) Ballast Water Management System, (subsequently changed to "ARA Ballast" Ballast Water Management System), the Republic of Korea	21st Century Shipbuilding Co., Ltd.	26 March 2010
21	Hyundai Heavy Industries Co., Ltd. (HHI) Ballast Water Management System (HiBallast), the Republic of Korea	Hyundai Heavy Industries Co., Ltd. the Republic of Korea	26 March 2010
22	Kwang San Co., Ltd. (KS) Ballast Water Management System "En-Ballast", the Republic of Korea	Kwang San Co., Ltd.	26 March 2010
23	OceanGuard™ Ballast Water Management System, Norway	Qingdao Headway Technology Co., Ltd.	26 March 2010
24	Severn Trent DeNora BalPure® Ballast Water Management System (subsequently changed to BalPure® BP-500), Germany	Severn Trent De Nora (STDN), LLC	26 March 2010
25	Techwin Eco Co., Ltd. (TWECO) Ballast Water Management System (Purimar), the Republic of Korea	Techwin Eco Co., Ltd.	1 October 2010
26	AquaStar Ballast Water Management System, the Republic of Korea	AQUA Eng. Co., Ltd.	1 October 2010
27	Kuraray Ballast Water Management System, (subsequently changed to MICROFADE™ Ballast Water Management System), Japan	Kuraray Co., Ltd.	1 October 2010
28	ERMA FIRST Ballast Water Management System (subsequently changed to ERMA FIRST BWTS), Greece	ERMA FIRST ESK Engineering Solutions S.A.	15 July 2011
29	BlueSeas Ballast Water Management System, Singapore	Envirotech and Consultancy Pte. Ltd.	15 July 2011

Table 1 (continued)

	Name of the system and proposing country	Name of manufacturer	Date of Basic Approval
30	SKY-SYSTEM® with Peraclean® Ocean Ballast Water Management System, Japan	Katayama Chemical, Inc.	15 July 2011
31	JFE BallastAce that makes use of NeoChlor Marine® Ballast Water Management System, Japan	JFE Engineering Corporation	15 July 2011
32	BallastMaster Ballast Water Management System, Germany	GEA Westfalia Separator Systems GmbH	15 July 2011
33	BlueWorld Ballast Water Management System, Singapore	Envirotech and Consultancy Pte. Ltd.	15 July 2011
34	Neo-Purimar™ Ballast Water Management System, the Republic of Korea	Samsung Heavy Industries Co., Ltd.	15 July 2011
35	"Smart Ballast" Ballast Water Management System, the Republic of Korea	STX Metal Co., Ltd.	2 March 2012
36	DMU ·OH Ballast Water Management System, China	Dalian Maritime University	2 March 2012
37	EcoGuardian™ Ballast Water Management System, the Republic of Korea	Hanla IMS Co., Ltd.	2 March 2012
38	KTM-Ballast Water Management System, the Republic of Korea	Korea Top Marine (KT Marine) Co., Ltd.	5 October 2012
39	Hamworthy Aquarius™-EC BWMS, the Netherlands	Hamworthy Water Systems Ltd.	5 October 2012
40	OceanDoctor Ballast Water Management System, China	Jiujiang Precision Measuring Technology Research Institute	5 October 2012
41	HS-BALLAST Ballast Water Management System, the Republic of Korea	HWASEUNG R&A Co. Ltd.	5 October 2012
42	GloEn-Saver™ Ballast Water Management System, the Republic of Korea	PANASIA Co. Ltd.	5 October 2012

Table (2) – List of ballast water management systems that make use of Active Substances which received Final Approval from IMO²

	Name of the system and proposing country	Name of manufacturer	Date of Final Approval
1	PureBallast System, Norway	Alfa Laval / Wallenius Water AB	13 July 2007
2	SEDNA® Ballast Water Management System (Using Peraclean® Ocean), Germany	Degussa GmbH, Germany	4 April 2008
3	Electro-Cleen™ System, the Republic of Korea	Techcross Ltd. and Korea Ocean Research and Development Institute (KORDI)	10 October 2008
4	OceanSaver® Ballast Water Management System, Norway	OceanSaver AS	10 October 2008
5	RWO Ballast Water Management System (CleanBallast), Germany	RWO GmbH Marine Water Technology, Germany	17 July 2009
6	NK-O3 BlueBallast System (Ozone), the Republic of Korea	NK Company Ltd., the Republic of Korea	17 July 2009
7	Hitachi Ballast Water Purification System (ClearBallast), Japan	Hitachi, Ltd. /Hitachi Plant technologies, Ltd.	17 July 2009
8	Greenship Sedinox Ballast Water Management System, the Netherlands	Greenship Ltd	17 July 2009
9	GloEn-Patrol™ Ballast Water Management System, the Republic of Korea	Panasia Co., Ltd.	26 March 2010
10	Resource Ballast Technologies System, South Africa	Resource Ballast Technologies (Pty) Ltd.	26 March 2010
11	JFE BallastAce® Ballast Water Management System, Japan	JFE Engineering Corporation	26 March 2010
12	Hyundai Heavy Industries Co., Ltd. (HHI) Ballast Water Management System (EcoBallast), the Republic of Korea	Hyundai Heavy Industries Co., Ltd. the Republic of Korea	26 March 2010
13	Special Pipe Hybrid Ballast Water Management System combined with Ozone treatment version (SP-Hybrid BWMS Ozone version), Japan	Mitsui Engineering & Shipbuilding Co., Ltd.	1 October 2010
14	"ARA Ballast" Ballast Water Management System, the Republic of Korea	21st Century Shipbuilding Co., Ltd.	1 October 2010
15	BalClor Ballast Water Management System, China	Qingdao Sunrui Corrosion and Fouling Control Company	1 October 2010
16	OceanGuard™ Ballast Water Management System, Norway	Qingdao Headway Technology Co., Ltd.	1 October 2010
17	Ecochlor® Ballast Water Management System, Germany	Ecochlor, INC, Acton, the United States	1 October 2010

² More comprehensive information regarding the systems approved until October 2012 is available in document BWM.2/Circ.34/Rev.1.

Table 2 continued

	Name of the system and proposing country	Name of manufacturer	Date of Final Approval
18	Severn Trent De Nora BalPure® Ballast Water Management System (subsequently changed to BalPure® BP-500), Germany	Severn Trent De Nora (STDN), LLC	1 October 2010
19	HiBallast Ballast Water Management System, the Republic of Korea	Hyundai Heavy Industries Co., Ltd.	15 July 2011
20	Purimar Ballast Water Management System, the Republic of Korea	Samsung Heavy Industries Co., Ltd.	15 July 2011
21	SiCURE™ Ballast Water Management System, Germany	Siemens Water Technologies	2 March 2012
22	ERMA FIRST Ballast Water Management System (subsequently changed to ERMA FIRST BWTS), Greece	ERMA FIRST E.S.K. Engineering Solutions S.A.	2 March 2012
23	MICROFADE™ Ballast Water Management System, Japan	Kuraray Co., Ltd.	2 March 2012
24	AquaStar™ Ballast Water Management, the Republic of Korea	AQUA Eng. Co.	2 March 2012
25	Neo-Purimar™ Ballast Water Management System, the Republic of Korea	Samsung Heavy Industries Co., Ltd. (SHI)	2 March 2012
26	DESMI Ocean Guard BWMS, Denmark	DESMI Ocean Guard A/S	5 October 2012
27	JFE BallastAce that makes use of NEO-CHLOR MARINE™, Japan	JFE Engineering Corporation	5 October 2012
28	Smart Ballast BWMS, the Republic of Korea	STX Metal Co., Ltd.	5 October 2012

Table (3) – List of ballast water management systems which received Type Approval Certification by their respective Administrations (resolution MEPC.175(58))³

	Approval Date	Name of the Administration	Name of the ballast water management system	Copy of Type Approval Certificate	Active Substance employed	MEPC report granting Final Approval
1	June 2008	Det Norske Veritas, on behalf of the Norwegian Administration	PureBallast System	Provided (MEPC 61/INF.3)	Yes, please refer to MEPC 56/2/2, annex 5	MEPC 56/23, paragraph 2.8
2	10 June 2008	Federal Maritime and Hydrographic Agency, Germany	SEDNA® Ballast Water Management System (Using Peraclean® Ocean)	Provided (MEPC 58/INF.17)	Yes, please refer to MEPC 57/2/10, annex 7	MEPC 57/21, paragraph 2.16
3	31 December 2008	Ministry of Land, Transport and Maritime Affairs, the Republic of Korea	Electro-Cleen™ System	Provided (MEPC 59/INF.6)	Yes, please refer to MEPC 58/2/7, annex 7	MEPC 58/23, paragraph 2.8
4	17 April 2009	Det Norske Veritas, on behalf of the Norwegian Maritime Directorate	OceanSaver® Ballast Water Management System	Provided (MEPC 59/INF.17 and MEPC 62/INF.15)	Yes, please refer to MEPC 58/2/8, annex 4	MEPC 58/23, paragraph 2.10
5	24 November 2009	Ministry of Land, Transport and Maritime Affairs, the Republic of Korea	NK-O3 BlueBallast System (Ozone)	Provided (MEPC 60/INF.14)	Yes, please refer to MEPC 59/2/16, annex 6	MEPC 59/24, paragraph 2.8.
6	4 December 2009	Ministry of Land, Transport and Maritime Affairs, the Republic of Korea	GloEn-Patrol™ Ballast Water Management System	Provided (MEPC 61/2/19)	Yes, please refer to MEPC 60/2/11, annex 4	MEPC 60/22, paragraph 2.7
7	5 March 2010	Ministry of Land, Infrastructure, Transport and Tourism of Japan	Hitachi Ballast Water Management System (ClearBallast)	Provided (MEPC 61/INF.21)	Yes, please refer to MEPC 59/2/19, annex 4	MEPC 59/24, paragraph 2.8
8	28 January 2011	China Maritime Safety Administration	BalClor™ Ballast Water Management System	Provided (MEPC 62/INF.29)	Yes, please refer to MEPC 61/2/15, annex 9	MEPC 61/24, Paragraph 2.7.3

³ Table 3 above was compiled based on the information provided by the respective Administrations

Table 3 continued

	Approval Date	Name of the Administration	Name of the ballast water management system	Copy of Type Approval Certificate	Active Substance employed	MEPC report granting Final Approval
9	26 May 2010 and 25 March 2011	Inspection and Measurement Division, Maritime Bureau, Ministry of Land, Infrastructure, Transport and Tourism of Japan	JFE BallastAce® Ballast Water Management System	Provided (MEPC 62/INF.25)	Yes, please refer to MEPC 60/2/12, annex 5	MEPC 60/22 paragraph 2.7
10	19 April 2011	The South African Department of Transport	Resource Ballast Technologies System	Provided (MEPC 62/INF.18)	Yes, please refer to MEPC 60/2/11, annex 7	MEPC 60/22 paragraph 2.7
11	2 September 2008	Office of the Maritime Administration, Marshall Islands	NEI Treatment System VOS-2500-101	Available at request	No Active Substances used according to the communication received from the Administration of Marshall Islands (Letter of 10 Dec. 2008)	Not applicable
	19 January 2010	Merchant Shipping Directorate of Malta		Provided (BWM.2/Circ. 25)	Please refer to circular BWM.2/Circ.25	Not applicable
12	29 April 2009	Lloyd's Register, as delegated by the Administration of the United Kingdom	Hyde GUARDIAN™ ballast water management system	Provided (MEPC 59/INF.20)	No Active Substances used according to the communication received from the Administration of United Kingdom (please refer to MEPC 59/INF.20)	Not applicable
13	12 November 2009	Det Norske Veritas, on behalf of the Norwegian Maritime Directorate	OptiMarin Ballast System (OBS)	Provided (MEPC 61/INF.4)	No Active Substances used according to the communication received from the Administration of Norway (please refer to MEPC 61/INF.4)	Not applicable

Table 3 continued

	Approval Date	Name of the Administration	Name of the ballast water management system	Copy of Type Approval Certificate	Active Substance employed	MEPC report granting Final Approval
14	16 February 2011	China Maritime Safety Administration	Blue Ocean Shield Ballast Water Management System	Provided (MEPC 62/INF.28)	No Active Substances used according to the communication received from the Administration of China (please refer to MEPC 62/INF.28)	Not applicable
15	10 March 2011	Det Norske Veritas, on behalf of the Norwegian Maritime Directorate	PureBallst 2.0 and PureBallast 2.0 Ex	Provided (MEPC 62/INF.14)	No Active Substances used according to the communication received from the Administration of Norway (please refer to MEPC 62/INF.14)	Not applicable
16	16 March 2011	The Ministry of Land, Transport and Maritime Affairs of the Republic of Korea	EcoBallast Ballast Water Management System (Hyundai Heavy Industries Co., Ltd.)	Provided (MEPC 63/INF.5)	Yes, please refer to MEPC 59/2/16, annex 8	MEPC 60/22 paragraph 2.13
17	28 March 2011	China Maritime Safety Administration	BSKY™ Ballast Water Management System	Provided (MEPC 62/INF.30)	No Active Substances used according to the communication received from the Administration of China (please refer to MEPC 62/INF.30)	Not applicable
18	6 June 2011	Inspection and Measurement Division, Maritime Bureau, Ministry of Land, Infrastructure, Transport and Tourism of Japan	FineBallast® OZ (the Special Pipe Hybrid Ballast Water Management System combined with Ozone treatment version)	Provided (MEPC 63/INF.12)	Yes, please refer to MEPC 61/2/15, annex 6	MEPC 61/24 paragraph 2.7
19	27 July 2011	Federal Maritime and Hydrographic Agency, Germany	BalPure® BP-500	Provided (MEPC 64/INF.20)	Yes, please refer to MEPC 61/2/21, annex 7	MEPC 61/24 paragraph 2.7

Table 3 continued

	Approval Date	Name of the Administration	Name of the ballast water management system	Copy of Type Approval Certificate	Active Substance employed	MEPC report granting Final Approval
20	6 August 2011	Office of the Maritime Administrator, Republic of the Marshall Islands	NEI Treatment System VOS-500 to VOS-6000	Available at request	No Active Substances used according to the communication received from the Administration of Marshall Islands (Letter of 9 August 2011)	Not applicable
21	31 October 2011	The Ministry of Land, Transport and Maritime Affairs of the Republic of Korea	Purimar™ System	Provided (MEPC 63/INF.6)	Yes, please refer to MEPC 62/2/18, annex 6	MEPC 62/24 paragraph 2.5
22	7 November 2011	Det Norske Veritas, on behalf of the Norwegian Maritime Directorate	OceanGuard™ Ballast Water Management System	Provided (MEPC 65/INF.2)	Yes, please refer to MEPC 61/2/21, annex 5	MEPC 61/24, paragraph 2.7
23	11 November 2011	The Ministry of Land, Transport and Maritime Affairs of the Republic of Korea	HiBallast™ Ballast Water Management System	Provided (MEPC 63/INF.4)	Yes, please refer to MEPC 62/2/18, annex 5	MEPC 62/24 paragraph 2.5
24	22 December 2011	Det Norske Veritas, on behalf of the Norwegian Maritime Directorate	OceanSaver® Ballast Water Management System	Provided (MEPC 64/INF.4)	Yes, please refer to MEPC 58/2/8, annex 4	MEPC 58/23, paragraph 2.10
25	10 May 2012	Hellenic Republic, Ministry of Development, Competitiveness and Shipping, General Secretariat of Shipping, Merchant Ships Inspection General Directorate, Design and Construction Directorate	ERMA FIRST BWTS	Provided (MEPC 64/INF.26)	Yes, please refer to MEPC 63/2/11, annex 5	MEPC 63/23, paragraph 2.7

Table 3 continued

	Approval Date	Name of the Administration	Name of the ballast water management system	Copy of Type Approval Certificate	Active Substance employed	MEPC report granting Final Approval
26	30 May 2012	Inspection and Measurement Division, Maritime Bureau, Ministry of Land, Infrastructure, Transport and Tourism of Japan	MICROFADE™ Ballast Water Management System	Provided (MEPC 64/INF.17)	Yes, please refer to MEPC 63/2/11, annex 6	MEPC 63/23, paragraph 2.7
27	12 June 2012	China Maritime Safety Administration	Cyeco™ Ballast Water Management System	Provided (MEPC 64/INF.12)	No Active Substances used according to the communication received from the Administration of China (please refer to MEPC 64/INF.12)	Not applicable
28	15 June 2012	The Ministry of Land, Transport and Maritime Affairs of the Republic of Korea	AquaStar™ Ballast Water Management System	Provided (MEPC 64/INF.18)	Yes, please refer to MEPC 63/2/11, annex 7	MEPC 63/23, paragraph 2.7
29	12 July 2012	The Ministry of Land, Transport and Maritime Affairs of the Republic of Korea	ARA PLASMA BWTS Ballast Water Management System	Provided (MEPC 64/INF.33)	Yes, please refer to MEPC 61/2/15, annex 8	MEPC 61/24, paragraph 2.7

Note: all lists above updated in October 2012.