



CHANGWON ENVIRONMENT IND. CO., LTD.

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• SEA CLEAN II SERIES •



TYPE APPROVAL No.2008-003~010

SEWAGE TREATMENT PLANT

SEA CLEAN SERIES (ELECTROLYSIS TYPE)
ADVANCED WASTE PURIFICATION



SEACLEAN SERIES (ELECTROLYSIS TYPE)

○ GENERAL

This system has the treatment method of electrolyzing & oxidizing sewage (feces and urine & living sewages) generated from ships & ocean structures by means of sodium chloride contained in natural seawater.

Here, the electrodes are insoluble electrodes made of titanium, coated with Iridium oxide (DSA electrode) which are efficient in generation of chlorine gas.

○ APPLICABLE REGULATIONS

PROVISION of MARPOL 73/78 / IMO MEPC Res. 159(55)

○ IMO & MED CERTIFICATED

○ ADVANTAGES

- Treated quantity to be adjusted (30ℓ~75ℓ/man/day)
- Stable and speedy in treatment
- Compact and light designed
- Decomposing oils & surfactant
- No odor or bio-active sludge associated with process
- No microorganisms to keep alive

○ PARTICULARS

Items \ Type	Type	N12CE	N25CE	N40CE	N60CE	N100CE	N120CE	N180CE	N360CE
CAPACITY (BLACK WATER)	MEN	12	25	40	60	100	120	180	360
	Throughput (m ³ /day)	0.3 0.9	0.75 1.8	1.2 3.0	1.8 4.5	3.0 7.5	3.6 9.0	5.4 13.5	10.8 27
CAPACITY (BLACK & GRAY WATER)	MEN	7	15	25	40	60	75	110	220
	Throughput (m ³ /day)	0.9	2.0	3.2	5.1	7.7	9.6	14.0	29.5
DIMENSION (mm)	L	1,000	1,000	1,000	1,200	1,200	1,400	1,600	1,800
	W	600	600	700	600	700	800	1,000	1,000
	H	900	1,000	1,000	1,200	1,200	1,400	1,300	1,600
WEIGHT (kg)		420	450	450	480	570	720	800	1,050
Electric Capacity (kW)		3kW			3.5kW			4kW	

※ Black Water shall be in accordance with (30ℓ~75ℓ)/day and Black & Gray Water (128ℓ~185ℓ)/day standards.

ADVANCED WASTE PURIFICATION



○ PRINCIPLES

This is a sewage (feces and urine & living sewage) generated from the ships operating in waters (ALASKA, HAWAII, CASPIAN SEA, etc.), which is a special management area subject to the United States Grain Standards regarding sailing vessels in Alaska including cruise ships, etc. rather than IMO MEPC RCO (Marine Environment Protection Committee, Risk Control Option) 159(55).

○ COMPOSITION OF SYSTEM

The system is made up of electrolysis sewage treatment system (Seaclean Series), main body, for sterilizing and oxidizing the sewage flowed, and screen, pre-treatment process for filtering alien and stenosed substances of sewage flowed into the main body, and filter system, post-processing system, filter press system, and etc. for filtering out the inappropriately treated sewage at the finishing process such as floating substances, etc.

○ APPLICABLE REGULATIONS

- IMO RES MEPC 227(64)
- Applicable Standards for special areas (Alaska, Hawaii, Caspian Sea, etc.)

○ ADVANTAGES

- Stable and speedy in treatment
- Compact installation
- Decomposing oils & surfactant
- Operation is not hampered by cleaning fluids (laundry, shower booth and etc.)
- No additional sewage tank
- Easy to run reverse filtration; or easy to replace the filter

○ PARTICULARS

Items \ Type		A12CE	A25CE	A40CE	A60CE	A100CE	A120CE	A180CE	A360CE
CAPACITY (WASTE WATER)	MEN	7	15	25	40	60	75	110	220
	Throughput (m ³ /day)	0.9	2.0	3.2	5.1	7.7	9.6	14.0	29.5
IMO MEPC 227(64)									
<ul style="list-style-type: none"> • Total Phosphorus (T-N) : 70% Reduction • COD : 25mg/ℓ below • T.Coliform : 35mg/ℓ below • Residual Chlorine : 0.5mg/ℓ below 					<ul style="list-style-type: none"> • Total Phosphorus (T-P) : 80% Reduction • COD : 125mg/ℓ below • T.Coliform : 100MPN/100ml below 				

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WORLDWIDE A/S NETWORK



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