

Marine & Oil Platform Sewage Treatment Plant



Implement of IMO MEPC.159 (55) Resolution



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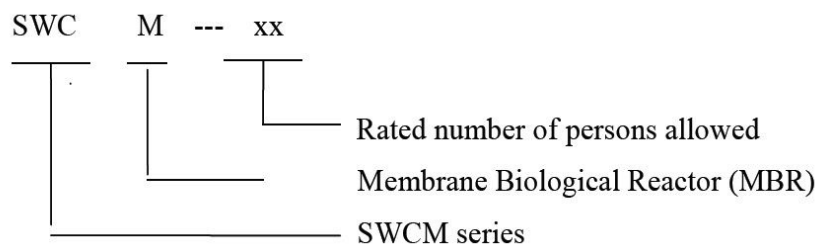


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Marks:

1. The sewage treatment plant as a Type II marine sanitation device, MSD can be used on un-inspected vessels.
2. The device is designed to operate in salt or fresh water.
3. The test pressure of the tank is 0.021MPa.
4. The effluent quality of the device is in compliance with the standards of **IMO MEPC159 (55)**, and 33CFR159 for type II device.
5. Any anti-virus agent can't be used in the progress of device using.

Type description:



1. Preface

This plant is applicable to treat the sewage, which means human body wastes and the wastes from the toilets on vessels and which is also called “black water”, to meet the effluent standards of IMO MEPC.159 (55), and discharge the effluent to overboard. It is also applicable to treat galley & shower drainage which is called “gray water” on condition that the “gray water” should be pretreated **or** should select a bigger capacity model to match.

Marine Sewage Treatment Plant belongs to the key devices for prevention of pollution from ships in seas and oceans according to the revised Annex IV of the International Convention of the Prevention of Pollution (MARPOL 73/78). The MEPC.2 (VI) resolution adopted on 3 December 1976 is the present guidelines on implementation of effluent standards and performance tests for STP, which is called “old standards”. This device is according to the MEPC.159 (55) resolution enacted on 13 October 2006, which is called “new standards”. The convention (MARPOL 73/78) provides that all STP installed on board on or after 1st January 2010 should meet the MEPC.159 (55) resolution.

Summary all the rules and effluent standards as followings:

	IMO old standard	IMO new standard	USCG	Alaska
TSS (mg/l)	50	35	150	30
BOD5 (mg/l)	50	25	Not required	30
COD (mg/l)	Not required	125	Not required	Not required
Coliform (pc/100ml)	250	100	200	20
PH	6~9	6~8.5	Not required	6~9
Chlorine (mg/l)	Not required	<0.5	Not required	10
Test days (day)	10	16	10	30

The SWCM type marine sewage treatment plant uses activated sludge, contact oxidizing and principle of biologic membrane to digest the organic pollutant, which can treat sewage effectively and reach at the IMO new effluent standard or other stricter requirements.

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2. Main technical performance

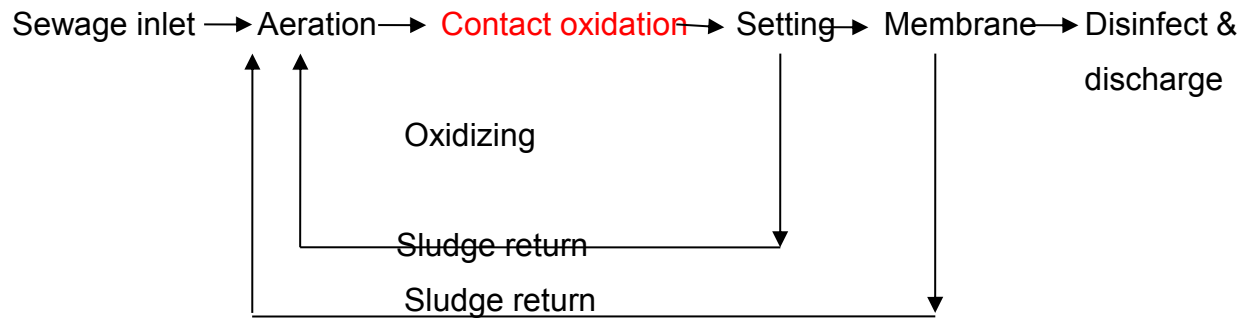
2.1 Table of main technical performance

Model		SWCM-																
		10	15	20	25	30	40	50	60	80	100	120	150	200	250	300	400	
LOAD	Average load (L/d)	840	1190	1540	1890	2310	3080	3780	4480	6020	7700	9100	11200	14700	18200	23100	30800	
	Peak load (L/h)	105	149	193	237	289	385	473	560	753	963	1138	1400	1838	2275	2888	3850	
	Organic load (kgBOD ₅ /d)	0.42	0.595	0.77	0.945	1.155	1.54	1.89	2.24	3.01	3.85	4.55	5.6	7.35	9.10	11.55	15.4	
Rated capacity (men)		10	15	20	25	30	40	50	60	80	100	120	150	200	250	300	400	
Max capacity (men)		12	17	22	27	33	44	54	64	86	110	130	160	210	260	330	440	
Electricity		AC 380V/50Hz/3φ, AC 415V/50Hz/3φ, AC 440/60Hz/3φ (optional)																
Power (kW)		2.5	2.5	2.5	2.5	2.5	3.0	3.0	3.5	4.0	4.0	4.0	6.0	6.0	7.0	9.0	11	
External dimension (mm) L×W×H		1510	1870	1745	1935	1985	2400	2410	2670	2780	2795	3000	3050	3600	3880	4750	5950	
		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
		1200	1200	1400	1400	1500	1600	1700	1700	1900	2000	2000	2200	2200	2200	2400	2400	2400
		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
weight		Dry weight (kg)	900	1000	1000	1100	1200	1300	1450	1600	1850	2200	2300	2800	3000	3300	3700	4200
		Wet weight (kg)	1775	2283	2640	2740	3500	4400	5073	5270	6517	8268	9166	11340	13267	16538	20357	25417
Effluent standard		BOD ₅ ≤ 25mg/L, COD ≤ 125mg/L, TSS ≤ 35mg/L, Coliform ≤ 100/100ml, PH ₆ ~ 8.5, CL ₂ ≤ 0.5mg/L																

3. System principle

The device adopts activated sludge, contact oxidizing and principle of biologic membrane to digest the organic pollutant, which can treat sewage effectively and **meet** the IMO new effluent standard or other stricter requirements.

The treatment procedures of the plants are shown as following:



4. Contact us



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