

EC-TYPE EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2013/52/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:**That the Sewage systems**

with type designation(s)

STC-1, STC-2, STC-3, STC-4, STC-5, STC-6, STC-8, STC-10, STC-15, STC-20

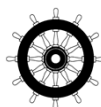
Issued to

CSSC Nanjing Luzhou Machine Co.,Ltd
NANJING JIANGSU, China

is found to comply with the requirements in the following Regulations/Standards:

Annex A.1, item No. A.1/2.6 and Annex B, Module B in the Directive. Marpol 73/78 as amended, Annex IV Regulation 9, IMO Res. MEPC.227(64) with the exception of Section 4.2.

Further details of the equipment and conditions for certification are given overleaf.

Høvik, 2015-06-29
for **DNV GL AS**This Certificate is valid until
2020-06-28Notified Body No.: **0575**

Petter Langnes
Head of DepartmentDNV GL local office:
Nanjing

Pål Evang Nundal
Surveyor

Product description

The equipment is intended for installation onboard ships to provide sewage treatment for the protection of the marine environment.

The process of the sewage treatment plants are based upon a biological process of degrading.

Application/Limitation

Sewage Treatment Plants;

Model:	Designed Capacity (m ³ /day):	Designed Organic Load (kg BOD5 / day):
STC-1	1.05	0.53
STC-2	2.10	1.05
STC-3	3.15	1.58
STC-4	4.20	2.1
STC-5	5.25	2.63
STC-6	6.30	3.15
STC-8	8.40	4.2
STC-10	10.50	5.25
STC-15	15.75	7.88
STC-20	21.0	10.5

The sewage treatment plants are not certified for nitrogen and phosphorus removal (MEPC.227(64) Sec. 4.2). If installed on passenger ships, treated sewage cannot be discharged in special areas. This prohibition applies when this sewage treatment plant is installed on new ships on or after 1 January 2016, and on existing ships on or after 1 January 2018.

Type Examination documentation

Mechanical/ System;

<i>Drwg.No.;</i>	<i>Date/ Rev.;</i>	<i>Title;</i>
W3102-00	29.10.08	Assembly, STC-1 Marine Sewage Treatment Units
W3102-01-0	29.10.08	Tank Sub Assembly, STC-1
W3102-00MX	28.10.08	Assembly Drawing List
W3103-00	28.10.08	Assembly, STC-2 Marine Sewage Treatment Units
W3103-01-0	28.10.08	Tank Sub Assembly, STC-2
W3103-00MX	29.10.08	Assembly Drawing List
W3104-00	28.10.08	Assembly, STC-3 Marine Sewage Treatment Units
W3104-01-0	28.10.08	Tank Sub Assembly, STC-3
W3104-00MX	29.10.08	Assembly Drawing List
W3105-00	28.10.08	Assembly, STC-4 Marine Sewage Treatment Units
W3105-01-0	28.10.08	Tank Sub Assembly, STC-4
W3105-00MX	29.10.08	Assembly Drawing List
W3106-00	29.10.08	Assembly, STC-5 Marine Sewage Treatment Units
W3106-02-0	28.10.08	Tank Sub Assembly, STC-5
W3106-00MX	29.10.08	Assembly Drawing List
W3107-00	29.10.08	Assembly, STC-6 Marine Sewage Treatment Units
W3107-01-0	28.10.08	Tank Sub Assembly, STC-6
W3107-00MX	29.10.08	Assembly Drawing List
W3108-00	28.10.08	Assembly, STC-8 Marine Sewage Treatment Units
W3108-01	29.10.08	Tank Sub Assembly, STC-8
W3108-00MX	29.10.08	Assembly Drawing List
W3109-00	28.10.08	Assembly, STC-10 Marine Sewage Treatment Units
W3109-04-0	29.10.08	Tank Sub Assembly, STC-10
W3109-00MX	29.10.08	Assembly Drawing List
W3110-00	29.10.08	Assembly, STC-15 Marine Sewage Treatment Units

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W3110-01-0	29.10.08	Tank Sub Assembly, STC-15
W3110-00MX	29.10.08	Assembly Drawing List
W3111-00	29.10.08	Assembly, STC-20 Marine Sewage Treatment Units
W3111-01-0	29.10.08	Tank Sub Assembly, STC-20
W3111-00MX	29.10.08	Assembly Drawing List

Dwg.No.;	Date/ Rev.;	Title;
W3101-W311100LC	28.10.08	System Diagram, STC Series Marine Sewage Treatment Plant

Technical Specifications for STC Series Sewage Treatment Plants W3102 – W311100JT

Main Data for STC Series Sewage Treatment Plant
Main Components of STC Series Sewage Treatment Plant

Operations Control;
The equipment will be controlled through PLC from Siemens, Ltd, Model S7-200

Tests carried out

- Shanghai Environmental Monitoring Centre, Testing Report No. WT20090001, dated Febr. 9, 2009, Samples Analyses with Summary
- China Shipbuilding Industry Environment and Reliability Test Centre for Electric and Electronic Equipment, Test Report No. 2008-018 dated Oct. 16, 2008, Electrical Control Box for Marine Sanitary Sewage Treatment Plant, Environmental Testing

Marking of product

For traceability to this type approval, each unit is to be marked with;

- Manufacturer's name or trade mark
- Type designation
- Serial No.
- Mark of Conformity

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.