



Marine & Offshore
Division

Certificate number: 39396/A0 EC

File number: ACM 217/2312/02

Annex A1 Item number: A.1/2.6

This certificate is not valid when presented without the full
attached schedule composed of 7 sections
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Notified Body 0062 - MARINE EQUIPMENT DIRECTIVE 96/98/EC

EC TYPE EXAMINATION CERTIFICATE

as per Module B of European Union Council Directive 96/98/EC on marine equipment
as amended by Commission Directive 2013/52/EU

This certificate is issued to

ACO Marine s.r.o.
Praha 5 - CZECH REPUBLIC

for the type of product

SEWAGE SYSTEMS

WWTP ACO Clarimar MF Series - Waste Water Treatment Plant

Requirements:

- MARPOL 73/78 as amended, Annex IV, Regulation 9
- IMO Resolution MEPC.159(55)
- IMO Resolution MEPC.227(64) excluding Section 4.2

This certificate is issued on behalf of the French Maritime Authorities to attest that BUREAU VERITAS did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Council Directive 96/98/EC of 20 December 1996 as amended.


This certificate will expire on: 26 Feb 2020

For BUREAU VERITAS Notified Body 0062,

At BV PRAGUE, on 26 Feb 2015,

Martin Dlouhy



This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark ) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex B of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. BUREAU VERITAS is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

WWTP ACO Clarimar MF Series - Waste Water Treatment Plant

1.1 Process Description

- Operates on a biological treatment process
- Manufactured out of composite material, or welded construction for retrofit in ship upgrade, replacement or conversion installations
- Compact unit, skid mounted
- Powered and controlled by Control Panel RM1, enclosure IP55 rated steel cabinet
- Main components: main tank including ACO "Bio-Sword", blower (option), effluent pump, desludge pump, fine bubble aeration, UV lamp, and a control panel RM1

1.2 Technical Data - ACO Clarimar MF Series

Series	Hydraulic loading (m3/day)	Organic loading (kg/day)	Series	Hydraulic loading (m3/day)	Organic loading (kg/day)
MF 0.5	1.2	0.77	MF 1	2.1	1.31
MF 2	3.5	2.41	MF 3	5.6	3.61
MF 4	7.2	4.59	MF 6	11.2	7.22
MF 8	14.2	9.10	MF 10	18.9	12.14
MF 12	22.4	14.44	MF 16	28.3	18.16
MF 20	37.8	24.28			

1.3 ACO Clarimar MF Series were tested and produced an effluent which, on analysis, produce:

Parameters	Unit	IMO MEPC.227(64)
Thermotolerant Coliform	MPN/100 ml	< 100
Total Suspended Solids (TSS)	mg/l	< 35
5-day Biochemical Oxygen Demand (BOD5 without Nitrification)	mg/l	< 25
Chemical Oxygen Demand (COD)	mg/l	< 125
pH value	-	Between 6.0 and 8.5
Residual chlorine demand	mg/l	< 0,5

Note: Nitrogen and Phosphorus content of the samples of effluent not analysed.

2. DOCUMENTS AND DRAWINGS

- Technical Documentation WWTP ACO Clarimar MF version 2014-07-23
- General Arrangement Drawings

Series	Drawings No.	Series	Drawings No.	Series	Drawings No.
MF 0.5	TP-P019CL-S000-5-00-00	MF 1	TP-P019CL-S001-00-00	MF 2	TP-P019CL-S002-00-00
MF 3	TP-P019CL-S003-00-00	MF 4	TP-P019CL-S004-00-00	MF 6	TP-P019CL-S006-00-00
MF 8	TP-P019CL-S008-00-00	MF 10	TP-P019CL-S010-00-00	MF 12	TP-P019CL-S012-00-00
MF 16	TP-P019CL-S016-00-00	MF 20	TP-P019CL-S020-00-00		

- Electric Wiring Drawings No. T1-P321-5278-99-40 (sheets 1 to 10) dated 2014-05-21
- Installation and Operation Manual - ACO Clarimar MF version 2014-08-19

No departure from the above documents shall be made without the prior consent of the notified body named on this certificate. The manufacturer must inform the notified body of any modification or changes to these documents and drawings.

3. TEST REPORTS

3.1 The water quality analysis according to the requirements of IMO Resolution MEPC.227(64) were carried out ashore, conducted by the laboratory VÚV T. G. Masaryk Water Research Institute, p.r.i., Prague (The Czech Republic) and witnessed by the notified body. The tests were carried out on a full scale ACO Clarimar MF 2 unit representing all the range of sewage treatment plants and all samples were taken on site, sealed and delivered to the laboratory. Test report No. 248/2014 dated 21/08/2014 and analytical test results of thermotolerant coliforms.

3.2 Environmental type tests carried out, conducted and witnessed by the laboratory Vojensky technicky ústav, s.p., Vyskov (The Czech Republic). Equipment Under Test: Control panel RM1, type ACO Clarimar MF. Type test reports No. 194200-159/2014 dated 11/08/2014 and No. 194300-399/2014 dated 11/08/2014.

3.3 Inclination test at angle of at least 22.5°.

Note: The ACO Clarimar MF 2 is not type tested on Nitrogen and Phosphorous removal standard acc. to requirements of IMO Resolution MEPC.227(64).

4. APPLICATION / LIMITATION

4.1 Applied to Sewage Treatment Plants compliant with the requirements of 2012 Guidelines - IMO Res. MEPC.227(64) as follows:

- Sewage Treatment Plants installed on or after 1 January 2016 [Ships, other than passenger ships, in all areas] and [Passenger ships outside MARPOL Annex IV special areas] excluding Section 4.2 on Nitrogen and Phosphorous removal standard.

4.2 The scope of the appraisal made by Bureau Veritas to issue this certificate is strictly restricted to the relevant requirements stated on the front page of this certificate. Other requirements like Ship's Flag Administration Regulations and/or Classification Societies Rules, typically for electrical equipment including control, safety devices and cables, are excluded from the scope of this certificate.

4.3 The installation on board is to be carried out in compliance with manufacturer's instructions and in accordance with the provisions of IMO Resolution in force.

4.4 A copy of this EC type-examination certificate shall be carried on board any ship equipped with the above described sewage treatment plant at all times.

4.5 The ship staff shall be familiarized with the operation and maintenance of the sewage treatment plant or properly trained by manufacturer's specialist.

4.6 Each sewage treatment plant is to be supplied with its manual for installation, use and maintenance in language accepted by the Ship's Flag Administration.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 This certificate does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D "Production Quality Assurance" or E "Product Quality Assurance" or F "Product Verification" of Annex B of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

5.2 The manufacturer shall institute quality control procedure in order to ensure that the sewage treatment plant is produced to the same standard as the prototype approved one, and to keep records of any production tests carried out in accordance with Requirements stated on the front page of this certificate.

5.3 Each sewage treatment plant shall be delivered with a declaration of conformity to type issued by the manufacturer.

Place of production

ACO Industries Tabor s.r.o.
Prumyslova 1158
391 01 Sezimovo Usti
Czech Republic

6. MARKING OF PRODUCT

A plate or durable label shall be placed on the sewage treatment plant with at least:

- Manufacturer's name or logo
- Model and serial number
- Type designation
- Hydraulic loading

- *Markings as per MED 96/98/EC when authorized by a Notified Body: ☒ YYYY/XX where YYYY is the number of the notified body undertaking surveillance module (when BV, 0062) and where XX are the last two digits of year mark affixed.*

7. OTHERS

This approval is given on the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper method of fittings and general maintenance of the sewage treatment plant and of the conditions of this approval.

***** END OF CERTIFICATE *****