

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the "B" Class divisions, fire integrity

with type designation(s)

Hailu Module Toilet Types A - F

Issued to

Jiangsu Hailu Technology Incorporated Corporation
JIANGYIN JIANGSU, China

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

Regulation **(EU) 2017/306,**

item No. MED/3.11b. SOLAS 74 as amended, Regulation II-2.3.4 & II-2/9 and IMO 2010 FTP Code

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

This Certificate is valid until **2023-01-08.**

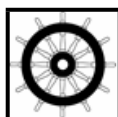
Issued at **Hamburg** on **2018-01-09**

DNV GL local station:

Jiangyin

Approval Engineer:

Pavel Golyshev



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudzus
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

"Hailu Module Toilet Types A - F" for use as sanitary units consists of the following components:

- Floor: 4 mm thick steel plate,
- Walls: JCP-L5 Type Class B-15 Lining (Test report No. FT11216),
- Ceiling: JCP-C2 Type Class B-15 Ceiling (Test report No. FT 11258).

The sanitary units have an entrance door - Class B-15 door CGFM-3 Type (Test report No.FT12303) and a maintenance access hatch - Class B-15 lining access door HL-BJXM-A Type (Test report No.FT09020). The ceiling is fitted with an electrical heating diffuser and light fixture installed in recessed boxes as described in Test report No. FT11258. The penetrations and fittings for the water closet pipes and cold/hot water pipes have undergone type examination (Test report No.FT11216). All of the above mentioned components and fittings have been certified in accordance with the Marine Equipment Directive.

Hailu Module Toilet Types A – F are to be constructed and installed in accordance with the manufacturer's drawings: Module Toilet – Ptype A,. Module Toilet – Ptype B, Module Toilet – Ptype C, Module Toilet – Ptype D, Module Toilet – Ptype E Module Toilet – Ptype F. For these and further details see test reports listed under "Type Examination documentation" below.

All of the above mentioned components and fittings have been certified in accordance with the Maritime Equipment Directive.

For further details, see test reports listed under Type Examination documentation below.

Application/Limitation

Approved for use as a fire retarding division of Class B-15.

To fulfil the requirements for B-class divisions the walls shall extend from deck to deck or may terminate at the ceiling when a continuous B-Class ceiling is installed.

Where the floor and wall/ceiling panels are penetrated for the passage of electrical cables or other fittings not stated in this certificate, arrangements shall be made to ensure that the fire resistance is not impaired.

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

Each product is to be supplied with its manual for installation, use and maintenance

Type Examination documentation

Test reports nos.: FT11216 dated 6th of September 2011, FT09020 dated 1st of February 2009, FT12294 dated 4th of December 2012,

FT11258 dated 28th of October 2011, FT14129 dated 5th of June 2014 and

FT12303 dated 19th of December 2012

all issued by the Far East Fire Testing Centre (FEFTC), Shanghai, China.

This certificate is based on previously issued MED B certificate 37767 - 12 HH.

Tests carried out

Tested according to IMO FTP Code Part 3, IMO 2010 FTP Code and in compliance with IMO 2010 FTP Code Ch.8.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire technical rating, Mark of Conformity and USCG marking if applicable (see first page).