

# Certificate

of

## EC Type-examination (Module B)

**Certificate No.: 10212004/AA/00**

Product Category: A.1/5.14 A.1/5.15

With respect to Marine Equipment Directive 96/98/EC and the amending Directive 2009/26/EC, Telefication declares that the equipment:

Product description: **150W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver**

Trademark: **See annex 3**

Family name: **System 6000 MF/HF**

Type designation: **See annex 3**

Serial No: **See annex 3**

Hard-/Software release No: **BOM Revision A|SW: 1.xx**

Manufacturer: **Thrane & Thrane A/S**

Address: **Lundtoftegaardsvej 93D**

City: **2800 Lyngby**

Country: **Denmark**

complies with the international instruments and test standards as listed in the Annex.

This certificate is granted to:

Name: **Thrane & Thrane A/S**

Address: **Lundtoftegaardsvej 93D**

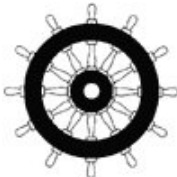
City: **2800 Lyngby**

Country: **Denmark**

Validity of this certificate is 5 years; **Expiry date: 16 May 2016**

This certificate has THREE Annexes.

Zevenaar, 16 May 2011



W.J.M. Jong  
Operations Manager Certification

## General conditions

- Each product to which this certificate relates shall be provided with Marine markings. The Marine marking consist of symbol in the form of a wheel followed by the identification number of the responsible Notified Body for module D, E, F or G, and by the last two digits of the number of the year in which the mark is affixed.
- The holder of this Certificate has drawn up a Declaration of conformity to type with Directive 96/98/EC and amending Directives, declaring that the product(s) described in this EC Type- examination certificate, satisfy the requirements that apply to them.
- Each product shall be identified by means of type, batch and/or serial numbers and the name of the manufacturer and/or importer.
- If the equipment is to be modified, Telefication shall be notified immediately. Depending on the modifications, Telefication may have additional examinations carried out in consultation with the applicant.
- Enforcement of a new amending directive voids the validity of this certificate for (re)placement of the product onboard ships.

## Remarks and observations

*The following conditions are applicable:*

This certificate covers the following 150 Watt System 6000 versions:

- 150W MF/HF SSB radiotelephone with integrated class-A DSC controller and 2187.5 kHz watchkeeping receiver.
- 150W MF/HF SSB radiotelephone with integrated class-A DSC controller and 6-ch scanning watchkeeping receiver.
- 150W MF/HF SSB radiotelephone with integrated class-A DSC controller, NBDP controller and 6-channel scanning watchkeeping receiver.

There are two transceiver-unit versions; only difference is the type of RF power-amplifier, BJT or FET.

All systems utilize the same hardware; version difference is by software programming.

For NBDP-operation however, the following hardware must be added: keyboard TT-6001A, printer TT-1252B/TT-3608A and message terminal TT-6006A.

Verification of which system is on-board ships, is done by readout of the special menu-item on the control-unit:

The Config Status clearly indicates what functionality is active and as such the system version is defined.

Final software version which has been seen during testing: 1.04.

The products to which this certificate relates include the following units or equipment:

- TT-6301A: Control-unit
- TT-6201A: Handset
- TT-6202A: Hand microphone
- TT-6203A: Handset (waterproof)
- TT-6360A: Transceiver-unit (150W BJT PA)
- TT-6361A: Transceiver-unit (150W FET PA)
- TT-6381A: Antenna Tuning Unit
- TT-6081A: AC power supply with charger
- TT-6080A: AC power supply
- PS4655: AC power supply
- TT-1252B or TT-3608A: Printer
- TT-6001A: Keyboard
- TT-6006A: Message Terminal
- TT-6103A: Distress Alarm Panel
- TT-6209A: Accessory Connection Box
- TT-6208A: CU Connection Box
- TT-6197A: Ethernet Switch
- TT-6270A: External Speaker

*Annex 2 to EC type-examination*  
*Number: 10212004/AA/00*

**Documentation lodged for this EC type-examination**

**Test Reports:**

- Delta: DANAK-1911259, 07 February 2011
- Delta: DANAK-195321, 12 July 2000
- Delta: DANAK-198724, 13 April 2007
- Nemko A/S: 130708, 14 September 2009
- Nemko A/S: 138930-3, 23 November 2010
- Nemko A/S: E10178.00, 17 February 2011
- RES Laboratory Ltd.: N 01.11, 04 February 2011
- RES Laboratory Ltd.: N 02.11, 04 February 2011
- SGS Taiwan Ltd.: HC70206/2010, 15 September 2010
- Telefication B.V.: 20103937200, 02 May 2011
- Telefication B.V.: 20103937300, 05 May 2011
- Telefication B.V.: 20103937302, 02 May 2011
- Telefication B.V.: 20103937303, 05 May 2011
- Telefication B.V.: 20103937304, 05 May 2011
- Telefication B.V.: 20103937307, 29 April 2011
- Telefication B.V.: 20103937308, 29 April 2011
- Telefication B.V.: 20103937309, 05 May 2011
- Telefication B.V.: 98735330, 17 December 2001
- Telefication B.V.: 99816920, 22 August 2007
- Telefication B.V.: 99816933, 22 August 2007
- Telefication B.V.: 99817230, 22 August 2007
- Telefication B.V.: 99817231, 22 August 2007
- Telefication B.V.: 99817232-rev 1.0, 04 October 2007
- Telefication B.V.: 99817530-rev 1.0, 06 February 2008
- Telefication B.V.: 99817531, 07 January 2008
- Telefication B.V.: 99817533-rev 1.0, 06 February 2008

**Product Documentation:**

- Assembly drawings
- Bill of materials
- Electric diagrams
- Photos
- User manual
- Installation manual

**International instruments and test standards**

*The equipment complies with:*

- |                            |                |           |
|----------------------------|----------------|-----------|
| - EN 300 338-1             | February 2010  | V1.3.1.   |
| - EN 300 338-2             | February 2010  | V1.3.1    |
| - EN 300 373-1             | January 2011   | V1.3.1    |
| - EN 301 033               | September 2010 | V1.3.1    |
| - EN 60945                 | October 2002   | Edition 4 |
| - ETS 300 067              | November 1990  |           |
| - ETS 300 067/A1           | October 1993   |           |
| - IEC 61162-1              | November 2010  | Ed. 4.0   |
| - IMO Resolution A.694(17) | 1991           |           |
| - IMO Resolution A.806(19) | 1995           |           |
| - ITU-R M.1173             | October 1995   |           |
| - ITU-R M.476-5            | October 1995   |           |
| - ITU-R M.491-1            | July 1986      |           |
| - ITU-R M.492-6            | October 1995   |           |
| - ITU-R M.493-13           | October 2009   |           |
| - ITU-R M.541-9            | May 2004       |           |
| - ITU-R M.625-3            | October 1995   |           |
| - ITU-R M.821-1            | February 1997  |           |
| - MSC Resolution 36(63)    | May 1994       |           |
| - MSC Resolution 68(68)/A3 | 1997           |           |
| - MSC Resolution Cir. 862  | 1998           |           |

### Technical features and characteristics

*The product includes the following features and characteristics:*

MF HF equipment:

- Operating frequency range: Transmitter: 1.6-30 MHz; Receiver: 0.15-30 MHz
- Maximum output power: SSB: 150W<sub>pep</sub> rated; DSC/NBDP: 120W<sub>mean</sub> rated
- Modulation method(s): J3E; J2B; A3E (RX only)
- DSC class A
- NBDP

### Trademarks and Type designations

*The product as described in this EC type-examination includes the following type designations:*

Product description: 150W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver  
Type designation: TT-6310A  
Trademark: SAILOR  
Serial No: --  
Hard-|Software release No: BOM Revision A|SW: 1.xx

Product description: 150W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver  
Type designation: TT-6310A  
Trademark: SAM  
Serial No: --  
Hard-|Software release No: BOM Revision A|SW: 1.xx

Product description: 150W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver  
Type designation: TT-6310A  
Trademark: Highlander  
Serial No: --  
Hard-|Software release No: BOM Revision A|SW: 1.xx