

Certificate

of

EC Type-examination (Module B)

Certificate N°: 06212501/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 2002/75/EC,
Telefication declares that the equipment:

Product description: **250W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver**

Trademark: **See annex 3**

Family name: **System 5000 MF/HF**

Type designation: **See annex 3**

Serial No: **See annex 3**

Software release No: **See annex 3**

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**

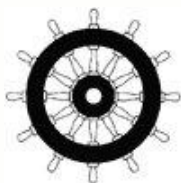
City: **2800 Lyngby**

Country: **Denmark**

Validity of this certificate is 5 years; **Expiry date: 23 August 2012**

This certificate has THREE Annexes.

Zevenaar, 31 August 2007

A handwritten signature in blue ink, appearing to read "M.H. Koop", written over a horizontal line.

M.H. Koop
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 (Telefication - 0560 -), 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.

Remarks and observations

The following conditions are applicable:

This certificate covers the following 250 Watt System 5000 versions:

- 250W MF/HF SSB radiotelephone with integrated class-A DSC controller and 2187.5 kHz watchkeeping receiver;
- 250W MF/HF SSB radiotelephone with integrated class-A DSC controller and 6-ch scanning watchkeeping receiver;
- 250W MF/HF SSB radiotelephone with integrated class-A DSC controller, NBDP controller and 6-ch scanning watchkeeping receiver.

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

For NBDP-operation however, the following hardware must be added: keyboard TT-3601E, printer H1252B/TT-3608A and/or data terminal TT-3606E.

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

* Menu - Setup - Config Status *.

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

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

- CU5100: Control-unit
- TU5250: Transceiver-unit
- ATU5215: Antenna Tuning Unit
- 5083: AC power supply
- AP5065: Distress Alarm Panel
- H1252B or TT-3608A: Printer
- TT-3601E: Keyboard
- TT-3606E: Data Terminal
- CB4616: Terminal Block Converter Box

Documentation lodged for this EC type-examination

Test Reports:

- Delta: DANAK-198724, 13 April 2007
- Delta: DANAK-198824, 24 July 2007
- Telefication bv: 99816920, 22 August 2007
- Telefication bv: 99816930, 22 August 2007
- Telefication bv: 99816931, 22 August 2007
- Telefication bv: 99816933, 22 August 2007
- Telefication bv: 99816935, 22 August 2007

Product Documentation:

- Bill of materials
- Electric diagrams
- Photos
- User manual
- Technical manual

International instruments and test standards

The equipment complies with:

- | | | |
|----------------------------|---------------|-----------|
| - EN 300 338 | April 1999 | V1.2.1 |
| - EN 300 373 -1 | October 2002 | V1.2.1 |
| - EN 301 033 | December 2005 | V1.2.1 |
| - EN 60945 | October 2002 | Edition 4 |
| - ETS 300 067 A1 | October 1993 | |
| - IEC 61162-1 | July 2000 | 2nd Ed. |
| - IMO Resolution A.694(17) | 1991 | |
| - IMO Resolution A.806(19) | 1995 | |
| - ITU-R M.1082-1 | October 1997 | |
| - 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.493-11 | May 2004 | |
| - 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: 250 W PEP 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:	250W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver
Type designation:	250 Watt System 5000
Trademark:	SAILOR
Software release No:	CU: 1.35.xx; TU: 1.35.0; ATU: 101.2.0
Product description:	250W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver
Type designation:	250 Watt System 5000
Trademark:	DEBEG
Software release No:	CU: 1.35.xx; TU: 1.35.xx; ATU: 101.2.0
Product description:	250W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver
Type designation:	250 Watt System 5000
Trademark:	Sperry marine
Software release No:	CU: 1.35.xx; TU: 1.35.xx; ATU: 101.2.0
Product description:	250W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver
Type designation:	250 Watt System 5000
Trademark:	Kongsberg
Software release No:	CU: 1.35.xx; TU: 1.35.xx; ATU: 101.2.0
Product description:	250W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver
Type designation:	250 Watt System 5000
Trademark:	HUSUN
Software release No:	CU: 1.35.xx; TU: 1.35.xx; ATU: 101.2.0
Product description:	250W GMDSS MF/HF SSB Radiotelephone with integrated Class-A DSC-controller, NBDP terminal and DSC-watchkeeping receiver
Type designation:	250 Watt System 5000
Trademark:	Raytheon
Software release No:	CU: 1.35.xx; TU: 1.35.xx; ATU: 101.2.0