GRAND-DUCHÉ DE LUXEMBOURG

COMMISSARIAT AUX AFFAIRES MARITIMES

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Subject : **Long-Range Identification and Tracking of Ships (LRIT)**

To : All ship owners, ship operators and designated persons of Luxembourg flagged ships

This circular summarizes the various important aspects of the LRIT system with a view to enabling companies to ensure compliance in a timely manner.

1. Background

In 2002 the requirement to fit Automatic Identification Systems (AIS) to ships was introduced.

AIS, as well as improving navigational safety, also enables coastal states to monitor traffic within VHF range of their coasts. Monitoring at longer ranges is not possible with AIS.

Resulting from discussions at the International Maritime Organization (IMO), the concept of Long-Range Identification and Tracking of Ships (LRIT) was developed for ships on international voyages.

The new SOLAS Chapter V Regulation 19-1 (which **entered into force on 1 January 2008**) establishes a multilateral agreement whereby LRIT information will be shared to improve maritime safety, security and assist with search and rescue (SAR) purposes. Moreover, consideration is currently being given by IMO's Maritime Safety Committee to agree that the information from the LRIT system may be used for marine environmental protection.

2. Ships required to transmit LRIT messages

When on international voyages, the following ships will be required to transmit LRIT messages:

- passenger ships (including high speed crafts);
- cargo ships (including high speed crafts) of 300 gross tonnage and up;
- mobile offshore drilling units.

3. Information to be transmitted automatically

- Ship's identity;
- Ship's position (Latitude and Longitude);
- Time and date of transmission (associated with the GNSS position).

4. Timetable

- All Ships constructed on or after 31 December 2008 will have to have LRIT capacities installed from date of build.
- Ships constructed before 31 December 2008 (operating in areas A2 and/or A3) will have to have to have LRIT capacities installed not later than 1st survey of the radio installation after 31 December 2008.
- Ships constructed before 31 December 2008 (operating in area A4) will have to have LRIT capacities installed not later than 1st survey of the radio installation after 1 July 2009.
- Ships operating in area A1 only and using AIS are exempted from SOLAS regulation V/19-1.

5. GMDSS Sea areas

The four different areas are:

- Area A1 – within range of shore-based VHF DSC coast station (30-40 nautical miles)
- Area A2 – within range of a shore-based MF DSC coast station; (150 nautical miles), (excluding sea areas A1)
- Area A3 – within the coverage of an INMARSAT geostationary satellite; approximately 76°N to 76°S (excluding sea areas A1 and A2)
- Area A4 – The remaining areas outside sea areas A1, A2 & A3 (polar regions).

The on-board equipment requirements are specified in the LRIT Performance Standards: IMO Resolution MSC.263(84).

6. Security of LRIT data

Availability of information from LRIT transmissions will be restricted to Contracting IMO Member States and Administrations. It will not be available to third parties or other ships.

There will be no interface between LRIT and AIS. An important difference between LRIT and AIS is that, whereas AIS is a broadcast system, data derived through LRIT will be available only to the recipients who are entitled to receive such information; regulatory provisions will include safeguards concerning the confidentiality of data. SOLAS contracting Governments will be entitled to receive information about ships navigating within a distance not exceeding 1000 nautical miles off their coast.

7. Equipment

The LRIT system will enable Administrations to receive position reports from ships flying their flag worldwide. It will also allow Governments to receive similar position reports from all ships in the vicinity of their coastlines and territorial waters.

The LRIT-System consists of:

- shipborne LRIT equipment
- LRIT Data Centres (National, Regional, Cooperative or International)
- Application Service Provider
- Communication Service Provider
- International LRIT Data Exchange

8. Shipborne equipment for Luxembourg flagged ships

Regulation V/19-1.6 specifies that the shipboard equipment to be used to transmit LRIT information shall be of a type approved by the Administration. It should be noted that, since the performance standard developed by IMO (Resolution MSC 263(84)) is a standard for the entire system, it is not possible to verify compliance unless the entire system is ready for operation. In order to facilitate this, authorized testing Application service providers (ASPs) shall be approached by the ship's company for testing the shipborne equipment on behalf of Luxembourg.

LRIT makes use of existing marine satellite technology to transmit position reports from ships to the Flag Administration and to other Governments with a legitimate right to the information.

LRIT data can be provided by using equipment already fitted on many ships, such as Inmarsat C, mini-C or D+. There will also be systems available which utilize alternative satellite networks and specifically designed to function within the LRIT infrastructure. All these systems have a built-in GNSS receiver, providing the vessel's position, date and time. They also have the equipment-unique identification (ID) built in to them. Remote control of transmissions is also possible.

Ship owners and masters are responsible for ensuring that the equipment fitted is fully compliant with the requirements of LRIT. Studies have revealed that some Inmarsat C equipment will not be able to support all LRIT operations. If in any doubt ship masters or owners should check with the equipment manufacturers or service facilities.

The following are on-board equipment requirements as specified in the LRIT Performance Standards (IMO Resolution MSC.263(84)).

The equipment must:

- be capable of automatically transmitting the ship's LRIT information at 6-hour intervals to an LRIT Data Centre without human intervention on board the ship;
- be capable of being configured remotely to transmit LRIT information at variable intervals;
- be capable of transmitting LRIT information following receipt of polling commands;
- interface directly to the ship-borne global navigation satellite system equipment, or have internal positioning capability;
- be supplied with energy from main as well as emergency source of electrical Power;
- be tested for electromagnetic compatibility taking into account the recommendations developed by the Organization.

9. Position report

The position report from the ship is sent to a Data Centre via an Application Service Provider utilizing a Communication Service Provider. Position reports are automatically sent every six hours to the Data Centre. Additional position reports may be requested by increasing the position reporting up to each 15 minutes or "polling" for an immediate position report by entitled Governments.

10 Transmission costs

There will be no costs to the ship for LRIT transmissions. Costs will be borne by Member States that request the LRIT data (if entitled to do so).

11. LRIT Data Centre

For the European Member States an EU LRIT Data Centre will be established.

The Commissariat aux affaires maritimes will provide the European Maritime Safety Agency (EMSA) with a list of ships entitled to fly the Luxembourg flag together with other salient details and will keep this list updated. EMSA will forward the list to the assigned LRIT Data Centre. It is important to note that EMSA will only accept to insert the ships in the EU LRIT data base once all details have been completed (see annex 1)

12. ASP – Application Service Providers

The Recognized ASP for LRIT Data Centre for EU-flagged ships will be recognized by the European Maritime Safety Agency (EMSA). The ASP will integrate the ship equipment into the designated Data Centre and connect the Data Centre to the different CSPs.

13. Authorized testing ASP

Authorized testing ASP is an Application Service Provider, other than a Recognized ASP, authorized by the Administration to conduct the conformance tests required for every ship. Testing ASPs for LRIT shipborne equipment on Luxembourg ships will be recognized by the Commissariat aux affaires maritimes.

At this stage the following companies will be authorized as testing ASPs:

- Fulcrum Maritime Systems;
- Thrane&Thrane;
- TRANSAS Telematics Ltd;
- SATPRO International Ltd;
- PoleStar Space Applications Ltd.

14. CSP -Communication Service Providers

CSPs will provide services which link the various parts of LRIT system using communications protocols in order to ensure secure transfer of LRIT information. In addition the CSPs may provide services as the ASPs. Contracting Governments are not required to recognize CSPs.

15. Implementation

Companies should check if their ships' equipment are approved for use in the LRIT system and make the necessary arrangements for the conduct of the conformance tests set out in SC.1/Circ.1257 well ahead of the date on which the survey of the radio installations becomes due. Such an approach would enable the Companies to ensure whether the shipborne equipments are capable of transmitting LRIT information and if adjustments of any hardware or software will be necessary.

For ships constructed on or after 31 December 2008, the conformance test should be:

- conducted after the completion of the initial survey of the radio installation, provided such survey has indicated that, as far as the radio installation is concerned, the ship meets the related requirements for the issue of a radio related certificate, and
- satisfactorily completed prior to the issue of a radio related certificate.

For ships constructed before 31 December 2008, the conformance test should be:

- conducted within a period of three months prior to the date of the first survey of the radio installation after the 31 December 2008 or 01 July 2009 (A4), and
- satisfactorily completed prior to the amendment of the record of equipment to document compliance with the requirements relating to LRIT system.

16. Conformance Test Report

The Conformance Test should be conducted either by a recognized ASP or by an authorized testing ASP. On satisfactory completion of a Conformance Test, the authorized test-ASP will issue a Conformance Test Report on behalf of the Administration in accordance with the model set out in appendix 2 of MSC.1/Circ.1257. The Test Report includes a reference to the authorization of the testing ASP by Commissariat aux affaires maritimes and has to be available on board for surveys and Port State Controls.

The Conformance Test Report should be considered as no longer valid if:

1. there is a change in the shipborne equipment;
2. the ship is transferred to another owner or flag;
3. the Data Centre or the ASP which has issued the Conformance test report notifies the Administration that the validity of the test report can no longer be attested (e.g. ship no longer transmitting reports); or
4. the Administration withdraws the recognition or authorization of the ASP which conducted the conformance test.

During any renewal or annual survey the related radio certificate will only be issued or endorsed, if the Conformance Test Report remains valid.

17. Further important information

Ship not transmitting due to outside failure of the LRIT system (MSC.1/Circ.1256, Section 11): in this case Contracting Governments should not impose sanctions on the ship as long as the Conformance Test Report and related radio certificate are valid.

Ship undergoing repairs, modifications or conversions in dry-dock or in port (MSC.1/Circ.1256, Section 12): in this case the Administration or the master may reduce he frequency of the transmission to one frequency per 24-hour period or may temporarily hold transmissions (exceptional case). In such cases the master should notify the flag Administration and the authority of port State accordingly. In addition the master should make an entry in the record of navigation activities and daily reporting required by regulation V/28.

18. Survey of the radio installation

If the anniversary date of the radio related certificate permits it is recommended for existing ships to have the next renewal or periodical survey of the radio installation conducted before

31 December 2008 in order to use the transition period as given by SOLAS regulation V/19-1.4.1.2 .

19.<u>Sources</u>

Resolution MSC.263(84)
MSC.1/Circ.1256 -Guidance on the implementation of the LRIT system
MSC.1/Circ.1257 – Survey and certification of the LRIT system

COMMISSARIAT AUX AFFAIRES MARITIMES
G.-D. DE LUXEMBOURG

(s) Robert BIWER
Government Commissioner
for maritime affairs

Annex 1

Details to be provided for each ship to the Commissariat aux affaires maritimes in view of the inclusion of a ship in the EU LRIT data base.

IMO Number
Ship Name
MMSI
Call Sign
Authorized ASP that issued the conformance test report
Issue date of the conformance test report (YYYY-MM-DD)
Shipborne system (Radio installation)
Shipborne system description (Radio installation description)
Shipborne serial number
Emergency contact name (ISM deputy person ashore or CSO)
Emergency contact address
Emergency contact phone
Alternative Emergency contact phone
Emergency contact fax
Emergency contact email address
Comments