

**EUROPEAN COMMISSION**

EUROPEAN MARITIME SAFETY AGENCY

Praça Europa 4, 1249-206 Lisbon, Portugal

# SafeSeaNet System Interface Guide

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## Ship particulars exchange

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# 1 INTRODUCTION

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## 1.1 Document Overview

This document is the SafeSeaNet (SSN) System Interface Guide for **Ship particulars exchange** and is the reference for all technical aspects related to this service.

## 1.2 Scope

This document defines the general requirements of the interface between an external application and the traffic monitoring system SafeSeaNet (SSN) with the scope of exchanging notifications and requests for details concerning:

- MS2SSN\_ShipParticulars\_Not
- MS2SSN\_ShipParticulars\_Req
- MS2SSN\_ShipParticulars\_Res
- MS2SSN\_ShipParticulars\_Sub
- SSN2MS\_ShipParticulars\_Ann

## 1.3 Reference and Applicable documents

### 1.3.1 Reference documents

This documents replaces the following documents that were available at the initial stage of the project<sup>1</sup>:

- "SSN Ship Particulars Exchange - Reference Guide (Version 1.12 – 03/04/2013), and;
- "SSN Ship Particulars Exchange Reference Guide - RVD WG Consolidated comments (03/04/2013).

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<sup>1</sup> Available in the restricted part of EMSA website at: <https://extranet.emsa.europa.eu/document-repository/ssn-workshops-and-meetings/rvd-working-group-restricted>

## 1.4 Abbreviations and acronyms

A list of the principal abbreviations and acronyms used in the document is provided here for a better understanding of this document.

Abbreviation	Definition
ACK	Acknowledged
AIS	Automatic Identification Systems
CSD	Central Ship Database
EMSA	European Maritime Safety Agency
EU	European Union
IMO	International Maritime Organisation
ITU	International Telecommunications Commission
MS	Member State
MMSI	Maritime Mobile Service Identity
MS2SSN	Used to indicate MS as the origin and SSN as the recipient of a message.
N/A	Not Applicable or Not Available
NACK	Not Acknowledged
OSD	Operational Ship Database
SSN	SafeSeaNet
SSN2MS	Used to indicate SSN as the origin and MS as the recipient of a message.
URL	Unified Resource Locator
WADL	<a href="#">Web Application Description Language</a> . It describes XML over HTTP interfaces
WSDL	Web Service Definition Language
XML	eXtensible Markup Language

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## 2 SYSTEM INTERFACES

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### 2.1 Services Overview

The Central Ship Database – CSD is a common service hosted by EMSA and available to all Member States on a voluntary basis.

The CSD includes information on ship particulars: IMO, MMSI, Name and Call Sign. The main ship data sources are the Member States notifications to SSN (for the four ship identifiers). The data is then validated according to defined business rules implemented in an automatic algorithm using reference commercial data sources. Manual verification may also be required in specific cases identified by the algorithm; in this case the Maritime Support Services Officer (MSSO) performs the verification.

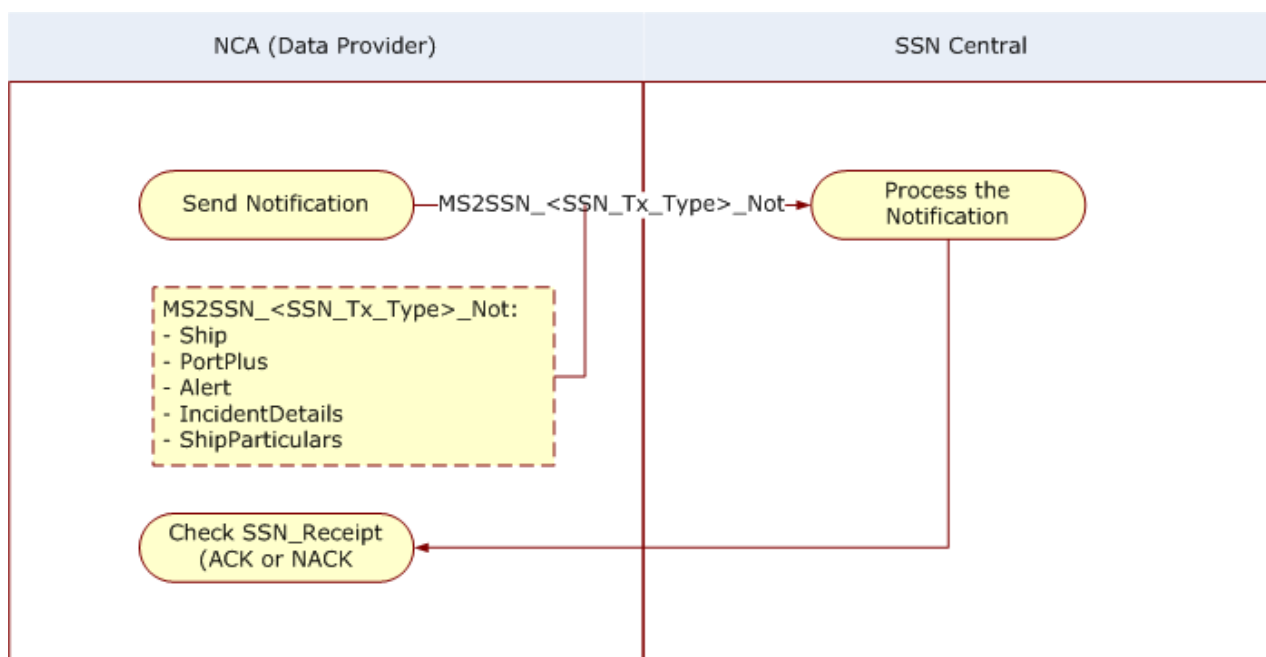
The CSD concept is referenced on the basis of an active ship identity which is valid at a particular moment. This consists of the combination of a unique vessel identifier (i.e. the IMO in the case of SOLAS ships) and the MMSI number. No ship will be registered in the CSD without a valid unique vessel identifier and MMSI combination.

The CSD information is available to the Member States, who may use it for cross-checking with data stored within their national vessel databases. For this purpose the following services to share data have been agreed by the SSN High Level Steering Group 11 (June 2014):

- **Request/response mechanism:** to request the content of ship records in the CSD based on ship ID, flag or latest updated records using predefined XML messages. The Member States could either treat the reception of data as a trigger to begin the additional verification of ship details included in their system, or use it to automatically update their own database;
  - The request/ response mechanism could be also used for the retrieval of changes in a ship record (**ship record "history"**) in the CSD
- **Ship particulars notification web-service:** to provide feedback information to the CSD which could be used to provide updates on ship particulars. The Member States could use such a service to provide updates of particulars that have been verified manually by their national authorities (e.g. national flag registries);
- **Ship particulars announcement ("push"):** To announce a change to the ship particulars of a ship already registered in the database or the creation of a new ship record in the Central Ship Database. Member States subscribing to this service can choose, subject to their decision, either to initiate the verification of ship details included in their system, or to use it to automatically update their own database

This document aims at describing the above services that will enable the national SSN applications of the Member States to communicate programmatically with the central SafeSeaNet system.

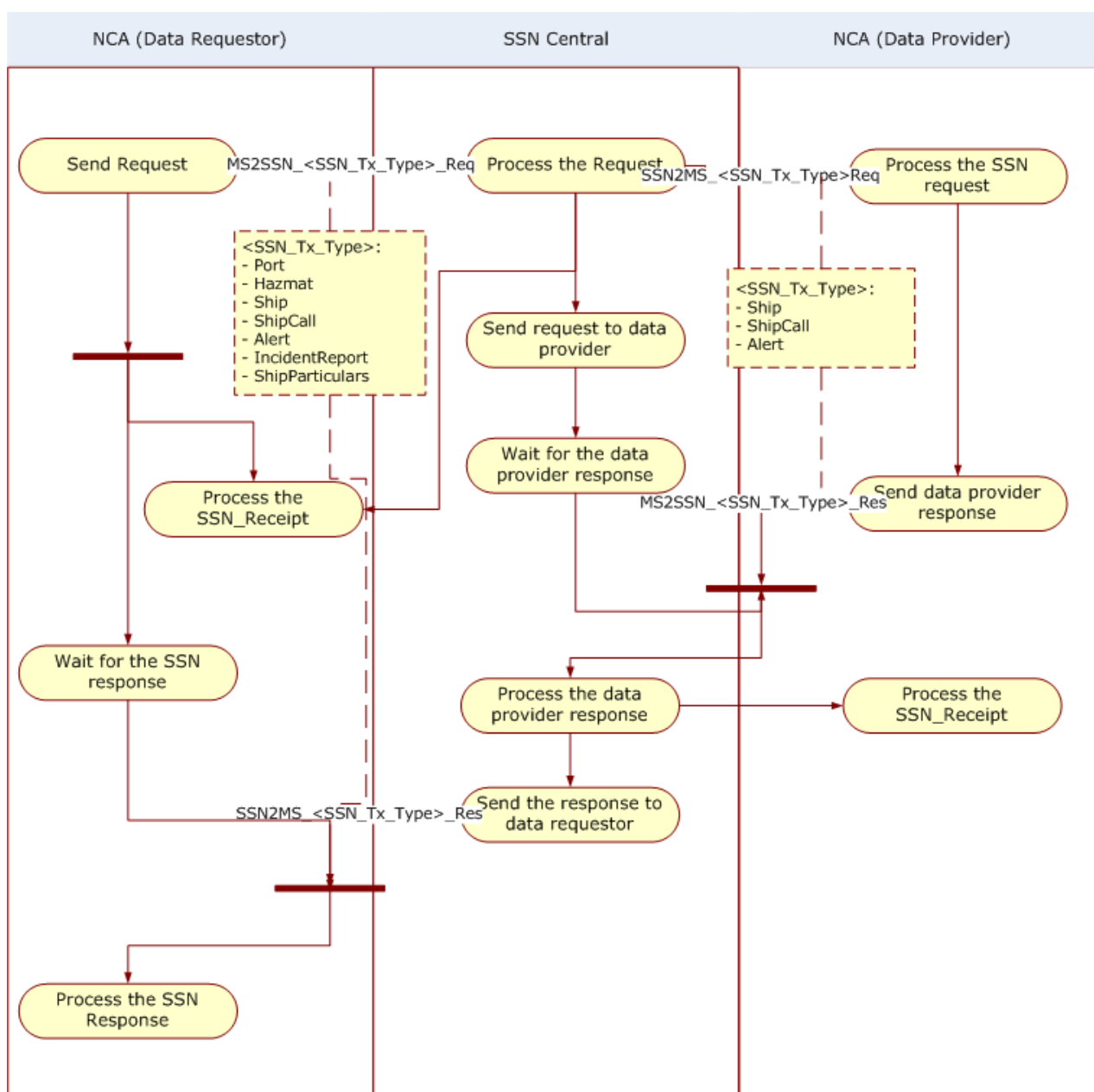
The **Send Ship Particulars** notifications are used to notify SafeSeaNet of new insertions or updates in the ship registry maintained by the data provider. The message flow is as follows:



The message exchange flow is described in the following table.

Step	Action
1	The national SSN system prepares the <b>MS2SSN_&lt;SSN_Tx_Type&gt;_Not</b> XML message corresponding to the type of the notification and sends it to SafeSeaNet.
2	SafeSeaNet logs and validates the notification message.  If valid, it stores the notification information in its index database, and sends back the <b>SSN_Receipt</b> XML message with a positive status code as response (synchronous connection).  If invalid or any problem during the processing of the notification, it sends back the <b>SSN_Receipt</b> XML message with a negative status code as response (synchronous connection).
3	The national SSN system analyzes the received XML response and processes it accordingly.

The Ship Particulars **request - response message** flow is identical to that of the SSN information request flow, and is as follows:



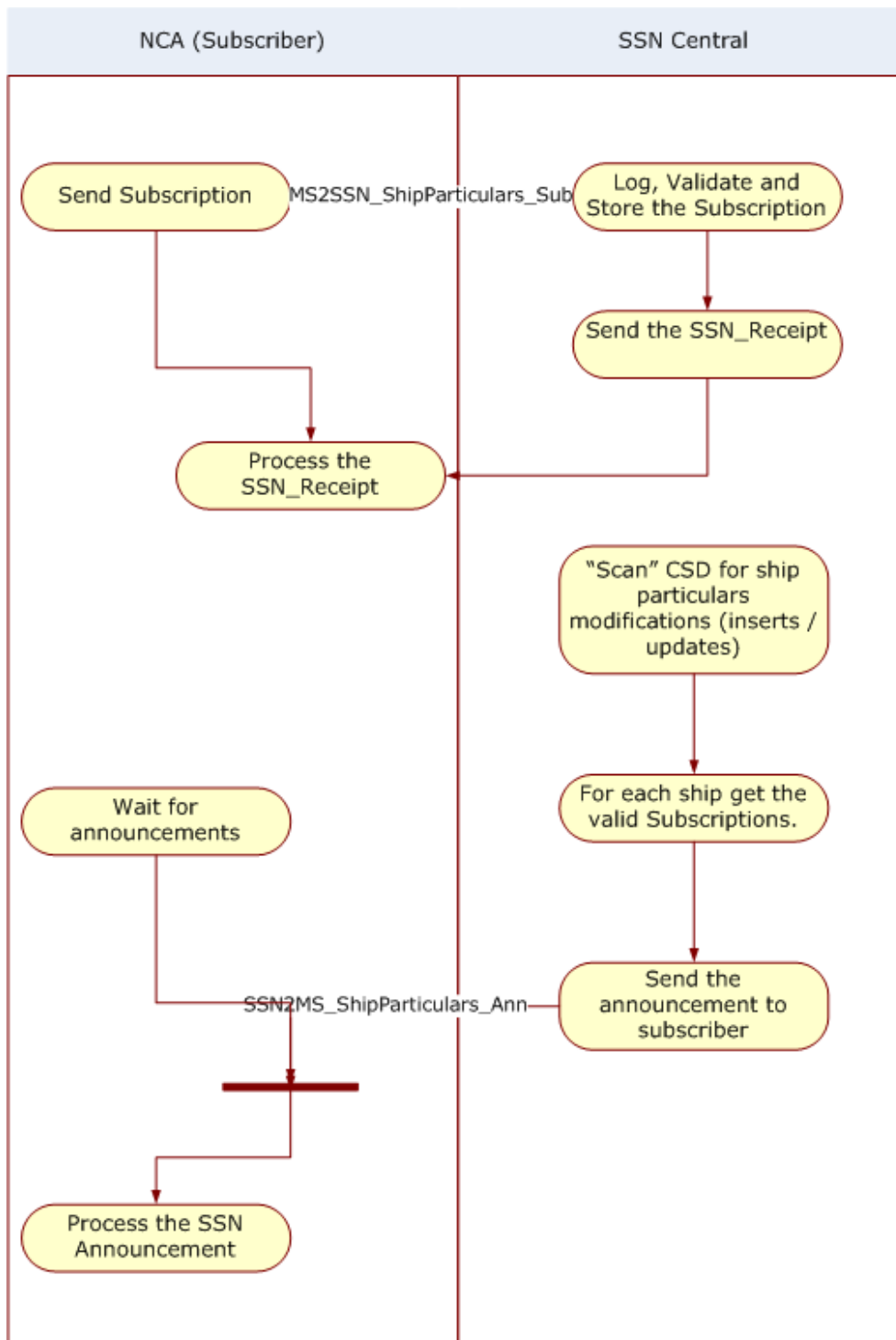
The process flow illustrates the case where the data provider can talk XML with SafeSeaNet. This process also applies to the **history retrieval** service.

The browser-based web application that SafeSeaNet will provide could act as the national SSN system (DataRequester part only) in the figure above.

The message exchange flow is described in the following table.

Step	Action
1	<p>The national SSN system (<i>data requester</i>) prepares the MS2SSN_&lt;SSN_Tx_Type&gt;_Req XML message corresponding to the type of the information request and sends it to SafeSeaNet.</p> <p>Contrary to the notification principle, the communication is now asynchronous. Therefore, upon receiving the transport acknowledgement (HTTP return code 202 and SSN_Receipt message with StatusCode='OK', meaning request accepted), the national SSN system should wait for receiving asynchronously the SSN2MS_&lt;SSN_Tx_Type&gt;_Res XML response from SafeSeaNet.</p>
2	<p>SafeSeaNet logs and validates the received <b>MS2SSN_&lt;SSN_Tx_Type&gt;_Req</b> XML message.</p> <p>If well-formatted (XML compliant) or valid (compliant to corresponding XSD), an SSN_Receipt message with StatusCode='OK' is sent synchronously. It then looks in its index database to identify the owner of the requested information. Assuming the <i>data provider</i> is able to talk XML with SafeSeaNet (see above for more details about <i>data provider</i> capabilities), SafeSeaNet will send a <b>SSN2MS_&lt;SSN_Tx_Type&gt;_Req</b> XML message asking the data provider to send the requested detailed information and wait for receiving asynchronously the <b>MS2SSN_&lt;SSN_Tx_Type&gt;_Res</b> XML response from the <i>data provider</i>.</p> <p>If any problem during the processing of the <i>data requester</i> request, it sends back to the <i>data requester</i> the <b>SSN2MS_&lt;SSN_Tx_Type&gt;_Res</b> XML message with a negative status code as response.</p> <p>If the <b>MS2SSN_&lt;SSN_Tx_Type&gt;_Req</b> XML message is not well-formatted (not XML compliant) or not valid (not compliant to corresponding XSD), an SSN_Receipt message is sent synchronously containing the error message generated by the parser.</p>
3	<p>The national SSN system (<i>data provider</i>) should log and validate the received <b>SSN2MS_&lt;SSN_Tx_Type&gt;_Req</b> XML message.</p> <p>If valid, it searches for the requested detailed information and sends it back to SafeSeaNet in the <b>MS2SSN_&lt;SSN_Tx_Type&gt;_Res</b> XML message.</p> <p>If invalid or any problem during the processing of the request, it sends back to SafeSeaNet the <b>MS2SSN_&lt;SSN_Tx_Type&gt;_Res</b> XML message with a negative status code as response.</p>
4	<p>SafeSeaNet logs and validates the received <b>MS2SSN_&lt;SSN_Tx_Type&gt;_Res</b> XML message and sends <b>SSN_Receipt</b> XML message back as confirmation (synchronous connection). It then prepares and sends back to the <i>data requester</i> the <b>SSN2MS_&lt;SSN_Tx_Type&gt;_Res</b> XML message with the requested detailed information asynchronously.</p>
5	<p>The national SSN system (<i>data requester</i>) should log and validate the received <b>SSN2MS_&lt;SSN_Tx_Type&gt;_Res</b> XML message and process it</p>

The **Subscription / Ship Particulars announcement message** flow is as follows:



The message exchange flow is shown in the following table.

Step	Action
1	<p>The <b>MS2SSN_ShipParticulars_Sub</b> message is sent by a MS to SSN for subscription to the ship particulars announcement (data “push”) service. The message provides the subscription’s</p> <ul style="list-style-type: none"> <li>➤ criteria (flag and vessel status criteria) and</li> <li>➤ the period (start – end date)</li> </ul> <p>for its configuration, or – alternatively - a specific subscription’s cancellation.</p> <p>SafeSeaNet logs and validates the received XML message.</p> <p>If well-formatted (XML compliant) or valid (compliant to corresponding XSD), an SSN_Receipt message with StatusCode=‘OK’ is sent synchronously.</p>
2	a scan task “checks” regularly CSD for ship particulars modifications (inserts / updates)
3	For each ship particulars modification, the application will check and retrieve the valid subscriptions for the ships for which ship particulars characteristics were modified.
4	An <b>SSN2MS_ShipParticulars_Ann</b> message is created including the ship particulars information and submitted to the aforementioned retrieved subscriptions endpoint.
5	A JMS Queue is used for redelivery purposes in case of unavailability.

### 2.1.1 Operational Concept

A high level conceptual connections diagram showing how the CSD could be located in an interoperable CSD/OSDs (operational vessel databases) network at EU level can be seen in Figure 2-1. It is noted that data providers notifying ship particulars via the ship particulars service may have different scopes, and hence notifications could be related to different ship particulars concerning the ship. Hence, the information in the CSD and SSN OSD for a single vessel will likely be composed of particulars provided by several different sources. Hence, provisions have been made in the design of the database schema of the SSN central system in order to store in the ship databases of SSN, not only the individual ship particulars, but also the date the ship particular was created/ last updated in the ship record and the source that caused the creation / updating of the information.

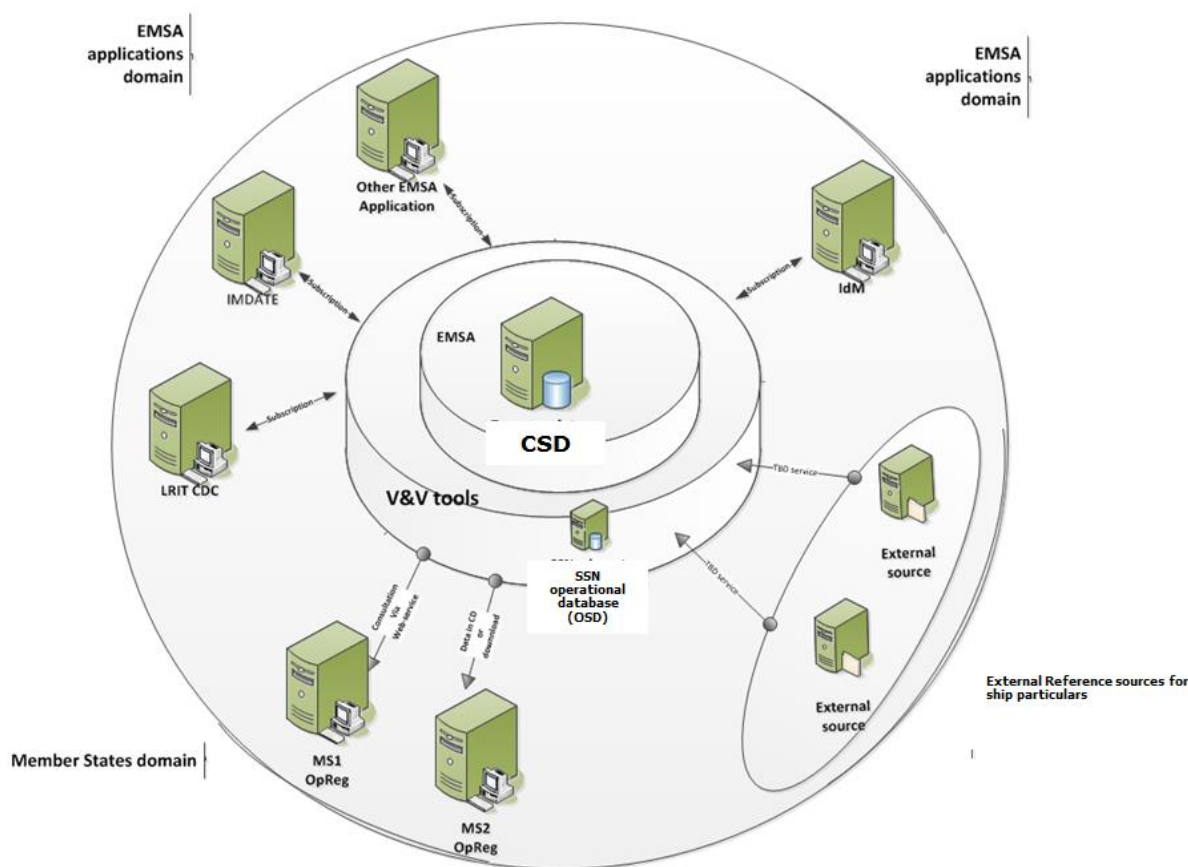


Figure 2-1 Conceptual layout/Ship particulars exchange

The verification and validation of all CSD input and output data will be carried out using the Verification and Validation tools (V&V), which will be implemented centrally at EMSA as a horizontal service offered by SSN. The relevant business processes are clarified in the following sub-sections and the applicable conventions/ definitions/ business rules in sections **2.1.4** to **2.1.6**.

The link between the external databases (identified as OSDs in the Figure 2-1) and the central SSN-CSD could be set up on a voluntary basis, using XML (SOAP web-services based interface). For registering or updating data in the CSD, the business rules mentioned in the next section shall be applied.

## 2.1.2 Principles for sharing of ship particulars

The sharing of ship particulars is governed by the following principles:

- The CSD is referenced on the basis of an active ship identity which is valid at a particular moment. This consists of the combination of a unique vessel identifier (i.e. the IMO in the case of SOLAS ships) and the MMSI number. No ship will be registered in the CSD without a valid unique vessel identifier and MMSI combination.
- For validation purposes, the following ship data sources shall be used:

- The four principal ship identifiers (IMO, MMSI, Ship name, Call Sign) particulars notified via the SSN notification mechanism, as well as the flag attribute notified via ShipParticulars notifications.
- The EU LRIT ship database (for the four principal identifiers and the flag of EU flagged ships).
- The THETIS ship database (for the four main identifiers and the flag validated from registered PSC inspections).
- External commercial reference sources as long as it is deemed necessary to utilise data from commercial sources for the purposes of ship particulars verifications/ validation.
- Others to be gradually included (e.g. MS ship databases, the ITU MARS database, etc.)

Upon receipt of a notification from the sources mentioned above, the following business processes shall be executed:

- i. First, a verification of the active identity of the ship (s) reported in the incoming notification. The verification is based on the business rules in section **2.1.6**.
  - a. Depending on the results of the ship identity verification process, additional actions could be initiated.
- ii. An automatic process for updating the content of the CSD (in line with the business rules in the sections **2.1.4** to **2.1.6**)
- iii. A Maritime Support Services operator assists the ship particular verification / validation process

The results of the processes mentioned above shall be stored as follows:

- In the CSD and SSN OSD for those ships whose identities were successfully verified, and an CSD update decision was taken in line with the business rules in sections **2.1.4** to **2.1.6**
  - In the SSN OSD only if the ship identity could not be verified, and the data have to be temporarily stored to allow a repetition of the verification/ validation process following a subsequent notification concerning the same ship.
- c. The ship particulars stored in the CSD (as well as their updates) will be made available to all EMSA applications (including the Integrated Maritime Data Environment), via request response, in order to be able to synchronise the information in the application-specific operational vessel databases (OSDs).
  - d. The CSD information shall be made available to the MSs, who may use it for cross-checking with data stored within the national vessel databases (MS OSDs).
  - e. The data in the CSD will be managed using the Verification & Validation (V&V) business rules. These rules are further explained in the section 2.1.6 of this document.
  - f. The business rules to be utilised for insertion. Updating of CSD data (refer to the next sub-section) introduce an automatic algorithm which prioritises sources based on the rating (refer to **Table 2-4**) of the level of confidence of incoming information. Moreover, the rules clarify the automatic update process of the CSD, and also indicate the types of situations when information proposed by alternative sources to the CSD should be taken into consideration or ignored. Lastly, they describe the very specific situations when the launch of the Maritime Support Services Officer (MSSO) assisted verification and validation (V&V) process can be authorised.

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- g. The application of the rules listed in the section **2.1.4** requires the maintenance of the following additional data in the CSD database:
- The source used to extract the value of a given ship particular (e.g. this field will allow users to know whether the Call Sign of a ship which is registered in the CSD originates from an SSN notification or another source).
  - An indication of the "reason to update" for a specific ship particular. This field will be used to provide an indication of the level of confidence for the data stored in the system for a specific particular.
  - An indication of the "date of effect" (i.e. the date that the update of a given ship particular was recorded within the external source that provided the information). Should an update request be accepted, the same date will be recorded in the ship database as for the date of effect of the CSD update.
  - For each record in the CSD, an indication of the date of the initial creation and of the date of the most recent update.
- h. The CSD will be updated whenever the automatic V&V process allows. Should the automatic V&V process not allow an automatic update, the incoming ship particulars are either rejected and logged or stored as mentioned above in a distinct database (the SSN central system's OSD), as "temporary" records, for further processing.
- i. The operator assisted V&V process could be performed in specific cases when the ship identity cannot be definitely determined by the automatic rules, but only when the IMO or IR (Internal Reference number) numbers are included in the notification.
- j. As stated above, ship records pending verification will be stored in a SSN OSD until an additional notification of vessel particulars from a different source reaches the CSD. The automatic verification/ validation process will then be re-launched. Should the process succeed at this stage, the record will be stored in the CSD. If not, the process will be repeated when the next notification arrives.

Should the primary ship identity (e.g. the IMO and MMSI of a SOLAS ship) be successfully verified during the automatic process (and the incoming notification includes, in addition to the primary identifiers, the ship name, call sign and flag), the relevant ship particulars will be updated. However, for the ship name update, the Business rule 7 in the section **2.1.4** will apply.

### **2.1.3 Definitions/ Clarifications of principal terms and their usage in the context of business processes**

The table below clarifies the context of certain terms utilised in the description of business rules here-in.

Term	Definition
Active IMO or IR or EMSA-R	The IMO or IR or EMSA-R number reported corresponds to a vessel that is in service
EMSA-R (reference) number	The EMSA reference (EMSA-R) number is a unique identifier assigned only to ships registered in CSD or SSN OSD (or both) with no IMO or IR number whose particulars are stored in the CSD.
Fishing vessel active identity	The combination of the IR number and the MMSI number currently assigned by the flag state uniquely identifies the active operational identity of a fishing vessel in the CSD (and SSN OSD)
IMO number	The definition of IMO number as per IMO Res A.600 (15) applies
IR number	The internal reference number is a unique vessel reference number for EU flag fishing vessels (as defined in Regulation No 2244/2003 of 18 December 2003 laying down detailed provisions regarding satellite-based Vessel Monitoring Systems for fishing vessels)
MMSI number	The MMSI (Maritime Mobile Service Identity) is a number comprising a series of 9 digits which uniquely identifies a communication/radio station associated with a ship. The first three digits correspond to the MID according to the ITU regulation
Non-active IMO or IR or EMSA-R	The IMO or IR number corresponds to a vessel that is not in service (e.g. scrapped).
UVI change of IR or EMSA-R	Unique vessel identifier (UVI) change is a status indicator that signifies the change of the unique identifier of a ship in the CSD and the SSN OSD. It is used in cases like: <ul style="list-style-type: none"> <li>a. EU fishing vessel changes flag and starts operating within EU waters with a non-EU flag. In this case, the IR number status of the record in the CSD / SSN OSD will change to "UVI change" and a new record shall be created in the CSD with the newly assigned UVI for the vessel.</li> <li>b. Fishing vessel of non-EU flag changes operator and is now to be registered in the CSD / SSN OSD with an IR. The EMSA-R in the existing record in the CSD/ SSN OSD will change status to "UNI change" and a new record shall be created for the ship in the CSD/ SSN OSD</li> </ul>
OSD	Operational vessel registry (database) of an application at EMSA or MS level.
CSD	Reference vessel database
<b>Considering the status of verification of the ship particulars of the vessel a vessel record in the ship database may obtain the following status indicators</b>	
Ship active Identity (for any vessel with an IMO number, except fishing vessels)	The combination of the IMO number of the ship in combination with the current MMSI number identifies the current operational identity of a ship in the CSD. The IMO number is a unique identifier of a vessel while the MMSI number may change, whenever the flag registration of the ship will change. The IMO number of a ship cannot be re-used after the ship is scrapped or dead.
Ship active identity of other types of vessels not assigned an IMO and/ or IR number	The EMSA-R identifier is used solely to enable the CSD to keep a record of ships without IMO/IR numbers
Valid vessel	Vessel listed in the CSD (and SSN OSD) following the successful V&V process
Invalid vessel	Vessel failing the CSD V&V process. The record of invalid vessels is maintained in the SSN OSD because there might be notifications that have been provided to SSN quoting the invalid ship particulars

Term	Definition
Temporary version of a valid vessel	Temporary version of a vessel already listed in the CSD is a list of ship particulars of the ship that is created within the SSN OSD in the following cases: <ul style="list-style-type: none"><li>I. the IMO of the vessel is already registered in the CSD, as part of a ship's identity, but an incoming notification reported a different MSSI. Such a situation may signify a change of the ship identity or wrong reporting and would require initiation of ship identity verification process.</li><li>II. The reported ship identity is identical with the one registered in the CSD but the ship name or call sign or flag attribute differs.</li></ul>
Temporary vessel	Vessel listed in the SSN OSD whose ship identity is not, as yet validated in line with the agreed business rules for particulars' validation. The temporary ships are maintained in the OSD because there might be notifications that have been provided to SSN quoting the to-be-validated ship identity.

Table 2-1 Principal terms and their definition

#### **2.1.4 Main business rules for ship particulars exchange and their storage to the CSD**

The following specific business rules are applicable for the processes followed during updating:

##### **Business rule 1**

The process of validation of data performed during ship particulars exchange relates only to the key vessel particulars, which are: the IMO/MMSI numbers, the Call Sign, the name and flag and, in addition, the IR number (for fishing vessels).

Additional ship particulars that could be stored and shared in the reference database are as follows:

- Additional particulars notified to SSN by THETIS (i.e. those available in the THETIS database which are of interest to an MS, and are among those defined in the XML schema here-in). The data exchange mechanism to be utilised is the web service defined here-in which is intended to be used as an interface between THETIS and CSD and MS applications and CSD.
- The PSC ship type (refer to Annex E) notified to the CSD by THETIS.
- The Lloyds (LLI) ship type (refer to Annex C) , if available
- The UNECE ship type (refer to Annex B), if available
- The AIS ship type transmitted by the ship's transponder (refet to Annex D).

Such additional ship particulars will undergo no verification. The values provided in the incoming notification from the sources specified above shall be stored in the SSN OSD and, for vessels whose identity is successfully verified, in the CSD too.

##### **Business rule 2**

A manual operation launched by an MSS Duty Officer shall be recorded in the application databases as related to the source "SSN" with the reason to update set as "MMSO".

### **Business rule 3**

When executing a check which results in a decision to update the database, the action taken by the system should be recorded in the system logs as **UPDATE, PENDING V&V, IGNORE.**

### **Business rule 4**

The level of confidence assigned to a "reason to update" will be identified by a configurable parameter (stored in the system) which will take the value "N" (at a first stage 1, 2 or 3). The greater the value of "N" is, the less reliable the proposed information is considered to be.

### **Business rule 5**

The "primary" (unique vessel identifier) of a ship in the CSD is its IMO or IR (for fishing vessels) or an EMSA-assigned reference number. Within the CSD, an EMSA-R shall be defined only for those vessels without an IMO number (or an IR number). In future, this number might be used to "map" a different Unique Vessel Identifier for barges/ inland waterway vessels, etc.

Should the primary identifier be missing in ship particulars notifications received from external reference sources, the notifications will not be considered for CSD update.

The table below indicates the unique identifiers stored in the CSD for certain specific categories of vessels.

Primary identifier	Vessel category
IMO Number	All SOLAS vessels regardless of flag
IR number	European Fishing vessels registered within in EU fishing register maintained by DG MARE
EMSA-R	Barges  Non-EU flag fishing vessels for which a decision has been taken to store the particulars in the CSD (e.g. because they regularly operate within EU waters)  Vessels of special categories not assigned an IMO or IR that operate in EU waters or other sea regions of special interest within the coverage of applications operated by MS and/or EMSA

Table 2-2 Ship unique identifier for specific vessel categories

Vessel records shall only be initially created in the RVR with an EMSA-R following a manual operation by the MSS.

In cases of unique vessel identifier change, a new record will be created in the CSD/ SSN OSD for the ship with the newly assigned unique identifier. The status of the previously used UVI will change to "UVI change."

The principal identifier of a ship may have one of the following status indications.

- Active – If the vessel is in operation
- Non active – If vessel is no longer in operation (e.g. it was scrapped)
- UVI change – If the UVI of the vessel was changed for any reason, and a new record was created in the CSD and/ or SSN OSD for the vessel.

The ship records where the UVI has status “non active” or “UVI” are kept in the database for statistical purposes and (in case of SSN OSD) for referential integrity purposes.

#### **Business rule 6**

The MSSI should be always known for a vessel to be registered in the CSD, as well as:

- the IMO number or;
- the IR number or;
- an EMSA reference number;

#### **Business rule 7**

The Ship Name is recorded in the CSD maintaining the “case” used in the latest accepted update of the ship name.

With respect to the potential update of a ship’s name<sup>2</sup>, the updating process shall cross check the ship name associated to an active ship identity, and must ignore the “case” of letters in the name (i.e. when a name is written in small letters or capital letters or a combination of these).

The ship name is to be updated in the CSD when:

- the characters included in the names (i.e. those existing in the database and those proposed by the reference source) differ by more than a configurable parameter (e.g. 20%), OR;
- there is difference in the last three or the first three characters of the name. This check should ignore the possible inclusion of characters such as: “ ” (whitespace), - (dash) \_ (underscore), (point) within the three being compared.

Example:

If the message recorded in the CSD is “MARIELE V,” and an external database proposes the name as “MARIELLE V” (or MARIELE-V or MARIELE V.), a temporary version should not be created. However, should the external database propose the name “Marielle VI,” the update processes should be initiated.

#### **Business rule 8**

Should more than two sources be considered for defining the “reason to update” (refer to the section 2.1.5), and if one of the sources is SSN, “SSN” shall be recorded as the “source” of the update registered in the database. Table 2 in section 2.1.5 shows the “levels of confidence” for the sources providing data to the CSD.

#### **Business rule 9**

Upon requesting information via the ship particulars service and / or upon logging in the SSN GI or the textual interface, authorised SSN users will receive/ visualise ship particulars with the source listed as “SSN” or “THETIS” in the CSD.

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<sup>2</sup> Refer to Annex G for the acceptable format of Ship name

Access to additional ship particulars provided by IHS or LLI (e.g. LLI ship type) could be provided to maritime application users based on the agreements made between EMSA and the data providers.

In future, different access control rules may be defined as the requirements and legal basis evolve.

### **Business rule 10**

Table 2-3 defines the rules for updating ship particulars in the CSD. The checks are based on the "date of effect" of the proposed update, plus the "relative" ranking of the confidence level assigned to the "reason to update." The "relative" ranking of the confidence level results to the characterisation of an update with the status HP (High priority), LP (Low priority) or EQ (equivalence), as follows :

We assume that the value allocated to the level of confidence for a specific ship particular stored in the CSD is "N," and that the value of the "level of "confidence" of the incoming source is "X".

- a. If [**N>X**] then the relative level of confidence assigned to the incoming update is **HP**;
- b. If [**N<X**] then the relative level of confidence assigned to the incoming update is **LP**;
- c. If [**N=X**] then the relative level of confidence assigned to the incoming update is **EQ**.

Relative priority of the update	Rule	Relevant CSD log entries
<b>HP</b>	a. <b>IF</b> [SYSDATE>(Date of Effect of the proposed Update)>= (Date Effect of Ship particular in the CSD)] <b>THEN</b> UPDATE the ship particular in the CSD	<b>UPDATE</b>
	b. <b>IF</b> [SYSDATE> (Date Effect of Ship particular in the CSD) > (Date Effect of proposed Update)] <b>AND</b> [(SYSDATE - Date Effect of proposed Update)<=(A configurable parameter, e.g. 30 days)] <b>THEN</b> initiate "PENDING V&V" processes	<b>PENDING V&amp;V</b>
	c. <b>IF</b> [(SYSDATE >Date Effect of Ship particular in the CSD) >Date Effect of proposed Update)]> <b>AND</b> [(SYSDATE - DateEffectOfproposedUpdate) > (A configurable parameter, e.g. 30 days)] <b>THEN</b> IGNORE	<b>IGNORE</b>
<b>EQ</b>	a. <b>IF</b> [SYSDATE>(Date Effect of proposed Update)> (Date Effect of Ship particular in the CSD)] <b>THEN</b> UPDATE the ship particular in the CSD	<b>UPDATE</b>

Relative priority of the update	Rule	Relevant CSD log entries
	<b>b. IF</b> [SYSDATE> (Date Effect of Ship particular in the CSD) > (Date Effect of proposed Update)] <b>THEN</b> IGNORE	<b>IGNORE</b>
<b>LP</b>	c. <b>IF</b> [SYSDATE>(Date Effect of proposed Update)> (Date Effect of Ship particular in the CSD)] <b>THEN</b> initiate "PENDING V&V" processes	<b>PENDING V&amp;V</b>
	d. <b>IF</b> SYSDATE> (Date Effect of Ship particular in the CSD )> (Date Effect of proposed Update)] <b>THEN</b> IGNORE	<b>IGNORE</b>

Table 2-3 Actions to be taken on the basis of the relative priority of an update request and its date of effect

### 2.1.5 Reasons for updates

In order to guarantee consistency within the SafeSeaNet ship reference database, and to ensure that data received from the Data Provider Applications is duly processed along with the internal validation processes, some metadata need to be collected by SafeSeaNet along with the notifications. Following the same principle, the Data Requestor Application might as well be designed to exploit such metadata in order to consistently apply its own validation rules.

Whenever any change in a ship's particulars is notified, a specific attribute *ReasonForUpdate* must be quoted in the message to specify the reason for each change.

The following table summarises the coded reasons which can be quoted as a value of the attribute *ReasonForUpdate*.

<u>"Reason to update" (as registered in the CSD)</u>	<u>"Source" of the ship particular</u>	<u>Level of confidence<sup>3</sup></u>	<u>What rule is applicable for the specific "reason to update"</u>
UP_MSSO	SSN	1	Should an MSSO exceptionally validate a ship record using the V&V tool, the update introduced is immediately registered in both the CSD and the OSD, with the date of effect being the date of the manual validation. It should be noted that manual validation by an MSSO will be the "exception." The normal method for updating CSD content will be the automatic processes executed in accordance with the proposed business rules.
UP_LRITDB	LRITDB	1	The LRIT DB should normally send updates to SSN after the "cut-off date" of an update in the LRIT DB for a ship. The cut-off date is to be recorded as the date of effect of

<sup>3</sup> The levels mentioned reflect the current perception of confidence levels, but this may change at a later stage.

<u>“Reason to update” (as registered in the CSD)</u>	<u>“Source” of the ship particular</u>	<u>Level of confidence<sup>3</sup></u>	<u>What rule is applicable for the specific “reason to update”</u>
			the update in the incoming notification
UP_THETIS	THETIS	1	THETIS would provide updates following a ship inspection or the manual insertion of data in THETIS. THETIS should not provide any notifications relating to ships assigned a “temporary” IMO number in the THETIS database
UP_MS_VERIFIED	SSN_MS	1	The assumption is that MSs will only provide data as “MS_verified” after a thorough data quality check has been carried out at MS level.
UP_COMB_LLI_IHS <sup>4</sup>	MARINFO	2	<b><u>Rules for vessels registered in the CSD with an IMO number</u></b>  Should exactly the same IMO/MMSI pair be found in at least two of the sources (LLI and IHS or SSN notification and IHS etc.), then there should be a process for notifying the event to SSN and launching the validation process in line with the rules in Table 2-3.
UP_COMB_SSN_LLI	SSN	2	
UP_COMB_SSN_IHS	SSN	2	
UP_COMB_MARS_LLI	MARS	3	
UP_COMB_MARS_IHS	MARS	3	
UP_COMB_SSN_MARS	SSN	3	
UP_COMB_MS_LLI	SSN_MS	3	
UP_COMB_MS_HIS	SSN_MS	3	<b><u>Vessels without an IMO and with an IR registered in the CSD</u></b>  Whenever a new IR is provided in notifications, the MSSO-assisted validation process should be initiated in order to enable a decision to be taken on the introduction of the new vessel in the CSD.
UP_SAM <sup>5</sup>	SAM	3	
			<b><u>Business rules concerning updates that use as one of the sources the MARS</u></b>  Should a vessel be registered with IMO1 in the LLI database, and the record includes both an MMSI1 and CallSign1 which are identical to an MMSI+Callsign combination found in the MARS database, the vessel with particulars IMO1+MMSI1+CallSign1 is proposed as an update, together. As reason for update will be quoted “Comb(MARS, LLI)”, as the date effect the date of the “most recent” among the date of last update of the vessel record in the LLI database and last update in the MARS database. A similar rule could be applied to the rest of the cases for Comb(MARS, IHS) and Comb(MARS, SSN)

Table 2-4 Reasons for updates

<sup>4</sup> The word “COMB” signals that exactly the same pair IMO+MMSI or IR+MMSI has been found in at least two reference sources.

<sup>5</sup> SAM is an application internal to EMSA where are registered information for accidents / major incidents as extracted from independent sources (e.g. the Rapid News Service of JRC). SAM could be used as another “low confidence” source for provision of ship particular information in the RARE occasions the ships involved ARE NOT previously registered in the EMSA ship databases.

## 2.1.6 Business rules for verification of reported ship identity against the registered identity in the CSD

Following the reception of a notification from a data provider linked to the SSN central system, the system will attempt to identify whether:

- I. the reported ship identity corresponds to that of a known vessel already registered in the CSD;
- II. the reported ship identity refers to a vessel already registered in the CSD, but it appears that there is a change in its identity, and/or;
- III. the vessel is not registered in the CSD, and the verification validation process should be initiated. This process enables a decision to be taken for the inclusion of the ship in the CSD,

The business rules for verifying the “reported” ship identity of a vessel are listed in tables 2-5 and 2-6.

Check against the data in the CSD	Result of automatic validation
Notification includes the correct combination, that is the currently active ship identity registered in the CSD <b>[MMSI (listed in the CSD)+ active IMO (listed in the CSD)]</b>	An existing vessel is identified
Notification reports an <b>[MMSI (not listed in the CSD as part of the currently active ship identity )+ an active IMO(listed in the CSD)]</b>	<p>If either the Call sign and/or the vessel name are available, check against Call sign (first check) or Vessel name. If the results of the check is positive, it is concluded that the vessel has been identified.</p> <p>The secondary check against the ship name will be done only in those cases where the Call sign is not reported and the Ship name in the CSD record containing the active IMO is the same as the Ship name in the incoming update (following a check of the Ship Name as BR7 in section 2.1.4 suggests ).</p> <p>If the check against call sign or vessel name fails, the inconsistency initiates a process of manual resolution by the MSSO operators.</p>
Notification reports an <b>[(MMSI listed in the CSD)+ (an non-active IMO - listed in the CSD)]</b>	The inconsistency initiates a process of manual resolution by the MSSO operators
Notification provides an <b>[IMO(listed and active in the CSD)] but does not include an MMSI.</b>	<p>If the IMO number is active and is included in an active pair of MMSI (listed)+IMO (listed), then it is concluded that the vessel has been identified.</p> <p>If not, the inconsistency initiates a process of manual resolution by the MSSO operators</p>
Notification provides an <b>[IMO(listed and non-active in the CSD)] and does not include an MMSI</b>	The inconsistency initiates a process of manual resolution by the MSSO operators

Check against the data in the CSD	Result of automatic validation
Notification provides an <b>[MMSI (known to the CSD)] but does not include an IMO</b>	If the MMSI is included in an active combination of MMSI + IMO the vessel is identified  If not, then the inconsistency initiates a process of manual resolution by the MSSO operators
Notification provides an <b>MMSI not registered in the CSD and does not include an IMO</b>	A temporary record is to be created within the SSN OSD.
Notification data include a combination of <b>[MMSI (listed in the CSD in an active ship identity)+ IMO(not listed in the CSD)]</b>	The inconsistency initiates a process of manual resolution by the MSSO operators.
Notification data include a combination of <b>[MMSI (listed in the CSD in a non active ship identity)+ IMO(not listed in the CSD)]</b>	A process of manual resolution by the MSSO operators is initiated.
Notification provides a new ship identity <b>[(MMSI (not listed in the CSD)+ IMO(not listed in the CSD)]</b>	The inconsistency creates a new temporary record in the SSN OSD and initiates a process of manual resolution by the MSSO operators
IMO or MMSI reported in the notification are <b>technically</b> non valid (the MMSI has less than 9 digits or more than 10 , while the IMO number fails in the check against the algorithm adopted by the IMO)	The non-valid ship particular is ignored. The validation considers only the technically correct particulars and tries to identify the ship based on the rules above. The reported ship particular that was non valid is ignored.  If the inconsistency cannot be resolved, a temporary record is created within the SSN OSD which includes only the reported particular that was valid.

Table 2-5 Rules for reported identity verification against registered identity in the CSD (all vessel types with IMO except fishing vessels)

Check against the data in the CSD	Result of automatic validation
Notification includes the correct combination, that is the currently active ship identity registered in the CSD <b>[(MMSI listed in the CSD)+ (active IR listed in the CSD)]</b> .	An existing vessel is identified.
Notification reports an <b>[(MMSI not listed in the CSD)+ an (active IR listed in the CSD)]</b> .	<p>If either the Call sign and/or the vessel name are available, check against Call sign (first check) or Vessel name (secondary check if the Call sign is not reported). If the results of the check are positive, it is concluded that the vessel has been identified.</p> <p>The secondary check against the ship name will be done only in those cases where the Call sign is not reported and the Ship name in the CSD record containing the active IR is the same as the Ship name in the incoming update (following a check of the Ship Name as BR7 in section 2.1.4 suggests ).</p> <p>If the check against call sign or vessel name fails, a process of manual resolution by the MSS operator will be initiated.</p>
Notification reports an <b>[(MMSI listed in the CSD)+ an (non-active IR listed in the CSD)]</b> .	The inconsistency initiates a process of manual resolution by the MSS operator.
Notification provides <b>an IR (listed and active in the CSD) but does not include an MMSI</b> .	<p>If the IR number is active and is included in an active pair of MMSI (listed)+IR (listed), then it is concluded that the vessel has been identified.</p> <p>If not, the inconsistency initiates a process of manual resolution by the MSS operator.</p>
Notification provides <b>an IR (listed and non-active in the CSD) and does not include an MMSI</b> .	The inconsistency initiates a process of manual resolution by the MSSO operators.
Notification provides <b>a MMSI (known to the CSD) but does not include an IR</b> .	<p>If the MMSI is included in an active combination of MMSI + IR the vessel is identified.</p> <p>If not, a process of manual resolution by the MSS operator will be initiated.</p>
Notification provides <b>a MMSI not registered in the CSD and does not include an IR</b> .	A temporary record is created within SSN OSD in this case.
Notification data include a combination of <b>[(MMSI listed in the CSD)+ (IR not listed in the CSD)]</b>	A process of manual resolution by the MSS operator will be initiated.

Check against the data in the CSD	Result of automatic validation
Notification provides a new fishing ship identity [( <b>MMSI (not listed in the CSD)+ IR (not listed in the CSD)</b> )]	The inconsistency initiates a process of manual resolution by the MSS operator.
IR and/ or MMSI reported in the notification are non valid	<p>The non-valid ship particular is ignored and the Validation tool proceeds with the validation as in the cases referring to an MMSI omitted or IR number omitted as in the above. The reported ship particular that was non valid is ignored.</p> <p>If the inconsistency cannot be resolved, a temporary record is created within the SSN OSD which includes only the reported particular that was valid.</p>

Table 2-6 Rules for reported identity verification against registered identity in the CSD (all fishing vessels with IR)

### 2.1.7 Notification Type

Type	Description
ShipParticulars	Used to notify SafeSeaNet of new insertions or updates in the ship database maintained by the data provider.

The notification message flow is identical to that of the SSN notification flow and is described in section 2.1.

### 2.1.8 Request Type

Type	Description
ShipParticulars	Used to get detailed information about ship particulars of a specific ship registered into the SSN database

The Ship Particulars request - response message flow is identical to that of the SSN information request flow and is described in section 2.1.

### 2.1.9 Subscription Type

Type	Description
ShipParticulars	Used to notify SafeSeaNet of new subscription for ship particulars announcements.

The subscription message flow is described in section 2.1.

### 2.1.10 Announcement Type

Type	Description
ShipParticulars	Used to notify ship particulars subscribers about ship particulars modifications occurred in CSD.

The announcement messages flow is described in section 2.1.

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## 2.2 Data Provider Interface

Both ends act as nodes capable of processing SOAP 1.1 messages (over HTTP/s). The message types used are as follows:

- **MS2SSN\_ShipParticulars\_Not**
- SSN\_Receipt (existing)

For every notification, a synchronous one-way message connection is established to the SSN-EIS SOAP node.

## 2.3 Data Requestor Interface

Both ends act as nodes capable of processing SOAP 1.1 messages (over HTTP/s). The message types used are as follows:

- **MS2SSN\_ShipParticulars\_Req**
- **SSN2MS\_ShipParticulars\_Res**
- SSN\_Receipt (existing)

For every request-response communication, two asynchronous, one-way connections are established between each SOAP node.

## 2.4 Data Subscriber Interface

Both ends act as nodes capable of processing SOAP 1.1 messages (over HTTP/s). The message types used are as follows:

- **MS2SSN\_ShipParticulars\_Sub**
- **SSN2MS\_ShipParticulars\_Ann**
- SSN\_Receipt (existing)

For every request-response communication, two asynchronous, one-way connections are established between each SOAP node.

## 3 SHIP PARTICULARS EXCHANGE

### 3.1 Send Ship particulars notification to SSN

#### 3.1.1 Introduction

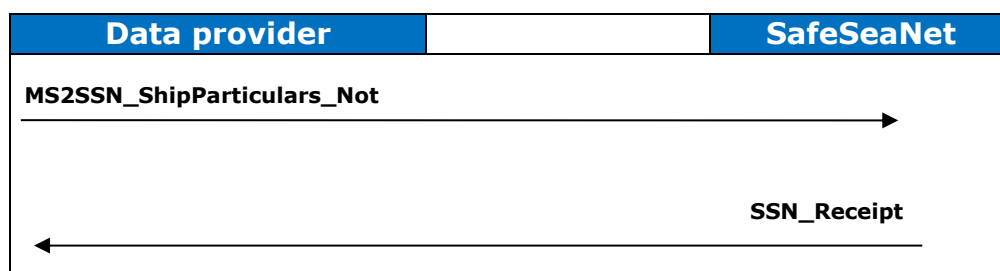
The MS2SSN\_ShipParticulars\_Not message is sent by a Member State or system linked to SafeSeaNet (e.g. THETIS, LRIT DC database) in order to notify SafeSeaNet of new insertions or updates in the ship database maintained by the data provider.

This notification already contains all of the detailed information. Therefore, SafeSeaNet may store the details of the notification in its ship database (following automatic, semi-automatic and/ or manual validation against other external sources), and will then act as the Data Provider when a request for ship particulars is received.

Please refer to section 3.2 for more details on the method of requesting ship particulars.

#### 3.1.2 Message flow

The following figure outlines the expected synchronous flow of Ship Particular notification message. A SSN\_Receipt XML message will always be returned as response to a notification.



#### 3.1.3 MS2SSN\_ShipParticulars\_Not.xml message

##### 3.1.3.1 Message description

The following table describes the XML message used for the transaction.

Elements		Attributes	Occ		
Header (ship:Header3Type)			1		
		Version	1		
		TestId	0-1		
		MSRefId	1		
		SentAt	1		
		From	1		
Body (ship:MS2SSN_ShipParticulars_NotBodyType)			1		
	Notification (ship:VesselNotificationType)		1		
		VesselIdentification (ship:NotificationVesselIdentificationType)		1	
			IMONumber		0-1
				Date_Effect	1

Elements			Attributes	Occ
			ReasonForUpdate	1
			<b>Current_MMSINumber</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>Current_ShipName</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>Current_CallSign</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>IRNumber</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>ERNumber</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>Current_FlagRegistry</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>VesselInfo</b> ( <i>ship:VesselInfoType</i> )	<b>0-1</b>
			<b>Beam</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>Breadth</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>Deadweight</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>GrossTonnage</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>HullType</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>IceClass</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1

Elements		Attributes	Occ
		<b>Keel-laying_Date</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>KeelToMastHeight</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>Length</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>LengthBetweenPerpendiculars</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>MaxManoeuvreSpeed</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>MaxNumberPassengers</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>MaxSpeed</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>MouldedBreadth</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>MouldedDepth</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>NetTonnage</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>NumBowThrusters</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>NumCargoTanks</b>	<b>0-1</b>
		Date_Effect	1
		ReasonForUpdate	1
		<b>NumOfHolds</b>	<b>0-1</b>
		Date_Effect	1

Elements			Attributes	Occ
			ReasonForUpdate	1
			<b>NumROROcompartments</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>NumSternThrusters</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>ReducedGrossTonnage</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>TEU</b>	<b>0-1</b>
			Date_Effect	1
			ReasonForUpdate	1
			<b>ShipOwnerCompanyIMONumber</b>	<b>0-1</b>
			<TBD>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>ISMCompanyNo</b>	<b>0-1</b>
			<TBD>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>RecognizedOrg</b>	<b>0-1</b>
			EUrecognised	1
			PMoUrecognised	1
			ClassSociety	1
			Date_Effect	1
			ReasonForUpdate	1
			<b>ShipType_AISbased</b>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>ShipType_PSC</b>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>ShipType_LLBased</b>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>ShipType_UN</b>	0-1

Elements			Attributes	Occ
			Date_Effect	1
			ReasonForUpdate	1
			<b>ShipInmarsatCallNumber</b>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>&lt;TBD&gt;</b>	0-1
			<Date_Effect>	1
			<ReasonForUpdate>	1
			.....	0-1
			<b>CurrentVesselStatus</b> (ship:NotificationCurrentVesselStatusType)	<b>0-1</b>
			<b>ServiceIndicator</b>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>IsBanned</b>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>IsDetained</b>	0-1
			Date_Effect	1
			ReasonForUpdate	1
			<b>&lt;TBD&gt;</b>	0-1
			<Date_Effect>	1
			<ReasonForUpdate>	1
			.....	0-1

### 3.1.3.2 Business rules

The following table describes the XML message used for the transaction and the applicable business rules. The detailed definition of the attributes is included in Annex G.

MS2SSN_ShipParticulars_Not Business Rules		
Ref	Item (element or sub- element or specific attribute)	Description
1	<b>MSRefId</b>	The MSRefId must be unique
2	<b>SentAt</b>	Format "YYYY-MM-DDThh:mm:ssTZD" Where TZD = time zone designator (Z or +hh:mm or -hh:mm).
3	<b>Notification</b>	<b>Notification element node</b>  A notification message should at least contain the MMSI and the primary identifier (IMO number, IR number or EMSA-R number), plus all those particulars updated since the last update of the record in the data provider's database. For the particulars included in the message, their corresponding "Date_Effect" shall be quoted. There is no need to include previously provided ship particulars in an update message which do not need to be revised. However if these are included,

MS2SSN_ShipParticulars_Not Business Rules		
Ref	Item (element or sub- element or specific attribute)	Description
		their corresponding "Date_Effect" should be quoted as well. Particulars quoted without a "Date_Effect" will be ignored. Ship particulars with no value in the data provider's database (database fields are "null") shall not be included in the SSN2MS_ShipParticulars_Notmessage.
4	<b>VesselIdentification</b>	Mandatory
5	<b>IMONumber</b>	Mandatory if MMSINumber not provided
6	<b>Current_MMSINumber</b>	Mandatory if IMONumber not provided
7	<b>VesselInfo</b>	If provided (OCC=1), at least one of the Vessel's particulars quoted in the element should be provided
8	<b>HullType</b>	Required in case of tankers of any type. In case the specifics of hull type cannot be specified : The DHT value should be defined for double hull tankers; SHT value should be specified for single hull tankers.
9	<b>NumBowThrusters</b>	Value Y to be quoted in case ship has bow thrusters but their number is unknown Value 0 to be provided in case the ship has no bow thrusters
10	<b>NumSternThrusters</b>	Value Y to be quoted in case ship has bow thrusters but their number is unknown Value 0 to be provided in case the ship has no stern thrusters
11	<b>CurrentVesselStatus</b>	If provided (OCC=1), at least one of the Status indicators quoted in the element should be provided

### 3.1.3.3 Example message(s)

Example of a SOAP message for this notification:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
<soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:To>
    <wsa:Address>https://safeseanet.emsa.europa.eu/ssn-ship particulars-ws/ssnvesselservice
    </wsa:Address>
  </wsa:To>
  <wsa:Action>
    soapenv:mustUnderstand="1">https://safeseanet.emsa.europa.eu/vesselservice/notify</wsa:Action>
  <wsa:ReplyTo>
    <wsa:Address>https://datap provider/notify</wsa:Address>
  </wsa:ReplyTo>
  <wsa:MessageID soapenv:mustUnderstand="1">MSREFID
  </wsa:MessageID>
</soapenv:Header>
<soapenv:Body>
<urn:MS2SSN_ShipParticulars_Not xmlns:urn="urn:eu.emsa.ssn.ship">
  <urn:Header From="GRPIR01" MSRefId="MSREFID" SentAt="2011-02-11T09:00:00" TestId="ADF"
  To="SSN" Version="1.0"/>
  <urn:Body>
    <urn:Notification>
      <urn:VesselIdentification>
        <urn:IMONumber ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">9332511</urn:IMONumber>
        <urn:Current_MMSINumber ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">232858800</urn:Current_MMSINumber>
        <urn:Current_ShipName ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-11T10:30:00">TEST
mitsos</urn:Current_ShipName>
        <urn:Current_CallSign ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">TEST_MI</urn:Current_CallSign>
```

```
<urn:IRNumber ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">ITA0000000002</urn:IRNumber>
<urn:ERNumber ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">ABC123456789</urn:ERNumber>
<urn:Current_FlagRegistry ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">IT</urn:Current_FlagRegistry>
</urn:VesselIdentification>
<urn:VesselInfo>
<urn:DeadWeight ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">1</urn:DeadWeight>
<urn:GrossTonnage ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">2</urn:GrossTonnage>
<urn:Keel-laying_Date ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-11T10:30:00">2011-01-
11T10:30:00</urn:Keel-laying_Date>
<urn:Length ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-11T10:30:00">1</urn:Length>
<urn:ShipType_AISBased ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">1</urn:ShipType_AISBased>
<urn:ShipType_PSC ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">311</urn:ShipType_PSC>
<urn:ShipType_LLIBased ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">OBI</urn:ShipType_LLIBased>
</urn:VesselInfo>
<urn:CurrentVesselStatus>
<urn:ServiceIndicator ReasonForUpdate="UP_MSSO" Date_Effect="2001-12-
17T09:30:47.0Z">Launched</urn:ServiceIndicator>
<urn:IsBanned ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">1</urn:IsBanned>
<urn:IsDetained ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">1</urn:IsDetained>
</urn:CurrentVesselStatus>
</urn:Notification>
</urn:Body></soapenv:Body>
</soapenv:Envelope>
```

## 3.2 Get Ship particulars from SSN

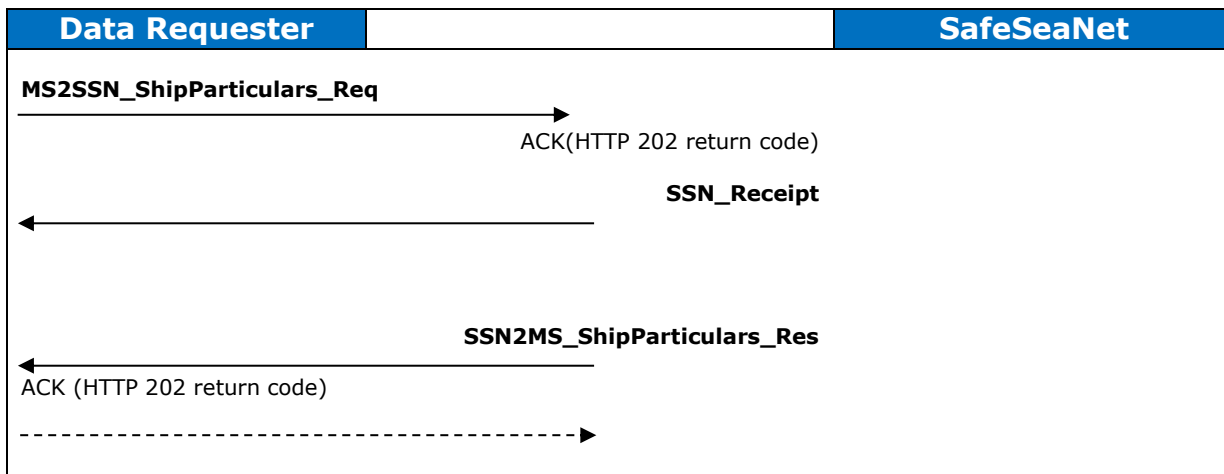
### 3.2.1 Introduction

A Member State system, or any other system (e.g. THETIS) to be linked to SSN in the future (data requester), can request the ship particulars of a specific ship registered in the SSN database.

This section describes the different XML messages provided for this transaction.

### 3.2.2 Message flow

The following figure outlines the expected asynchronous flow of XML messages related to this SafeSeaNet XML transaction.



### 3.2.3 MS2SSN\_ShipParticulars\_Req.xml message

The MS2SSN\_ShipParticulars\_Req is sent by a Member State system, or any other system (e.g. THETIS) to be linked to SSN in the future (data requester), in order to request the ship particulars of a specific ship registered in the SSN database.

### 3.2.3.1 Message description

The following table describes the XML message used for the transaction.

Elements			Attributes	Occ
<b>Header</b> ( <i>ship:Header4Type</i> )				<b>1</b>
			Version	1
			TestId	0-1
			MSRefId	1
			SentAt	1
			TimeoutValue	1
			From	1
			To	1
<b>Body</b> ( <i>ship:MS2SSN_ShipParticulars_ReqBodyType</i> )				<b>1</b>
	<b>RequestOriginator</b> ( <i>ship:RequestOriginatorType</i> )			<b>0-1</b>
			SSNUserID	1
	<b>SearchCriteria</b> ( <i>ship:VesselSearchCriteriaType</i> )			<b>1</b>
		<b>ShipIdentificationCriteria</b> ( <i>ship:VesselIdentificationType</i> )		<b>0-1</b>
			IMONumber	0-1
			MMSINumber	0-1
			CallSign	0-1
			ShipName	0-1
			IRNumber	0-1
			ERNumber	0-1
		<b>FlagCriteria</b> ( <i>ship:FlagCriteriaType</i> )		<b>0-1</b>
			Flag	0-1
			<TBD>	0-1
		<b>VesselStatusCriteria</b> ( <i>ship:VesselStatusType</i> )		1
			ServiceIndicator	0-1
			HullType	0-1
			IsBanned	0-1
			IsDetained	0-1
		<b>RVDrecordUpdateTimeCriteria</b> ( <i>ship:RVDrecordUpdateTimeCriteriaType</i> )		
			StartDateTime	1
			EndDateTime	1
			GetResultsInXMLYesOrNo	0-1
			GetShipRecordChanges	0-1

### 3.2.3.2 Business rules

The following table describes the XML message used for the transaction and the applicable business rules. The detailed definition of the attributes is included in Annex G.

MS2SSN_ShipParticulars_Req Business Rules		
Ref	Item (element or sub-element or specific attribute)	Description
1	MSRefId	<u>The MSRefId must be unique</u>
2	SentAt	Format "YYYY-MM-DDThh:mm:ssTZD" Where TZD = time zone designator (Z or +hh:mm or -hh:mm).
3	From	Standard practice for the field is to include the reference identification of the originator of the data included in the message
4	<b>RequestOriginator</b>	<b>RequestOriginator element node(s). It defines the person user requesting the information utilising the XML interface of the Authority defined in the FROM field of the header</b>  <b>The element should be quoted only in the case that the originator is a user of SSN central system and he (she) is also authorised to make ship particular requests via the SSN textual interface</b>
5	<b>SearchCriteria</b>	<b>SearchCriteria element node(s). Only 1 element node might be given – Child to RequiredResponseCriteria</b>
6	<b>ShipIdentificationCriteria</b>	<b>ShipIdentification-based search criteria element node – Child to SearchCriteria.</b> <b>If FlagCriteria element is provided in the request this element should not be provided</b>
7	<b>FlagCriteria</b>	<b>FlagCriteria element</b> <b>If ShipIdentificationCriteria is provided in the request, this element should not be provided</b>
8	Flag	Should this attribute is provided the results of the query will be limited to ship belonging to flag registry identified by the attribute
9	<b>VesselStatusCriteria</b>	If <b>FlagCriteria</b> is provided in the request, this element should be provided with at least one of the following status criteria.
10	<b>RVDrecordUpdateTimeCriteria</b>	<b>Should RVDrecordUpdateTimeCriteria be provided in the request message, ShipIdentificationCriteria elements should not be provided.</b>
11	StartDateTime	StartDateTime should be defined within a time window [SentAt minus 7 days max] and should be "in the past" with respect to EndDateTime.
12	EndDateTime	EndDateTime should be defined within a time window [SentAt minus 1 hour max].
13	GetResultsInXMLYesOrNo	By providing Yes the system will return the results in XML (including them in the <b>ShipParticular_LISTItem</b> element within the response message). By specifying N and/ or if the attribute is omitted the system will return the results in an encoded list (including them in the <i>EncodedShipParticular_LIST</i> element within the response message). The default value is N.
14	GetShipRecordChanges	By providing "Yes" the system will use the ShipParticular_LISTItem element to provide the history of changes in a specific record in the ship reference database. The response message will include as many repetitions of the ShipParticular_LISTItem element required to report all the changes in specific ship particulars in a specific's ship record in the vessel database A valid request for history retrieval shall include only the following elements: <ol style="list-style-type: none"> <li>1. ShipIdentificationCriteria including one of the principal identifiers of the vessel (IMO number or MMSI)</li> <li>2. RVDrecordUpdateTimeCriteria specifying the StartDateTime, EndDateTime and both GetResultsInXMLYesOrNo and GetShipRecordChanges attributes with values set to "Yes".</li> </ol> The query for record changes cannot co-exist with any other query. Accordingly, any request that: <ul style="list-style-type: none"> <li>– Shall quote the GetShipRecordChanges with value set to "Yes"; and</li> <li>– Shall a combination of other search attributes different from those mentioned above in points (1) and (2)</li> </ul> shall be rejected.

### 3.2.3.3 Example message(s)

Example of a SOAP message for this notification:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
<soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:Action>https://safeseanet.emsa.europa.eu/vesselservice/request
</wsa:Action>
  <wsa:ReplyTo>
    <wsa:Address>http://datarequestor
  </wsa:Address>
  </wsa:ReplyTo>
  <wsa:MessageID>MSREFID_REQ</wsa:MessageID>
</soapenv:Header>
<soapenv:Body xmlns:urn="urn:eu.emsa.ssn.ship">
<urn:MS2SSN_ShipParticulars_Req>
<urn:Header From="XYthanosId" MSRefId="21012011vessel_req_ts_04"
SentAt="2010-12-20T07:44:07" TestId="asdf" TimeoutValue="60"
To="SSN" Version="1.0"/>
<urn:Body>
<urn:SearchCriteria>
<urn:ShipIdentificationCriteria IMONumber="7350002"/>
</urn:SearchCriteria>
</urn:Body>
</urn:MS2SSN_ShipParticulars_Req>
</soapenv:Body>
</soapenv:Envelope>
```

### 3.2.4 SSN2MS\_ShipParticulars\_Res.xml message

The SSN2MS\_ShipParticulars\_Res message is the response sent by SafeSeaNet to a Member State system, or any other system (e.g. THETIS) to be connected to SSN, requesting ship particulars from SSN.

#### 3.2.4.1 Message description

The following table describes the XML message used for the transaction.

Note: <TBD> (To Be Defined) indicates that new attributes could be defined in the future. It is not an actual attribute.

Elements	Attributes	Occ
<b>Header</b> (ship:Header1Type)		<b>1</b>
	Version	1
	TestId	0-1
	MSRefId	1
	SSNRefId	1
	SentAt	1
	From	1
	To	1
	StatusCode	1
	StatusMessage	0-1
<b>Body</b> (ship:SSN2MS_ShipParticulars_ResBodyType)		<b>1</b>

Elements		Attributes	Occ
<b>RequestOriginator</b> (ship:RequestOriginatorType)			<b>0-1</b>
		SSNUserID	1
<b>SearchCriteria</b> (ship:VesselSearchCriteriaType)			<b>1</b>
	<b>ShipIdentificationCriteria</b> (ship:VesselIdentificationType)		<b>0-1</b>
		IMONumber	0-1
		MMSINumber	0-1
		CallSign	0-1
		ShipName	0-1
		IRNumber	0-1
		ERNumber	0-1
	<b>FlagCriteria</b> (ship:FlagCriteriaType)		<b>0-1</b>
		Flag	1
		<TBD>	0-1
	<b>VesselStatusCriteria</b> (ship:VesselStatusType)		1
		ServiceIndicator	0-1
		HullType	0-1
		IsBanned	0-1
		IsDetained	0-1
	<b>RVDrecordUpdateTimeCriteria</b> (ship:RVDrecordUpdateTimeCriteriaType)		
		StartDateTime	1
		EndDateTime	1
		GetResultsInXMLYesOrNo	0-1
		GetShipRecordChanges	0-1
<b>QueryResults</b> (ship:VesselQueryResultsType)			<b>0-1</b>
	<b>EncodedShipParticular_LISTType</b> (ship: ship:VesselEncodedShipParticular_LISTType)		<b>0-1</b>
		Vessel_ListInBase64	<b>1</b>
	<b>ShipParticular_LISTItem</b> (ship:Vessel_LISTType)		<b>0-∞</b>
	<b>VesselIdentification</b> (ship:ResponseVesselIdentificationType)		<b>1</b>
	<b>IMONumber</b>		0-1
		Date_Effect	0-1
		ReasonForUpdate	0-1
	<b>Current_MMSINumber</b>		0-1
		Date_Effect	0-1
		ReasonForUpdate	0-1
	<b>Current_ShipName</b>		0-1
		Date_Effect	0-1
		ReasonForUpdate	0-1
	<b>Current_CallSign</b>		0-1

Elements				Attributes	Occ
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>IRNumber</b>	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ERNumber</b>	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>Current_FlagRegistry</b>	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
			<b>VesselInfo</b> (ship:VesselInfoType)		<b>0-1</b>
				<b>Beam</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>Breadth</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>Deadweight</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>GrossTonnage</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>HullType</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>IceClass</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>Keel-laying_Date</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>KeelToMastHeight</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>Length</b>	<b>0-1</b>
				Date_Effect	0-1

Elements				Attributes	Occ
				ReasonForUpdate	0-1
				<b>LengthBetweenPerpendiculars</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>MaxManoeuvreSpeed</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>MaxNumberPassengers</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>MaxSpeed</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>MouldedBreadth</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>MouldedDepth</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>NetTonnage</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>NumBowThrusters</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>NumCargoTanks</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>NumOfHolds</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>NumROROcompartments</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>NumSternThrusters</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ReducedGrossTonnage</b>	<b>0-1</b>

Elements				Attributes	Occ
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>TEU</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ShipOwnerCompanyIMONumber</b>	<b>0-1</b>
				EORI	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ISMCompanyNo</b>	<b>0-1</b>
				EORI	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>RecognizedOrg</b>	<b>0-1</b>
				EUrecognised	0-1
				PMoUrecognised	0-1
				ClassSociety	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ShipType_AISbased</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ShipType_PSC</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ShipType_LLBased</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ShipType_UN</b>	<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<b>ShipInmarsatCallNumber</b>	
				Date_Effect	0-1
				ReasonForUpdate	0-1
				.....	0-1
				<b>CurrentVesselStatus</b> (ship:ResponseCurrentVesselStatusType)	<b>0-1</b>
				<b>ServiceIndicator</b>	0-1
				Date_Effect	0-1

Elements				Attributes	Occ
				ReasonForUpdate	0-1
			<b>IsBanned</b>		<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
			<b>IsDetained</b>		<b>0-1</b>
				Date_Effect	0-1
				ReasonForUpdate	0-1
			<b>&lt;TBD&gt;</b>		<b>0-1</b>
				<Date_Effect>	0-1
				<ReasonForUpdate>	0-1
			.....		0-1

### 3.2.4.2 Business rules

The following table describes the XML message used for the transaction and the applicable business rules. The detailed definition of the attributes is included in Annex G.

Ref	Item (element or sub-element or specific attribute)	Description
<b>1</b>	<b>Header</b>	
	1 MSRefId	<u>The MSRefId must be unique</u>
	2 SSNRefId	<u>The SSNRefId must be unique</u>
	3 SentAt	Format "YYYY-MM-DDThh:mm:ssTZD"  Where TZD = time zone designator (Z or +hh:mm or -hh:mm).
<b>2</b>	<b>Body</b>	<b>Body Node (only optional when StatusCode="InvalidFormat")</b>
<b>3</b>	<b>RequestOriginator</b>	<b>1</b>  <b>RequestOriginator element node(s). It defines the person user requested the information utilising the XML interface of the Authority defined in the FROM field of the header</b>  From original MS2SSN_GetShhipParticulars_Req request
	2 SSNUserID	From original MS2SSN_GetShhipParticulars_Req request
<b>3</b>	<b>SearchCriteria</b>	<b>SearchCriteria element node(s). Only 1 element node might be given – Child to ProvidedResponseCriteria</b>
<b>4</b>	<b>ShipIdentificationCriteria</b>	<b>ShipIdentification-based search criteria element node – Child to search criteria</b>
	IMONumber	From original MS2SSN_GetShhipParticulars_Req request
	MMSINumber	
	CallSign	
	ShipName	
	IRNumber	
	ERNumber	
<b>5</b>	<b>FlagCriteria</b>	From original MS2SSN_GetShhipParticulars_Req request
	Flag	
<b>6</b>	<b>VesselStatusCriteria</b>	ServiceIndicator
	HullType	From original MS2SSN_GetShhipParticulars_Req request
	IsBanned	
	IsDetained	
<b>7</b>	<b>RVDrecordUpdateTimeCriteria</b>	StartDateTime
	EndDateTime	From original MS2SSN_GetShhipParticulars_Req request
	GetResultsInXMLYesOrNo	
	GetShipRecordChanges	
<b>8</b>	<b>QueryResults</b>	<b>Element node, child to Body, including the results of the query to</b>

Ref	Item (element or sub-element or specific attribute)	Description
		<p><b>be executed</b>  This query returns only the records that include the active identity of ships (as recorded in the CSD at the SYSDATE time of the reception of the request). "Temporary" or "invalid" ship record entries in the SSN OSD are not provided in responses.  <b>The QueryResults element is only included in the response when a query has results.</b>  The query results shall always include all particulars registered in the CSD with their corresponding "Date_Effect" for the ship records meeting the query criteria, even though some of these particulars have been already provided in a previous response message.  Ship particulars with no value in the CSD/ SSN OSD (database fields are "null") shall not be included in the SSN2MS_ShipParticulars_Res message.</p>
9	<b>EncodedShipParticular_LIST</b>	<p><b>This element is only provided in response to a message that includes the RVDrecordUpdateTimeCriteria element in the criteria.</b>  <b>Element node, child to QueryResults returns a base64 encoded Zip file that includes a list of files (each in XML format, including a single vessel record) formatted as the ShipParticular_LISTitem element below. The name of the file will be the in for the format "result_NNNNNN.xml" where NNNNNN is a sequential number for the results, always starting with 1 and padded with zero.</b></p>
10	<b>ShipParticular_LISTitem</b>	<p><b>Element node, child to QueryResults, returns 0-∞ times the vessel particulars of vessels registered in SSN database, on the basis of the criteria defined in the original request message.</b>  <b>Each record included in the list will provide the latest update of attributes values available in the SSN OSD for ships listed within the CSD .</b>  <b>This element is included in response messages related to request messages that include the ShipIdentificationCriteria or the RVDrecordUpdateTimeCriteria element in the search criteria (one of ShipIdentificationCriteria or RVDrecordUpdateTimeCriteria should be included in the message, not both)</b>  <i>'If ShipParticular_LISTitem is included in a response message, the element EncodedShipParticular_LIST will not be</i></p>

Ref	Item (element or sub-element or specific attribute)	Description
		included.
11	<b>VesselIdentification</b>	<b>VesselIdentification</b> element node ( <b>"child" to the ShipParticular_LISTitem</b> element) Latest update of the elements/ attributes registered in the vessel database
		latest update of the element/attribute registered in vessel database
12	<b>VesselInfo</b>	<b>VesselInfo</b> element <b>"child" to the ShipParticular_LISTitem</b> element. Latest update of the elements/ attributes registered in the vessel database.
		latest update of the element/attribute registered in vessel database

Ref	Item (element or sub-element or specific attribute)	Description
		ReasonForUpdate
	<b>4 GrossTonnage</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>5 HullType</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>6 IceClass</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>7 Keel-laying_Date</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>8 KeelToMastHeight</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>9 Length</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>10 LengthBetweenPerpendiculars</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>11 MaxManoeuvreSpeed</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>12 MaxNumberPassengers</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>13 MaxSpeed</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>14 MouldedBreadth</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>15 MouldedDepth</b>	
	Date_Effect	
	ReasonForUpdate	

Ref	Item (element or sub-element or specific attribute)	Description
	<b>16 NetTonnage</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>17 NumBowThrusters</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>18 NumCargoTanks</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>19 NumOfHolds</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>20 NumROROcompartments</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>21 NumSternThrusters</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>22 ReducedGrossTonnage</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>23 TEU</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>24 ShipOwnerCompanyIMONumber</b>	
	<TBD>	
	Date_Effect	
	ReasonForUpdate	
	<b>25 ISMCompanyNo</b>	
	<TBD>	
	Date_Effect	
	ReasonForUpdate	
	<b>26 RecognizedOrg</b>	
	EUrecognised	
	PMoUrecognised	
	ClassSociety	
	Date_Effect	

Ref	Item (element or sub-element or specific attribute)	Description
		ReasonForUpdate
	<b>27 ShipType_AISbased</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>28 ShipType_PSC</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>29 ShipType_LLBased</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>30 ShipType_UN</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>31 ShipInmarsatCallNumber</b>	
	Date_Effect	
	ReasonForUpdate	
	.....	
	Date_Effect	
	ReasonForUpdate	
	<b>29 ShipType_LLBased</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>30 ShipType_UN</b>	
	Date_Effect	
	ReasonForUpdate	
	<b>31 ShipInmarsatCallNumber</b>	
	Date_Effect	
	ReasonForUpdate	
	.....	
<b>13</b>	<b>CurrentVesselStatus</b>	<b>CurrentVesselStatus element_child" to the ShipParticular_LISTitem element</b>  Latest update of the elements / attributes registered in the vessel database.
	<b>1 ServiceIndicator</b>	latest update of the element/attribute registered in vessel database
	Date_Effect	
	ReasonForUpdate	
	<b>2 IsBanned</b>	

Ref	Item (element or sub-element or specific attribute)		Description
			Date_Effect
			ReasonForUpdate
		<b>3</b>	<b><i>IsDetained</i></b>
			Date_Effect
			ReasonForUpdate

### 3.2.4.3 Example message(s)

Example of a SOAP message for this notification:

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:To>http://datarequestor</wsa:To>
    <wsa:Action>https://datarequestor/vesselservice/response</wsa:Action>
    <wsa:MessageID>SSNRefResId</wsa:MessageID>
    <wsa:RelatesTo>MSREFID_REQ</wsa:RelatesTo>
  </env:Header>
  <env:Body>
    <SSN2MS_ShipParticulars_Res xmlns="urn:eu.emsa.ssn.ship">
      <Header MSRefId="MSREFID_REQ" SSNRefId="SSNRefResId" StatusCode="OK" Version="1.0" TestId="ADF"
        SentAt="2014-05-01T10:45:02Z" From="SSN" To="GRPIR01" />
      <Body>
        <SearchCriteria>
          <ShipIdentificationCriteria IMONumber="1000045" />
        </SearchCriteria>
        <QueryResults>
          <EncodedShipParticular_LIST
            Vessel_ListInBase64="UESDBBQACAgIAKFVQUUAAAAAAAAAAAAAAAAAHAAAMTAwMDA0Na2V246bMBBAfwX5nWvSbjcyXjW3
            CjUXFEhb9SVyYUisgR3ZZXs19e5LWzSN8IL8sg+Z8by2Pjlb1VaryAVEzxEvuMhC3gmcsaLEK3Tqf0FWUpTntNScAjRARR6ITjZsX1MpWZZXVIZA
            agsA+IqRLXkA6gdqBR11OKOMjMRwT9AKSijHLhmW5ZRbXwER/Ploq7+gLTGVMNmst1CpkMUeH7f9p7swE+DYOAGDfrPv5G1AqoEnwq53ud
            mikkv3sxWUToeIuJ75ut/wu47keBRLaXRbebzJHqMJfce342Ih+79/BGeNycBa2gqy6JJ1bfC6wUilbOG2h5vm3CJmp7vSaLq7HJYUTLMmEF75rDy
            eT/alRXcKOalrRYQcGUloeuujhtTG0uwe7/T9AlyreC4CHQqnO9fSfA7pFkeBJornfX2GWEx+b/E1ix091lhtvgCP4mhVKp4JwWnU/PCd4GEvwdolR
            LejDNvTnSO/FDZUXvtMI/rcDurYXgGfBC7x5QkGPO/BIG8AoyUXD2BvLSFiZkLc9jBXmIFsiK5+I2NCqpUonIGOjDMUA87H6gnO+19LCHzdcog
            VKzsPPFhN07ZksTJ6Ouuhp7fdhghCz+bRQ+pYhkNW44rtWnKU/td+vYcSjTVtTKpgHxIGUQ8P7as6HwFz2jNxsx3kJP0bsnlN1JBv3r3aLS0VmKfkgju
            Cx6ApeyT6CiTv993HfXPvX1jyD1BLBwiw6xuqHwIAAK0HAABQSwECFAAUAAgICACHVUFFsOsbqh8CAAACtBwAABwAAAAAAAAAAAAAAAA
            AAAAAAMTAwMDA0NVBLBQYAAAAAQAABADUAAABUAgAAAA=" />
          </QueryResults>
        </Body>
      </SSN2MS_ShipParticulars_Res>
    </env:Body>
  </env:Envelope>
```

The decoded Base64 attribute content listed below

```
<ShipParticularItem xmlns="urn:eu.emsa.ssn.ship">
  <VesselIdentification>
    <IMONumber Date_Effect="2014-07-21T22:07:49Z"
      ReasonForUpdate="UP_LRITDB">1000045</IMONumber>
    <Current_MMSINumber Date_Effect="2014-07-21T22:07:49Z"
      ReasonForUpdate="UP_LRITDB">263990001</Current_MMSINumber>
    <Current_ShipName Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">SPE 402 Test
      Vessel</Current_ShipName>
    <Current_CallSign Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">402-
      01X</Current_CallSign>
    <Current_FlagRegistry Date_Effect="2014-07-21T22:07:49Z"
      ReasonForUpdate="UP_LRITDB">PT</Current_FlagRegistry>
  </VesselIdentification>
  <VesselInfo>
    <Beam Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">44.2</Beam>
    <Breadth>44.2</Breadth>
    <DeadWeight Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">442</DeadWeight>
    <GrossTonnage Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">442</GrossTonnage>
    <Keel-laying_Date Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">2014-07-
      31T22:17:49Z</Keel-laying_Date>
    <Length Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">442.3</Length>
    <RecognizedOrg EUrecognised="N" PMOurecognised="N" ClassSociety="N">0</RecognizedOrg>
```

---

```
ReasonForUpdate="UP_LRITDB"><ShipType_AISBased Date_Effect="2014-07-21T22:07:49Z"
ReasonForUpdate="UP_LRITDB">1</ShipType_AISBased>
ReasonForUpdate="UP_LRITDB"><ShipType_PSC Date_Effect="2014-07-21T22:07:49Z"
ReasonForUpdate="UP_LRITDB">311</ShipType_PSC>
ReasonForUpdate="UP_LRITDB"><ShipType_LLIBased Date_Effect="2014-07-21T22:07:49Z"
ReasonForUpdate="UP_LRITDB">OIB</ShipType_LLIBased>
</VesselInfo>
<CurrentVesselStatus>
ReasonForUpdate="UP_LRITDB"><ServiceIndicator Date_Effect="2014-07-21T22:07:49Z"
ReasonForUpdate="UP_LRITDB">Launched</ServiceIndicator>
ReasonForUpdate="UP_LRITDB"><IsBanned Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">>false</IsBanned>
ReasonForUpdate="UP_LRITDB"><IsDetained Date_Effect="2014-07-21T22:07:49Z" ReasonForUpdate="UP_LRITDB">>false</IsDetained>
ReasonForUpdate="UP_LRITDB"></CurrentVesselStatus>
ReasonForUpdate="UP_LRITDB"></ShipParticularItem>
```

## 3.3 SSN Receipt Message

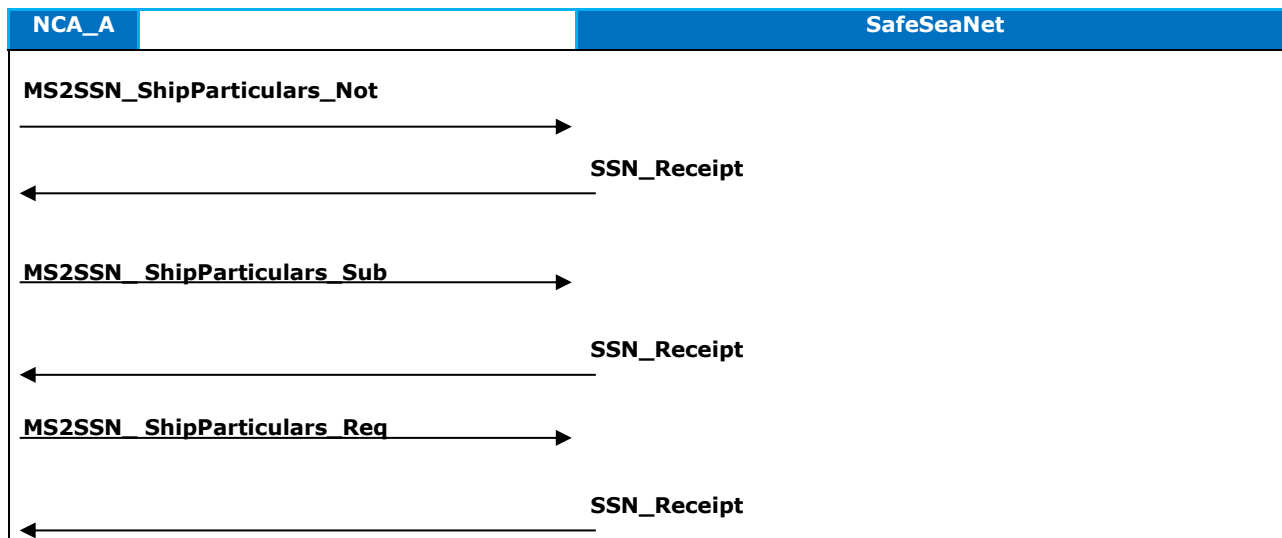
### 3.3.1 Introduction

There are several goals of the SSN\_Receipt.xml message receipt:

- It must be sent by SafeSeaNet as the confirmation message (indicating whether the notification message is compliant to the corresponding XSD and has been successfully validated and processed, or not) to every notification (*MS2SSN\_ShipParticulars\_Not*) and/or subscription (*MS2SSN\_ShipParticulars\_Not*) message received from the Member States.
- It must be sent as the confirmation message (indicating whether the request message is compliant to the corresponding XSD, or not) to every request message (*MS2SSN\_ShipParticulars\_Req*) received from the Member States.
- In the case that any of the aforementioned messages is compliant to the corresponding XSD, or the notification message has been successfully validated and processed, the SSN\_Receipt message Status Code will be set to 'OK'.
- In the case that any of the aforementioned messages is not compliant to the corresponding XSD, or the notification is invalid, the SSN\_Receipt message Status Code will be set to 'InvalidFormat'.

### 3.3.2 Message flow

The following figure illustrates the cases when this message must be sent:



### 3.3.3 SSN\_Receipt.xml message

#### 3.3.3.1 Message description

The following table describes the XML message used for the transaction.

Elements	Attributes	Occ
<b>Header</b> (ssn:Header1Type)		<b>1</b>
	Version	1
	TestId	0-1
	MSRefId	1
	SSNRefId	1
	SentAt	1
	From	1
	To	1
	StatusCode	1
	StatusMessage	0-1

#### 3.3.3.2 Business rules

The following table describes the XML message used for the transaction and the applicable business rules. The detailed definition of the attributes is included in the Annex G of this document.

SSN_ Receipt Business Rules		
Ref	Item (element or sub- element or specific attribute)	Description
1	<b>MSRefId</b>	The MSRefId must be unique.
2	<b>SSNRefId</b>	The SSNRefId must be unique
3	<b>SentAt</b>	Format "YYYY-MM-DDThh:mm:ssTZD" Where TZD = time zone designator (Z or +hh:mm or -hh:mm).

### 3.3.3.3 Example message(s)

Example of receipt confirming a successful ShipParticulars notification:

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:MessageID>1562250</wsa:MessageID>
    <wsa:To env:mustUnderstand="1">https://dataprovder/notify</wsa:To>
    <wsa:Action>https://safeseanet.emsa.europa.eu/vesselservice/notifyResponse</wsa:Action>
    <wsa:RelatesTo>MSREFID1</wsa:RelatesTo>
  </env:Header>
  <env:Body>
    <SSN_Receipt xmlns="urn:eu.emsa.ssn.ship">
      <Header MSRefId="MSREFID1" SSNRefId="1562249" StatusCode="OK" StatusMessage="The message
processed successfully." Version="1.0" TestId="ADF" SentAt="2014-10-01T16:03:01Z" From="SSN"
To="GRPIR01"/>
    </SSN_Receipt>
  </env:Body>
</env:Envelope>
```

Example of receipt with InvalidFormat error:

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:MessageID>1562235</wsa:MessageID>
    <wsa:To env:mustUnderstand="1">https://dataprovder/notify</wsa:To>
    <wsa:Action>https://safeseanet.emsa.europa.eu/vesselservice/notifyResponse</wsa:Action>
    <wsa:RelatesTo>MSREFID</wsa:RelatesTo>
  </env:Header>
  <env:Body>
    <SSN_Receipt xmlns="urn:eu.emsa.ssn.ship">
      <Header StatusCode="InvalidFormat" MSRefId="MSREFID" SSNRefId="1562235" Version="1.0"
SentAt="2014-04-01T15:37:55Z" From="SSN" To="GRPIR01" StatusMessage="cvc-complex-type.2.4.a: Invalid
content was found starting with element 'urn:Keel-laying_Date'. One of '{'urn:eu.emsa.ssn.ship':ShipType_UN,
'urn:eu.emsa.ssn.ship':ShipInmarsatCallNumber}' is expected." TestId="ADF"/>
    </SSN_Receipt>
  </env:Body>
</env:Envelope>
```



## 3.4 Subscribe for ship particulars updates from SSN

### 3.4.1 Subscription to the ship particulars announcement (data “push”) service

#### Introduction

The **MS2SSN\_ShipParticulars\_Sub** message is sent by an MS to SSN for subscription to the ship particulars announcement (data “push”) service. The message contains information to enable the central SSN system to configure the service and/or cancel the subscription.

#### Message description

The following table describes the XML message used for the transaction.

Note: <TBD> (To Be Defined) indicates that new attributes could be defined in the future. It is not an actual attribute.

Elements		Attributes	Occ
Header (ship:Header3Type)			1
		Version	1
		TestId	0-1
		MSRefId	1
		SentAt	1
		From	1
		To	1
Body (ship:SSN2MS_ShipParticulars_AnnBodyType)			1
	RequestOriginator (ship:RequestOriginatorType)		0-1
			SSNUserID
	ShipParticularServiceSubscriptionCriteria (ship:ShipParticularServiceSubscriptionCriteriaType)		1
		SubscriptionFlagCriteria (ship:SubscriptionFlagCriteriaType)	
		Flag	
		VesselStatusCriteria (ship:VesselStatusType)	
		ServiceIndicator	
		HullType	

Elements					Attributes	Occ	
					IsBanned	0-1	
					IsDetained	0-1	
			SubscriptionTimeCriteria (ship:SubscriptionTimeCriteriaType)				0-1
					StartDateTime	1	
					EndDateTime	1	
			CancelSubscription (ship:CancelSubscriptionType)				0-1
			CancelDataPush			1	
		MSRefIdofSubscriptionToCancel			1		

## Business Rules

The following table describes the applicable business rules. The detailed definition of the attributes is included in Annex A.

Ref			Attributes	Business rules
1	Header			
		1	MSRefld	The MSRefld must be unique
		2	SentAt	Format "YYYY-MM-DDThh:mm:ssTZD" Where TZD = time zone designator (Z or +hh:mm or -hh:mm)
		3	From	Standard practice for the field is to include the reference identification of the originator of the data included in the message.
1	RequestOriginator	1		<b>RequestOriginator element node(s). This defines the user (person) requesting the information, using the XML interface of the Authority defined in the FROM field in the header.</b>  <b>The element should only be quoted when the originator is a user of the SSN central system, and also authorised to make ship particular requests via the SSN textual interface</b>
		2	SSNUserID	None
3	ShipParticularServiceSubscriptionCriteria	1		<b>This element defines the scope of the subscription. It should be always quoted in the case the</b>

				<b><i>CancelSubscription element is not included in the message</i></b>
		2	<i>SubscriptionFlagCriteria</i>	If not defined, the data to be pushed shall include all the ship records updated in the RVD during the period specified in <i>SubscriptionTimeCriteria</i>
		3	Flag	Should this attribute be provided, the ship particulars to be pushed will be limited to ships belonging to the flag registry (ies) identified by the attribute.
4	<i>VesselStatusCriteria</i>	1		If included, at least one of the criteria included as attributes in the element should be quoted.
		2	ServiceIndicator	None
		3	HullType	None
		4	IsBanned	None
		5	IsDetained	None
5	<i>SubscriptionTimeCriteria</i>	1		If the element is not included in a subscription message, central SSN will start pushing ship particulars record updates, based on the <i>ShipParticularServiceSubscriptionCriteria</i> . The data push will initiate at the <i>systemDateTime</i> of the reception of the subscription message. The pushing will continue until a new subscription request is received from the MS and the same FROM and/ or until a message cancelling the subscription (quoting the same FROM) will be received.
		2	StartDateTime	StartDateTime should be set equal and/ or "in the future" with respect to the "SentAt"
		3	EndDateTime	If not defined, SSN will push all the records updates in the RVD starting from the StartDateTime defined above.
6	<i>CancelSubscription</i>	1		This element cannot be included in the message if the <i>ShipParticularServiceSubscriptionCriteria</i> is included in the message
		2	CancelDataPushYes	Only acceptable value "Y" (yes)
		3	MSRefIdofSubscriptionToCancel	Should be always quoted in case of the cancellation of a previous subscription. The value of the attribute points to the MSRefId of the subscription that is to be cancelled.

---

### **Example of a SOAP message for a valid subscription**

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:Action>https://safeseanet.emsa.europa.eu/vesselservice/requestannouncement</wsa:Action>
    <wsa:From>
      <wsa:Address>http://datasubscriber/ssn-shipparticulars-ws/ssnvesselservice/</wsa:Address>
    </wsa:From>
    <wsa:MessageID>ms2ssn_shippart_req_yt20140725_02</wsa:MessageID>
    <wsa:To>
      <wsa:Address>http://ssn.emsa/ssn-shipparticulars-ws/ssnvesselservice/</wsa:Address>
    </wsa:To>
    <wsa:ReplyTo soapenv:mustUnderstand="1">
      <wsa:Address>http://datasubscriber/ssn-shipparticulars-ws/ssnvesselservice</wsa:Address>
    </wsa:ReplyTo>
  </soapenv:Header>
  <soapenv:Body>
    <urn:MS2SSN_ShipParticulars_Sub xmlns:urn="urn:eu.emsa.ssn.ship">
      <urn:Header From="GRPIR02" MSRefId="ms2ssn_shippart_sub_1" SentAt="2014-07-07T17:51:15"
To="SSN" Version="1.0"/>
      <urn:Body>
        <urn:RequestOriginator SSNUserID="grpir_webuser"/>
        <urn:ShipParticularServiceSubscriptionCriteria>
          <urn:SubscriptionFlagCriteria Flag="GR">
            <urn:VesselStatusCriteria ServiceIndicator="Launched" HullType="DBE" IsBanned="false"
IsDetained="false"/>
          </urn:SubscriptionFlagCriteria>
          <urn:SubscriptionTimeCriteria StartDateTime="2014-06-26T14:51:15Z" EndDateTime="2015-08-
01T14:51:15Z"/>
        </urn:ShipParticularServiceSubscriptionCriteria>
      </urn:Body>
    </urn:MS2SSN_ShipParticulars_Sub>
  </soapenv:Body>
</soapenv:Envelope>
```

## 3.4.2 Ship particulars announcement

### Introduction

The **SSN2MS\_ShipParticulars\_Ann** message is sent by SSN to a subscriber to the ship particulars announcement (data "push") service. The message contains information on the attributes updated in a single vessel record in the CSD.

### Message description

The following table describes the XML message used for the transaction.

Note: <TBD> (To Be Defined) indicates that new attributes could be defined in the future. It is not an actual attribute.

Elements			Attributes	Occ
<i>Header (ship:Header1Type)</i>				1
			Version	1
			TestId	0-1
			MSRefId	1
			SSNRefId	1
			SentAt	1
			From	1
			To	1
			StatusCode	0-1
			StatusMessage	0-1
<i>Body</i>				1
	<i>ShipParticularsAnnouncement(ship:ShipParticularsAnnouncementType)</i>			0-1
		<i>VesselIdentification (ship:ResponseVesselIdentificationType)</i>		1
		<i>IMONumber (ship:IMONumberType)</i>		0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
		<i>Current_MMSINumber (ship:MMSINumberType)</i>		0-1

Elements				Attributes	Occ			
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				Current_ShipName (ship:ShipNameType)		0-1		
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				Current_CallSign (ship:CallSignType)		0-1		
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				IRNumber (ship:IRNumberType)		0-1		
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				ERNumber (ship:ERNumberType)		0-1		
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				Current_FlagRegistry (ship:FlagRegistryType)		0-1		
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
			VesselInfo (ship:VesselInfoType)				0-1	
				Beam (ship:DecimalPrecision4Scale2)				0-1
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				Breadth (ship:DecimalPrecision4Scale2)				0-1
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				Deadweight (ship:DeadWeightType)				0-1
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				GrossTonnage (ship:GrossTonnageType)				0-1
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				HullType (ship:HullTypeType)				0-1
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				IceClass (ship:IceClassType)				0-1
				Date_Effect	0-1			
				ReasonForUpdate	0-1			

Elements				Attributes	Occ
				<i>Keel-laying_Date</i> (xsd:dateTime)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>KeelToMastHeight</i> (ship:DecimalPrecision4Scale2)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>Length</i> (ship:DecimalPrecision5Scale2)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>LengthBetweenPerpendiculars</i> (ship:DecimalPrecision5Scale2)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>MaxManoeuvreSpeed</i> (ship:DecimalPrecision5Scale2)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>MaxNumberPassengers</i> (ship:IntegerUpTo5DigitsType)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>MaxSpeed</i> (ship:DecimalPrecision5Scale2)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>MouldedBreadth</i> (ship:DecimalPrecision5Scale2)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>MouldedDepth</i> (ship:MouldedDepthType)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>NetTonnage</i> (ship:IntegerUpTo5DigitsType)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>NumBowThrusters</i> (ship:NumThrustersType)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1
				<i>NumCargoTanks</i> (ship:IntegerUpTo6DigitsType)	0-1
				Date_Effect	0-1
				ReasonForUpdate	0-1

Elements			Attributes	Occ
			<i>NumOfHolds (ship:IntegerUpTo6DigitsType)</i>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>NumRORocompartments (ship:IntegerUpTo6DigitsType)</i>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>NumSternThrusters (ship:NumThrustersType)</i>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>ReducedGrossTonnage (ship:IntegerUpTo6DigitsType)</i>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>TEU (ship:DecimalPrecision4Scale2)</i>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>ShipOwnerCompanyIMONumber (ship:IMONumberType)</i>	0-1
			<TBD>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>ISMCompanyNo (ship:IMONumberType)</i>	0-1
			<TBD>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>RecognizedOrg (ship:IntegerUpTo3DigitsType)</i>	0-1
			EUrecognised	0-1
			PMoUrecognised	0-1
			ClassSociety	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>ShipType_AISbased (ship:ShipType_AISBasedType)</i>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>ShipType_PSC (ship:ShipType_PSCType)</i>	0-1
			Date_Effect	0-1
			ReasonForUpdate	0-1
			<i>ShipType_LLBased (ship:ShipType_LLIBasedType)</i>	0-1

Elements				Attributes	Occ			
				Date_Effect	0-1			
				ReasonForUpdate	0-1			
				ShipType_UN (ship:ShipType_UNType)				0-1
					Date_Effect	0-1		
					ReasonForUpdate	0-1		
				ShipInmarsatCallNumber (ship:ShipInmarsatCallNumberType)				0-1
					Date_Effect	0-1		
					ReasonForUpdate	0-1		
			CurrentVesselStatus (ship:ResponseCurrentVesselStatusType)				0-1	
				ServiceIndicator (ship:ServiceIndicatorType)				0-1
					Date_Effect	0-1		
					ReasonForUpdate	0-1		
				IsBanned (xsd:Boolean)				0-1
					Date_Effect	0-1		
					ReasonForUpdate	0-1		
				IsDetained (xsd:boolean)				0-1
					Date_Effect	0-1		
			ReasonForUpdate		0-1			

## Business Rules

The following table describes the applicable business rules. The detailed definition of the attributes is included in Annex G.

Ref	Item			Description
<b>1</b>	<b>Header</b>			<b>Header Node</b>
		1	MSRefId	SSN shall quote the MSRefId of the corresponding subscription message
		2	SSNRefId	The SSNRefId must be unique
		3	SentAt	Format "YYYY-MM-DDThh:mm:ssTZD" Where TZD = time zone designator (Z or +hh:mm or -hh:mm)
<b>2</b>	<b>Body</b>			Body Node (only optional when StatusCode="InvalidFormat")
<b>3</b>	<b>VesselIdentification</b>			
		<b>1</b>	<b>IMONumber</b>	Latest update of the element/attribute registered in the vessel database
			Date_Effect	
			ReasonForUpdate	
		<b>2</b>	<b>Current_MMSINumber</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>3</b>	<b>Current_ShipName</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>4</b>	<b>Current_CallSign</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>5</b>	<b>IRNumber</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>6</b>	<b>ERNumber</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>7</b>	<b>Current_FlagRegistry</b>	

		Date_Effect	
		ReasonForUpdate	
<b>4</b>	<b>VesselInfo</b>		
	<b>1</b>	<b>Beam</b>	Latest update of the element/attribute registered in the vessel database
		Date_Effect	
		ReasonForUpdate	
	<b>2</b>	<b>Breadth</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>3</b>	<b>Deadweight</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>4</b>	<b>GrossTonnage</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>5</b>	<b>HullType</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>6</b>	<b>IceClass</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>7</b>	<b>Keel-laying_Date</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>8</b>	<b>KeelToMastHeight</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>9</b>	<b>Length</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>10</b>	<b>LengthBetweenPerpendiculars</b>	
		Date_Effect	
		ReasonForUpdate	
	<b>11</b>	<b>MaxManoeuvreSpeed</b>	
		Date_Effect	
		ReasonForUpdate	

	<b>12</b>	<b><i>MaxNumberPassengers</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>13</b>	<b><i>MaxSpeed</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>14</b>	<b><i>MouldedBreadth</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>15</b>	<b><i>MouldedDepth</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>16</b>	<b><i>NetTonnage</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>17</b>	<b><i>NumBowThrusters</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>18</b>	<b><i>NumCargoTanks</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>19</b>	<b><i>NumOfHolds</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>20</b>	<b><i>NumROROcompartments</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>21</b>	<b><i>NumSternThrusters</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>22</b>	<b><i>ReducedGrossTonnage</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>23</b>	<b><i>TEU</i></b>	
		Date_Effect	
		ReasonForUpdate	
	<b>24</b>	<b><i>ShipOwnerCompanyIMONumb</i></b>	

			<b>er</b>	
			<TBD>	
			Date_Effect	
			ReasonForUpdate	
		<b>25</b>	<b>ISMCompanyNo</b>	
			<TBD>	
			Date_Effect	
			ReasonForUpdate	
		<b>26</b>	<b>RecognizedOrg</b>	
			EUrecognised	
			PMoUrecognised	
			ClassSociety	
			Date_Effect	
			ReasonForUpdate	
		<b>27</b>	<b>ShipType_AISbased</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>28</b>	<b>ShipType_PSC</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>29</b>	<b>ShipType_LLIbased</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>30</b>	<b>ShipType_UN</b>	
			Date_Effect	
			ReasonForUpdate	
		<b>31</b>	<b>ShipInmarsatCallNumber</b>	
			Date_Effect	
			ReasonForUpdate	
			.....	
<b>5</b>	<b>CurrentVesselStatus</b>			
		<b>1</b>	<b>ServiceIndicator</b>	latest update of the element/attribute registered in vessel database
			Date_Effect	
			ReasonForUpdate	
		<b>2</b>	<b>IsBanned</b>	
			Date_Effect	
			ReasonForUpdate	

	<b>3</b>	<b><i>IsDetained</i></b>	
		Date_Effect	
		ReasonForUpdate	

### Example of a SOAP message for ship particular announcement

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:To>http://datatsubscriber/ssn-ship particulars-ws/ssnvessel service</wsa:To>
    <wsa:Action>https://datatsubscriber/vessel service/response</wsa:Action>
    <wsa:MessageID>ms2ssn_shippart_sub_grpir_01</wsa:MessageID>
  </env:Header>
  <env:Body>
    <SSN2MS_ShipParticulars_Ann xmlns="urn:eu.emsa.ssn.ship">
      <Header MSRefId="ms2ssn_shippart_sub_grpir_01" SSNRefId="130677"
        StatusCode="OK" Version="1.0"
        SentAt="2014-09-26T17:35:36Z" From="SSN" To="GRPIR01" />
      <Body>
        <ShipParticularsAnnouncement>
          <VesselIdentification>
            <IMONumber Date_Effect="2014-09-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">9278387</IMONumber>
            <Current_MMSINumber Date_Effect="2014-09-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">247000009</Current_MMSINumber>
            <Current_ShipName Date_Effect="2014-09-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">test name</Current_ShipName>
            <Current_CallSign Date_Effect="2014-09-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">9TZW</Current_CallSign>
            <IRNumber Date_Effect="2014-09-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">XYZ201000222</IRNumber>
            <ERNumber Date_Effect="2014-09-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">123456782222</ERNumber>
            <Current_FlagRegistry Date_Effect="2014-09-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">GR</Current_FlagRegistry>
          </VesselIdentification>
          <VesselInfo>
            <Beam Date_Effect="2014-05-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">5.6</Beam>
            <Breadth>9.6</Breadth>
            <DeadWeight Date_Effect="2014-05-15T16:22:27Z"
              ReasonForUpdate="UP_MSSO">6</DeadWeight>
          </VesselInfo>
        </ShipParticularsAnnouncement>
      </Body>
    </SSN2MS_ShipParticulars_Ann>
  </env:Body>
</env:Envelope>
```

---

```

ReasonForUpdate="UP_MSSO">6</GrossTonnage>
ReasonForUpdate="UP_MSSO">2014-09-15T16:22:27Z</Keel-laying_Date>
ClassSociety="N">0</RecognizedOrg>
ReasonForUpdate="UP_MSSO">1</ShipType_AISBased>
ReasonForUpdate="UP_MSSO">311</ShipType_PSC>
ReasonForUpdate="UP_MSSO">OBI</ShipType_LLIBased>
    </VesselInfo>
    <CurrentVesselStatus>
ReasonForUpdate="UP_MSSO">Launched</ServiceIndicator>
ReasonForUpdate="UP_MSSO">true</IsBanned>
ReasonForUpdate="UP_MSSO">true</IsDetained>
    </CurrentVesselStatus>
  </ShipParticularsAnnouncement>
</Body>
</SSN2MS_ShipParticulars_Ann>
</env:Body>
</env:Envelope>

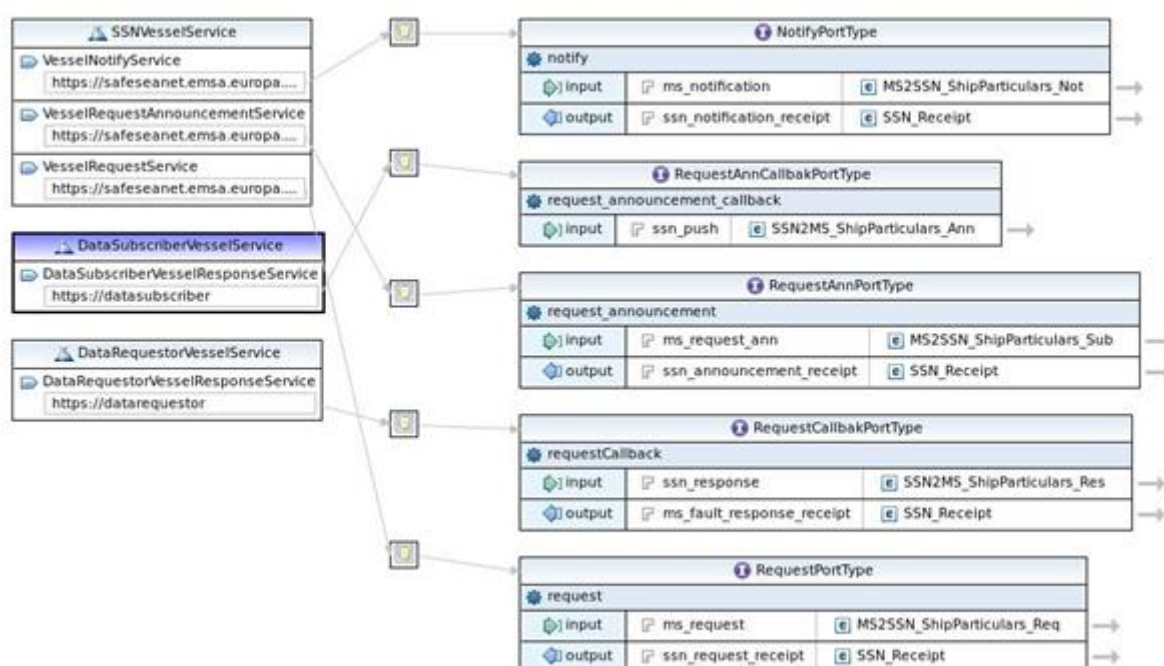
```

## ANNEX A - DESCRIPTION OF SSN VESSEL WEB-SERVICE

### vesselservice.wsdl

The vesselservice.wsdl (using WSDL version 1.1, SOAP version 1.1, WS-Addressing version 1.0) defines the SSN Ship Particulars exchange between the SSN EIS and Member State systems or other third applications connected to SSN.

The SSN Web Services – Vessel Service handles all SSN ship particulars defined in this document. The following figure shows the Vessel Service wsdl.



### EIS SSN system

The Services provided by EIS SSN system in bundle named SSNVesselService are listed below

1. **VesselNotifyService** – operation **notify** of **NotifyPortType** (**soapAction="https://safeseanet.emsa.europa.eu/vesselservice/notify"**) serves the incoming Ship Particulars Notifications (MS2SSN\_ShipParticulars\_Not) –

<sup>6</sup> In implementation view, SSNVesselService is a web service (spring-ws) that delegates the incoming SOAP messages to two (2) endpoints – SsnVesselNotificationEndpoint and SsnVesselRequestEndpoint – based on the message SOAP Action that –the endpoints– handle the notifications and requests messages accordingly. So, the SOAP Action described in this document per operation should be defined on the message soap header to be submitted.

input: ms\_notification – and it always returns SSN\_Receipt as response synchronously  
– output:ssn\_notification\_receipt SSN\_Receipt.

The following is an Example of SOAP MS2SSN ShipParticulars Notification

```
< soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
<soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
  <wsa:To>
    <wsa:Address>https://safeseanet.emsa.europa.eu/ssn-ship particulars-ws/ssnvessel service
    </wsa:Address>
  </wsa:To>
  <wsa:Action
soapenv:mustUnderstand="1">https://safeseanet.emsa.europa.eu/vessel service/notify</wsa:Action>
  <wsa:ReplyTo>
    <wsa:Address>https://datap provider/notify</wsa:Address>
  </wsa:ReplyTo>
  <wsa:MessageID soapenv:mustUnderstand="1">MSREFID1
  </wsa:MessageID>
</soapenv:Header>
<soapenv:Body>
<urn:MS2SSN_ShipParticulars_Not>
<urn:Header From="ZXthanosId" MSRefId="MSREFID1" SentAt="2011-02-11T09:00:00" TestId="ADF"
To="SSN" Version="1.0"/>
<urn:Body>
<urn:Notification>
<urn:VesselIdentification>
<urn:IMONumber ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">9332511</urn:IMONumber>
<urn:Current_MMSINumber ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">232858800</urn:Current_MMSINumber>
<urn:Current_ShipName ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-11T10:30:00">TEST
mitsos</urn:Current_ShipName>
<urn:Current_CallSign ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">TEST_MI</urn:Current_CallSign>
<urn:Current_FlagRegistry ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">IT</urn:Current_FlagRegistry>
</urn:VesselIdentification>
<urn:VesselInfo>
<urn:GrossTonnage ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">2</urn:GrossTonnage>
<urn:DeadWeight ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">1</urn:DeadWeight>
<urn:ShipType_AISBased ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">111</urn:ShipType_AISBased>
<urn:ShipType_PSC ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">111</urn:ShipType_PSC>
<urn:ShipType_LLIBased ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-
11T10:30:00">111</urn:ShipType_LLIBased>
<urn:Keel-laying_Date ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-11T10:30:00">2011-01-
11T10:30:00</urn:Keel-laying_Date>
<urn:Length ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-11T10:30:00">1</urn:Length>
</urn:VesselInfo>
<urn:CurrentVesselStatus>
<urn:ServiceIndicator ReasonForUpdate="UP_MSSO" Date_Effect="2001-12-
17T09:30:47.0Z">1</urn:ServiceIndicator>
<urn:IsBanned ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-11T10:30:00">1</urn:IsBanned>
<urn:IsDetained ReasonForUpdate="UP_MSSO" Date_Effect="2011-01-11T10:30:00">1</urn:IsDetained>
</urn:CurrentVesselStatus>
</urn:Notification>
</urn:Body>
</urn:MS2SSN_ShipParticulars_Not>
</soapenv:Body>
</soapenv:Envelope>
```

The following is an example of (synchronous) SSN\_Receipt on arrival of SOAP MS2SSN ShipParticulars Notification

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:MessageID>SSNRefId</wsa:MessageID>
    <wsa:To env:mustUnderstand="1">https://dataproducer/notify</wsa:To>
    <wsa:Action>https://safeseanet.emsa.europa.eu/vesselservice/notifyResponse</wsa:Action>
    <wsa:RelatesTo>MSREFID</wsa:RelatesTo>
  </env:Header>
  <env:Body>
    <SSN_Receipt xmlns="urn:eu.emsa.ssn.ship">
      <Header StatusMessage="The message processed successfully."
        StatusCode="OK" SSNRefId="SSNRefId" MSRefId="MSREFID" To="GRPIR01"
        From="SSN" SentAt="2001-12-31T12:00:00Z" Version="1.0" />
    </SSN_Receipt>
  </env:Body>
</env:Envelope>
```

2. VesselRequestService – operation **request** of RequestPortType (**soapAction="https://safeseanet.emsa.europa.eu/vesselservice/request"**) serves the incoming Ship Particulars Requests (MS2SSN\_ShipParticulars\_Req) – input: ms\_request– and it always returns SSN\_Receipt as response synchronously – output: ssn\_request\_receipt SSN\_Receipt.

It should be noted that this operation is implemented according to the WS-Addressing Request-Response Message Exchange Pattern (MEP). So, the mandatory “reply endpoint” – “ReplyTo” – property is used by SSN EIS for the asynchronous response to the data requestor.

The “reply endpoint” property provides the operation **requestCallback** of RequestCallbackPortType implemented by DataRequestorMessageService

Additionally, the mandatory “message id” – “MessageID” – property should have the same value with the value of MSRefId attribute of the XML Header element.

The following is an example of SOAP MS2SSN Ship Particulars Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:Action>https://safeseanet.emsa.europa.eu/vesselservice/request
    </wsa:Action>
    <wsa:ReplyTo>
      <wsa:Address>http://datarequestor
      </wsa:Address>
    </wsa:ReplyTo>
    <wsa:MessageID>MSREFID_REQ</wsa:MessageID>
  </soapenv:Header>
  <soapenv:Body>
    <urn:MS2SSN_ShipParticulars_Req>
      <urn:Header From="XYthanosId" MSRefId="MSREFID_REQ"
        SentAt="2010-12-20T07:44:07" TestId="asdf" TimeoutValue="60"
        To="SSN" Version="1.0"/>
      <urn:Body>
        <urn:SearchCriteria>
          <urn:ShipIdentificationCriteria IMONumber="7350002"/>
        </urn:SearchCriteria>
      </urn:Body>
    </urn:MS2SSN_ShipParticulars_Req>
  </soapenv:Body>
</soapenv:Envelope>
```

The following is an example of SSN\_Receipt on arrival of SOAP MS2SSN Ship Particulars Request

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:MessageID>SSNRefId</wsa:MessageID>
    <wsa:To env:mustUnderstand="1">http://datarequestor</wsa:To>
    <wsa:Action>https://safeseanet.emsa.europa.eu/vesselservice/requestResponse</wsa:Action>
    <wsa:RelatesTo>MSREFID_REQ</wsa:RelatesTo>
  </env:Header>
  <env:Body>
    <SSN_Receipt xmlns="urn:eu.emsa.ssn">
      <Header MSRefId="MSREFID_REQ" SentAt="2011-01-02T12:00:00Z"
        StatusCode="OK" From="SSN" SSNRefId="SSNRefId"
        StatusMessage="The message processed successfully." To="XYId"
        Version="1.0" />
    </SSN_Receipt>
  </env:Body>
</env:Envelope>
```

### Data Requestor SSN system

This section describes the Service provided by Data Requestor SSN system and named DataRequestorVesselService.

DataRequestorVesselResponseService – operation **requestCallback** of RequestCallbakPortType (**soapAction="https://datarequestor/vesselservice/response"**) serves the incoming Ship Particulars Responses (SSN2MS\_ShipParticulars\_Res) – input: ssn\_response and in case of error (i.e. Invalid Message) returns SSN\_Receipt as response synchronously – output: ms\_fault\_response\_receipt SSN\_Receipt.

This operation is the callback interface of the **request** operation – refer also section *EIS SSN system*, item 2 of this document. It is implemented according to the WS-Addressing Request-Response MEP. The mandatory "relationship" – "RelatesTo" – property includes the value of correlation Id (MSRefId) of the SSN2MS\_ShipParticulars\_Res; i.e. the MSRefId of the initial MS2SSN\_ShipParticulars\_Req.

The following is an example of SOAP SSN2MS Ship Particulars Response:

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Header xmlns:wsa="http://www.w3.org/2005/08/addressing">
    <wsa:To>http://datarequestor</wsa:To>
    <wsa:Action>https://datarequestor/vesselservice/response</wsa:Action>
    <wsa:MessageID>SSNRefResId</wsa:MessageID>
    <wsa:RelatesTo>MSREFID_REQ</wsa:RelatesTo>
  </env:Header>
  <env:Body>
    <SSN2MS_ShipParticulars_Res xmlns="urn:eu.emsa.ssn.ship">
      <Header MSRefId="MSREFID_REQ" SSNRefId="SSNRefResId" StatusCode="OK" Version="1.0"
        TestId="ADF"
        SentAt="2014-05-01T10:45:02Z" From="SSN" To="XYId" />
      <Body>
        <SearchCriteria>
          <ShipIdentificationCriteria IMONumber="1000045" />
        </SearchCriteria>
      </Body>
    </SSN2MS_ShipParticulars_Res>
  </env:Body>
</env:Envelope>
```

```
<QueryResults>
  <EncodedShipParticular_LIST

    Vessel_ListInBase64="UESDBBQACAgIAKFVQUUAAAAAAAAAAAAAAAAHAAAAMTAwMDA0Na2V246bMBBAfwX
5nWvSbjcyXjW3CjUXFEhb9SVyYUIsgR3ZZtXs19e5LWzSN8IL8sg+Z8by2Pjlb1VaryAVEzxEvuMhC3gmcsaLEK3Tqf0FWU
pTntNScAjRARR6ITjZsX1MpWZZXVIZAagsA+IqRLXkA6gdqBR1IOKOMjMRwT9AKSijHLhmW5ZRbXwER/Ploq7+gLTVGM
Nmst1CpkMUeH7f9p7swE+DYOA9DfrPv5G1AqoEnwq53udmtkkv3sxWUToeIuJ75ut/wu47keBRLaXRbebzJHqMJfjce342I
h+79/BGeNycBa2gqy6JJ1bfC6wUllbOG2h5vm3CJmp7vSaLq7HJYUTLMmEF75rDyeT/alRXcKOalrRYQcGUloeuujhtTG0u
we7/T9AlyreC4CHQqnO9fSfA7pFkeBJornfX2GWEx+b/E1ix091IhtvgCP4mhVKp4JwWnU/PCd4GEvwdolRLLejDNvTnSO/f
DZUXvtMI/rcDurYXgGfBC7x5QkGPO/BIG8AoyUXD2BvISftZkLc9jBXmIFsiK5+I2NCqpUonIGOjDMUA87H6gnO+19LCHz
dcoGVKzsPPFhN07ZksTJ6Ouhp7fdhhgCz+bRQ+pYhkNW44rtWnKU/td+vYcSjTVtTKpgHxIGUQ8P7as6HwFz2jNsx3kjp0b
snIN1JBy3r3aLS0VmKfkgjuCx6ApeyT6CiTv993HfXPvX1jyD1BLBwiw6xuqHwIAAK0HAABQSwECFAAUAAgICACHVUFFsO
sbqh8CAACTBwAABwAAAAAAAAAAAAAAAAAAAAAAAAAMTAwMDA0NVBLBQYAAAAAAQABADUAAABUAgAAAAA=" />
  </QueryResults>
</Body>
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## ANNEX B - SHIP TYPE CODES AS PER UNECE (INFORMATIVE)

The table below contains ship codes from UN/ECE recommendation No. 28, Second edition<sup>7</sup>.. These are two or three digits long. For updates to the list, the original UN/ ECE publication is applicable.

Code	Ship type	Description
50	General cargo vessel	Vessel designed to carry general cargo.
501	Grain vessel	Vessel designed to carry grain.
502	Timber/log carrier	Vessel designed to carry logs and timber.
503	Wood chips vessel	Vessel designed to carry wood chips.
504	Steel products vessel	Vessel designed to carry steel products.
505	Carrier, general cargo/container	Vessel designed to carry general cargo and containers.
506	Temperature controlled cargo vessels	Vessel designed to carry temperature-controlled cargo.
51	Unit carrier	Vessel designed to carry unit loads
511	Full container ship/cellular vessel	Vessel designed to carry containers only.
512	RoRo vessel	Vessel with ramp designed to carry roll-on/roll-off cargo.
513	Car carrier	Vessel designed to carry automotive vehicles or their knock-down parts.
514	Livestock carrier	Vessel designed to carry livestock.
515	Barge carrier – Lash ship	Vessel designed to carry barges. Lash means lighters aboard ship.
516	Chemical carrier	Vessel designed to carry chemicals in bulk or drums not in tanks.
517	Irradiated fuel carrier	Vessel designed to carry irradiated fuel.
518	Heavy cargo vessel	Ship designed to carry heavy cargo.
519	RoRo/Container vessel	Vessel designed to carry both containers and roll-on/roll-off cargo.
52	Bulk carrier	Vessel designed to carry bulk cargo.
521	Dry bulk carrier	Vessel designed to carry dry bulk (expellers).

<sup>7</sup> approved by the UN/CEFACT Information Content Management Group (ICG), September 2002, United Nations Centre for Trade Facilitation and Electronic Business

Code	Ship type	Description
522	Ore carrier	Vessel designed to carry ore.
523	Cement carrier	Vessel designed to carry cement.
524	Gravel carrier	Vessel designed to carry gravel.
525	Coal carrier	Vessel designed to carry coal.
53	Tanker	Vessel solely equipped with tanks to carry cargo.
531	Crude oil tanker	Tanker designed to carry crude oil.
532	Chemical tanker, coaster	Tanker designed to carry chemicals in coastal traffic.
533	Chemical tanker, deep sea	Tanker designed to carry chemicals in deep sea.
534	Oil and other derivatives tanker	Tanker designed to carry oil and other derivatives.
54	Liquefied gas tanker	Tanker designed to carry liquefied gas.
541	LPG tanker	Vessel designed to carry Liquefied Petroleum Gas (LPG).
542	LNG tanker	Tanker designed to carry Liquefied Natural Gas (LNG).
543	LNG/LPG tanker	Tanker designed to carry Liquefied Natural Gas (LNG) and Liquefied Petroleum Gas (LPG).
55	Other special tanker	Tanker designed to carry other special liquids.
551	Asphalt/bitumen tanker	Tanker designed asphalt and bitumen.
552	Molasses tanker	Tanker designed to carry molasses.
553	Vegetable oil tanker	Tanker designed to carry vegetable oil.
57	Cargo and passenger vessel	Vessel designed to carry cargo and passengers.
59	Passenger ship	Vessel designed to carry more than 12 passengers.
591	Cruise ship	Passenger ship designed to carry tourists on specified routes.
592	Ferry	Vessel designed to ply regularly between two or more ports.
593	Other passenger ship	Vessel designed to carry passengers, not otherwise specified.
594	Passenger ship, sailing	Vessel designed to carry passengers and mainly propelled by sails.
60	Assistance vessel	Vessel designed to give assistance.
601	Tug, without tow	Vessel designed to tow objects but sailing alone.

Code	Ship type	Description
602	Tug, with tow	Vessel designed to tow, and towing an object.
603	Salvage vessel	Vessel designed to salvage.
604	Rescue vessel	Vessel designed to effect rescue operations.
605	Oil combat vessel	Vessel designed to combat oil spills.
606	Oil rig	Object designed for drilling oil at sea.
607	Hospital vessel	Vessel designed to serve as a hospital at sea.
70	Other sea-going vessel	Sea-going vessel, not otherwise specified.
711	Pilot boat	Vessel designed to convey pilots to/from ships.
712	Patrol/measure ship	Vessel designed to guard, patrol or measure.
72	Work ship	Vessel designed to assist in work.
721	Supply vessel	Vessel designed to provide supplies.
723	Offshore support vessel	Vessel designed to provide offshore support.
724	Pontoon	Flat-bottomed vessel with a flat deck.
725	Stone dumping vessel	Vessel designed to dump stones.
726	Cable layer	Vessel designed to lay cable.
727	Buoyage vessel	Vessel designed to handle buoys.
728	Icebreaker	Vessel designed to break ice.
729	Pipelaying vessel	Vessel designed to lay pipe.
73	Push boat	Vessel designed to push other vessels.
74	Dredger	Vessel designed to scoop or suck mud or sand.
75	Fishing boat	Vessel designed for fishing.
751	Trawler	Vessel designed to drag a bag-like net.
752	Cutter	Small vessel that sometimes can be carried on a larger ship.
753	Factory ship	Vessel designed as a fish factory.
76	Research and education ship	Vessel designed for research and education.
761	Fishery research vessel	Vessel designed for fishery research.
762	Climate registration vessel	Vessel designed for climate registration.
763	Ship for environmental measurement	Vessel designed for environmental monitoring and measurement.
764	Scientific vessel	Vessel designed for scientific purposes.
765	Sailing school ship	Vessel designed for training, powered by sail.
76	Training vessel	Vessel designed for training.
77	Navy vessel	Vessel operated by a Navy.

Code	Ship type	Description
78	Structure, floating	Any floating structure.
781	Crane, floating	A crane mounted on a barge or pontoon.
782	Dock, floating	A submersible floating structure used as a dock.
80	Pleasure boat	Vessel designed for recreation.
81	Speedboat	Vessel designed for speed, often used for recreation.
82	Sailing boat with auxiliary motor	Vessel designed primarily for sailing outfitted with an auxiliary motor.
83	Sailing yacht	A specific type of vessel mostly used for pleasure and designed for sailing.
84	Boat for sport fishing	Vessel designed for sport fishing.
85	Craft, pleasure, longer than 20 metres	Vessel longer than 20 metres, designed for recreation.
89	Craft, other, recreational	Vessel designed for recreation, not otherwise specified.
90	Fast ship	Fast, all-purpose vessel.
91	Hydrofoil	Vessel with wing-like structure for skimming at high speed.
92	Catamaran, fast	Fast vessel designed with two parallel hulls.

## **ANNEX C – LLOYDS LIST OF SHIP CODES (INFORMATIVE)**

The table below contains ship codes used by Lloyd's List, as utilised in the definition of the ship particular web service. These are three characters long, and new types may be added when the Lloyds list codes are updated.

<b>Attribute for the ship particular service</b>	<b>Ship type according to Lloyd's list</b>
ACB	bulk aggregates carrier
BBU	bulk carrier
BCB	bulk carrier with container capacity
BCE	bulk cement carrier
BOR	bulk ore carrier
BWC	wood-chip carrier
CBO	combined bulk and oil carrier
COO	combined ore and oil carrier
DBD	bucket dredger
DCH	cutter suction hopper dredger
DCS	cutter suction dredger
DDR	dredger
DGD	grab dredger
DGH	grab hopper dredger
DHD	hopper dredger
DSD	suction dredger
DSH	suction hopper dredger
DSS	sand suction dredger
DTD	trailing suction dredger
DTS	trailing suction hopper dredger
FFC	fish carrier
FFF	fish factory
FFP	fishery protection
FFS	fishing (general)

Attribute for the ship particular service	Ship type according to Lloyd's list
FRL	LNG Floating Storage Degasification Unit
FTR	trawler (All types)
FWF	whale factory
FWH	whaler
GCT	cargo/training
GGC	general cargo
GPC	general cargo with container capacity
GRF	reefer
LCN	Compressed Natural Gas Carrier
LFP	floating gas production
LFS	floating gas storage
LNG	Liquid Natural Gas Carrier
LNP	Combined LNG and LPG Gas Carrier
LPG	Liquid Petroleum Gas Carrier
MLV	livestock
MPR	passenger (cruise)
MVE	vehicle carrier
NAV	Naval Vessel
NAX	Naval Auxiliary Vessel
OBA	barge
OBS	buoy ship/supply
OBY	buoy ship
OCL	cable ship
OCP	cable pontoon
OCS	crane ship
OCX	crane barge
ODE	depot ship
ODS	diving support
OES	exhibition ship
OFL	floating crane
OFY	ferry

Attribute for the ship particular service	Ship type according to Lloyd's list
OHB	hopper barge
OHF	hydrofoil
OHL	semi-sub HL vessel
OHS	hospital ship
OHT	semi-sub HL/tank
OIB	icebreaker
OIF	icebreaker/ferry
OIS	icebreaker/supply
OIT	icebreaker/tender
OLC	landing craft
OLT	lighthouse/tender
OMN	mining ship
OMS	mission ship
OMT	maintenance
OOS	offshore safety
OPA	patrol ship
OPC	pollution control vessel
OPD	paddle
OPI	pilot ship
OPL	pipe layer
OPO	pontoon
OPP	pipe carrier
ORD	radio ship
ORN	ro/ro pontoon
ORP	repair ship
ORX	repair barge
OSB	storage barge
OSC	sludge carrier
OSM	submarine
OSP	semi-sub pontoon
OSS	storage ship

Attribute for the ship particular service	Ship type according to Lloyd's list
OSU	support
OSV	salvage
OSY	supply
OSZ	standby safety vessel
OTB	tank barge
OTC	tank cleaning ship
OTN	tender
OTR	training
OWA	waste ship
OWO	work ship
OYT	yacht
PRR	passenger ro/ro
PSO	floating power station
RHR	hydrographic research
RMR	meteorological research
ROR	oceanographic research
RRB	research/buoy ship
RRE	research
RRS	research/supply ship
RSR	seismographic research
TAC	acid tanker
TAS	asphalt tanker
TBK	bunkering tanker
TCH	chemical tanker
TCO	Combined chemical and oil tanker
TCR	crude oil tanker
TDP	floating drilling production tanker
TEO	edible oil tanker
TFJ	fruit juice tanker
TFO	fish oil tanker
TFP	floating production tanker

Attribute for the ship particular service	Ship type according to Lloyd's list
TFS	floating storage tanker
TMO	molasses tanker
TNA	naval auxiliary tanker
TPD	product tanker
TRR	tanker with ro/ro for road tankers.
TTA	non specific tanker
TWN	wine tanker
TWT	water tanker
UBC	barge container carrier
UBG	barge carrier
UCC	fully cellular containership
UCR	fully cellular refrigerated
URC	roll on roll off with container capacity
URR	Roll On Roll Off
XAA	anchor handling salvage tug
XAF	anchor handling fire fighting tug/supply
XAG	anchor handling fire fighting tug
XAH	anchor handling tug/supply
XAT	anchor handling tug
XCT	catamaran tug
XFF	fire fighting tug
XFS	fire fighting tug/supply
XFT	fire fighting tractor tug
XPT	pusher tug
XST	salvage tug
XTG	tug
XTI	tug/icebreaker
XTP	tug/pilot ship
XTR	tractor tug
XTS	tug/supply
XTT	tug/tender

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Attribute for the ship particular service	Ship type according to Lloyd's list
XTX	tug/support
YDP	drill platform
YDS	drill ship

## ANNEX D – AIS SHIP TYPES

The table below contains ship codes transmitted by the AIS ship transponder within the AIS ship and cargo type element. The table below indicates the codes transmitted by the ship, as well as the relevant value of the attribute as utilised in the definition of the ship particular web service herein.

AIS/ Cargo type transmission from vessel's AIS transponder		Code to be transmitted via the ship particular service	Description	Notes/ Rules
First digit	Second digit			
1	<del>1,2,3,4,5,6,7,8,9</del>	1	Reserved for future use	Second digit transmitted by AIS should be ignored as relates with the cargo type <sup>8</sup>
2	<del>1,2,3,4,5,6,7,8,9</del>	2	WIG	
3	0	30	Fishing vessel	
3	1	31	Towing craft	
3	2	32	Towing where length of the tow exceeds 200 m or breadth exceeds 25 m	
3	3	33	Craft engaged in dredging or underwater operations	
3	4	34	Craft engaged in diving operations	
3	5	35	Craft engaged in military operations	

<sup>8</sup> See table 11 below extracted from IALA AIS specifications

AIS/ Cargo type transmission from vessel's AIS transponder		Code to be transmitted via the ship particular service	Description	Notes/ Rules
First digit	Second digit			
4	<del>1,2,3,4,5,6,7,8,9</del>	36	HSC	Second digit transmitted by AIS should be ignored as relates with the cargo type
5	0	50	Pilot vessel	
5	1	51	Search and rescue vessels	
5	2	52	Tugs	
5	3	53	Port tenders	
5	4	54	Vessels with anti-pollution facilities or equipment	
5	5	55	Law enforcement vessels	
5	6	56	Spare – for assignments to local vessels	
5	7	57	Spare – for assignments to local vessels	
5	8	58	Medical transports (as defined in the 1949 Geneva Conventions and Additional Protocols)	
5	9	59	Ships according to RR Resolution No. 18 (Mob-83)	
6	<del>1,2,3,4,5,6,7,8,9</del>	7	Passenger ships	Second digit transmitted by AIS should be ignored as relates with the cargo type
7	<del>1,2,3,4,5,6,7,8,9</del>	7	Cargo ships	
8	<del>1,2,3,4,5,6,7,8,9</del>	8	Tanker(s)	

AIS/ Cargo hype transmission from vessel's AIS transponder		Code to be transmitted via the ship particular service	Description	Notes/ Rules
First digit	Second digit			
9	<del>1,2,3,4,5,6,7,8,9</del>	9	Other types of ship	

## ANNEX E – PSC SHIP TYPES (INFORMATIVE)

The table below contains ship codes adopted by the PARIS MoU for PSC community purposes. New types may be added following a decision of the PARIS MoU.

Attribute for the ship particular service	Ship type according to Paris MoU codification
311	NLS tanker
312	Combination carrier
313	Oil tanker
315	Fishing vessel
316	Warship and naval auxiliary
317	Wooden ship of a primitive build
318	Government ship used for non-commercial purpose
319	Pleasure yacht not engaged in trade
320	Gas carrier
330	Chemical tanker
340	Bulk carrier
353	Container
355	Ro-Ro cargo
360	General cargo/multipurpose
361	Refrigerated cargo
367	Livestock carrier
370	Ro-Ro passenger ship
371	Passenger ship
373	Fish factory
375	Heavy load
376	Offshore supply
378	Dredger
380	MODU & FPSO
382	Special purpose ship
383	High speed passenger craft

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384	High speed cargo
385	Tug
399	Other special activities

## **ANNEX F – RECOGNISED ORGANISATIONS LIST (INFORMATIVE)**

The table below contains the list of Recognised Organisations (including classification societies) used in inspections recorded by the Paris MOU. Amendments to the list are possible following a decision of the PARIS MoU.

Code	Description	Abbreviation	EU Recognized	Classification Society	Recognized Organization	Effect Date	Expiry Date
101	American Bureau of Shipping	ABS	Yes	Yes	Yes	01/01/1982	
103	Register of Shipping (Albania)	RSA		Yes	Yes	01/01/1982	
104	Alpha Register of Shipping	ARS		Yes	Yes	20/08/2003	
108	Biro Klasifikasi Indonesia	BKI		Yes	Yes	01/01/1982	
112	Bulgarian Register of Shipping	BRS		Yes	Yes	01/01/1982	
113	Bureau Securitas	BS		Yes	Yes	01/01/1982	
115	Bureau Veritas	BV	Yes	Yes	Yes	01/01/1982	
118	Cyprus Bureau of Shipping	CBS		Yes	Yes	01/01/1982	
120	China Corporation Register of Shipping	CCRS		Yes	Yes	01/01/1982	
121	China Classification Society	CCS	Yes	Yes	Yes	01/01/1982	
124	Croatian Register of Shipping	CRS		Yes	Yes	01/01/1982	
125	Ceskoslovensky Lodin Register	CS		Yes	Yes	01/01/1982	
127	Class withdrawn	CW		Yes	Yes	01/01/1982	01/01/2001
128	Det Norske Veritas	DNV	Yes	Yes	Yes	01/01/1982	
130	Fidenavis S.A.	FID		Yes	Yes	01/01/1982	
132	Germanischer Lloyd	GL	Yes	Yes	Yes	01/01/1982	

Code	Description	Abbreviation	EU Recognized	Classification Society	Recognized Organization	Effect Date	Expiry Date
135	Honduras International Surveying and Inspection Bureau	HINSIB		Yes	Yes	01/01/1982	
138	Hellenic Register of Shipping	HRS		Yes	Yes	01/01/1982	
139	Isthmus Bureau of Shipping, S.A.	IBS		Yes	Yes	01/01/1982	
141	Intermaritime Certification Services, Class ICS	ICS		Yes	Yes	31/12/2007	
146	Inspeccion y Clasificacion Maritima (INCLAMAR)	INCLAMAR		Yes	Yes	01/01/1982	
148	International Naval Surveys Bureau	INSB		Yes	Yes	01/01/1982	
150	Indian Register of Shipping	IRS		Yes	Yes	01/01/1982	
151	International Register of Shipping	IS		Yes	Yes	29/10/2002	
156	Korea Classification Society	KCS		Yes	Yes	01/01/1982	
158	Korean Register of Shipping	KRS	Yes	Yes	Yes	01/01/1982	
159	Korea Ship Safety Technology Authority	KST		Yes	Yes	31/12/2007	
160	Lloyd's Register	LR	Yes	Yes	Yes	01/01/1982	
164	Marconi International Marine Company Ltd.	MIMC		Yes	Yes	01/01/1982	
168	National Cargo Bureau Inc.	NCB		Yes	Yes	01/01/1982	
169	Nippon Kaiji Kyokai	NKK	Yes	Yes	Yes	01/01/1982	
170	No class	NOCL		Yes	Yes	01/01/1982	01/01/2000

Code	Description	Abbreviation	EU Recognized	Classification Society	Recognized Organization	Effect Date	Expiry Date
171	National Shipping Adjuster Inc.	NASHA		Yes	Yes	01/01/1982	
173	Other	OTHER		Yes	Yes	01/01/1982	
174	Panama Bureau of Shipping	PBS		Yes	Yes	01/01/1982	
175	Panama Maritime Documentation Services	PMDS		Yes	Yes	27/08/2002	
176	Panama Maritime Surveyor Bureau Inc.	PMSB		Yes	Yes	01/01/1982	
178	Panama Register Corporation	PRC		Yes	Yes	01/01/1982	
179	Polski Rejestr Statkow (Polish Register of Shipping)	PRS	Yes	Yes	Yes	01/01/1982	
182	Registro Brasileiro de Navios de Aeronaves	RBNA		Yes	Yes	01/01/1982	01/01/2000
183	Registro Cubano de Buques	RCB		Yes	Yes	01/01/1982	
186	Registro Italiano Navale	RINA	Yes	Yes	Yes	01/01/1982	
187	R.J. Del Pan	RJDP		Yes	Yes	01/01/1982	
188	Register of Shipping	RK		Yes	Yes	01/07/2011	
189	Register of Shipping (Singapore)	RSS		Yes	Yes	01/01/1982	20/08/2003
190	Regjistri Laknori Shqiptar	RLS		Yes	Yes	01/01/1982	12/05/2009
191	Russian Maritime Register of Shipping	RMRS	Yes	Yes	Yes	01/01/1982	
192	Romanian Naval Register	RNR		Yes	Yes	01/01/1982	
193	Rinave Portuguesa	RP	Yes	Yes	Yes	01/01/1982	
194	Russian River Register	RR		Yes	Yes	01/01/1982	

Code	Description	Abbreviation	EU Recognized	Classification Society	Recognized Organization	Effect Date	Expiry Date
196	Societe Anonyme Internationale de Telegraphie sans fil (SAITE)	SAITE		Yes	Yes	01/01/1982	
197	Sociedade Classificadora Brasileira de Navios	SCBN		Yes	Yes	01/01/1982	01/01/2000
198	Sociedad Classificadora de Colombia	SCC		Yes	Yes	01/01/1982	
202	Societe Generale de Surveillance	SGS		Yes	Yes	01/01/1982	
203	Seefartsaht Helsinki	SH		Yes	Yes	01/01/1982	
205	Sociedad de Registro y Classificacion Mexicana SA	SRCM		Yes	Yes	01/01/1982	
206	Turkish Lloyd	TL		Yes	Yes	01/01/1982	
209	NV Unitas	UN		Yes	Yes	01/01/1982	
211	Universal Shipping Bureau Inc.	USB		Yes	Yes	31/12/2007	
212	Shipping Register of Ukraine	SRU		Yes	Yes	27/08/2002	
213	Vietnam Register	VR		Yes	Yes	01/01/1982	
215	Phoenix Register of Shipping	PHRS		Yes	Yes	11/08/2008	
216	Overseas Marine Certification Services	OMCS		Yes	Yes	28/09/2010	
224	ASIA Classification Society	ASIA		Yes	Yes	01/07/2011	
225	Black Sea Bureau of Shipping	BBS		Yes	Yes	01/07/2011	
226	Belize Maritime Bureau Inc.	BMB		Yes	Yes	01/07/2011	
227	Belize Register Corporation	BRC		Yes	Yes	01/07/2011	
228	Classification Bureau of	CBI		Yes	Yes	01/07/20	

Code	Description	Abbreviation	EU Recognized	Classification Society	Recognized Organization	Effect Date	Expiry Date
	Indonesia					11	
229	Cosmos Marine Bureau Inc.	CMB		Yes	Yes	01/07/2011	
230	Compania Nacional de Registro e Inspeccion de Naves, S. de R.L.	CNRIN		Yes	Yes	01/07/2011	
231	C.T.M. Inspection and Classification Company, S. de R.L.	CTMICC		Yes	Yes	01/07/2011	
232	Dromon Bureau of Shipping	DBS		Yes	Yes	01/07/2011	
233	Ferriby Marine	FM		Yes	Yes	01/07/2011	
234	Global Marine Bureau Inc.	GMB		Yes	Yes	01/07/2011	
235	Global Shipping Bureau Inc	GSB		Yes	Yes	01/07/2011	
236	Honduras Bureau of Shipping	HBS		Yes	Yes	01/07/2011	
237	Honduras Maritime Inspection Inc.	HMI		Yes	Yes	01/07/2011	
238	Horizon International of Naval Surveying and Inspection Bureau, S.A.	HORINSIB		Yes	Yes	01/07/2011	
239	Isthmus Maritime Classification Society S.A	IMCS		Yes	Yes	01/07/2011	
240	Icons Marine Services PTE Ltd	IMS		Yes	Yes	01/07/2011	
241	Instituto Nacional de los Espacios Acuaticos e Insulares	INEAI		Yes	Yes	01/07/2011	
242	International Ship Classification	ISC		Yes	Yes	01/07/2011	
243	International Yacht Bureau, Inc.	IYB		Yes	Yes	01/07/2011	

Code	Description	Abbreviation	EU Recognized	Classification Society	Recognized Organization	Effect Date	Expiry Date
244	Iranian Classification Society	IRCS		Yes	Yes	01/07/2011	
245	Libyan Surveyor Mr. Sif Ennasar Abdulhamid Giahmi	LS		Yes	Yes	01/07/2011	
246	Macosnar Corporation	MC		Yes	Yes	01/07/2011	
247	Maritime Bureau of Shipping	MBS		Yes	Yes	01/07/2011	
248	Maritime Lloyd - Georgia	MLG		Yes	Yes	01/07/2011	
249	Maritime Technical Systems and Services Ltd.	MTSS		Yes	Yes	01/07/2011	
250	New United International Marine Services Ltd.	NUMS		Yes	Yes	01/07/2011	
251	Panama Marine Survey and Certification Services Inc.	PMSCS		Yes	Yes	01/07/2011	
252	Panama Shipping Certificates Inc.	PSC		Yes	Yes	01/07/2011	
253	Panama Shipping Registrar Inc.	PSR		Yes	Yes	01/07/2011	
254	Registro Internacional Naval, S.A.	REGINAV		Yes	Yes	01/07/2011	
255	regs4ships Ltd.	RFS		Yes	Yes	01/07/2011	
256	Sociedad Andina de Certificacion Ltda.	SAC		Yes	Yes	01/07/2011	
257	State Committee of Fisheries of Ukraine	SCFU		Yes	Yes	01/07/2011	
258	State Enterprise Registrul Naval Republic of Moldova	SERN		Yes	Yes	01/07/2011	
259	Sociedade Classificadora	SCRIN		Yes	Yes	01/07/2011	

Code	Description	Abbreviation	EU Recognized	Classification Society	Recognized Organization	Effect Date	Expiry Date
	Registro Italiano Navale (Brazil)						
260	Ship Classification Malaysia	SCM		Yes	Yes	01/07/2011	
261	Sing Lloyd	SGL		Yes	Yes	01/07/2011	
262	SingClass International	SCI		Yes	Yes	01/07/2011	
263	Slovak Lloyd	SL		Yes	Yes	01/07/2011	
264	Union Bureau of Shipping	UBS		Yes	Yes	01/07/2011	
265	Universal Maritime Bureau Ltd	UMB		Yes	Yes	01/07/2011	
266	Unknown	UNKN		Yes	Yes	01/07/2011	
267	Yugoslav Register of Shipping	YRS		Yes	Yes	01/07/2011	
268	American Register of Shipping	AMRS		Yes	Yes	01/07/2012	
269	ASIA Classification ACS	ACS		Yes	Yes	01/07/2012	
270	Global Shipping Class Inc.	GSC		Yes	Yes	01/07/2012	
271	International Maritime Register	IMR		Yes	Yes	01/07/2012	
272	Maritime Lloyd	ML		Yes	Yes	01/07/2012	
273	SAC Register	SR		Yes	Yes	01/07/2012	
274	Union Marine Classification Society	UMCS		Yes	Yes	01/07/2012	
275	Venezuelan Register of Shipping	VRS		Yes	Yes	01/07/2012	
EXPI RED _1	Mert (Hungary)	MERT		Yes	Yes	01/01/1982	01/01/2000
EXPI RED _2	Register Of Shipping People's R.C. (China)	RSPRC		Yes	Yes	01/01/1982	01/01/2000

Code	Description	Abbreviation	EU Recognized	Classification Society	Recognized Organization	Effect Date	Expiry Date
EXPI RED _3	Register Of Shipping Society Ltd (Ghana)	RSGHANA		Yes	Yes	01/01/1982	01/01/2000
EXPI RED _4	Senbak Kamdok Phenian	SKP		Yes	Yes	01/01/1982	01/01/2000
EXPI RED _5	Deutsche Schiffs	DSCHIFFS		Yes	Yes	01/01/1982	01/01/1995

## ANNEX G – ATTRIBUTES AND VESSEL PARTICULAR ELEMENTS DEFINITIONS

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
<i>Beam</i>	Decimal	n(4,2)	The nominal width (in metres) of the ship defined by design.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>Breadth</i>	Decimal	n(4,2)	The transverse distance (in metres) extending from the most outboard point on one side to the most outboard point on the other side of a ship's hull including any projections on the ship's side; this dimension determines the maximum space occupied by the ship when used with length overall. In other words the highest value of the ship's beam.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
CallSign	Text	0-7	Call sign of the vessel.	MS2SSN_ShipParticulars_Not MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
CancelDataPush	ENUM		Possible value: <b>Y</b> (for yes);	MS2SSN_ShipParticulars_Sub
ClassSociety	ENUM		Designates if the recognised organisation specified by the <i>RecognisedOrg</i> element is a classification society or not. Possible values: <b>Y</b> (for yes); <b>N</b> (for no).	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
Current_CallSign	Text	0-7	Call sign of the vessel.	MS2SSN_ShipParticulars_Not

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
				SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
Current_FlagRegistry	Text	2	The Alpha-2 code (two-digits flag code) in accordance with the standard ISO 3166-1.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
Current_MMSINumber	Text	9	MMSI number of the vessel. MID according to the ITU regulation. Length of the MMSI number should always be 9.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
Current_ShipName	Text	0-35	Name of the vessel. Upon SOLAS, chapter I, part B, regulation 15 "Form Certificates", "the particulars inserted in the certificates shall be in Roman characters and Arabic figures". (From "A" to "Z" and from 0 to 9).	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
Date_Effect	DT		Effective date and time for the given value.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
Deadweight	Text	10	The ship's carrying capacity expressed in tonnes.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
EndDateTime	DT		Ending point of a time window declared to define a query.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
ERNumber	Text	0-12	EMSA vessel Registration number.	MS2SSN_ShipParticulars_Not MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
EUrecognised	ENUM		Identifies if the recognised organisation specified by the <i>RecognisedOrg</i> element is recognised by European Union . Possible values: <b>Y</b> (for yes); <b>N</b> (for no).	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
Flag	Text	2	The Alpha-2 code (two-digits flag code) in accordance with the standard ISO 3166-1.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
From	Text	3-15	The UserID of the originator of the message (as defined in SafeSeaNet). Best practice for the field is to include the reference identification of the originator of the data included in the message.	All messages
GetResultsInXMLYesOrNo	ENUM		Possible Values "Y" (for Yes), "N" (for No).	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
GetShipRecordChanges	ENUM		Possible Values "Y" (for Yes), "N" (for No).	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
GrossTonnage	INT	1-10	The measurement of ship's total capacity expressed in volumetric tons of 100 cubic feet.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
				SSN2MS_ShipParticulars_Ann
<i>HullType</i>	ENUM		<p>The hull is the watertight body of a ship or boat. From an operational / safety perspective is important to define if the vessel is of single hull type or double hull.</p> <p>Following types are defined:</p> <p><b>DBE</b> (Double Bottom Entire Compartment Length); <b>DBEDSP</b> (Double Bottom Entire, Double Sides Partial); <b>DBP</b> (Double Bottom Partial Compartment Length); <b>DHT</b> (Double Hull tanker); <b>DSE</b> (Double Sides Entire Compartment Length); <b>SHT</b> (Single Hull tanker); <b>SHT-SBT</b> (single hull tanker with segregated ballast tanks, <b>UKN</b> for unknown hull type. .</p>	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>IceClass</i>	ENUM		<p>ICE class notation applies to vessels intended for service in icy waters with everything from light ice conditions to ice breaking and ramming. The following values are permitted:</p> <p><b>ICE-05</b> – Vessels breaking ice of 0.5 m level thickness;</p> <p><b>ICE-10</b> – Vessels breaking ice of 1.0 m level thickness;</p> <p><b>ICE-15</b> – Vessels breaking ice of 1.5 m level thickness;</p> <p><b>ICE-1A</b> – Ships operating in ice conditions of 0.8 m level ice thickness;</p> <p><b>ICE-1A*</b> – Ships operating in ice conditions with ice floes of 1.0 m level ice thickness;</p> <p><b>ICE-1A*F</b> – Ships operating regular services in</p>	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
			ice conditions with ice floes of 1.0 m level ice thickness; <b>ICE-1B</b> – Ships operating in ice conditions with ice floes of 0.6 m level ice thickness; <b>ICE-1C</b> – Ships operating in ice conditions with ice floes of 0.4 m level ice thickness; <b>ICE-C</b> – Class notation for ships operating in light ice conditions; <b>ICE-E</b> – Ships with ice strengthening for light localised drift ice in mouths of rivers and coastal areas. <b>PC1-PC7</b> - Ships designed for ice breaking year-round in polar waters.	
IMONumber	Text	7	IMO number – IMO Res A.600 (15).	MS2SSN_ShipParticulars_Not MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
IRNumber	Text	12	EU fishing vessel Registration number (CFR field).	MS2SSN_ShipParticulars_Not MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
IsBanned	ENUM		Indicates if the ship is Banned. Possible values: N = Ship is not Banned Y = Ship is Banned	MS2SSN_ShipParticulars_Not MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
				SSN2MS_ShipParticulars_Ann
IsDetained	ENUM		Indicates if the ship is Detained. Possible values: N = Ship is not Detained Y = Ship is Detained	MS2SSN_ShipParticulars_Not MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>ISMCompanyNo</i>	Text	7	Identification number of the ISM company responsible for the ship which conforms to the IMO Unique Company and Registered Owner Identification Number Scheme adopted by the Organization.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
Keel-laying_Date	DT		Date and time the ship progressive construction began.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res
<i>KeelToMastHeight</i>	Decimal	n(4,2)	Distance (in metres) between the bottom of the keel and the top of the ship's mast.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res
Length	Decimal	n(5,2)	The distance (LOA – length overall in meters) between the forward most and aftermost parts of the ship.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>LengthBetweenPerpendiculars</i>	Decimal	n(5,2)	The nominal (defined during ship design) length of a vessel along the waterline from the forward surface of the stem, or main bow perpendicular member, to the after surface of the sternpost, or main stern perpendicular member.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>MaxManoeuvreSpeed</i>	Decimal	n(5,2)	The maximum speed in knots (defined during ship design) that a ship can maintain during a manoeuvre.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
<i>MaxNumberPassengers</i>	INT	1-5	The maximum number of passengers that a ship may carry by design according to the applicable rules.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>MaxSpeed</i>	Decimal	n(5,2)	The maximum speed in knots (defined during ship design) of the vessel.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
MMSINumber	Text	9	MMSI number of the vessel. MID according to the ITU regulation. Length of the MMSI number should always be 9.	MS2SSN_ShipParticulars_Not MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>MouldedBreadth</i>	Decimal	n(4,2)	the transverse distance in meters between the moulded or inboard surfaces of the side shell plating measured at the widest portion of a ship's hull.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>MouldedDepth</i>	INT	1-4	The moulded depth is the vertical distance measured in meters from the top of the keel to the top of the freeboard deck beam at side.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res
MSRefId	Text	1-36	Reference identifier specified by the original caller. It will be inserted by SafeSeaNet in the MSRefId attribute of the SSN_Receipt.xml response.	All messages
MSRefIdofSubscriptionToCancel	Text	1-36	Reference identifier pointing at the MSRefId attribute of a previous MS2SSN_ShipParticular_Sub message that is to be cancelled	MS2SSN_ShipParticular_Sub
<i>NetTonnage</i>	INT	1-6	Net tonnage is a representation of a the internal	MS2SSN_ShipParticulars_Req

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
			volume of a ship's cargo holds, in tonnes, defined during design.	SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>NumBowThrusters</i>	ENUM		Number of bow thrusters of the ship. Possible values: <b>Y</b> (Yes); <b>0-4</b> .	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>NumCargoTanks</i>	INT	1-6	Number of cargo tanks of the ship.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>NumOfHolds</i>	INT	1-6	Number of cargo holds of the ship.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>NumRORocompartments</i>	INT	1-6	Number of RORO compartments of a ship.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>NumSternThrusters</i>	ENUM		Number of stern thrusters of the ship. Possible values: <b>Y</b> (Yes); <b>0-4</b> .	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
PMoUrecognised	ENUM		Identifies if the recognised organisation specified by the <i>RecognisedOrg</i> element is recognised by Paris MoU. Possible values: <b>Y</b> (for yes); <b>N</b> (for no).	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
ReasonForUpdate	ENUM		The coded value (for the specific element the attribute belong too) of the reason for update as defined in the section 1.3 – “Reasons to Update”.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>RecognizedOrg</i>	INT	3	The three digit code allocated to IMO and maintained by Paris MoU for organisations (including Classification societies) recognised to conduct ship inspections. Refer to the annex F (informative) for the list of currently recognised organisations.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>ReducedGrossTonnage</i>	INT	1-6	(to be quoted only for open top container ships) The value calculated as per MSC 82/24/Add.2.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
SentAt	DT		Date and time the message was sent. If local time is used MS application has to adjust the time to UTC.	ALL messages
ServiceIndicator	ENUM		Possible values: <b>Launched;</b> <b>InServiceOrCommission;</b> <b>LaidUp;</b> <b>BrokenUp.</b>	MS2SSN_ShipParticulars_Not MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
ShipInmarsatCallNumber	String	9	9 digit Inmarsat Call number for the ship (the international Call ID for Inmarsat network not to be quoted)	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
ShipName	Text	1-35	Name of the vessel. Upon SOLAS, chapter I, part B, regulation 15	MS2SSN_ShipParticulars_Not

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
			"Form Certificates", "the particulars inserted in the certificates shall be in Roman characters and Arabic figures". (From "A" to "Z" and from 0 to 9).	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
<i>ShipOwnerCompanyIMONumber</i>	Text	7	Identification number of the owner company responsible for the ship which conforms to the IMO Unique Company and Registered Owner Identification Number Scheme adopted by the Organization.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
ShipType_AISbased	ENUM		The type of ship according to the AIS classification. Possible values as per Annex E.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
ShipType_LLBased	ENUM		The type of ship according to Lloyd's List classification. Possible values as per Annex C.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
ShipType_PSC	ENUM		The type of ship according to the PSC classification. Possible values: as per Annex E.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
ShipType_UN	Text	1-10	The type of ship according to the PSC UN/ECE classification. Possible values as per Annex B.	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
SSNRefId	UUID	1-36	Reference number given by the SafeSeaNet. It must be inserted later by the NCA application in the SSNRefID attribute of the MS2SSN_<SSN_Tx_type>_Res.xml response and will be used for correlation when SafeSeaNet will	MS2SSN_ShipParticulars_Not SSN2MS_ShipParticulars_Res SSN_Receipt

Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
			receive the response from NCA application.	SSN2MS_ShipParticulars_Ann
SSNUserID	Text	3-32	The SSN unique user Identifier.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
StartDateTime	DT		Starting point of a time window declared to define a query.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
StatusCode	ENUM		Global status code. See "Status Codes and Status Messages" section for possible values.	SSN2MS_ShipParticulars_Res SSN_Receipt SSN2MS_ShipParticulars_Ann
StatusMessage	Text	0-255	Global status message string.	SSN2MS_ShipParticulars_Res SSN_Receipt SSN2MS_ShipParticulars_Ann
TestId	Text	0-8	Test Case identification. Only useful for testing.	All messages
TEU	Decimal	TBD	Twenty-foot equivalent unit, a measure used for capacity in container transportation. One TEU represents the cargo capacity of a standard intermodal container, 20 feet (6.1 m) long and 8 feet (2.44 m) wide.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res SSN2MS_ShipParticulars_Ann
TimeoutValue	DT		Date and time of the ship position reporting.	MS2SSN_ShipParticulars_Req SSN2MS_ShipParticulars_Res
To	Text	3-15	The reference identification of the recipient of the message ('SSN').	All messages

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Attribute/Element name	Type	Len	Description and general rules	Message(s) that the attribute is included
Version	Text	3	SafeSeaNet request current version ('x.x').	All messages
Vessel_ListInBase64	base64		Base64-encoded zip file, including a list of files, each file in XML format.	SSN2MS_ShipParticulars_Res