

The EU SRR and the IHM

Explanatory guidance

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BACKGROUND

Ship scrapping terminology was first raised at the 44th MEPC session in March 2000, following a correspondence group which was established to research this issue and provide information about current ship recycling practices and suggestions on the role of IMO.

Guidelines were developed by the Marine Environment Protection Committee (MEPC) and finalized at the MEPC 49th session in July 2003. These guidelines were adopted as the: Guidelines on Ship Recycling by the 23rd Assembly in November-December 2003 by resolution A.962(23) and were subsequently amended by resolution A.980(24).

Resolution A.962(23) - IMO Guidelines on Ship Recycling gives advice to all stakeholders in the recycling process, including administrations of ship building and maritime equipment supplying countries, flag, port and recycling States, as well as intergovernmental organizations and commercial bodies such as shipowners, ship builders, repairers and recycling yards.

The guidelines noted that, in the process of recycling ships, virtually nothing goes to waste. The materials and equipment are almost entirely reused. Steel is reprocessed to become, for instance, reinforcing rods for use in the construction industry or as corner castings and hinges for containers. Ships' generators are reused ashore. Batteries find their way into the local economy. Hydrocarbons on board become reclaimed oil products to be used as fuel in rolling mills or brick kilns. Light fittings find further use on land. Furthermore, new steel production from recycled steel requires only one third of the energy used for steel production from raw materials. Recycling thus makes a positive contribution to the global conservation of energy and resources and, in the process, employs a large, if predominantly unskilled, workforce. Properly handled, ship recycling is, without question, a "green" industry. However, the guidelines also recognized that, although the principle of ship recycling may be sound, the working practices and environmental standards in the yards often leave much to be desired. While ultimate responsibility for conditions in the yards has to lie with the countries in which they are situated, other stakeholders must be encouraged to contribute towards minimising potential problems in the yards.

The Guidelines on Ship Recycling also introduced the concept of a "Green Passport" for ships. It was envisaged that this document, containing an inventory of all materials used in the construction of a ship that are potentially hazardous to human health or the environment, would accompany the ship throughout its working life. Produced by the shipyard at the construction stage and passed to the purchaser of the vessel, the document would be in a format that would enable any subsequent changes in materials or equipment to be recorded. Successive owners of the ship would maintain the accuracy of the Green Passport and incorporate into it all relevant design and equipment changes, with the final owner delivering it, with the vessel, to the recycling yard.

Subsequently, at its 53rd session in July 2005, the Marine Environment Protection Committee (MEPC) agreed that the IMO should develop, as a high priority, a new instrument on recycling of ships with a view to provide legally binding and globally applicable ship recycling regulations for international shipping and for recycling facilities. MEPC 53 also agreed that the new IMO instrument on ship recycling should include regulations for the design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling, without compromising the safety and operational efficiency of ships; the operation of ship recycling facilities in a safe and environmentally sound manner; and the establishment of an appropriate enforcement mechanism for ship recycling (certification/reporting requirements). MEPC 53 further agreed that the above-mentioned instrument should be completed in time for its consideration and adoption in the biennium 2008-2009.

The IMO Assembly in November-December 2005 subsequently agreed that IMO should develop a new legally-binding instrument on ship recycling. Assembly Resolution A.981(24) New legally-binding instrument on Ship Recycling requested the Marine Environment Protection Committee to develop a new instrument that would provide regulations for:

- the design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling, without compromising the safety and operational efficiency of ships;
- the operation of ship recycling facilities in a safe and environmentally sound manner; and
- the establishment of an appropriate enforcement mechanism for ship recycling, incorporating certification and reporting requirements.

The Resolution referred to the urgent need for IMO to contribute to the development of an effective

solution to the issue of ship recycling, which will minimize, in the most effective, efficient and sustainable way, the environmental, occupational health and safety risks related to ship recycling, taking into account the particular characteristics of world maritime transport and the need for securing the smooth withdrawal of ships that have reached the end of their operating lives.





DEFINITIONS

For the purposes of this Publication and under the terms of the EU SRR, the following definitions apply:

ship means a vessel of any type whatsoever operating or having operated in the marine environment, and includes submersibles, floating craft, floating platforms, self- elevating platforms, Floating Storage Units (FSUs), and Floating Production Storage and Offloading Units (FPSOs), as well as a vessel stripped of equipment or being towed;

new ship means a ship for which either:

- a. the building contract is placed on or after the date of application of the EU SRR;
- b. in the absence of a building contract, the keel is laid or the ship is at a similar stage of construction six months after the date of application of the EU SRR or thereafter; or
- c. the delivery takes place thirty months after the date of application of the EU SRR or thereafter;

tanker means an oil tanker as defined in Annex I to the Convention for the Prevention of Pollution from Ships ('MARPOL Convention') or a Noxious Liquid Substances (NLS) tanker as defined in Annex II to that Convention;

hazardous means any material or substance which is liable to create hazards to human health and/or material the environment;

operationally means waste water and residues generated by the normal operation of ships subject to the generated requirements of the MARPOL Convention;

waste

ship recycling means the activity of complete or partial dismantling of a ship at a ship recycling facility in order to recover components and materials for reprocessing, for preparation for re-use or for re-use, whilst ensuring the management of hazardous and other materials, and includes associated operations such as storage and treatment of components and materials on site, but not their further processing or disposal in separate facilities;

ship recycling means a defined area that is a yard or facility located in a Member State or in a third country facility and used for the recycling of ships;

ship recycling means, the owner of the ship recycling facility or any other organisation or person who has company assumed the responsibility for the operation of the ship recycling activity from the owner of the ship recycling facility;

administration means a governmental authority designated by a Member State as being responsible for

duties related to ships flying its flag or to ships operating under its authority;

competent authority

means a governmental authority or authorities designated by a Member State or a third country as responsible for ship recycling facilities, within a specified geographical area or an area of expertise, relating to all operations within the jurisdiction of that state;

gross tonnage

means the gross tonnage (GT) calculated in accordance with the tonnage measurement regulations contained in Annex I to the International Convention on Tonnage Measurement of Ships, 1969, or any successor convention;

competent means a person with suitable qualifications, training, and sufficient knowledge, experience person and skill, for the performance of the specific work;

ship owner means the natural or legal person registered as the owner of the ship, including the natural or legal person owning the ship for a limited period pending its sale or handover to a ship recycling facility, or, in the absence of registration, the natural or legal person owning the ship or any other organisation or person, such as the manager or the bareboat charterer, who has assumed the responsibility for operation of the ship from the owner of the ship, and the legal person operating a state-owned ship;

installation

means the installation of systems, equipment, insulation or other material on a ship after the date of application of the EU SRR;

ship recycling plan

means a plan developed by the operator of the ship recycling facility for each specific ship to be recycled under its responsibility taking into account the relevant IMO guidelines and resolutions;

ship recycling facility plan means a plan prepared by the operator of the ship recycling facility and adopted by the board or the appropriate governing body of the ship recycling company that describes the operational processes and procedures involved in ship recycling at the ship recycling facility and that covers in particular workers' safety and training, protection of human health and the environment, roles and responsibilities of personnel, emergency preparedness and response, and systems for monitoring, reporting and record-keeping, taking into account the relevant IMO guidelines and resolutions;

safe-for-entry

means a space that meets all of the following criteria:

- a. the oxygen content of the atmosphere and the concentration of flammable vapours are within safe limits:
- b. any toxic materials in the atmosphere are within permissible concentrations;
- c. any residues or materials associated with the work authorised by the competent person will not produce uncontrolled release of toxic materials or an unsafe concentration of flammable vapours under existing atmospheric conditions while maintained as directed;

safe-for-hot means a space in which all of the following criteria are met:

- work a. safe, non-explosive conditions, including gas-free status, exist for the use of electric arc or gas welding equipment, cutting or burning equipment or other forms of naked flame, as well as heating, grinding, or spark-generating operations;
 - b. the safe-for-entry criteria set out in point 18 are met;
 - c. existing atmospheric conditions do not change as a result of the hot work;
 - d. all adjacent spaces have been cleaned, rendered inert or treated sufficiently to prevent the start or spread of fire;

completion

statement of means a confirmatory statement issued by the operator of the ship recycling facility that the ship recycling has been completed in accordance with the EU SRR;

certificate

inventory means a ship-specific certificate that is issued to ships flying the flag of a Member State in accordance with Article 9 and that is supplemented by an inventory of hazardous materials in accordance with Article 5;

ready for means a ship-specific certificate that is issued to ships flying the flag of a Member State in recycling accordance with Article 9(9) and that is supplemented by an inventory of hazardous certificate materials in accordance with Article 5(7) and the approved ship recycling plan in accordance with Article 7;

compliance

statement of means a ship-specific certificate that is issued to ships flying the flag of a third country and that is supplemented by an inventory of hazardous materials in accordance with Article 12;

THE HONG KONG CONVENTION

The Hong Kong International Convention (hereinafter referred to as "HKC") for the Safe and Environmentally Sound Recycling of Ships was adopted at a diplomatic conference held in Hong Kong, China, from 11 to 15 May 2009, which was attended by delegates from 63 countries, is not yet in force. It will enter into force 24 months after ratification of 15 Member States, representing 40% of world merchant shipping by GT, combined maximum annual ship recycling volume not less than 3% of their combined tonnage.

Currently 15 Flag Administrations have ratified the Convention, representing the 29,62%. The HKC ratifying counties can be found listed here below.

- Belgium
- Congo
- Denmark
- Estonia
- France
- Germany
- Ghana
- India

- Japan
- Malta
- Netherlands
- Norway
- Panama
- Serbia
- Turkey

The HKC aims to ensure that ships, when being recycled after reaching the end of their operational lives, do not pose any unnecessary risks to human health, safety and to the environment.

The HKC intends to address all the issues around ship recycling, including the fact that ships sold for scrapping may contain environmentally hazardous substances such as asbestos, heavy metals, hydrocarbons, ozone-depleting substances and others. It also addresses concerns raised about the working and environmental conditions at many of the world's ship recycling facilities.

The text of the HKC was developed over three and a half years, with input from IMO Member States and relevant non-governmental organizations, and in co-operation with the International Labour Organization and the Parties to the Basel Convention.

Regulations in the HKC cover the design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling without compromising the safety and

operational efficiency of ships; the operation of ship recycling facilities in a safe and environmentally sound manner; and the establishment of an appropriate enforcement mechanism for ship recycling, incorporating certification and reporting requirements.

Ships to be sent for recycling will be required to carry an Inventory of hazardous materials (hereinafter referred to as "IHM"), which will be specific to each ship.

An appendix to the Convention provides a list of hazardous materials, the installation or use of which is prohibited or restricted in shipyards, ship repair yards, and ships of Parties to the Convention. Ships will be required to have an initial survey to verify the inventory of hazardous materials, renewal surveys during the life of the ship, and a final survey prior to recycling.

Ship recycling yards will be required to provide a Ship Recycling Plan, to specify the manner in which each individual ship will be recycled, depending on its particulars and its inventory. Parties will be required to take effective measures to ensure that ship recycling facilities under their jurisdiction comply with the HKC.

THE EU SRR

The European Union (EU) having in mind the HKC requirements and in order to boost its ratification from the Member States, therefore contributing to its global entry into force, has adopted the Regulation (EU) 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling amending Regulation (EC) 1013/2006 and Directive 2009/16/EC (hereinafter referred to as "EU SRR"). The EU SRR entered into force on 30 December 2013.

The EU pursues an ambitious policy to make ship recycling greener and safer. Currently, a vast majority of large vessels are dismantled in poor social and environmental conditions in South Asia. The impact of ship recycling has been documented in a thematic issue of Science for Environment Policy published by the Commission in June 2016.

The EU SRR aims to reduce the negative impacts linked to the recycling of ships flying the flag of Member States of the EU. The EU SRR lays down requirements that ships and recycling facilities have to fulfil in order to make sure that ship recycling takes place in an environment sound and safe manner.

The EU SRR is closely following the HKC's structure, concepts and definitions. However, the EU SRR also sets out additional safety and environmental requirements, as authorised by Article 1(2) of the Convention with a number of other requirements that go beyond those set in the HKC.

The EU SRR first prohibits or restricts the installation and use of hazardous materials (like asbestos or ozone-depleting substances) on board ships.

New ships flying an EU flag and EU-flagged ships going for dismantling must also have on board an Inventory of Hazardous Materials verified by the relevant administration or authority and specifying the location and approximate quantities of those materials. This obligation will also apply from 31 December 2020 to all existing ships sailing under the flag of an EU Member States as well as to non-EU flagged ships and calling at an EU port or anchorage.

This will facilitate the recycling of vessels and reduce the presence of toxic materials on board ships.

From 31 December 2018, large commercial seagoing vessels flying the flag of an EU Member State may be recycled only in safe and sound ship recycling facilities included in the European List of ship recycling facilities. More information on this list and the criteria that ship recycling facilities must meet to be included in this list can be found here.

APPLICABILITY

The EU SRR applies to ships on international voyages, of 500 GT and above flying the flag of an EU Member State or a non-EU flag under the conditions of Article 12 of the EU SRR.

The EU SRR applies to all vessels of any type whatsoever operating or having operated in the marine environment including submersibles, floating craft, floating platforms, self-elevating platforms, FSUs and FPSOs, as well as ships stripped of equipment or being towed.

It does not apply to:

- ships of less than 500 GT;
- any warships;
- naval auxiliary; or
- other ships owned or operated by a state and used, for the time being, only on government non-commercial service.

DIFFERENCES BETWEEN THE HKC AND THE EU SRR

The EU SRR is closely following the HKC's structure, concepts and definitions. Additional hazardous materials required by EU SRR to be added in the IHM for EU flagged ships:

- Perfluorooctane Sulfonic Acid (PFOs); and
- Brominated Flame Retardant (HBCDD).

The table below indicates the basic requirements under the HKC and the EU SRR additional requirements.

HKC Basic requirements

- Preparation of IHM according to MEPC.269(68)
- Be authorized by the competent authorities
- Facility designed and operated safely and in a clean manner
- Have management and monitoring systems to prevent health risks and adverse environmental effects
- Draw a Ship Recycling Facility Plan and Ship Recycling Plan
- Ensure safe and clean management and storage of HM
- Transfer waste only to waste management facilities
- Establish emergency preparedness plans
- Train workers
- Report on incidents

Table 1 – Differences between the HKC and the EU SRR.

EU SRR Additional requirements

- To cover two more HazMats for the IHM (PFOS and HBCDD)
- Control of any leakage, in particular in intertidal zones
- Handle HM, and waste only on impermeable floors with effective drainage systems
- Operate from built structures
 - The facility ensures rapid access for emergency response equipment, such as firefighting equipment and vehicles, ambulances and cranes, to the ship and all areas of the ship recycling facility
- International standards for downstream waste management
- List of EU approved SRFs

EU SRR COMPLIANCE

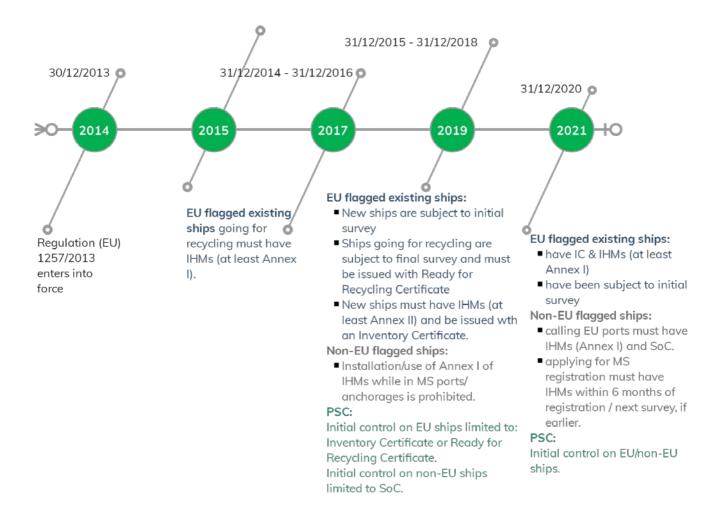
Keeping an up-to-date Inventory on board a ship through the ship's life cycle is a key requirement in both the HKC and the EU SRR.

All EU-flagged ships shall need to carry on board an "Inventory Certificate" (IC) issued by the flag or their RO. The IC need to be supplemented by Part I of the IHM.

When calling at a port or anchorage of an EU port, all non-EU flagged ships shall carry on board a ship-specific "Statement of Compliance" (SoC) issued by the flag or the RO. The SoC need to be supplemented by Part II of the IHM.

The IHM shall be maintained and updated throughout the life of the ship, reflecting new installations (any machinery or equipment is added to, removed or replaced or the hull coating is renewed) containing any HM referred to in Annex II of the EU SRR and changes in the structure and equipment of the ship.

TIMELINE



THE INVENTORY OF HAZARDOUS MATERIALS (IHM)

An Inventory of Hazardous Materials (hereinafter referred to as "IHM") must be developed taking into account the IMO Resolution MEPC.269(68).

In accordance with Article 5 of the EU SRR, all EU-flagged ships shall have on board an IHM.

In accordance with Article 12 of the EU SRR, all non-EU flagged ships shall also have on board an IHM when calling at a port or anchorage of an EU port.

The IHM consists of:

- Part I: HM contained in ship structure or equipment and referred to in Annexes I and Annexes II
 of the EU SRR;
- Part II: Operationally generated wastes; and
- Part III: Stores.

In general, a 'new' ship shall have on board an IHM which shall identify at least the HM referred to in Annex II of the EU SRR while an 'existing' ship or a 'ship going for recycling' before the final application date of the EU SRR, shall have on board an IHM which shall identify, at least, the HM listed in Annex I of the EU SRR

Annex I of the EU SRR lists five types of hazardous materials and Annex II lists the items of Annex I as well as an additional ten types of hazardous materials.

In all cases the IHM shall be properly maintained and updated throughout the operational life of the ship, reflecting new installations containing any HM referred to in Annex II of the EU SRR and relevant changes in the structure and equipment of the ship.

Annex I of the IHM, should include, at least, the following materials:

- Asbestos
- Ozone-depleting substances
- Polychlorinated biphenyls (PCB);
- Perfluorooctane sulfonic acid (PFOS)*; and

Anti-fouling compounds and systems.

Annex II of the IHM, should include the following items:

- Any hazardous materials listed in Annex I;
- Cadmium and Cadmium Compounds;
- Hexavalent Chromium and Hexavalent Chromium Compounds;
- Lead and Lead Compounds;
- Mercury and Mercury Compounds;
- Polybrominated Biphenyl (PBBs);
- Polybrominated Diphenyl Ethers (PBDEs);
- Polychlorinated Naphthalenes (more than 3 chlorine atoms);
- Radioactive Substances:
- Certain Shortchain Chlorinated Paraffins (Alkanes, C10-C13, chloro); and
- Brominated Flame Retardant (HBCDD)*.

The development and maintenance of the IHM is a key requirement of the EU SRR, which requires 'ships' to have the IHM on board therefore, the obligation lies in principle with the shipowner.

The development procedure of the IHM Part I is depending on whether the ship is a new or an existing one.

For new ships the shipbuilder may draw the IHM at the construction and design stage.

For existing ships should be developed by the Ship Owner, whereas, the Ship Owner may draw the IHM upon assistance by a Hazardous Materials Expert (hereinafter referred to as "HazMat Expert"). This is recommended by EMSA for safety and health protection reasons and in order to have a minimum assurance that the work is carried out by competent personnel, under a quality management system and in accordance with recommended guidance (i.e. the EMSA's guidance and the relevant IMO guidelines).

The development procedure of the IHM Part II and Part III relates only to EU-flagged ships when going for recycling.

Shipowners are responsible to establish necessary procedures to properly maintain and update

the Inventory of Hazardous Materials throughout the ship's life, reflecting new installations containing any Hazardous Materials and relevant changes in the structure and equipment of the ship.

Ship Owners need to appoint a designated person for IHM maintenance and this can be an independent person or a company. The designated person for IHM on board should:

- Establish, implement and supervise a system to ensure updating of IHM Part I and IHM related procedures;
- Regularly review the correct execution of IHM maintenance during the general repair and maintenance management;
- Check of number of equipment and component replaced onboard;
- Collect and files the MDs/SDoCs for the newly added equipment and components on ships
- List new entries into the IHM by name, supplier, and location of the new equipment, relevant hazmat type and where it is used together with the approximate quantity.
- In case of conversion, repair or sale of a ship, appropriately maintain and update IHM Part I by recording all changes/deletions relevant with the dates of changes and the signature/name of the designated person;
- Upload the updated IHM (Part I), Ships' IHM (Part I) Maintenance Report; and
- Submit the revised IHM to DromonClass for re-approval.

The designated person for IHM need to be appropriately trained for the above tasks.

The development and maintenance of the IHM should be subject to the principles of independence, quality and accountability.

The individual IHM expert, its company and the laboratory should be properly certified and/or accredited.

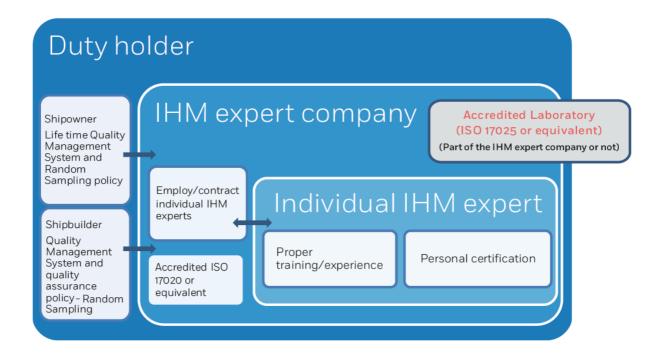
Suppliers need to provide to ship owners with Supplier's Declaration of Conformity and Material Declarations in any case even when no Hazardous Materials are contained above the applicable threshold values.

According to EMSA's Guidance the IHM expert should work within a general quality assurance framework provided by a management system in accordance with the overarching principles for

the development and maintenance of the IHM. Anyone using an individual IHM expert for compiling or updating an IHM is responsible to confirm that the IHM expert is competent to carry out the work required.

The laboratory to carry out specific tests should be accredited in accordance with ISO 17025 or an equivalent standard for the purpose of conducting specific tests for HMs included in the EU SRR. Anyone using a laboratory for the analysis of samples for HM included in the Annex II of the EU SRR is responsible to confirm that the laboratory is suitably accredited.

The optimum organisational framework for the IHM process is described in the following graph:



REQUIREMENTS FOR SHIPS FLYING A NON-EU FLAG

When calling at a port or anchorage of EU, a non-EU flagged ship shall have on board an inventory of hazardous materials that complies with Article 5(2) of the EU SRR.

The installation of hazardous materials on non-EU flagged ships flying, whilst in a port or anchorage of an EU Member State, shall be prohibited or restricted.

The inventory of hazardous materials shall be specific to each ship, be compiled taking into account the relevant IMO guidelines.

A plan shall be established by the ship flying the flag of a third country describing the visual/sampling check by which the inventory of hazardous materials is developed taking into account the relevant IMO guidelines.

IHM REVIEW AND APPROVAL

The IHM should be reviewed and approved by DromonClass in accordance with the requirements as set in IMO Resolution MEPC.269(68).

IHM Review and Approval is required for:

- 1. New built vessels;
- 2. Vessel changes Flag Administration; and
- 3. Vessel changes type that is now required to have an IHM.

A list of required plans/documents to be submitted to DromonClass Engineers, can be found in the table below:

Item	Description	Number of copies
1	IHM (developed taking into consideration the IMO Resolution MEPC.269(68));	One (1)
2	Hazardous Materials Expert Sampling report and/or visual sampling check plan;	One (1)
3	Material Declarations and Supplier's Declarations of Conformity;	One (1)
4	Asbestos-free certificate from build;	One (1)
5	PCB-free certificate;	One (1)
6	International Air Pollution Prevention (IAPP) Certificate and Supplement to IAPP Certificate, if issued by another RO;	One (1)
7	Antifouling Certificate (AFS), if issued by another RO;	One (1)
8	Evidence of a procurement policy in place (restricting the hazards identified in the legislation from being brought onboard);	One (1)
9	Ship recycling plan (SRP), for ships going for recycling; and	One (1)
10	Document of authorization to conduct ship recycling (DASR) / EU List, for ships	One (1)

Table 2 – List of documents to be submitted to DromonClass for review and approval of the IHM.

As stated above, in case repairs, alternations, etc occur on board a vessel, the IHM should be submitted to DromonClass for re-approval.

SUPPLIER DECLARATION OF CONFORMITY (SDOC) & MATERIAL DECLARATION (MD)

Suppliers should identify and declare the presence of a Hazardous Material included in the Annex

II of the EU SRR if it exceeds the threshold value.

However, this provision does not apply to chemicals which do not constitute a part of the finished product. Suppliers should provide their customers with Supplier's Declarations of Conformity and Material Declarations in any case even when no Hazardous Material contained above the applicable threshold values.

Suppliers shall establish, implement and maintain procedures to:

- Prepare an SDoC for products supplied by them;
- Provide SDoC efficiently to requesting customers;
- Ensure that required information is provided in the SDoC;
- Create a unique ID-number for identification of SDoC and referencing it in MD;
- Ensure that the SDoC is signed by a company representative;
- Ensure that all information and forms required are available, maintained and provided digitally;
 and
- Provide at least one SDoC for their product portfolio.

SDoC and MD should be prepared and signed in accordance with the IMO Guidelines and they should be drawn in the format provided in the IMO Guidelines. However, due regard should be given to include in the IMO/MD form a supplement with a reference to the presence (or absence) of the two additional HM (PFOS and HBCDD) included only in Annexes I and II of the EU SRR.

Suppliers shall establish, implement and maintain procedures to:

- Provide a statement on presence/absence of hazmats for all supplied products;
- Provide accurate and up-to-date information on presence of hazmats;
- Identify supply chain and require sub-MDs as basis for preparation of own MDs;
- Ensure that up-to-date information is supplied by their supply chain;
- Identify missing information and establish a follow up procedure;
- Assure that each homogenous material is evaluated and/or analysed;
- Provide a unique ID-number for identification of MD;
- Ensure the related SDoC is identified in the MD; and
- Ensure that all information is available, maintained and provided digitally.

SHIP RECYCLING FACILITIES

Ship recycling yards will be required to provide a "Ship Recycling Plan", specifying the manner in which each ship will be recycled, depending on its particulars and its inventory. Parties will be required to take effective measures to ensure that ship recycling facilities under their jurisdiction comply with the Convention.

The following guidelines have been developed and adopted to assist States in the early implementation of the Convention's technical standards:

- 2011 Guidelines for the Development of the Ship Recycling Plan, adopted by resolution MEPC.196(62);
- 2012 Guidelines for Safe and Environmentally Sound Ship Recycling, adopted by resolution MEPC.210(63);
- 2012 Guidelines for the Authorization of Ship Recycling Facilities, adopted by resolution MEPC.211(63); and
- 2015 Guidelines for the development of the Inventory of the Hazardous Materials, adopted by resolution MEPC.269(68).

In regard to the EU SRR, the Ship Recycling Facilities shall need to comply with the requirements of Article 13 of the EU SRR.

The EU SRR sets additional Articles for the Ship Recycling Facilities, as mentioned below:

- Article 14 sets the requirements for authorization of ship recycling facilities located in an EU
 Member State:
- Article 15 sets the requirements for Ship Recycling Facilities located in a non-EU Country; and
- Article 16 sets the requirements for the establishment and updating of the European List of ship recycling facilities.

EMSA GUIDANCES

EMSA GUIDANCE ON THE IHM

In November 2016, the European Maritime Safety Agency (EMSA), published a Best Practice Guidance on the Inventory of Hazardous Materials for practitioners on the field, ship owners and national authorities. EU Member States' port authorities will control ships to verify whether they have on board a ready-for-recycling certificate or a valid IHM.

The document provides best practice guidance and a harmonised approach to the development and maintenance of IHMs in accordance with Article 5 and Article 12 of the EU SRR. The Guidance has been prepared on the basis of current knowledge and experience from the Member States, the industry and EMSA and other stakeholders.

EMSA GUIDANCE ON PSC INSPECTIONS IN ACCORDANCE WITH THE EU SRR

Equally important with the proper development and maintenance of the Inventory of Hazardous Materials and the role of the flag States is the inspections by the port State to ensure compliance with the requirements of the EU SRR of ships entering the ports of the European Union.

EMSA published in October 2019 a new Guidance on inspections of ships by the port States in accordance with Regulation (EU) 1257/2013 on ship recycling. The guidance document has been developed for ship inspections (inspections by the EU Member States under their capacity as port States to control ships' compliance with the requirements of the EU SRR), the addition of a specific field in THETIS for the EU SRR Certificates and the development of a dedicated module in THETIS-EU to support inspections within the context of the EU SRR.

EMSA guidance aims to assist Member States and their designated inspectors in their efforts to fulfil the requirements of EU SRR and PSC Directive, in relation to inspections covering the respective requirements of these two instruments. It is a reference document that provides both technical information and procedural guidance thus contributing to harmonised implementation and enforcement of the provisions of the EU SRR and the PSC Directive.

The PSC Guide advises inspectors that the detention of a ship may be considered if the ship recycling non-compliances involve:

- 1. failure to carry a ship recycling-related certificate as appropriate;
- 2. failure to carry a valid ship recycling-related certificate, i.e. when the condition of the ship does not correspond substantially with the particulars of the certificate (except when Part I of the Inventory of Hazardous Materials has not been properly maintained and updated);
- 3. the Inventory of Hazardous Materials required by the EU SRR is not specific to the ship;
- 4. the Inventory of Hazardous Materials required by the EU SRR has not been verified by the Flag State or an appropriate organisation authorised by it;
- 5. the ship recycling plan does not properly reflect the information contained in the Inventory of Hazardous Materials;
- 6. an EU ship is heading to a ship recycling facility not included in the European list of ship recycling facilities; and
- 7. non-compliance with the control measures for Hazardous Materials listed in Annex I of the EU SRR.

The PSC shall carry out inspections on board ships to verify that:

- an IHM is on board after 31/12/2020
- Either an Inventory Certificate of a Statement of Compliance is on board.

In applying PSC provisions, if no certificate or if an invalid certificate is found on board, or any other clear ground revealed, then a PSCO may undertake a detailed inspection or ask the relevant authority of the Member State to carry out a detailed inspection.

A ship may be **warned**, **detained**, **dismissed or excluded from EU ports** in the event that it fails to submit to the relevant authorities of that Member State a copy of the relevant certificate.

DETAILED INSPECTION

Clear grounds to conduct a more detailed inspection include:

- 1. evidence that a certificate required by the Convention is missing or clearly invalid;
- 2. evidence that the Inventory of Hazardous Materials required by the Convention is missing or clearly invalid;
- 3. the absence of structure or equipment identified in part I of the Inventory of Hazardous

Materials:

- 4. the absence of an entry in part I of the IHM for structure or equipment that the PSCO believes to contain hazmats listed in appendices 1 and 2 to the Convention; and
- 5. no evidence of implementation of a procedure on board the ship for maintaining part I of the Inventory of Hazardous Materials

MORE DETAILED INSPECTION

The PSCO should verify that controls of hazmats listed in appendix 1 to the HKC are effectively implemented, referring to relevant certificates or documents that may specify structure or equipment presumed to contain these hazmats.

The PSCO should note that detailed inspections are limited to confirming whether effective controls of hazmats listed in appendix 1 to the HKC are in place. Failure to update the IHM should not, therefore, constitute a detainable deficiency, but any inconsistencies in the IHM should be reported to the flag Administration of that ship, and should be redressed at the time of the next survey.

Ship may be warned, detained, dismissed or excluded from the ports or offshore terminals under the jurisdiction of a Member State in the event that it fails to submit to the relevant authorities of that Member State a copy of the IHM or the ready for recycling certificate, as appropriate and on request of those authorities, without prejudice to Article 9 (EU SRR Article 11).

EMSA Guidances are **non-binding documents** and nothing in the guidances should be construed as generating mandatory requirements on any of the involved parties.

SURVEY AND CERTIFICATION

All ships flying the flag of a Member State shall be subject to a survey regime, as per Article 8 of the EU SRR and they shall carry on board a ship-specific 'Inventory Certificate' (IC) issued by the Administration or an RO authorized by it and supplemented by Part I of the IHM.

When calling at a port or anchorage of an EU Member State, all non-EU flagged ships shall carry on board a ship specific 'Statement of Compliance' (SoC) issued by the relevant authorities of the non-EU country whose flag the ship is flying or an organization authorized by them and supplemented by Part I of the IHM. The SoC shall be issued after verification of the IHM by the relevant authorities of the ship's flag or its RO, in accordance with the national requirements.

The ships shall be subject to the following surveys:

- Initial survey;
- Renewal survey;
- Additional survey; and
- Final survey.

INITIAL SURVEY

The aim of the initial survey is to verify whether part I of the Inventory of Hazardous Materials has been prepared in accordance with the Convention requirements. There are different requirements for the initial surveys of new ships and for those of existing ships.

In the case of a **new ship**, an initial survey should be conducted before the ship is put in service. Prior to the initial survey for a new ship, a request for the initial survey should be submitted by the shipowner or shipyard to DromonClass along with the ship data required for the International Certificate on Inventory of Hazardous Materials.

The request for an initial survey for a new ship should be supplemented by Part I of the Inventory of Hazardous Materials – which identifies Hazardous Materials contained in ship structure and equipment, their location and approximate quantities – along with the Material Declaration and Supplier's Declaration of Conformity in accordance with the 2011 Guidelines for the Development

of the Inventory of Hazardous Materials (resolution MEPC.197(62), as amended), and all other documents used to develop the Inventory of Hazardous Materials.

The survey should verify that part I of the Inventory of Hazardous Materials identifies the Hazardous Materials contained in the ship structure and equipment, their location and approximate quantities, by checking the Material Declaration and Supplier's Declaration of Conformity, and should clarify that the ship complies with regulations 4 and 5 of the annex to the Convention. The survey should also verify that the Inventory of Hazardous Materials, especially the location of Hazardous Materials, is consistent with the arrangements, structure and equipment of the ship, through onboard visual inspection.

The International Certificate on Inventory of Hazardous Materials should be issued either by DromonClass, after successful completion of the initial survey, to any new ships to which regulation 10 of the annex to the Convention applies.

In the case of an **existing ship**, an initial survey should be conducted before the International Certificate on Inventory of Hazardous Materials is issued and not later than five years after the entry into force of the Convention. The initial survey should be harmonized with the renewal surveys required by other applicable statutory instruments of the Organization, in line with regulations 5.2 and 10.5 of the annex to the Convention and with the principles established in resolution A.1140(30), as amended (Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2019).

Prior to the initial survey for an existing ship, a request for the initial survey should be submitted by the shipowner to DromonClass along with the ship data required for the International Certificate on Inventory of Hazardous Materials.

The request for an initial survey for an existing ship should be supplemented by Part I of the Inventory of Hazardous Materials, and/or the visual/sampling check plan developed in accordance with the 2011 Guidelines for the development of the inventory of hazardous materials (IMO Resolution MEPC.269(68)).

Part I of the Inventory of Hazardous Materials – which identifies Hazardous Materials contained and/or potentially contained in ship structure and equipment, their location and approximate

quantities – should be developed through a visual check and/or sampling check on board the ship, based on the visual/sampling check plan in accordance with the 2011 Guidelines for the development of the inventory of hazardous materials.

It should then be submitted by the shipowner to DromonClass along with supporting information such as the report of the visual/sampling check and/or any Material Declaration and Supplier's Declaration of Conformity.

The visual/sampling check plan and Part I of the Inventory of Hazardous Materials should be prepared by personnel with the requisite knowledge and experience to conduct the assigned task, in accordance with the 2011 Guidelines for the development of the inventory of hazardous materials, as may be amended.

The survey should verify that Part I of the Inventory of Hazardous Materials identifies the Hazardous Materials contained and/or potentially contained in the ship structure and equipment, their location and approximate quantities, by checking supporting information such as the report of the visual check and/or sampling check and/or any Material Declaration and Supplier's Declaration of Conformity. The survey should also clarify that the ship complies with regulations 4 and 5 of the annex to the Convention. Classification as "potentially containing hazardous materials" should be noted in the remarks column of the Inventory of Hazardous Materials. The survey should further verify that the Inventory of Hazardous Materials, especially the location of Hazardous Materials, is consistent with the arrangements, structure and equipment of the ship, through onboard visual inspection.

The International Certificate on Inventory of Hazardous Materials should be issued either by DromonClass, after successful completion of the initial survey, to any existing ships to which regulation 10 of the annex to the Convention applies, except for existing ships for which an initial and a final survey are conducted at the same time; in such cases, only an International Ready for Recycling Certificate should be issued.

Upon the satisfactory completion of an initial survey, the Surveyor shall issue the Inventory of Hazardous Materials Certificate.

In no case the validity of a provisional certificate should exceed five months.

RENEWAL SURVEY

A renewal survey should be carried out at intervals not exceeding five years.

Prior to the renewal survey, a request for the renewal survey should be submitted by the shipowner to DromonClass along with the ship data required for the International Certificate on Inventory of Hazardous Materials.

The request for a renewal survey should be supplemented by the latest version of part I of the Inventory of Hazardous Materials, and Material Declaration and Supplier's Declaration of Conformity regarding any change, replacement or significant repair of structure, equipment, systems, fittings, arrangements and material since the last survey.

The survey should verify that part I of the Inventory of Hazardous Materials is properly maintained and updated to reflect changes in ship structure and equipment, by checking Material Declaration and Supplier's Declaration of Conformity, and should clarify that the ship complies with regulations 4 and 5 of the annex to the Convention. The survey should also verify that the Inventory of Hazardous Materials, especially the location of Hazardous Materials, is consistent with the arrangements, structure and equipment of the ship, through on-board visual inspection. The survey should further verify that any decision by the shipowner to delete equipment, system and/or area previously classed as "potentially containing hazardous materials" from Part I of the Inventory of Hazardous Materials is based on clear grounds for believing that the equipment, system and/or area in question contain no Hazardous Materials.

A new International Certificate on Inventory of Hazardous Materials should be issued either by DromonClass after successful completion of the renewal survey, in accordance with regulation 11 of the annex to the Convention.

The documentation preparation for renewal surveys includes below;

- Ship's existing IHM certificate and stamped IHM (Part I);
- The updated IHM Part I, and as supporting documents MDs and SDoCs regarding any change, replacement or significant repair of structure, equipment, systems, fittings, arrangements and materials since last survey;

- Ship's IHM (Part I) maintenance report reflecting the ship's hazardous materials management since last survey; and
- IHM renewal survey.

ADDITIONAL SURVEY

The additional survey, either general or partial depending on the circumstances, shall be conducted if requested by the ship owner after a change, replacement or significant repair of the structure, equipment, systems, fittings, arrangements and material, which has an impact on the inventory of hazardous materials.

The survey shall be such as to ensure that any change, replacement, or significant repair has been made in a manner that ensures that the ship continues to comply with the requirements of the EU SRR, and that Part I of the inventory of hazardous materials is amended as necessary.

FINAL SURVEY

A final survey should be conducted before a ship is taken out of service and before the recycling of the ship has started.

Prior to the final survey, a request for the final survey should be submitted by the shipowner to DromonClass along with the ship data and the Ship Recycling Facility data required for the International Ready for Recycling Certificate as follows:

- name of the Ship Recycling Facility(ies);
- distinctive Recycling Company identity number (as listed on the Document of Authorization to conduct Ship Recycling (DASR));
- full address: and
- date of expiry of DASR.

In cases where multiple Ship Recycling Facilities are involved, the appropriate information for all the Facilities should be provided prior to the final survey.

The request for a final survey should be supplemented by:

• the International Certificate on Inventory of Hazardous Materials, the Inventory of Hazardous

Materials, and Material Declaration and Supplier's Declaration of Conformity regarding any change, replacement or significant repair of the structure, equipment, systems, fittings, arrangements and/or material since the last survey;

- the approved Ship Recycling Plan; and
- a copy of the DASR.

Prior to the final survey:

- Part I of the Inventory of Hazardous Materials should be properly maintained and updated to reflect changes in ship structure and equipment, and Part II for operationally generated wastes and Part III for stores should be developed by the shipowner taking account of planned or expected operations before the arrival at the Ship Recycling Facility, and of the 2011 Guidelines for the development of the inventory of hazardous materials, as may be amended; and
- the Ship Recycling Plan should be developed by the authorized Ship Recycling Facility, taking account of information including the Inventory of Hazardous Materials provided by the shipowner; as required by Regulation 9 of the annex to the Convention, the Ship Recycling Plan should be either explicitly or tacitly approved by the Competent Authority authorizing the Ship Recycling Facility.

FLAG TRANSFER

The certificates cease to be valid when a ship transfers to the flag of another State and the Government of the State to which the ship transfers should not issue new certificates until it is fully satisfied that the Inventory of Hazardous Materials is being properly maintained and that there have been no unauthorized changes to the structure, machinery or equipment.

When so requested, the Government of the State whose flag the ship was formerly entitled to fly is obliged to forward as soon as possible to the new Administration a copy of the certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports and records. When fully satisfied by an inspection that the Inventory of Hazardous Materials is being properly maintained and that there have been no unauthorized changes, the new Administration may, in order to maintain harmonization of the surveys, give due recognition to initial and subsequent surveys carried out by or on behalf of the former Administration and issue new certificates having the same expiry date as the certificates that ceased to be valid because of the

change of flag.

The Government of the State to which the ship transfers should also make sure that the Inventory of Hazardous Materials complies with the legislation, guidelines and any additional requirements of this State.

If the flag transfer takes place after the final survey and after the International Ready for Recycling Certificate has been issued, the Government of the State to which the ship transfers should not issue the new certificate until fully satisfied that the conditions on the basis of which the International Ready for Recycling Certificate had been issued remain valid.

REFERENCES

- 1. International Maritime Organization (IMO) (www.imo.org)
- 2. European Commission (https://ec.europa.eu/)
- 3. Hong Kong International Convention for The Safe and Environmentally Sound Recycling of Ships, 2009
- 4. Regulation (EU) 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC, entry into force December 2013
- 5. EMSA's Best Practice Guidance on the Inventory of Hazardous Materials. IHM development and maintenance in the context of the EU Ship Recycling Regulation. Monitoring and enforcement in the context of the EU Ship Recycling Regulation, published November 2016.
- 6. EMSA's Guidance on inspections of ships by the port States in accordance with Regulation (EU) 1257/2013 on ship recycling: Inspections from the EU port States to enforce provisions of the ship recycling Regulation, 27 September 2019
- 7. IMO Resolution MEPC.269(68): 2015 Guidelines for the Development of the Inventory of Hazardous Materials
- 8. IMO MSC/Circ.1045: Guidelines for Maintenance and Monitoring of On-Board Materials Containing Asbestos (Adopted on 28 May 2002)
- 9. IMO MSC.1/Circ.1426: Unified Interpretation of SOLAS Regulation II-1/3-5 (June 2012)
- 10. IMO MSC.1/Circular.1379: Unified Interpretation of SOLAS Regulation II-1/3-5 (8 December 2010).
- 11. MSC.1/Circular.1374: Information on Prohibiting the Use of Asbestos on Board Ships (3 December 2010)
- 12. IMO Resolution MSC.282(86): Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as Amended (adopted on 5 June 2009) introduced amendments to Regulation 3-5 New Installation of materials containing asbestos

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