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## **RECYCLING OF SHIPS**

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GDAŃSK

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# 1 GENERAL

## 1.1 Application

**1.1.1** The requirements of the present *Publication* apply to:

- ships flying flag of a Party to the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (2009)* (hereafter referred to as *Hong Kong Convention*);
- ships flying flag of a Member State of European Union and obliged to take measures consistent with international law, with respect to the safe and environmentally sound recycling of ships in accordance with Regulation (EU) No 1257/2013 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 (hereinafter referred to as Regulation No. 1257/2013);
- ships flying the flag of third country when calling at a port or anchorage of a Member State of European Union;
- ship recycling facilities located in a Member State of European Union or under the jurisdiction of a Party of the *Hong Kong Convention*;
- ship recycling facilities operating outside the European Union but included in the European List of Ship Recycling Facilities published In the Official Journal of the European Union and on the website of the European Commission (not later than 31 December 2016).

The requirements specified in this *Publication* do not apply to:

- naval ships, naval auxiliary, or other ships owned or operated by a state and used, for the time being, only on government non-commercial service;
- ships of less than 500 gross tonnage (GT);
- ships operating throughout their life only in waters subject to the sovereignty or jurisdiction of the Member State whose flag the ship is flying.

**1.1.2** The purpose of this *Publication* to reduce the negative results of ship recycling on human health and the environment and to prevent accidents, injuries and other adverse effects. As well as to enhance safety, the protection of human health and of marine environment throughout a ship's life-cycle, in particular to ensure that hazardous waste from such ship recycling is subject to environmentally sound management.

## 1.2 Definitions

**Additional survey** – either general or partial, depending on the circumstances, survey performed at the shipowner request after a change, replacement, or significant repair of the structure, equipment, systems, fittings, arrangements and material. The survey aims to ensure that any such change, replacement, or significant repair has been made in the manner that the ship continues to comply with the legal requirements, and that Part I of the *Inventory of Hazardous Materials* is amended as necessary.

**Administration** – a governmental authority designated in and by a Member State of EU as being responsible for duties related to ships flying its flag or to ships operating under its authority.

**Competent authority** – a governmental authority or authorities 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.

**Competent person** – a person with suitable qualifications, training, and sufficient knowledge, experience and skill, for the performance of the specific work.

**Convention, Hong Kong Convention** – Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009.

**Environmentally sound management** – taking all practicable steps to ensure that waste and hazardous materials are managed in a manner which protects human health and the environment against the adverse effects which may result from such materials and waste.

**European List of Ship Recycling Facilities** – the list of recycling facilities complying the requirements in accordance with the relevant *Hong Kong Convention (2009)*, Regulation EC No

1257/2013 provisions and taking into account the relevant guidelines of the IMO, the ILO, the Basel Convention and of the Stockholm Convention on Persistent Organic Pollutants and others. The European List consists of ship recycling facilities which have been authorised by a competent authority. That authorisation may be granted to the respective ship recycling facilities for a maximum period of five years and renewed accordingly. The European List is published in the *Official Journal of the European Union* and on the website of the Commission. It comprises of two sub-lists indicating the ship recycling facilities located in a Member State of the European Union and in non-EU countries.

**Final survey** – survey performed prior to the ship being taken out of service and before the recycling of the ship has started in order to verify the *Inventory of Hazardous Materials*, the compliance of the *Ship Recycling Plan* with Regulation No. 1257/2013 as well as the validity of the authorization of the Ship Recycling Facility(ies).

**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.

**Hazardous material** – any material or substance which is liable to create hazards to human health and/or the environment.

**Homogeneous material** – a material of uniform composition throughout that cannot be mechanically disjointed into different materials, meaning that the materials cannot, in principle, be separated by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes (in acc. with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment and IMO Resolution MEPC.269(68): Guidelines for the Development of the *Inventory of Hazardous Materials*) adopted on 10 May 2015.

**Initial survey** – initial survey before the ship is put in service, or before the Certificate on Inventory of Hazardous Materials / International Certificate on Inventory of Hazardous Materials is issued. That survey shall verify that Part I of the Inventory is in accordance with the Regulation EC No 1257/2013 and corresponds with actual structure and equipment on the ship.

**Inventory certificate** – a ship-specific certificate that is issued to ships flying the flag of a Member State of EU and that is supplemented by an inventory of hazardous materials.

**Light displacement tones (LDT)** – the weight of a ship in tonnes without cargo, fuel, lubricating oil in storage tanks, ballast water, fresh water, feed water, consumable stores, passengers and crew and their effects and it is the sum of the weight of the hull, structure, machinery, equipment and fittings of the ship.

**New installation** – the installation of systems, equipment, insulation or other material on a ship after the date of application of the Regulation EC No 1257/2013.

**New ship** – a ship for which either:

- the building contract is placed on or after the date of application of Regulation EC No 1257/2013;
- 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 Regulation EC No 1257/2013, or thereafter; or
- the delivery takes place thirty months after the date of application of the Regulation EC No 1257/2013 or thereafter.

**Operationally generated waste** – waste water and residues generated by the normal operation of ships subject to the requirements of the *International Convention for the Prevention of Pollution from Ships, 1973* as modified by the *Protocol of 1978 (MARPOL Convention, hereafter)*.

**Product** – means machinery, equipment, materials and applied coatings on board a ship.

**Ready for recycling certificate** – a ship-specific certificate that is issued to ships flying the flag of a Member State of EU and that is supplemented by an inventory of hazardous materials and the approved *Ship Recycling Plan*.

**Recognised organization** – an organisation recognised in accordance with Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 on common rules and standards for ship inspection and survey organizations (OJ L 131, 28.05.2009).

**Renewal survey** – survey performed for the renewal of the *Inventory Certificate* at intervals specified by the Administration, but not exceeding five years. The survey aims to verify that Part I of the *Inventory of Hazardous Materials* complies with the actual structure and equipment of ship.

**Safe-for-entry** – a space that meets all of the following criteria:

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

**Safe-for-hot work space** – space where all of the following criteria are fulfilled:

- 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;
- the safe-for-entry criteria are fulfilled;
- existing atmospheric conditions do not change as a result of the hot work;
- all adjacent spaces have been cleaned, rendered inert or treated sufficiently to prevent the start or spread of fire.

**Ship** – 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.

**Shipowner** – 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.

**Ship recycling** – 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 company** – the owner of the ship recycling facility or any other organisation or person who has assumed the responsibility for the operation of the ship recycling activity from the owner of the ship recycling facility.

**Ship recycling facility** – a defined area that is a yard or facility located in a Member State of EU or in non-EU country and used for the recycling of ships.

**Ship recycling facility plan** – 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 systems for monitoring, reporting and record-keeping, taking into account the relevant IMO guidelines and resolutions.

**Ship Recycling Plan** – 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.

**Site inspection** – inspection of the ship recycling facility assessing whether the conditions on site are consistent with those described in any relevant documentation provided.

**Statement of Completion** – confirmatory statement issued by the operator of the ship recycling facility that the ship recycling has been completed in accordance with the *Regulation EC No. 1257/2013*.

**Statement of Compliance** – ship-specific certificate that is issued to ships flying the flag of non-EU country and that is supplemented by an inventory of hazardous materials.

**Supplier** – company which provides products; which may be a manufacturer, trader or agency.

**Supply chain** – the series of entities involved in the supply and purchase of materials and goods, from raw materials to final product.

**Tanker** – oil tanker as defined in Annex I to the *International Convention for the Prevention of Pollution from Ships, 1973* as modified by the *Protocol of 1978 (MARPOL 73/78 hereafter)* or a Noxious Liquid Substances (NLS) tanker as defined in Annex II of MARPOL 73/78.

**Threshold level / threshold value** – a limit of concentration value of hazardous material in homogeneous materials above which materials must be listed in the inventory of hazardous materials.

**Worker** – any person who performs work, either regularly or temporarily, in the context of an employment relationship, including the personnel working for contractors and subcontractors.

### 1.3 Normative References

#### General:

- *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009*;
- IMO Resolution MEPC.210(63) Adopted on 2 March 2012; *2012 Guidelines for Safe and Environmentally Sound Ship Recycling*;
- IMO Resolution MEPC.211(63) Adopted on 2 March 2012; *2012 Guidelines for the Authorization of Ship Recycling Facilities*;
- IMO Resolution MEPC.222(64) Adopted on 5 October 2012; *2012 Guidelines for the survey and certification of Ships under the Hong Kong Convention*;
- IMO Resolution MEPC.223(64) Adopted on 5 October 2012; *2012 Guidelines for the inspection of Ships Under The Hong Kong Convention*;
- *Revised Guidelines for the Inventory of Hazardous Materials. Threshold levels for radioactive substances*, Sub-Committee on Pollution, Prevention and Response, Secretariat, 8 January 2015
- IMO Resolution MEPC.269(68) Adopted on 15 May 2015: *2015 Guidelines for the Development of the Inventory of Hazardous Materials*
- Regulation (EU) No 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;
- *Basel Convention on the Control of the Transboundary Movements of Hazardous Wastes and their Disposal*;
- Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 *on shipments of waste*;
- *International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78)*
- Commission Implementing Decision (UE) 2015/2398 of 17 December 2015 on information and documentation related to an application for a facility located in a third country for inclusion in the European List of ship recycling facilities;
- **Communication from the Commission – Requirements and procedure for inclusion of facilities located in third countries in the European List of ship recycling facilities – Technical guidance note under Regulation (EU) No 1257/2013 on ship recycling ;(2016/C 128/01)**;
- *Shipping Industry Guidelines in Transitional Measures for Shipowners Selling Ship for Recycling*. International Chamber of Shipping, Second Edition, London, 2016;

- Commission Implementing Decision (EU) 2016/2323 of 19 December 2016 establishing the *European List of ship recycling facilities* pursuant to Regulation (EU) No. 1257/2013 of the European Parliament and of the Council on ship recycling.)

## **2 INTERNATIONAL STANDARDS**

### **2.1 Basel Convention on the Control of the Transboundary Movements of Hazardous Wastes**

**2.1.1** Ships which constitute waste and which are subject to a transboundary movement for recycling are regulated by *the Basel Convention of 22 March 1989 on the Control of the Transboundary Movements of Hazardous Wastes and their Disposal (the Basel Convention, hereafter)* and Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (OJ L 190, 12.07.2006) which implements the Basel Convention as well as an amendment to that Convention (adopted in 1995), which has not yet entered into force at international level, and which establishes a ban on exports of hazardous waste to countries that are not members of the Organisation for Economic Cooperation and Development (OECD). Such ships are generally classified as hazardous waste and prohibited from being exported from the Union for recycling in facilities in countries that are not members of the OECD.

### **2.2 Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009**

**2.2.1** Efforts involving inter-agency cooperation between the International Labour Organisation (ILO), the International Maritime Organisation (IMO) and the Secretariat of the Basel Convention have been successful in reaching agreement on the introduction of mandatory requirements, at global level, aimed at ensuring an efficient and effective solution to unsafe and unsound ship recycling practices in the form of the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling (the Convention or the Hong Kong Convention, hereafter)*.

**2.2.2** *The Hong Kong Convention* was adopted on 15 May 2009 under the auspices of the International Maritime Organization. *The Hong Kong Convention* will enter into force only 24 months after the date of ratification by at least 15 states representing a combined merchant fleet of at least 40 per cent of the gross tonnage of the world's merchant shipping and whose combined maximum annual ship recycling volume during the preceding 10 years constitutes not less than three per cent of the gross tonnage of the combined merchant shipping of the same states.

**2.2.3** *The Hong Kong Convention* covers the whole life-cycle: the design, the construction, the operation and the preparation to dismantling of ships with a view to facilitating safe and environmentally sound recycling without compromising ship safety and operational efficiency. It also covers the operation of ship recycling facilities in a safe and environmentally sound manner, and the establishment of an appropriate enforcement mechanism for ship recycling.

### **2.3 Standard Series ISO 30000**

**2.3.1** The ISO 30000 system is another integrated guidelines in the area of ship recycling and is addressing the safety, health and environmental issues. It supports the goals of IMO of cleaner environment and safer work in ship recycling facilities given in *Hong Kong Convention*. The standards are compatible with ISO 9001 (quality management systems), ISO 14001 (environmental management) and ISO 28000 (security in the global supply chain).

**2.3.2** The ISO 30000 Standards for Ship Recycling consist of:

- ISO 30000: 2009 Ships and marine technology – Ship recycling management systems – Specifications for management systems for safe and environmentally sound ship recycling facilities.
- ISO 30002:2012 Ships and marine technology – Ship recycling management systems - Guidelines for selection of ship recyclers (and proforma contract).

- ISO 30003: 2009 Ships and marine technology – Ship recycling management systems: Requirements for bodies providing audit and certification of ship recycling management.
- ISO 30004:2012: Ships and marine technology – Ship recycling management systems – Guidelines for the implementation of ISO 30000.
- ISO/PAS 30005:2012 Ships and marine technology -Ship recycling management systems: Information control for hazardous materials in the manufacturing chain of shipbuilding and ship operations.
- ISO/PAS 30006:2010 Ship recycling management systems: Diagrams to show the location of hazardous materials onboard ships.
- ISO/PAS 30007:2010 Ships and marine technology: Measures to prevent asbestos emission and exposure during ship recycling.

**2.3.3** *ISO 30000:2009 Ships and marine technology – Ship recycling management systems – Specifications for management systems for safe and environmentally sound ship recycling facilities* specifies requirements for a management system to enable a ship recycling facility to develop and implement procedures, policies and objectives of safe and environmentally sound ship recycling operations in accordance with national and international standards taking into account the relevant legal requirements, safety standards and environmental elements that the ship recycling facility needs to identify and fulfil in order to perform safe and environmentally sound ship recycling. ISO 30000:2009 applies to the entire process of ship recycling:

- accepting a ship for recycling by the facility;
- assessing the hazards onboard the ship;
- identifying and complying with any applicable notification and import requirements for ships to be recycled;
- conducting the recycling process in a safe and environmentally sound manner;
- conducting required training;
- ensuring the availability of social amenities (e.g. first aid, health checks, food and beverages);
- storage and processing of materials and wastes from the ship;
- waste stream and recycling stream management, including contractual agreements;
- documentation controls for the process, including any applicable notification of the final disposal of the vessel.

**2.3.4** *ISO 30002:2010 Ships and marine technology – Ship recycling management systems – Guidelines for selection of ship recyclers (and pro forma contract)* provides guidance to shipowners to ensure that vessels are recycled in a safe and environmentally sound manner. It applies to the process of selecting a ship recycling facility and the use of a pro forma contract. It does not consider other aspects of ship recycling which are covered by other standards of the ISO 30000 series. According to *ISO 30002:2010* shipowners need to consider to which ship recycling facilities they wish to sell their ships, and it is therefore important that ship recycling facilities provide certain objective information to assist in this selection process. Ship recycling facilities that are unwilling to provide this information on request by the shipowner cannot be objectively assessed.

**2.3.5** *ISO 30003: 2009 Ships and marine technology – Ship recycling management systems: Requirements for bodies providing audit and certification of ship recycling management* contains principles and requirements for bodies providing the audit and certification of ship recycling management systems according to management system standards and standards such as ISO 30000.

**2.3.6** *ISO 30004:2012: Ships and marine technology – Ship recycling management systems – Guidelines for the implementation of ISO 30000* is to aid in the understanding and implementation of ISO 30000. It describes the intent, typical inputs, processes and typical outputs, for each requirement of ISO 30000.

**2.3.7** *ISO/PAS 30005:2012 Ships and marine technology -Ship recycling management systems: Information control for hazardous materials in the manufacturing chain of shipbuilding and ship operations* provides guidance for the management, communication and maintenance of information in an

effective, standardized and compatible manner in accordance with the requirements of *the Hong Kong Convention*.

**2.3.8** *ISO/PAS 30006:2010 Ship recycling management systems: Diagrams to show the location of hazardous materials onboard ships* provides requirements for diagrams to show the location of hazardous materials onboard ships. Diagrams should be helpful for ship recycling facility in understanding an *Inventory of Hazardous Materials* which is required by the *Hong Kong Convention*. ISO 30006:2010 gives instructions for the inventory preparation.

**2.3.9** *ISO/PAS 30007:2010 Ships and marine technology: Measures to prevent asbestos emission and exposure during ship recycling* provides effective methods for minimizing the dangers of asbestos during ship recycling, reducing both the release of asbestos into the environment and worker exposure to asbestos. It helps ship recyclers to fulfil the requirements of *The Hong Kong Convention*.

## **2.4 International Maritime Organization documentation**

**2.4.1** The Marine Environment Protection Committee of International Maritime Organization during sessions adopted a set of guidelines within the scope of the detailed solutions dedicated to the problems of ships' recycling and ship recycling facilities:

- .1 Resolution MEPC.222(64) adopted on 5 October 2012: *2012 Guidelines for the Survey and Certification of Ships under the Hong Kong Convention*;
- .2 IMO Resolution MEPC.223(64) Adopted on 5 October 2012; *2012 Guidelines for the inspection of Ships Under The Hong Kong Convention*;
- .3 Resolution MEPC.210(63) adopted on 2 March 2012: *2012 Guidelines for Safe and Environmentally Sound Ship Recycling*;
- .4 Resolution MEPC.211(63) adopted on 2 March 2012: *2012 Guidelines for the Authorization of Ship Recycling Facilities*;
- .5 Revised Guidelines for the Inventory of Hazardous Materials. Threshold levels for radioactive substances, Secretariat of Sub-Committee on Pollution Prevention and Response, January 2015;
- .6 Resolution MEPC.269(68) adopted on 15 May 2015: *2015 Guidelines for the Development of the Inventory of Hazardous Materials*.

## **2.5 European Regulation No 1257/2013**

**2.5.1** Among the aims of the European Parliament and of the Council No 1257/2013 on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC there are:

- .1 facilitating early ratification of the Hong Kong Convention both within the European Union and in non-EU countries;
- .2 applying proportionate means of controls to ships and ship recycling facilities both EU and non-EU countries on the basis of the Convention;
- .3 reducing disparities between countries in terms of health and safety at the workplace and environmental standards and among ship recycling facilities in fulfilling the requirements and implementation of safe and environmentally sound recycling rules;
- .4 making mandatory to establish and maintain the *European list of ship recycling facilities* (*European List*, hereafter) which can be filled with only these ship recycling facilities which meet the criteria of environmentally sound recycling in accordance with Hong Kong Convention as well as provide high level of workers' life and health protections, meaning excluding these ship recycling facilities which do not comply with the Hong Kong requirements;
- .5 unification of rules and standards set by the Hong Kong Convention, and resolutions and guidelines of MEPC and others regarding ship recycling and ship recycling facilities.

### 3 RECYCLING OF SHIP

#### 3.1 Inventory of hazardous materials / Ship construction

**3.1.1** *Inventory of Hazardous Materials (IHM)* shall be developed at the design and construction stages, it shall be specific to each ship and shall be verified by the Administration or a recognized organization authorized by it.

**3.1.2** *Inventory of Hazardous Materials* shall be available on the ship board and shall identify all the hazardous materials contained either in the structure or equipment of the ship, their location and approximate quantities.

**3.1.3** *Inventory of Hazardous Materials* consists of:

- Part I: – Materials contained in ship structure or equipment;
- Part II: – Operationally generated wastes;
- Part III: – Stores.

Part I for the new ships shall be developed at the design and construction stage. Table 3.1.4 provides information on the hazardous materials that may be found on board a ship and shall be listed in Part I of the IHM.

Part II comprises items potentially hazardous to the environment and human health at ship recycling facilities and goods which are not integral to a ship and are unlikely to be dismantled or treated at a ship recycling facility.

Part III comprises stores and consumable goods that may potentially contain hazardous materials.

**3.1.4** The installation or use on ships of hazardous materials listed in Table 3.1.4 is prohibited or restricted. Full lists of items to be listed in each part of Inventory of hazardous materials are presented in Table A, B and C in Annex 1 to this *Publication*.

**Table 3.1.4  
Hazardous materials prohibited or restricted on shipboard**

| Hazardous material         | Definitions  | Control measures  |
|----------------------------|--|---|
| Asbestos                   | Materials containing asbestos  | For all ships, new installation of materials which contain asbestos is <u>prohibited</u> . The threshold level asbestos/ asbestos fibres content for the construction materials is 0.1% (2015). |
| Ozone-depleting substances | Controlled substances defined in article 1(4) of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, listed in annexes A, B, C or E to that protocol in force at the time of application or interpretation of this annex.<br>Ozone – depleting substance that may be found on board ships include, but are not limited to:<br>CFCS<br>Halons:<br>– Halon 1211 – bromochlorodifluorometan – cf <sub>2</sub> clbr<br>– Halon 1301 – bromotrifluorometan – cbrf <sub>3</sub><br>– Halon 2402 – r114b2 – 1,2-dibromo-1,1,2,2-tetrafluoroetan<br>Other fully halogenated cfcs:<br>– CFC-11 – trichlorofluoromethane | New installations which contain ozone-depleting substances are <u>prohibited</u> on all ships.<br><br>No threshold value in accordance with the Montreal Protocol. <sup>1</sup>                 |

<sup>1</sup> Unintentional trace contaminants should not be listed in the Material Declarations and in the Inventory.

| Hazardous material                                | Definitions  | Control measures   |
|---|--|--|
|   | <ul style="list-style-type: none"> <li>- CFC-12 – dichlorofluoromethane</li> <li>- CFC-113 – 1,1,2 – trichloro-1,2,2-trifluoroethane</li> <li>- CFC-114 – 1,2-dichloro-1,1,2,2-tetrafluoroethane</li> <li>- CFC-115 – chloropentafluoroethane</li> </ul> Carbon tetrachloride – CCL <sub>4</sub><br>1,1,1-trichloroethane (methyl chloroform)<br>Hydrochlorofluorocarbons (HCFC): <ul style="list-style-type: none"> <li>- HCFC-21 – CHFCL<sub>2</sub></li> <li>- HCFC-22 – CHF<sub>2</sub>CL</li> <li>- HCFC-141 – CH<sub>3</sub>CFCL<sub>2</sub></li> </ul> Hydrobromofluorocarbons (HBFC): <ul style="list-style-type: none"> <li>- CHFBR<sub>2</sub></li> <li>- CHF<sub>2</sub>BR</li> </ul> Methyl bromide – bromomethane – CH <sub>3</sub> BR<br>Bromochloromethane – CH <sub>2</sub> CLBR |  |
| Polychlorinated biphenyls (PCB)                   | ‘polychlorinated biphenyls’ means aromatic compounds formed in such a manner that the hydrogen atoms on the biphenyl molecule (two benzene rings bonded together by a single carbon- carbon bond) may be replaced by up to ten chlorine atoms.   | For all ships, new installation of materials which contain polychlorinated biphenyls shall be prohibited. <sup>1</sup><br>Threshold value: 50mg/kg <sup>2</sup> .  |
| Perfluorooctane sulfonic acid (PFOS) <sup>3</sup> | ‘perfluorooctane sulfonic acid’ (PFOS) means perfluorooctane sulfonic acid and its derivatives   | New installations which contain perfluorooctane sulfonic acid (PFOS) and its derivatives shall be prohibited in accordance with Regulation (EC) No. 850/2004 <sup>4</sup> of the European Parliament and of the Council ( 2 ).   |
| Anti-fouling compounds and systems                | Anti-fouling compounds and systems regulated under Annex I to the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001 (AFS Convention).   | 1. No ship may apply anti-fouling systems containing organotin compounds as a biocide or any other anti-fouling system whose application or use is prohibited by the AFS Convention.<br>2. No new ship or new installations on ships shall apply or employ anti- fouling compounds or systems in a manner inconsistent with the AFS Convention.<br>Threshold level: 2500 mg total tin /kg. |
| Cadmium   | Cadmium means cadmium and cadmium compounds.   | Threshold level: 100 mg/kg.  |
| Hexavalent chromium                               | Hexavalent chromium means hexavalent chromium and exavalent chromium compounds.  | Threshold level: 1000 mg/kg.   |
| Lead  | Lead means lead and lead compounds.  | Threshold level: 1000 mg/kg.   |
| Mercury   | Mercury means mercury and mercury compounds.   | Threshold level: 1000 mg/kg.   |

<sup>1</sup> It was agreed to amend the footnote for PCB, PBB and PCN to read "The Organization set 50 mg/kg as the threshold value referring to the concentration level at which wastes, substances and articles containing, consisting of or contaminated with PCB/PBB/PCN are characterized as hazardous under the Basel Convention (PPR2/WP7 page 3 (2015-01-26)).

<sup>2</sup> IMO set 50 mg/kg as the threshold value referring to the concentration level at which wastes, substances and articles containing, consisting or contaminated with PCB are characterized as hazardous under the Basel Convention.

<sup>3</sup> Not applicable for ships flying the flag of a third country.

<sup>4</sup> Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC (OJ L 158, 30.4.2004, p. 7).

| Hazardous material                       | Definitions   | Control measures  |
|--|---|---|
| Polybrominated biphenyls (PBBS)          | "polybrominated biphenyls" means aromatic compounds formed in such a manner that the hydrogen atoms on the biphenyl molecule (two benzene rings bonded together by a single carbon- carbon bond) may be replaced by up to ten bromine atoms.  | Threshold level: 50 mg/kg.  |
| Polybrominated diphenyl ethers (PBDES)   |   | Threshold level: 1000 mg/kg.  |
| Polychlorinated naphthalenes             | Compounds with more than 3 chlorine atoms.  |   |
| Radioactive substances                   | <p>Typical radionuclides: <sup>241</sup>AM, <sup>241</sup>AM/BE, <sup>252</sup>CF, <sup>244</sup>CM, <sup>60</sup>CO, <sup>137</sup>CS, <sup>153</sup>GD, <sup>192</sup>IR, <sup>147</sup>PM, <sup>238</sup>PU, <sup>239</sup>PU/BE, <sup>226</sup>RA, <sup>75</sup>S, <sup>90</sup>SR(<sup>90</sup>Y), <sup>170</sup>TM, <sup>169</sup>YB</p> <p>Examples of radioactive sources<br/>The following list contains examples of radioactive sources that shall be included in the inventory, regardless of the number, the amount of radioactivity or the type of radionuclide <sup>5, 6</sup>.</p> <p>Examples of consumer products with radioactive materials<br/>Ionization chamber smoke detectors (typical radionuclides <sup>241</sup>AM; <sup>226</sup>RA)<br/>Instruments/signs containing gaseous tritium light sources (<sup>3</sup>H)<br/>Instruments/signs containing radioactive painting (typical radionuclide <sup>226</sup>RA)<br/>High intensity discharge lamps (typical radionuclides <sup>85</sup>KR; <sup>232</sup>TH)<br/>Radioactive lighting rods (typical radionuclides <sup>241</sup>AM; <sup>226</sup>RA)</p> <p>Examples of industrial gauges with radioactive materials<br/>Radioactive level gauges<br/>Radioactive dredger gauges<br/>Radioactive conveyor gauges<br/>Radioactive spinning pipe gauges</p> | <p>No threshold level set. All radioactive sources shall be included in Material Declaration and Inventory of Hazardous Materials.</p> <p>Substances, threshold levels and 'exemption criteria' established in the <i>IAEA Safety Standards</i></p> |
| Certain shortchain chlorinated paraffins | Alkanes, C10 – C13, chloro  | Threshold level 1%.   |

Compounds of cadmium, hexavalent chromium, lead, mercury, polybrominated biphenyls, polybrominated diphenyl ethers, polychlorinated naphthalenes, radioactive substances, shortchain chlorinated paraffins that are inherent in solid metals or metal alloys used in general construction (hull, superstructure, pipes, housings for equipment and machinery) are not required to be listed in the IIHM.

The Inventory shall be developed on the basis of the standard format set out in Appendix 2 of IMO's 2015 *Guidelines for the Development of the Inventory of Hazardous Materials*: "Standard format of the Inventory of Hazardous Materials". Filled "Standard format" can be found in Annex 2 of this *Publication*.

<sup>5</sup> Safety Series No. 115 International Basic Safety Standards for the Protection against Ionizing Radiation and for the Safety of Radiation Sources, Vienna, 1996

<sup>6</sup> IAEA Safety Standards for protecting people and the environment: Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards Vienna, 2014

## 3.2 Development of Inventory of Hazardous Materials for Existing Ships

3.2.1 *Inventory of Hazardous Materials* for existing ships shall be developed in accordance with scheme recommended by IMO:

- .1 collection of detailed information
  - collection of ship plans and documentation:
    - a. ship's specification,
    - b. general arrangement plan,
    - c. machinery arrangement,
    - d. spare parts and tools list,
    - e. piping arrangement,
    - f. accommodation plan,
    - g. fire control plan,
    - h. fire protection plan,
    - i. insulation plan (hull and machinery),
    - j. International Anti-Fouling System Certificate,
    - k. related manuals and drawings,
    - l. information from other inventories and/or sister or similar ships, machinery, equipment, materials and coatings,
    - m. results of previous visual/sampling checks or analysis,
    - n. in case of ship which has undergone conversion or major repair work – documents allowing to identify the modifications from the initial design and specification;
  - collation and analysis of documents retained onboard, collected by shipowner, classification society and manufacturers;
  - practical approach: preparation of "Indicative list" of equipment, systems, and areas on board that is presumed to contain hazardous materials.
- .2 assessment of collected information
  - preparation of checklist (including "Indicative list", mentioned above) and analysis and assessment of hazardous materials content of each listed equipment, system or area onboard;
  - assessment and calculation of the content, mass and volume of hazardous materials;
  - checklist shall contain the column "Result of document analysis", where "Y" means "Contained" (the presence of hazardous material) and N means "Not contained" (no HM) in the given item.
- .3 preparation of visual/sampling check plan
  - each item mentioned in the checklist (as described above) shall be subjected to a visual check;
  - for items categorized as "unknown" a decision shall be made whether to apply a sampling check, taking under consideration the costs of the check and the potential contents of hazardous materials;
  - preparation of a "visual/sampling check plan" (in acc. with the example given below).

*Form of visual / sampling check plan*

Form of visual / Sampling check plan

|  |  |
|--|--|
| Name of ship   |  |
| IMO number   |  |
| Gross tonnage  |  |
| L × B × D  |  |
| Date of delivery   |  |
| Shipowner  |  |
| Contact point (tel., fax, e-mail, address)               |  |
| Check schedule   |  |
| Site of check  |  |
| In charge of check                                       |  |
| Check engineer   |  |
| Sampling method and anti-scattering measure for asbestos |  |
| Sampling of fragments of paints                          |  |
| Laboratory   |  |
| Chemical analysis method                                 |  |
| Location of visual / sampling check                      |  |

| Listing for equipment, system and/or area for visual check |                               |               |           |                         |
|--|-------------------------------|---------------|-----------|-------------------------|
| Location   | Equipment, system and/or zone | Name of parts | Materials | Result of doc. Checking |
|  |                               |               |           |                         |
|  |                               |               |           |                         |
|  |                               |               |           |                         |

| Listing for equipment, system and/or area for sampling check |                               |               |           |                         |
|--|-------------------------------|---------------|-----------|-------------------------|
| Location   | Equipment, system and/or zone | Name of parts | Materials | Result of doc. Checking |
|  |                               |               |           |                         |
|  |                               |               |           |                         |
|  |                               |               |           |                         |

Refer to attached “analysis and definition of scope of investigation for sample ship” and “location plan of hazardous materials for sample ship”

| List of equipment, system and/or area classed as PCHM |                               |               |           |                         |
|---|-------------------------------|---------------|-----------|-------------------------|
| Location  | Equipment, system and/or zone | Name of parts | Materials | Result of doc. Checking |
|   |                               |               |           |                         |
|   |                               |               |           |                         |
|   |                               |               |           |                         |

|                                  |  |
|----------------------------------|--|
| Prepared by:<br>Tel.:<br>E-Mail: |  |
| Document check date/place:       |  |
| Preparation date of plan:        |  |

- .4 onboard visual / sampling check
  - check points from visual/sampling check plan shall be marked in the ship’s plan (i.e. the general arrangement plan)
  - a person leading the check shall be responsible for recording with photographs for each check point
  - a person taking samples (check engineer) shall be protected by the appropriate safety equipment relevant to the suspected type of hazardous materials encountered
  - appropriate safety precautions shall also be in place for passengers, crewmembers and other persons on board, to minimize the potential exposure to hazardous materials;
- .5 preparation of Part I of the *Inventory of Hazardous Materials* and related documents
  - part I of the *Inventory* shall be developed with reference to the checklist actualized after the check and quantity estimation
  - a location diagram of hazardous materials shall be developed.

### 3.3 Initial Survey

**3.3.1** Initial survey is performed on request of the shipowner or shipyard submitted to the Administration or to a recognized organization along with the ship data required for the *Certificate on Inventory of Hazardous Materials*:

- .1 name of ship;
- .2 distinctive number or letters;
- .3 port of registry;
- .4 gross tonnage;
- .5 IMO number;
- .6 name and address of shipowner;
- .7 IMO registered owner identification number;
- .8 IMO company identification number; and
- .9 date of construction.

**3.3.2** The request for an initial survey shall be supplemented by Part I of the *Inventory of Hazardous Materials* along with the Material Declaration and Supplier's Declaration of Conformity, and all other documents used to develop the IHM.

**3.3.3** The initial survey for a new ship is performed before the ship is put in service, or before the *Inventory Certificate* is issued.

**3.3.4** In case of existing ships the initial survey shall be conducted by 31 December 2020.

**3.3.5** During the survey the officers of the Administration or of recognized organization authorized by the administration, in accordance with IMO guidelines, verify Part I of the *Inventory of Hazardous Materials*.

### **3.4 Inventory Certificate**

**3.4.1** The *International Certificate on Inventory of Hazardous Materials / Certificate on Inventory of Hazardous Materials (Inventory Certificate)* is issued after completion of initial survey and will be renewed after completion of the renewal survey.

**3.4.2** The certificate is drawn up in an official language of the issuing Party. If the language used is not English, French or Spanish, the certificate will include a translation into one of these languages.

**3.4.3** The certificates supplemented by Part I of the *Inventory of Hazardous Materials*.

**3.4.4** After a change, replacement or significant repair of the structure, equipment, systems, fittings, arrangements and materials, which has an impact on the *Inventory of Hazardous Materials*, an inventory certificate is updated. The certificate endorsement takes place at the request of the shipowner and shall be conducted by the Administration after successful completion of an additional survey.

**3.4.5** *Inventory Certificate* is issued for a period not exceeding five years from successful completion of initial or renewal survey. The time of validity of inventory certificate is specified by the Administration.

**3.4.6** In case the *Inventory Certificate* has been issued for a period of less than five years, the Administration or the recognised organisation authorised by it may extend the validity of the existing certificate for a further period which shall not exceed five years from completion of renewal survey.

**3.4.7** Administration can extend the period of validity of the *Inventory Certificate* for a period not exceeding three months to enable the ship to complete its voyage to the port in which it is to be surveyed. When the renewal survey is completed, the new inventory certificate shall be valid for a period not exceeding five years from the date of expiry of the existing certificate before the extension was granted.

**3.4.8** An inspection of Port State Control shall be limited to check whether an *Inventory Certificate* is kept on board and whether it is valid. If the inspected ship meets both requirements it shall be considered sufficient for the inspection to be approved.

**3.4.9** The relevant authority involved in Port State Control activities may conduct a detailed inspection (in accordance with relevant IMO guidelines) in following casus:

- a ship does not carry a valid certificate onboard,
- it is believed that the condition of the ship or its equipment does not correspond with the inventory certificate or with Inventory of Hazardous Materials,
- there is no procedure implemented on board the ship for the maintenance of Part I of the inventory of hazardous materials.

**3.4.10** *Inventory Certificate* ceases to be valid in any of the following cases:

- if the condition of the ship does not correspond substantially with the particulars of that inventory certificate (including where Part I of the inventory of hazardous materials has not been properly maintained and updated, reflecting changes in ship structure and equipment, taking into account the relevant IMO guidelines),
- where the renewal survey is not completed within the specified time,
- where the ship flag has been changed.

**3.4.11** Form of *Certificate on Inventory of Hazardous Materials*

**CERTIFICATE ON INVENTORY OF HAZARDOUS MATERIALS**

(NOTE: This certificate shall be supplemented by part I of the *Inventory of Hazardous Materials*)

*(official seal)*

*(state)*

**issued under the provisions of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as “*the convention*”) under the authority of the government of**

.....  
*(full designation of the country)*

by .....  
*(full designation of the person or organization authorized under the provisions of the convention)*

Particulars of the ship:

|  |  |
|--|--|
| Name of ship                               |  |
| Distinctive number or letters              |  |
| Port of registry                           |  |
| Gross tonnage                              |  |
| IMO number                                 |  |
| Name and address of shipowner              |  |
| IMO registered owner identification number |  |
| IMO company identification number          |  |
| Date of construction                       |  |

**Particulars of part I of the *Inventory of Hazardous Materials***

Part I of the *Inventory of Hazardous Materials* identification/verification number: .....

Note:

Part I of the *Inventory of Hazardous Materials*, as required by Regulation 5 of the Annex to the Convention, is an essential part of the *Certificate on Inventory of Hazardous Materials* and should always accompany the *Certificate on Inventory of Hazardous Materials*. Part I of the *Inventory of Hazardous Materials* should be compiled on the basis of the standard format shown in the guidelines developed by IMO.

THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with Regulation 10 of the Annex to *the Convention*;
2. That the survey shows that part I of the *Inventory of Hazardous Materials* fully complies with the applicable requirements of *the Convention*.

Completion date of survey on which this Certificate is based: ..... (dd/mm/yyyy)

This Certificate is valid until ..... (dd/mm/yyyy)

Issued at .....  
*(place of issue of certificate)*

|  |  |
|--|--|
| (dd/mm/yyyy) .....<br>(date of issue)            | .....<br>(signature of duly authorized official issuing the certificate) |
| (seal or stamp of the authority, as appropriate) |  |

### 3.5 Renewal Survey / Operational Life of Ship

**3.5.1** During the operational life of ship, it should be regularly supervised during renewal surveys, and, if applicable, additional surveys.

**3.5.2** Renewal survey of ship is performed by the Administration officers, taking into account the relevant EU and IMO guidelines. The renewal survey shall be conducted at intervals specified by the Administration, which shall not exceed five years.

**3.5.3** The renewal survey shall verify the Part I of the *Inventory of hazardous materials*.

**3.5.4** Part I of the IHM shall be properly maintained and updated throughout the operational life of the ship, reflecting new installations containing any hazardous materials (acc. Table 3.1.4) and relevant changes in the ship structure and equipment.

**3.5.5** The renewal survey aims to renew the certificate and is performed at the shipowner request.

**3.5.6** If the renewal survey is completed after the expiry date of the existing *Inventory Certificate*, the new one shall be valid from the date of the survey completion and not longer than for the period of five years.

**3.5.7** If the renewal survey is completed more than three months before the expiry date of the existing inventory certificate, the new one shall be valid from the date of the survey completion and not longer than for the period of five years.

### 3.6 Additional Survey / Operational Life of Ship

**3.6.1** The additional survey, either general or partial, shall be conducted if requested by the shipowner after a change, replacement or significant repair of the structure, equipment, systems, fittings, arrangements and material, which has an impact on or shall be included in the *Inventory of Hazardous Materials*.

**3.6.2** The additional 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 Regulation No. 1257/2013, and that Part I of the *Inventory of Hazardous Materials* is amended as necessary.

**3.6.3** Ship flying the flag of a non-EU country:

- when calling at a port or anchorage of a EU-countries, a ship flying the flag of a third country shall have on board an inventory of hazardous materials
- in case of force majeure or overriding safety considerations or to reduce or minimalise the risk of pollution may be permitted by the relevant authority of a Member State of UE to access to a specific port or anchorage provided that adequate measures to the satisfaction of relevant authority of that country have been implemented by the shipowner or operator to ensure safe entry;
- whilst in a port or anchorage of a Member State of UE, the installation of hazardous materials onboard of the ship shall be prohibited or restricted;
- shall prepare the visual/sampling check plan by which the *Inventory of Hazardous Materials* is developed taking into account the relevant IMO guidelines;

- shall have on the board the *Inventory of Hazardous Materials*, which is: properly maintained and updated throughout the operational life of the ship and reflecting all new installations containing any hazardous materials and relevant changes in the structure and equipment of the 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 *Statement of Compliance* together with the *Inventory of Hazardous Materials*, as appropriate and on request from those authorities.

*Statement of compliance:*

- shall be issued after verification of the *Inventory of Hazardous Materials* by the relevant authorities of the third country whose flag the ship is flying or an organisation authorised in accordance with the national requirements.
- The *Statement of Compliance* and the *Inventory of Hazardous Materials* is drawn up in an official language of the issuing relevant authorities of the non-EU country whose flag the ship is flying and where the language used is not English, French or Spanish, the text shall include a translation into one of those languages.
- Ships flying the flag of a third country applying to be registered under the flag of a Member State shall ensure that the *Inventory of Hazardous Materials* is kept on board or is established within six months of the registration under the flag of that Member State or during any of the next surveys, whichever comes first.

### **3.7 Preparation to Recycling Stage**

#### **3.7.1 Update of *Inventory of Hazardous Materials***

**3.7.1.1** Prior to the recycling processes, the IHM shall in addition to the properly maintained and updated Part I of IHM, incorporate Part II for operationally generated wastes and Part III for stores. Completed IHM shall be verified by the administration or recognized organization authorised by it.

**3.7.1.2** Ships destined to be recycled shall conduct operations in the period prior to entering any ship recycling facility in a manner that minimizes the amount of cargo residues, fuel oil and wastes remaining on board.

**3.7.1.3** The Part II of IHM for operationally generated wastes shall comprise of:

- Waste oil (sludge)
- Bilge and/or waste water generated by the after-treatment systems fitted on machineries
- Oily liquid cargo residues
- Ballast water
- Raw sewage
- Treated sewage
- Non-oily liquid cargo residues
- Dry cargo residues
- Medical/infectious waste
- Incinerator ash
- Garbage
- Fuel tank residues
- Oily solid cargo tank residues
- Oily or chemical contaminated rags
- Dry tank residues
- Cargo residues

**3.7.1.4** Stores including regular consumable goods shall be listed in Part III of IHM. Examples of materials that could be found on board of ships that the recycling facility should be prepared to handle are presented below:

- kerosene,
- white spirit,

- lubricating oil,
- hydraulic oil,
- anti-seize compounds,
- fuel additive,
- engine coolant additives,
- antifreeze fluids,
- boiler and feed water treatment and test reagents,
- deionizer-regenerating chemicals,
- evaporator dosing and descaling acids,
- paint stabilizers/rust stabilizers,
- solvents/thinners,
- paints,
- chemical refrigerants,
- battery electrolyte,
- alcohol/methylated spirits,
- acetylene,
- propane,
- butane,
- oxygen,
- carbon dioxide,
- perfluorocarbons (PFCs),
- methane,
- hydrofluorocarbons (HFCs),
- nitrous oxide (N<sub>2</sub>O),
- sulfur hexafluoride (SF<sub>6</sub>),
- bunkers, e.g. fuel oil,
- grease,
- fuel gas,
- batteries (including lead-acid batteries),
- pesticides/insecticide sprays,
- extinguishers,
- chemical cleaner (including electrical equipment cleaner, carbon remover),
- detergent/ bleacher (potentially a liquid),
- miscellaneous medicines,
- fire-fighting clothing and personal protective equipment,
- spare parts containing hazardous materials.

**3.7.1.5** It is important to describe the sequence of removal of hazardous materials as part of the ship recycling activities. It is recommended that the following aspects of proper management of hazardous materials should be clearly addressed for each of the identified potentially hazardous materials:

- identification, marking and labelling and potential on-board locations;
- recycling approach;
- removal, handling and remediation;
- storage and labelling; and treatment,
- transportation and disposal.

### **3.8 Ship Recycling Plan (SRP)**

**3.8.1** *Ship Recycling Plan* (SRP) shall address any material or ship specific considerations that are not covered in the ship recycling facility plan or that require special procedures. The SRP shall describe how the Ship Recycling Facility will recycle the specific ship in a safe and environmentally sound manner, covering the recycling process steps and their sequence over the entire process. Any processes or procedures that deviate from the *Ship Recycling Facility Plan* (SRFP) and are specific to the ship shall be described in detail in the SRP.

**3.8.2** The SRP shall include descriptions of all preparatory works (such as pre-treatment, identification of potential hazards and removal of stores). The SRP should include the location where the ship will be placed during recycling operations and a concise ship-specific plan for the arrival and safe placement.

**3.8.3** At the stage of an arrival to the Ship Recycling Facility it is important that the SRP describes the procedures that the Ship Recycling Facility will follow to conduct a walk-through (on-board check) of the vessel in an effort to identify any potential environmental or safety issues.

**3.8.4** The SRP should include information regarding the type and amount of Hazardous Materials to be managed, as required by the *Hong Kong Convention* and specify the facility's approach for managing each hazardous material. The SRP should also contain additional information on the management of hazardous materials as required in the *Document of Authorization of Ship Recycling (DASR)*. Specifically, the SRP should specify where the hazardous materials are to be processed or disposed of if the operation is not being conducted at the Ship Recycling Facility. The SRP should state that the removal of hazardous materials will be undertaken by responsible personnel who are trained and authorized to do so.

**3.8.5** Moreover the SRP should include information concerning the establishment, maintenance and monitoring of Safe-for-entry and Safe-for-hot-work procedures. It shall also explain in detail how the procedures will be implemented on the specific ship taking into consideration its structure, configuration, and previous cargo.

**3.8.6** The SRP shall include a dismantling sequence that is ship-specific and take into account the cutting operations and locations of hazardous materials. In addition it shall include any ship specific processes and/or procedures that will be necessary to recycle the ship and that are not fully covered in the SRFP. For example, a Ship Recycling Facility may need to use additional workers or subcontractors, or they may need additional equipment to deal with unique aspects of the ship.

**3.8.7** The SRP shall be prepared by the Ship Recycling Facility in close cooperation with shipowner. Updated IHM is essential to plan and execute the removal and management of hazardous materials specific for the ship. Among other useful specifications and drawings there are:

- general arrangement,
- capacity plan,
- shell expansion plan,
- fire control plan,
- trim and stability
- calculation,
- light weight distribution or calculation table.

The following information may be useful to prepare *Ship Recycling Plan*:

- midship section,
- construction profile (including longitudinal sections, deck, inner bottom and deckhouse),
- longitudinal and transverse bulkhead principal transverse sections,
- fore and aft construction,
- superstructures,
- accommodation plan,
- hydrostatic curve or table,
- deck piping system,
- general arrangement of ventilators and air ducts,
- painting scheme, joiner works,
- engine room arrangement (if appropriate) and bilge piping system of pump room,
- pump room arrangement,
- engine room piping diagram,
- ballast piping and cargo piping diagram,
- manufacturers' finished drawings of major equipment.

**3.8.8** SRP shall be developed taking into account information provided by the shipowner and if the language used is not English, French or Spanish, the *Ship Recycling Plan* shall be translated into one of

these languages, except where the Administration is satisfied that this is not necessary. It is recommended that the SRP shall use the same nomenclature and identification scheme as those included in IHM.

**3.8.9** Sample cover page of SPR developed in accordance with *the Hong Kong Convention* – Summary of information on ship and Ship Recycling Facility – is presented below:

| <b>Ship information</b>                                    |  |
|--|--|
| Name of ship   |  |
| Distinctive number or letters                              |  |
| IMO company identification number                          |  |
| Gross tonnage  |  |
| Port of registry   |  |
| IMO number   |  |
| Name and address of shipowner                              |  |
| IMO-registered owner identification number                 |  |
| Telephone number   |  |
| E-mail address   |  |
| <b>Ship recycling facility information</b>                 |  |
| Name of ship recycling facility                            |  |
| Distinctive recycling company identity no.                 |  |
| Full address of ship recycling facility                    |  |
| Primary contact person                                     |  |
| Telephone number   |  |
| Name, address and contact information of ownership company |  |
| Working language(s)  |  |
| <b>Projected schedule for ship recycling</b>               |  |
| Date of ship arrival at ship recycling facility            |  |
| Date of commencement of ship recycling                     |  |
| Date of completion of ship recycling                       |  |
| Date of completion of sale/disposal of all components      |  |
| .....<br>(date)  | .....<br>(signature of ship recycling facility owner/operator) |

**3.8.10** *Ship Recycling Plan* needs to be verified and approved by a competent authority in accordance with the requirements of the State before the ship may be recycled. The approval may be tacit (see 3.8.10.2) or explicit (see 3.8.10.1).

**3.8.10.1** Explicit approval is given when the competent authority sends a written notification of its decision on the *Ship Recycling Plan* to the operator of the ship recycling facility, the shipowner and the Administration.

**3.8.10.2** Tacit approval shall be deemed given, if no written objection to the *Ship Recycling Plan* is communicated by the competent authority to the operator of the ship recycling facility, the shipowner and the Administration within a review period specified in accordance with the requirements of the state where the ship recycling facility is located.

### **3.9 Final Survey**

**3.9.1** The final survey is conducted prior to the ship being taken out of service and before the recycling of the ship has started. The final survey verifies all three parts of the inventory of hazardous materials, the *Ship Recycling Plan* and inclusion of the ship recycling facility into the European List.

**3.9.2** Prior to the final survey, a request for the final survey shall be submitted by the shipowner to the Administration or to a recognized organization along with the following information on the ship:

- .1 name of ship;
- .2 distinctive number or letters;
- .3 port of registry;
- .4 gross tonnage;
- .5 IMO number;
- .6 name and address of shipowner;
- .7 IMO registered owner identification number;
- .8 IMO company identification number; and
- .9 date of construction;

and on Ship Recycling Facility, necessary for issuing the *Ready for Recycling Certificate*:

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

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

The request for a final survey shall be supplemented by:

- .1 International Certificate on Inventory of Hazardous Materials,
- .2 Inventory of Hazardous Materials,
- .3 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;
- .4 the approved *Ship Recycling Plan*;
- .5 a copy of the DASR.

#### **3.9.3 Prior to Final Survey**

**3.9.4** Part I of the *Inventory of Hazardous Materials* shall 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 shall be developed by the shipowner taking account of planned or expected operations before the arrival at the Ship Recycling Facility, and of the *2015 Guidelines for the development of the inventory of hazardous materials* (MEPC.269(68)).

**3.9.5** *Ship Recycling Plan* shall be developed by the authorized ship recycling facility, taking account of information including in the *Inventory of Hazardous Materials* provided by the shipowner;

**3.9.6** *Ship Recycling Plan* shall be either explicitly or tacitly approved by the Competent Authority authorizing the Ship Recycling Facility in accordance with paragraph 3.8.10.

**3.9.7** During the final survey it shall be verified:

- .1** that the *Inventory of Hazardous Materials* is in accordance with the requirements of the Hong Kong Convention, including that part I of the *Inventory of Hazardous Materials* is properly maintained and updated to reflect changes in ship structure and equipment since the last survey, and that parts II and III of the *Inventory of Hazardous Materials* identify all the hazardous materials on board the ship, their location and approximate quantities; planned or expected operations during the period between the final survey and the arrival at the Ship Recycling Facility should be taken into consideration;
- .2** that the *Ship Recycling Plan*, as required by the Hong Kong Convention, properly reflects the information contained in the *Inventory of Hazardous Materials* and contains information concerning the establishment, maintenance and monitoring of Safe-for-entry and Safe-for-hot-work conditions;
- .3** in the case of tacit approval of the *Ship Recycling Plan*, the written acknowledgement of receipt of the *Ship Recycling Plan* sent by the Competent Authority and the end date of the 14-day review period shall also be verified;
- .4** that the Ship Recycling Facility(ies) where the ship is to be recycled holds a valid DASR;
- .5** that any decision by the shipowner to delete equipment, system and/or area previously classed as "potentially containing hazardous materials" from the Part I of the IHM is based on clear grounds for believing that the equipment, system and/or area in question contain no hazardous materials.

### **3.10 Ready for Recycling Certificate**

**3.10.1** *The Ready for Recycling Certificate* is issued either by the Administration or by a recognized organization authorized by it, after successful completion of the final survey.

**3.10.2** *Ready for Recycling Certificate* is issued by the Administration or by a recognized organization authorized by it for a period not exceeding three months.

**3.10.3** *Ready for Recycling Certificate* issued under Article 9(9) ceases to be valid where the condition of the ship does not correspond substantially with the particulars of the *Inventory Certificate*.

**3.10.4** By way of derogation from paragraph 3, the ready for recycling certificate may be extended by the administration or by a recognised organisation authorised by it for a single point to point voyage to the ship recycling facility.

**3.10.5** Example of *The Ready for Recycling Certificate*.

|   |         |
|---|---------|
| <b>READY FOR RECYCLING CERTIFICATE</b>  |         |
| (Note: this Certificate shall be supplemented by the inventory of hazardous materials and the <i>Ship Recycling Plan</i> )  |         |
| (Official seal)   | (State) |
| Issued under the provisions of the Hong Kong International Convention for the safe and environmentally sound recycling of ships, 2009 (hereinafter referred to as "the Convention") under the authority of the government of: |         |
| .....<br>(full designation of the country)  |         |
| By .....  |         |
| (full designation of the person or organization authorized under the provisions of the Convention)  |         |

**Particulars of the ship**

|  |  |
|--|--|
| Name of ship                               |  |
| Distinctive number or letters              |  |
| Port of registry                           |  |
| Gross tonnage                              |  |
| Imo number                                 |  |
| Name and address of shipowner              |  |
| Imo registered owner identification number |  |
| Imo company identification number          |  |
| Date of construction                       |  |

**Particulars of the ship recycling facility(ies)**

|  |  |
|--|--|
| Name of ship recycling facility                |  |
| Distinctive recycling company identity number* |  |
| Full address                                   |  |
| Date of expiry of DASR                         |  |

\* This number is based on the document of authorization to conduct ship recycling (DASR).

**Particulars of the inventory of hazardous materials**

*Inventory of Hazardous Materials* identification/verification number: .....

Note: the *Inventory of Hazardous Materials*, as required by regulation 5 of the annex to the convention, is an essential part of the Ready for recycling certificate and shall always accompany the Ready for recycling certificate. The *Inventory of Hazardous Materials* shall be compiled on the basis of the standard format shown in the guidelines developed by the organization.

**Particulars of the Ship Recycling Plan**

Ship recycling plan identification/verification number: .....

Note: the ship recycling plan, as required by regulation 9 of the annex to the convention, is an essential part of the *Ready for recycling certificate* and must always accompany the *Ready for recycling certificate*.

**THIS IS TO CERTIFY:**

1. That the ship has been surveyed in accordance with Regulation 10 of the Annex to the Convention;
2. That the ship has a valid *Inventory of Hazardous Materials* in accordance with Regulation 5 of the Annex to the Convention;
3. That the *Ship Recycling Plan*, as required by Regulation 9, properly reflects the information contained in the *Inventory of Hazardous Materials* as required by Regulation 5.4 and contains information concerning the establishment, maintenance and monitoring of safe-for-entry conditions as well as safe-for-hot work conditions; and
4. That the ship recycling facility(-ies) where this ship is to be recycled holds a valid authorization in accordance with the Convention.

This Certificate is valid until (dd/mm/yyyy) .....  
(date)

Issued at .....  
(place of Certificate issue)

(dd/mm/yyyy) .....  
(date of issue) (signature of duly authorized official issuing the Certificate)

(seal or stamp of the authority, as appropriate)

## 4 SHIP RECYCLING FACILITIES

### 4.1 European List of Ship Recycling Facilities

**4.1.1** The *European List of Ship Recycling Facilities* (hereafter the *European List*) is established, maintained and updated by all Member States of UE. The *European List* comprise of a list of ship recycling facilities located both in the EU and in non-EU countries and authorized by recognized organization of EU Member State meaning operating in accordance with IMO, ILO and EU guidelines and principles.

**4.1.2** *The European List of Ship Recycling Facilities* is established by European Commission and published in the Official Journal of the European Union and on the website of the Commission. It is divided into two sub-lists indicating the ship recycling facilities located in a Member State and the ship recycling facilities located in a third country.

**4.1.3** Article 16(2) of the EU Ship Recycling Regulation requires the European Commission to publish the European List no later than 31 December 2016. *The first publication of The European List of Ship Recycling Facilities took place on 20 December 2016 basing on Commission Implementing Decision (EU) 2016/2323 od 19 December 2016 establishing the European List of ship recycling facilities pursuant to Regulation (EU) No 1257/2013 of the European Parliament and of the Council on ship recycling. The European List is consisted of 18 objects notified by Member States of EU.*

**4.1.4** The European List shall indicate the date of expiry of the inclusion of the ship recycling facility. An inclusion is valid for a maximum period of five years and is also renewable.

**4.1.5** The European List shall include all of the following information about the SRF:

- the method of recycling;
- the type and size of ships that can be recycled;
- any limitation and conditions under which the ship recycling facility operates, including as regards hazardous waste management;
- details on the explicit or tacit procedure for the approval of the ship recycling plan by the competent authority;
- the maximum annual ship recycling output.

#### 4.1.6 Requirements necessary for Ship Recycling Facility

To be included in the European List of Ship Recycling Facilities, the facility shall:

- be authorised by its competent authorities to conduct ship recycling operations;
- be designed, constructed and operated in a safe and environmentally sound manner;
- operates from built structures;
- establish management and monitoring systems, procedures and techniques which have the purpose of preventing, reducing, minimising and to the extent practicable eliminating:
  - health risks to the workers concerned and to the population in the vicinity of the ship recycling facility,
  - adverse effects on the environment caused by ship recycling;
- prevent adverse effects on human health and the environment, including the demonstration of the control of any leakage, in particular in intertidal zones;
- ensure safe and environmentally sound management and storage of hazardous materials and waste, including:
  - the containment of all hazardous materials present on board during the entire ship recycling process so as to prevent any release of those materials into the environment,
  - handling of hazardous materials, and of waste generated during the ship recycling process, only on impermeable floors with effective drainage systems,
  - ensuring that all waste generated from the ship recycling activity and their quantities are documented and are only transferred to waste management facilities, including waste recycling

facilities, authorised to deal with their treatment without endangering human health and in an environmentally sound manner;

- establish and maintain an emergency preparedness and response plan; ensures rapid access for emergency response equipment, such as fire-fighting equipment and vehicles, ambulances and cranes, to the ship and all areas of the ship recycling facility;
- provides for worker safety and training, including ensuring the use of personal protective equipment for operations requiring such use;
- establish records on incidents, accidents, occupational diseases and chronic effects and, if requested by its competent authorities, reports any incidents, accidents, occupational diseases or chronic effects causing, or with the potential for causing, risks to workers' safety, human health and the environment;
- fulfil all the duties of the SRF owner;
- prepare the *Ship Recycling Facility Plan*.

**4.1.7** Among duties of the operator of a ship recycling facility there is:

- sending the *Ship Recycling Plan* to the shipowner and the Administration or a recognised organisation authorised by it;
- reporting to the Administration that the ship recycling facility is ready in every respect to start the recycling of the ship;
- when the total or partial recycling of a ship is completed within 14 days of the date of the total or partial recycling in accordance with the *Ship Recycling Plan*, sending the *Statement of Completion* to the Administration which issued the *Ready for Recycling Certificate* for the ship. The *Statement of Completion* shall include a report on incidents and accidents damaging human health and/or the environment, if any.

## **4.2 Authorisation of Ship Recycling Facilities Located in EU Member State**

**4.2.1** In EU Member States, the authorisation to conduct ship recycling may be granted by competent authorities to ship recycling facilities located on their territory for a maximum period of five years and renewed accordingly.

**4.2.2** The national lists determined by each Member State and managed by their national competent authorities are being communicated to the European Commission for direct inclusion in the European List.

**4.2.3** Where a ship recycling facility ceases to comply with the requirements of the *Hong Kong Convention* and EU Regulation no 1257/2013, the Member State where that ship recycling facility is located shall suspend or withdraw the authorisation given to it or require corrective actions by the ship recycling company concerned and shall inform the EU Commission thereof without delay.

## **4.3 Authorisation of ship recycling facilities located in non-EU countries**

**4.3.1** Ship recycling facility operating in non EU-country but willing to recycle ships flying the flag of a Member State of EU shall submit an application to the European Commission to be included in the European List.

In particular the ship recycling company shall present:

- the permit, license or authorisation granted by its competent authorities to conduct the ship recycling and, where relevant, the permit, license or authorisation granted by the competent authorities to all its contractors and sub-contractors directly involved in the process of ship recycling,
- all information about SRF: the method of recycling, the type and size of ships that can be recycled, any limitation and conditions under which the ship recycling facility operates, including as regards hazardous waste management, details on the explicit or tacit procedure for the approval of the *Ship Recycling Plan* by the competent authority, the maximum annual ship recycling output,
- indication whether the ship recycling plan will be approved by the competent authority through a tacit or explicit procedure, specifying the review period relating to tacit approval, in accordance with national requirements, where applicable;
- confirmation that it will only accept a ship flying the flag of a Member State of EU for recycling in accordance with the Regulation EU no 1257/2013;

- evidence that the ship recycling facility is capable of establishing, maintaining and monitoring of the safe-for-hot work and safe-for-entry criteria throughout the ship recycling process;
- map of the boundary of the ship recycling facility and the location of ship recycling operations within it;
- declaration for each hazardous material referred to in Part I of the *Inventary of Hazardous Materials* and additional hazardous material which might be part of the structure of a ship:
  - whether the ship recycling facility is authorised to perform the removal of the hazardous material. Where it is so authorised, the relevant personnel authorised to perform the removal shall be identified and evidence of their competence shall be provided;
  - which waste management process will be applied within or outside the ship recycling facility such as incineration, landfilling or another waste treatment method, the name and address of the waste treatment facility if different from that of the ship recycling facility, and provide evidence that the applied process will be performed without endangering human health and in an environmentally sound manner;
- confirmation that the company adopted a ship recycling facility plan, taking into account the relevant IMO guidelines;
- information necessary to identify the ship recycling facility: name of Ship Recycling Facility, Distinctive Recycling Company identity No., Full address of Ship Recycling Facility, Primary contact person, Phone number, E-mail address, Information about ownership company - name, address and contact information, working language(-s).

**4.3.2** The information and documentation required to identify a ship recycling facility applying for inclusion in the European List of Ship Recycling Facilities shall be delivered in the format provided in the Annex 3 of this Publication.

**4.3.3** An application file shall include a completed form with necessary information and documentation (see 4.4.3), a copy of the certification of the ship recycling facility by an Independent Verifier and a copy of the Ship Recycling Facility Plan.

**4.3.4** In order to be included in the European List, compliance by ship recycling facilities located in non-EU countries with the requirements specified in sub-chapter 4.2 shall be certified following a site inspection by an independent verifier with appropriate qualifications. The certification shall be submitted to the Commission by the ship recycling company when applying for inclusion in the European List and, every five years thereafter, upon renewal of the inclusion in the European List. The initial inclusion on the list and the renewal thereof shall be supplemented by a mid-term review.

**4.3.5** Site inspections shall be conducted by the European Commission or agents acting on its behalf. The independent verifier, the Commission or agents acting on its behalf shall cooperate with the competent authorities of the non-EU country where the ship recycling facility is located in order to perform those site inspections.

**4.3.6** Ship recycling company shall be able to demonstrate that the waste management facility which receives the waste will be operated in accordance with human health and environmental protection standards that are broadly equivalent to relevant international and Union standards.

**Table 4.3**  
**Main steps of the inspection and verification process for ship recycling facilities located outside the EU<sup>7</sup>**

|        |   |
|--------|---|
| STEP 0 | The ship recycling facility prepares for compliance   |
| STEP 1 | The ship recycling facility contracts an Independent Verifier, provides documentation and provides access to the entire site<br>If the facility is compliant, the Independent Verifier certifies the facility |
| STEP 2 | The ship recycling company submits the application file for its facility to the European Commission   |
| STEP 3 | The European Commission May decide to carry out a site inspection, priori to or after the listing on the EU List  |

<sup>7</sup> According to the Communication from the European Commission (2016/C 128/01) z dnia 12.4.2016

## 4.4 Ship Recycling Facility Plan

**4.4.1** Ship Recycling Facility Plan (SRFP) shall be adopted by the board or appropriate governing body of the Recycling Company. The SRFP is the main document that the Competent Authority(ies), or organization recognized by it, will rely on in authorizing a Ship Recycling Facility. Site inspections are be utilized to verify that Facility operations conform to the description in the SRFP. It is therefore critical that the SRFP should fully describe the operations and procedures that are in place at the SRF to ensure compliance with *the Hong Kong Convention*.

**4.4.2** SRFP shall demonstrate knowledge and understanding of all applicable statutory and regulatory requirements and a strong commitment to worker health and safety and protection of the environment. The SRFP shall also describe the operational processes and procedures involved in ship recycling at the ship recycling facility, demonstrating how the requirements of the *Hong Kong Convention* will be met.

**4.4.3** SRFP format recommended by IMO:

### SHIP RECYCLING FACILITY PLAN

#### **1 Facility management**

- 1.1** Company information
- 1.2** Training programme
- 1.3** Worker management
- 1.4** Records management

#### **2 Facility operation**

- 2.1** Facility information
- 2.2** Permits, licences and certification
- 2.3** Acceptability of ships
- 2.4** *Ship Recycling Plan* (SRP) development
- 2.5** Vessel arrival management
- 2.6** Ship recycling methodology
- 2.7** Reporting upon completion

#### **3 Worker safety and health compliance approach**

- 3.1** Worker health and safety
- 3.2** Key safety and health personnel
- 3.3** Job hazard assessment
- 3.4** Prevention of adverse effects to human health
  - 3.4.1** Safe-for-entry procedures
    - Safe-for-entry criteria
    - Competent person for safe-for-entry determination
    - Safe-for-entry inspection and testing procedures
    - Oxygen
    - Flammable atmospheres
    - Toxic, corrosive, irritant or fumigated atmospheres and residues
    - Safe-for-entry determination by a competent person
    - Safe-for-entry certificate, warning signs and labels
    - Safe-for-entry operational measures
  - 3.4.2** Safe-for-hot-work procedures
    - Safe-for-hot-work criteria
    - Competent person for safe-for-hot-work determination
    - Safe-for-hot-work inspection, testing and determination
    - Safe-for-hot-work certificate, warning signs and labels
    - Safe-for-hot-work operational measures
  - 3.4.3** Welding, cutting, grinding and heating
  - 3.4.4** Drums, containers and pressure vessels
  - 3.4.5** Prevention of falling from heights and accidents caused by falling objects
  - 3.4.6** Gear and equipment for rigging and materials handling

- 3.4.7 Housekeeping and illumination
- 3.4.8 Maintenance and decontamination of tools and equipment
- 3.4.9 Health and sanitation
- 3.4.10 Personal protective equipment
- 3.4.11 Worker exposure and medical monitoring
- 3.4.12 Emergency preparedness and response plan
- 3.4.13 Fire and explosion prevention, detection and response

**4 Environmental compliance approach**

- 4.1 Environmental monitoring
- 4.2 Management of hazardous materials
  - 4.2.1 Potentially containing hazardous materials
  - 4.2.2 Additional sampling and analysis
  - 4.2.3 Identification, marking and labelling and potential on-board locations
  - 4.2.4 Removal, handling and remediation
  - 4.2.5 Storage and labelling after removal
  - 4.2.6 Treatment, transportation and disposal
- 4.3 Environmentally sound management of hazardous materials
  - 4.3.1 Asbestos and materials containing asbestos
  - 4.3.2 PCBs and materials containing PCBs
  - 4.3.3 Ozone-depleting substances (ODSs)
  - 4.3.4 Paints and coatings
    - Anti-fouling compounds and systems (organotin compounds including tributyltin (TBT))
    - Toxic and highly flammable paints
  - 4.3.5 Hazardous liquids, residues and sediments (such as oils, bilge, and ballast water)
  - 4.3.6 Heavy metals (lead, mercury, cadmium and hexavalent chromium)
  - 4.3.7 Other hazardous materials
- 4.4 Prevention of adverse effects to the environment
  - 4.4.1 Spill prevention, control and countermeasures
  - 4.4.2 Storm-water pollution prevention
  - 4.4.3 Debris prevention and control
  - 4.4.4 Incident and spills reporting procedures

**Plan attachments;**

- Facility map
- Organizational flow chart
- Permits, licences and certification
- Résumé

**4.4.4 Example format of facility information in SRFP:**

| <b>Facility name and contact information</b> |  |     |  |
|--|--|-----|--|
| Facility name                                |  |     |  |
| Registered address                           |  |     |  |
| Facility address                             |  |     |  |
| Representative and communication address     |  |     |  |
| Number of employees                          |  |     |  |
| Tel.   |  | Fax |  |
| E-mail address                               |  | URL |  |
| Working language                             |  |     |  |

| <b>Capacity of facility</b>                               |   |
|---|---|
| Maximum capacity of ship to be recycled                   | DWT<br>GT<br>LDT<br><br>Length<br>Breadth<br>Width<br>Depth |
| Types of ship to be accepted                              |   |
| Annual recycling capacity (in LDT)                        |   |
| <b>Waste management capacity</b>                          |   |
| Asbestos  | Removal<br>Storage<br>Processing                            |
| Ozone-depleting substances                                | Removal<br>Storage<br>Processing                            |
| Polychlorinated biphenyls (PBCs)                          | Removal<br>Storage<br>Processing                            |
| Anti-fouling compounds and systems                        | Removal<br>Storage<br>Processing                            |
| Cadmium and cadmium compounds                             | Removal<br>Storage<br>Processing                            |
| Hexavalent chromium and hexavalent chromium compounds     | removal<br>storage<br>process                               |
| Lead and lead compounds                                   | Removal<br>Storage<br>Processing                            |
| Mercury and mercury compounds                             | Removal<br>Storage<br>Processing                            |
| Polybrominated biphenyl (PBBs)                            | Removal<br>Storage<br>Processing                            |
| Polybrominated diphenyl ethers (PBDEs)                    | removal<br>storage<br>process                               |
| Polychlorinated naphthalenes (more than 3 chlorine atoms) | Removal<br>Storage<br>Processing                            |

|  |                                  |
|--|----------------------------------|
| Radioactive substances   | Removal<br>Storage<br>Processing |
| Certain shortchain chlorinated paraffins<br>(alkanes, c10 – c13, chloro)                                       | Removal<br>Storage<br>Processing |
| Hazardous liquids, residues and sediments  | Removal<br>Storage<br>Processing |
| Paints and coatings that are highly<br>flammable and/or lead to toxic release                                  | Removal<br>Storage<br>Processing |
| Other hazardous materials not listed above<br>and that are not a part of the ship structure<br>(specify .....) | Removal<br>Storage<br>Processing |

| <b>Facility equipment and other information</b>  |   |
|--|---|
| Area of facility (m <sup>2</sup> )   | Area of pavement (m <sup>2</sup> )                                  |
| Description of ship recycling facility<br>(layout, waterdepth, accessibility,<br>etc.) |   |
| Heavy lifting machines   | E.g. Jib crane: 60 tons   |
|  | Mobile crane: 35 tons ×× 1, 27 tons × 1                             |
|  | Hydraulic backhoe: SH400, ZX330, SK220, ZX200 with shear,<br>magnet |
|  | Hydraulic shear: 600 tons x 1                                       |
|  | Weight bridge: 50 tons  |
| Boat   | E.g. Gross tonnage 5 tons, power: 240 PS                            |
| Shear  | E.g. Capacity: 600 tons   |
| O <sub>2</sub> supply  | E.g. Liquid O <sub>2</sub> supply system: 10 m <sup>3</sup>         |
| Gas supply   | E.g. LPG cylinders  |
| Compressed air   |   |
| Fire extinguisher  | E.g. Portable fire extinguisher                                     |
| Waste oil treatment  | E.g. Oil water separation tank<br>Tank capacity abt. 20 tons        |
| Wastes storage   | E.g. Container for asbestos: 2                                      |
| Incinerator  | E.g. None   |
| Electric power supply  | E.g. Substation   |

| <b>Location</b>                                |                                |
|--|--------------------------------|
| Division and classification of the<br>location | E.g. Urbanization control area |
|  |                                |
|  |                                |

|                        |   |
|------------------------|---|
| Peripheral environment | E.g. Factories: former quarry, two marinas in the vicinity      |
|                        | Housing: private houses at the entrance and 200 m from entrance |

|  |  |
|--|--|
| <b>Facility certificate and licence</b>  |  |
| (if applicable specify: certifying authority; date of expiry; number of certificate; etc.)   |  |
| <i>(List here any applicable certificates, for example relevant to waste treatment, waste transportation, or other, such as certificates relevant to management systems of environmental performance, and/or occupational health and safety)</i> |  |
|  |  |
|  |  |

| <b>Worker's certificate / licences</b>             |                       |
|--|-----------------------|
| Certificate/licence                                | Name                  |
| 1) manager of asbestos handling                    | Mr yxxx***** 1 person |
| 2) manger of PCB handling                          | Mr yxxx***** 1 person |
| 3) designated chemicals handling                   | None                  |
| 4) asbestos handling class                         | Mr. *****             |
|  | Mr. *****             |
|  | MR. ***** 3 persons   |
| 5) gas cutting                                     | Mr. *****             |
|  | Mr. *****             |
|  | Mr. ***** 3 persons   |
| 6) welding   | Mr. ***** 1 person    |
| 7) zinc handling                                   | Mr. ***** 1 person    |
| 8) lifting   | Mr. *****             |
|  | Mr. *****             |
|  | Mr. ***** 3 persons   |
| 9) heavy lift machines                             | Mr. *****             |
|  | Mr. ***** 2 persons   |
| 10) seafarer                                       | Mr. ***** 1 person    |
| 11) diver  | None                  |
| 12) removal of hazardous materials<br>(Material A) | Mr. *****             |
|  | Mr. *****             |
| (Material B)                                       | Mr. *****             |
|  |                       |

|  |  |
|--|--|
| <b>Subcontractor information</b>   |  |
| <i>(supply all pertinent information relevant to the services of the subcontractor to the ship recycling facility)</i> |  |
| Subcontractor name   |  |
| Registered address   |  |
| Representative and communication address   |  |

|                      |  |         |  |
|----------------------|--|---------|--|
| Field of services    |  |         |  |
| Licence for services |  |         |  |
| Number of employees  |  |         |  |
| Tel. No.             |  | Fax no. |  |
| E-mail address       |  | URL     |  |

#### 4.5 Authorisation Process for Ship Recycling Facilities

**4.5.1** One or more Competent Authorities in each country being a Party of *the Hong Kong Convention* or Member State of UE is responsible for authorising Ship Recycling Facilities within its jurisdiction. The Competent Authority(ies) may entrust the authorization of Ship Recycling Facilities to organizations recognized by it. It is the Competent Authority's responsibility to ensure that the organization has appropriate qualifications and expertise. The extent to which authority is delegated to the organization recognized by the Competent Authority(ies) therefore varies according to each country's decision but In every case, the Competent Authority retains full responsibility for the authorization.

**4.5.2** The Competent Authority(ies) shall identify a single contact point to act as central communicating partner between the Competent Authority(ies), Administrations and Ship Recycling Facilities.

**4.5.3** The Ship Recycling Facility shall submit to a Competent Authority(ies) a formal application for authorization to conduct ship recycling accompanied by a completed Ship Recycling Facility Plan.

**4.5.4** The onus is on the Ship Recycling Facility to assess the effects of its operations and to demonstrate how ship recycling operations shall be managed so as to meet the requirements of the *Hong Kong Convention*, Regulation EC No. 1257/2013 and of relevant national and/or regional legislation.

**4.5.5** The Competent Authority(ies) may ask for additional documentation and/or certification required under applicable international or national legislation and/or return the application if it is not complete. The Ship Recycling Facility may draw upon or attach other sources of information in its application, and indeed is encouraged to make use of existing information where appropriate.

**4.5.6** SRFP is used as the main document in issuing the DASR. Apart the Competent Authority(ies) should check:

- that the Ship Recycling Facility has a management system, the appropriate procedures and techniques, aimed at protecting human health and the environment without posing any unacceptable risks,
- that the SRFP includes the policy, plans, systems and other factors, among others:
  - .1 policy ensuring workers' safety and the protection of human health and the environment,
  - .2 system for ensuring implementation of the Hong Kong Convention requirements, the achievement of the goals set out in the policy and the continuous improvement of the procedures and standards, identification of roles and responsibilities for employers and workers,
  - .3 programme for providing appropriate information and training of workers for the safe and environmentally sound operation, an emergency preparedness and response plan;
  - .4 system for monitoring the performance of ship recycling;
  - .5 record-keeping system showing how Ship Recycling is being performed;
  - .6 system for reporting discharges, emissions, incidents and accidents causing damage, or with the potential of causing damage, to workers' safety, human health and the environment;
  - .7 system for reporting occupational diseases, accidents, injuries and other adverse effects on workers' safety and human health;
- that the Ship Recycling Facility has established, implemented and maintained procedures for environmentally sound management of Hazardous Materials and wastes;
- that the Ship Recycling Facility has procedures in place to ensure that all Hazardous Materials are, to the maximum extent possible prior to cutting, identified, labelled, packaged and removed by properly trained and equipped workers, then stored and transported to waste management facilities by licensed vehicles;

- that the Ship Recycling Facility has established procedures to send all Hazardous Materials and wastes to authorized waste management and disposal sites before issuing a DASR;
- that these disposal sites are consistent with national regulations
- that the Ship Recycling Facility has established procedures for managing all wastes generated by recycling activity, which should be kept separate from recyclable materials and equipment and labelled and stored under conditions that do not pose a risk to workers, human health or the environment.

Moreover, the Competent Authority(ies) may require an environmental impact study assessing whether the location is appropriate and suitable for ship recycling activities, and whether or not SRF has adverse effects on flora, fauna, hydrogeology, surface and ground water, soil structure, historical, social or economical values or air quality.

**4.5.7** The application shall be assessed and verified by the Competent Authority(ies) within reasonable time frame, if possible within three months. The assessment should include a site inspection. If the application is rejected, the reason for the rejection should be clear.

**4.5.8** The main purpose of the site inspection is to check the consistency of the documentation with the actual arrangements and operations at the Ship Recycling Facility. The first site inspection is announced in advance to the Ship Recycling Facility, in order to ensure that it will be possible to meet all relevant persons and to provide any necessary information by SRF. Safety issues and sufficient precautions taken are considered throughout the site inspection, including with respect to personal protection.

**4.5.9** In particular, the following factors are verified during site inspection:

- .1 availability of the SRFP to all personnel at the Ship Recycling Facility;
- .2 knowledge of the SRFP, as appropriate, among management, Competent persons and workers according to their designated tasks, roles and responsibilities, (incl. first-aid personnel and fire fighters)
- .3 implementation of the objectives of the SRFP, as demonstrated by implementation of operational procedures in: ship preparation/deconstruction/hot work processes; monitoring of safe-for-entry and safe-for-hot-work conditions; management of Hazardous Materials and wastes (protective measures and removal, transport, storage and disposal); and emergency preparedness).

Site inspection identifies procedures and routines for the following:

- .1 developing and using the Ship Recycling Plan;
- .2 accepting ships, taking into account relevant requirements and the required certificates;
- .3 reporting and following up incidents;
- .4 conducting operations in a safe and environmentally sound manner, in accordance with the regulations of the Convention.

The supplement to the DASR may be used as guidance in planning site inspections.

**4.5.10** Authority(ies) may suspend, amend or withdraw the DASR.

**4.5.11** The Competent Authority(ies) shall issue a DASR to the Ship Recycling Facility if the document verification process and site inspection prove satisfactory. The DASR shall not be issued until all required documentation has been received and the site inspection has been successfully completed. The DASR shall be available at the Ship Recycling Facility at all times.

**4.5.12** The Competent Authority(ies) may amend the DASR as appropriate. The amendment procedure may be initiated by the Competent Authority(ies) or the Ship Recycling Facility. The Competent Authority(ies) may require a site inspection and the SRF should provide the Competent Authority(ies) with appropriate documentation and updates to the SRFP.

**4.5.13** The reasons to amend DASR include, but are not limited to, the following:

- .1 the Ship Recycling Facility applies for the DASR amendment in order to widen the scope of authorization; for example, after having invested in the Facility and added new capabilities which should be reflected in the DASR;

- .2 the DASR amendment is triggered by compelling needs on the part of Competent Authority(ies); for example, when new domestic regulations are put into effect;
- .3 the DASR amendment is triggered by investigations conducted by the Competent Authority(ies) following accidents;
- .4 the DASR amendment is triggered by a deviation of practice at the Ship Recycling Facility from the SRFP, which thereby affect the contents of the DASR;
- .5 the DASR amendment is triggered by a change in the hazardous materials which the Ship Recycling Facility can remove, store and process.

**4.5.14** The Competent Authority(ies) may suspend the DASR, or require corrective action by the Ship Recycling Facility, if it has information demonstrating that the Ship Recycling Facility no longer satisfies the terms and conditions of the DASR. The Competent Authority(ies) may suspend the DASR temporarily or indefinitely, depending on the Ship Recycling Facility's subsequent level of compliance.

**4.5.15** The Competent Authority(ies) may withdraw the DASR if the Competent Authority(ies) has information demonstrating that the Ship Recycling Facility no longer satisfies the terms and conditions of the DASR. The Competent Authority(ies) should generally reserve withdrawal for cases when the Ship Recycling Facility has seriously or repeatedly failed to comply and when suspending the DASR does not present an adequate remedy.

**4.5.16** The Competent Authority(ies) may reinstate the Ship Recycling Facility's authorization only after the Ship Recycling Facility has submitted a new application to the Competent Authority(ies) demonstrating that the Ship Recycling Facility is in full compliance with the Convention's requirements and related Guidelines. Any action or modification at the Ship Recycling Facility that may affect the conditions on which the authorization was granted shall prompt a new inspection. If such an inspection reveals that the conditions for authorization are no longer in place, the DASR shall be withdrawn.

**4.5.17** The Competent Authority(ies) may renew the DASR upon written request by the Ship Recycling Facility. The SRF should support any such request with revised documents. The Competent Authority(ies) may, at its discretion, conduct a site inspection before it renews the DASR.

**4.5.18** The DASR shall be issued for a period determined by the Party not exceeding five years. If a Ship Recycling Facility changes ownership, the new owner shall – within a reasonable time frame, if possible not exceeding 30 days – notify the Competent Authority(ies) so that it can amend the DASR accordingly. The new owner shall confirm in writing that it will fully comply with all requirements, including the SRFP, and the Convention. The new owner shall also provide any supporting documentation requested by the Competent Authority(ies). If operations at the Ship Recycling Facility are changed in such a way as to affect the conditions on which authorization was granted, the Competent Authority(ies) may amend, suspend or withdraw the DASR and inform the new owner accordingly.

**4.6** Example format of ship recycling facility authorisation in SRFP:



## 1 GENERAL TERMS

### 1.1 Requirements of the *Convention*

The ship recycling facility meets the requirements that it be designed, constructed, and operated in a safe and environmentally sound manner in accordance with the *Convention*, including meeting the relevant requirements of:

- Regulation 16 – Authorization of Ship Recycling Facilities
- Regulation 17 – General Requirements
- Regulation 18 – Ship Recycling Facility Plan
- Regulation 19 – Prevention of Adverse Effects to Human Health and the Environment
- Regulation 20 – Safe and Environmentally Sound Management of Hazardous Materials
- Regulation 21 – Emergency Preparedness and Response
- Regulation 22 – Worker Safety and Training
- Regulation 23 – Reporting on Incidents, Accidents, Occupational Diseases and Chronic Effects
- Regulation 24 – Initial Notification and Reporting Requirements
- Regulation 25 – Reporting on Completion

These requirements are imposed on the ship recycling facility by way of

.....  
(identify the permit, licence, authorization, legal standards, or other mechanism that applies)

SRFP identification/verification number: .....

### 1.2 Acceptance of Ships

For ships to which the *Convention* applies and ships treated similarly pursuant to article 3.4 of the *Convention*, the ship recycling facility can only accept a ship for recycling in accordance with Regulation 17 of the Annex to the *Convention*.

### 1.3 Safe-for-hot Work and Safe-for-entry Conditions

The ship recycling facility is capable of establishing, maintaining and monitoring safe-for-hot work and safe-for-entry conditions throughout the ship recycling process.

### 1.4 Management of hazardous materials

The ship recycling facility is designed, constructed, operated, and required to ensure that all hazardous materials' management shall be safe and environmentally sound in compliance with the *Convention* and with all relevant local or national regulations/requirements.

### 1.5 Map and location of ship recycling operations

A map of the boundary of the ship recycling facility and the location of ship recycling operations within it, is attached.

## 2 Capability of Ship Recycling Facility

### 2.1 Size of Ships

The ship recycling facility is authorized to accept a ship for recycling subject to the following size limitations:

| Maximum size |  | Other limitation |
|--------------|--|------------------|
| Length       |  |                  |
| Breadth      |  |                  |
| Lightweight  |  |                  |

### 2.2 Safe and environmentally sound management of hazardous materials

The ship recycling facility is authorized to accept a ship for recycling that contains Hazardous materials as specified in the following table subject to the conditions noted below:

| Hazardous material <sup>4</sup>   | Management of Hazardous Materials |                   |   | Authorization/<br>Limitations |
|---|-----------------------------------|-------------------|---|-------------------------------|
|   | Removal<br>YES/NO <sup>2</sup>    | Storage<br>YES/NO | Process <sup>1</sup><br>YES/NO <sup>3</sup> |                               |
| Asbestos  |                                   |                   |   |                               |
| Ozone-depleting substances  |                                   |                   |   |                               |
| Polychlorinated biphenyls (PCB)   |                                   |                   |   |                               |
| Perfluorooctane sulfonic acid (PFOS)  |                                   |                   |   |                               |
| Anti-fouling compounds and systems  |                                   |                   |   |                               |
| Cadmium and cadmium compounds   |                                   |                   |   |                               |
| Hexavalent chromium and hexavalent chromium compounds   |                                   |                   |   |                               |
| Lead and lead compounds   |                                   |                   |   |                               |
| Mercury and mercury compounds   |                                   |                   |   |                               |
| Polybrominated biphenyls (PBBs)   |                                   |                   |   |                               |
| Polybrominated diphenyl ethers (PBDEs)  |                                   |                   |   |                               |
| Polychlorinated naphthalenes (more than 3 chlorine atoms)   |                                   |                   |   |                               |
| Radioactive substances  |                                   |                   |   |                               |
| Certain shortchain chlorinated paraffins (Alkanes, C10 – C13)   |                                   |                   |   |                               |
| Hazardous liquids, residues and sediments   |                                   |                   |   |                               |
| Paints and coatings that are highly flammable and/or toxic release  |                                   |                   |   |                               |
| Other hazardous materials not listed above and that are not a part of the ship structure: ( <i>specify</i> )<br>..... |                                   |                   |   |                               |

Notes:

- \*1 Process means the processing of hazardous materials in the ship recycling facility, such as:
  - a. incineration of hazardous materials;
  - b. reclamation of hazardous materials; and
  - c. treatment of oily residues.
- \*2 If YES, indicate in the *Ship Recycling Facility Plan* the responsible personnel authorized to perform the removal, with the certificate number or other relevant information.
- \*3 If NO, describe in the *Ship Recycling Plan* where the hazardous materials are to be processed/disposed.
- \*4 These hazardous materials are specified in appendices 1 and 2 and Regulation 20 of the *Convention*.

**4.7 Reporting upon completion**

**4.7.1 Ship Recycling Completion Report**

| <b>SHIP RECYCLING COMPLETION REPORT</b>   |  |
|---|--|
| <b>Summary of Information on Ship and Ship Recycling Facility</b>   |  |
| <b>Ship Information</b>   |  |
| Name of ship  |  |
| Distinctive number or letters   |  |
| Port of registry  |  |
| Gross tonnage   |  |
| Imo number  |  |
| Name and address of shipowner   |  |
| IMO-registered owner identification number  |  |
| IMO company identification number   |  |
| Telephone number  |  |
| E-mail address  |  |
| <b>Ship Recycling Facility information</b>  |  |
| Name of ship recycling facility   |  |
| Distinctive recycling company identity no.  |  |
| Full address of ship recycling facility   |  |
| Primary contact person  |  |
| Telephone number  |  |
| E-mail address  |  |
| Name, address and contact information of ownership company  |  |
| Working language(s)   |  |
| <b>Completed tasks on ship recycling</b>  |  |
| Date of ship arrival at Ship Recycling Facility   |  |
| Date of commencement of ship recycling  |  |
| Date of completion of ship recycling  |  |
| Date of completion of sale/disposal of all components   |  |
| <p>.....</p> <p style="display: flex; justify-content: space-between;"><span>(Date)</span> <span>(Signature of Ship Recycling Facility owner/operator)</span></p> |  |

## Items to be listed in the Inventory of Hazardous Materials

Table A

| No. | Material   |   | Inventory |         |          | Threshold value       |
|-----|--|---|-----------|---------|----------|-----------------------|
|     |  |   | Part I    | Part II | Part III |                       |
| A-1 | Asbestos   |   | X         |         |          | 0.1%                  |
| A-2 | Polychlorinated biphenyls (PCBs)                                 |   | X         |         |          | 50 mg/kg              |
| A-3 | Ozone depleting Substances                                       | CFCs                                      | X         |         |          | no threshold value    |
|     |  | Halons                                    | X         |         |          |                       |
|     |  | Other fully halogenated CFCs              | X         |         |          |                       |
|     |  | Carbon tetrachloride                      | X         |         |          |                       |
|     |  | 1,1,1-trichloroethane (Methyl chloroform) | X         |         |          |                       |
|     |  | Hydrochlorofluorocarbons                  | X         |         |          |                       |
|     |  | Hydrobromofluorocarbons                   | X         |         |          |                       |
|     |  | Methyl bromide                            | X         |         |          |                       |
| A-4 | Anti-fouling systems containing organotin compounds as a biocide |   | X         |         |          | 2,500 mg total tin/kg |

Table B

| No. | Material  |  | Inventory |         |          | Threshold Value    |
|-----|---|--|-----------|---------|----------|--------------------|
|     |   |  | Part I    | Part II | Part III |                    |
| B-1 | Cadmium and cadmium compounds                                       |  | X         |         |          | 100 mg/kg          |
| B-2 | Hexavalent chromium and hexavalent chromium compounds               |  | X         |         |          | 1,000 mg/kg        |
| B-3 | Lead and lead compounds   |  | X         |         |          | 1,000 mg/kg        |
| B-4 | Mercury and mercury compounds                                       |  | X         |         |          | 1,000 mg/kg        |
| B-5 | Polybrominated biphenyl (PBBs)                                      |  | X         |         |          | 50 mg/kg           |
| B-6 | Polybrominated diphenyl ethers (PBDEs)                              |  | X         |         |          | 1,000 mg/kg        |
| B-7 | Polychlorinated naphthalenes (more than 3 chlorine atoms)           |  | X         |         |          | 50mg/kg            |
| B-8 | Radioactive substances  |  | X         |         |          | no threshold value |
| B-9 | Certain shortchain chlorinated paraffins (alkanes, c10-c13, chloro) |  | X         |         |          | 1%                 |

Table C

| No. | Properties |          | Goods  | Inventory |         |          |
|-----|------------|----------|--|-----------|---------|----------|
|     |            |          |  | Part I    | Part II | Part III |
| C-1 | Liquid     | Oiliness | Kerosene   |           |         | X        |
| C-2 |            |          | White spirit                                       |           |         | X        |
| C-3 |            |          | Lubricating oil                                    |           |         | X        |
| C-4 |            |          | Hydraulic oil                                      |           |         | X        |
| C-5 |            |          | Anti-seize compounds                               |           |         | X        |
| C-6 |            |          | Fuel additive                                      |           |         | X        |
| C-7 |            |          | Engine coolant additives                           |           |         | X        |
| C-8 |            |          | Antifreeze fluids                                  |           |         | X        |
| C-9 |            |          | Boiler and feed water treatment and test re-agents |           |         | X        |

| No.  | Properties                             |   | Goods   | Inventory |         |          |
|------|--|---|---|-----------|---------|----------|
|      |  |   |   | Part I    | Part II | Part III |
| C-10 |  |   | De-ioniser regenerating chemicals   |           |         | X        |
| C-11 |  |   | Evaporator dosing and descaling acids   |           |         | X        |
| C-12 |  |   | Paint stabilizers/rust stabilizers  |           |         | X        |
| C-13 |  |   | Solvents/thinners   |           |         | X        |
| C-14 |  |   | Paints  |           |         | X        |
| C-15 |  |   | Chemical refrigerants   |           |         | X        |
| C-16 |  |   | Battery electrolyte   |           |         | X        |
| C-17 |  |   | Alcohol, methylated spirits   |           |         | X        |
| C-18 | Gas                                    | Explosives/<br>Inflammables   | Acetylene   |           |         | X        |
| C-19 |  |   | Propane   |           |         | X        |
| C-20 |  |   | Butane  |           |         | X        |
| C-21 |  |   | Oxygen  |           |         | X        |
| C-22 |  | Green house<br>Gases  | CO <sub>2</sub>   |           |         | X        |
| C-23 |  |   | Perfluorocarbons (PFCs)   |           |         | X        |
| C-24 |  |   | Methane   |           |         | X        |
| C-25 |  |   | Hydrofluorocarbon (HFCs)  |           |         | X        |
|      |  |   |   |           |         | X        |
| C-27 |  |   | Nitrous oxide (N <sub>2</sub> O)  |           |         | X        |
| C-28 | Sulfur hexafluoride (SF <sub>6</sub> ) |   |   | X         |         |          |
| C-29 | Liquid                                 | Oiliness  | Bunkers: fuel oil   |           |         | X        |
| C-30 |  |   | Grease  |           |         | X        |
| C-31 |  |   | Waste oil (sludge)  |           | X       |          |
| C-32 |  |   | Bilge and/or waste water generated by the after-treatment systems fitted on machineries |           | X       |          |
| C-33 |  |   | Oily liquid cargo tank residues   |           | X       |          |
| C-34 |  | Ballast water<br>Raw sewage<br>Treated sewage<br>Non-oily liquid cargo residues | Ballast water   |           | X       |          |
| C-35 |  |   | Raw sewage  |           | X       |          |
| C-36 |  |   | Treated sewage  |           | X       |          |
| C-37 |  |   | Non-oily liquid cargo residues  |           | X       |          |
| C-38 | Gas                                    | Explosibility/<br>Inflammability  | Fuel gas  |           |         | X        |
| C-39 | Solid                                  |   | Dry cargo residues  |           | X       |          |
| C-40 |  |   | Medical waste/infectious waste  |           | X       |          |
| C-41 |  |   | Incinerator ash13   |           | X       |          |
| C-42 |  |   | Garbage   |           | X       |          |
| C-43 |  |   | Fuel tank residues  |           | X       |          |
| C-44 |  |   | Oily solid cargo tank residues  |           | X       |          |
| C-45 |  |   | Oily or chemical contaminated rags  |           | X       |          |
| C-46 |  |   | Batteries (incl. lead acid batteries)   |           |         | X        |
| C-47 |  |   | Pesticides/insecticide sprays   |           |         | X        |
| C-48 |  |   | Extinguishers   |           |         | X        |
| C-49 |  |   | Chemical cleaner (incl. electrical equipment cleaner, carbon remover)                   |           |         | X        |
| C-50 |  |   | Detergent/bleacher (could be a liquid)  |           |         | X        |
| C-51 |  |   | Miscellaneous medicines   |           |         | X        |
| C-52 |  |   | Fire fighting clothing and personal protective Equipment                                |           |         | X        |

| No.  | Properties | Goods  | Inventory |         |          |
|------|------------|--|-----------|---------|----------|
|      |            |  | Part I    | Part II | Part III |
| C-53 |            | Dry tank residues  |           | X       |          |
| C-54 |            | Cargo residues   |           | X       |          |
| C-55 |            | Spare parts which contain materials listed in Table A or Table B |           |         | X        |

### Standard Format of the Inventory of Hazardous Materials

**Part I – HAZARDOUS MATERIALS CONTAINED IN THE SHIP'S STRUCTURE AND EQUIPMENT**
**I-1 Paints and coating systems containing prohibited or restricted hazardous materials**

| No. | Application of paint | Name of paint | Location | Materials | Approximate quantity | Remarks |
|-----|----------------------|---------------|----------|-----------|----------------------|---------|
| 1   |                      |               |          |           |                      |         |
| 2   |                      |               |          |           |                      |         |

**I-2 Equipment and machinery containing prohibited or restricted hazardous materials**

| No. | Name of machinery or equipment | Location | Materials | Parts where used | Approximate quantity | Remarks |
|-----|--------------------------------|----------|-----------|------------------|----------------------|---------|
| 1   |                                |          |           |                  |                      |         |
| 2   |                                |          |           |                  |                      |         |

**I-3 Structure and hull containing prohibited or restricted hazardous materials**

| No | Name of machinery or equipment | Location | Materials | Parts where used | Approximate quantity | Remarks |
|----|--------------------------------|----------|-----------|------------------|----------------------|---------|
| 1  |                                |          |           |                  |                      |         |
| 2  |                                |          |           |                  |                      |         |

**PART II – OPERATIONALLY GENERATED WASTE**

| No. | Location | Name of equipment and machinery | Approximate quantity | Remarks |
|-----|----------|---------------------------------|----------------------|---------|
| 1   |          |                                 |                      |         |
| 2   |          |                                 |                      |         |
|     |          |                                 |                      |         |
|     |          |                                 |                      |         |

**PART III – STORES**
**III-1 Stores**

| No. | Location | Name of item | Unit quantity | Figure | Approximate quantity | Remarks |
|-----|----------|--------------|---------------|--------|----------------------|---------|
| 1   |          |              |               |        |                      |         |
| 2   |          |              |               |        |                      |         |

**III-2 Liquids sealed in ship's machinery and equipment**

| No. | Type of liquids | Name of machinery or equipment | Location | Approximate quantity | Remarks |
|-----|-----------------|--------------------------------|----------|----------------------|---------|
| 1   |                 |                                |          |                      |         |
| 2   |                 |                                |          |                      |         |

**III-3 Gases sealed in ship's machinery and equipment**

| No. | Type of gases | Name of machinery or equipment | Location | Approximate quantity | Remarks |
|-----|---------------|--------------------------------|----------|----------------------|---------|
| 1   |               |                                |          |                      |         |
| 2   |               |                                |          |                      |         |

**III-4 Regular consumable goods potentially containing Hazardous Materials**

| No. | Location | Name of item | Quantity | Remarks |
|-----|----------|--------------|----------|---------|
| 1   |          |              |          |         |
| 2   |          |              |          |         |

**Standard format of the Application for inclusion in the European List  
of Ship Recycling Facilities (for non-EU countries)**

| <b>PART I: Identification of the ship recycling facility</b>   |   |
|--|---|
| Name of ship recycling facility  |   |
| Distinctive Recycling Company identification No.   |   |
| Full address of ship recycling facility  |   |
| Primary contact person   |   |
| Phone number   |   |
| Email address  |   |
| Name, address and contact information of ownership company   |   |
| Working language   |   |
| <b>PART II: Additional information</b>   |   |
| Method(s) of recycling <sup>(1)</sup>  |   |
| Type(s) of ships that can be recycled  |   |
| Procedure for approval of the ship recycling plan <sup>(2)</sup>   |   |
| Number of employees at the time of application   |   |
| Maximum ship recycling output achieved on a given year in the past 10 years (in LDT) <sup>(3)</sup>  |   |
| Description of the ship recycling facility (layout, water depth, accessibility, etc)   |   |
| <p><sup>1</sup> Including the environmental monitoring programme aimed at preventing possible negative impacts to the environment during ship recycling, such as I. releases of Hazardous Materials to ground and sediments; II. releases of Hazardous Materials to water; III. emissions of Hazardous Materials to air; and IV noise/vibrations.</p> <p><sup>2</sup> The procedure of approval can be either tacit or explicit (acc. to Art.7(3) and 15(2) of the EU SRR).</p> <p><sup>3</sup> The figure should be documented (official confirmations of that year recycling completion. As per Article 32 of the EU SRR, the figure is calculated as ‘the sum of the weight of ships expressed in LDT that have been recycled in a given year in that facility. The maximum annual ship recycling output is determined by selecting the highest value occurring in the preceding 10-year period for each ship recycling facility, or, in the case of a newly authorised ship recycling facility, the highest annual value achieved at that facility’.</p> |   |
| <b>Heavy equipment</b>   |   |
| Heavy – lifting machines   | e.g. Jib crane: 60 tonnes   |
|  | e.g. Jib crane: 60 tonnes   |
|  | e.g. Mobile crane: 35 tonnes × 1, 27 tonnes × 1                       |
|  | e.g. Hydraulic backhoe: SH400, ZX330, SK220, ZX200 with Shear, Magnet |
|  | e.g. Hydraulic shear: 600 tonnes × 1                                  |
|  | e.g. Weight bridge: 50 tonnes   |
|  |   |
|  |   |
| Boat   | e.g. Gross tonnage: 5 tonnes, Power 240 HP                            |
| Shear  | e.g. Capacity: 600 tonnes   |

| <b>Other equipment</b>  |  |
|---|--|
| O <sub>2</sub> supply   | e.g. Liquid O <sub>2</sub> supply system: 10m <sup>3</sup>                                 |
| Gas supply  | e.g. LPG bottles   |
| Compressed air  |  |
| Fire extinguishers  | e.g. Portable fire extinguisher capacity   |
| Waste oil treatment   | e.g. Oil water separation tank<br>Tank capacity: abt. 20 tonnes                            |
| Wastes storage  | e.g. Container for asbestos: 2   |
| Incinerator(s)  | e.g. none  |
| Electric power supply   | e.g. substation  |
| <b>Location of the facility <sup>1)</sup></b>   |  |
| Division and classification of the location   | e.g. urbanisation control area   |
| Area of the facility (in sqm)   |  |
| Area of pavement  |  |
| Peripheral environment  | e.g. factories: former quarry, two marinas in the vicinity, vulnerable environmental zones |
|   | e.g. Housing: private houses at the entrance and 200m from entrance                        |
| <sup>1)</sup> Acc to Art. 15(2) of the UE SRR, a map of boundary of the SRF shall be attached to the application. |  |
| <b>Workers' certificates / licences <sup>2)</sup></b>   |  |
| Certificate / licence   | Number of personnel / qualifications <sup>3)</sup>   |
| 1) Manager of asbestos handling   |  |
| 2) Manager of PCB handling  |  |
| 3) Designated chemicals handling  |  |
| 4) Asbestos handling class  |  |
|   |  |
|   |  |
| 5) Gas cutting  |  |
|   |  |
|   |  |
| 6) Welding  |  |
| 7) Zinc handling  |  |
| 8) Lifting  |  |
| 9) Heavy lift machines  |  |
| 10) Seafarer  |  |
| 11) Diver   |  |
| 12) Removal of Hazardous Materials (Material A)   |  |
| (Material B)  |  |
| (Material C)  |  |

|              |  |
|--------------|--|
| (Material D) |  |
| (Material E) |  |
| (Material F) |  |
| (Material G) |  |
| (Material H) |  |
| (Material I) |  |
| (Material J) |  |
| (Material K) |  |

<sup>2</sup> Please note that it is only necessary to fill in corresponding lines in the table with regard to those hazardous materials the ship recycling facility is authorised to remove.

<sup>3</sup> Please note that the ship recycling company must at all times be in a position to provide evidence of the competence of each member of personnel authorised to carry out the removal of hazardous materials to the European Commission or agents acting on its behalf.

**PART III: Identification of the permit, license and authorisation granted by the competent authority/-ties to conduct ship recycling**

As per Article 15(2)(a) of Regulation (EU) No 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling, the ship recycling company shall provide a copy of document(s) issued by its competent authorities to conduct the ship recycling and, where relevant, the permit, licence or authorisation granted by the competent authorities to all its contractors and sub-contractors directly involved in the process of ship recycling.

Permit, license or authorisation document(s) attached to the application file <sup>1)</sup>:

| Name of document | Country of issuance | Issuing Competent Authority | Issued on (date) | Valid until (date or indefinite) | Beneficiary entity |
|------------------|---------------------|-----------------------------|------------------|----------------------------------|--------------------|
|                  |                     |                             |                  |                                  |                    |
|                  |                     |                             |                  |                                  |                    |
|                  |                     |                             |                  |                                  |                    |
|                  |                     |                             |                  |                                  |                    |
|                  |                     |                             |                  |                                  |                    |
|                  |                     |                             |                  |                                  |                    |

<sup>1)</sup> Name of the ship recycling company and / or its contractor /sub-contractor concerned by the document.

**PART IV: Capability and limitations of the ship recycling facility**

The ship recycling facility is authorised to accept a ship for recycling subject to the following size limitations:

| Maximum capacity of ship to be recycled | Other limitation |
|---|------------------|
| DWT                                     |                  |
| GT                                      |                  |
| LDT                                     |                  |
| Length                                  |                  |
| Breadth                                 |                  |
| Width                                   |                  |
| Depth                                   |                  |

The ship recycling facility is authorised to accept a ship for recycling that contains hazardous materials as specified in the following table subject to the conditions noted below:

| <p><b>Management of hazardous materials</b><br/>For the management of each item, the national and/or international requirements should be identified for reference. Any limitations imposed under the authorisation granted by the competent authority/-ies of the country where the facility is located should be mentioned. The hazardous materials may be present in parts of the ship or equipment (e.g. in paint or as plastic additives) or in chemical mixtures (e.g. cooling fluids).</p> | <p><b>Descriptions of the management steps</b><br/>As per Article 15(2)(f)(ii) of SRR, please:<br/>1) indicate which management process will be applied,<br/>2) indicate the location where the activity takes place (either within the facility or at a downstream waste management facility – in the latter case, information should also be provided, including the facility name and contact information)<br/>3) provide evidence that the applied process will be carried out without endangering human health and in an environmentally sound manner.</p> |
|---|---|
| 1) Asbestos   | Removal<br>Storage<br>Waste treatment   |
| 2) Ozone-depleting substances   | Removal<br>Storage<br>Waste treatment   |
| <p>Heavy metals:<br/>3) Tinorganic anti-fouling compounds and system<br/>4) Cadmium and Cadmium Compounds<br/>5) Hexavalent Chromium and Hexavalent Chromium Compounds<br/>6) Lead and Lead Compounds<br/>7) Mercury and Mercury Compounds</p>  | Removal<br>Storage<br>Waste treatment   |
| <p>Flame retardants:<br/>8) Polybrominated Diphenyl Ethers (PBDEs)<br/>9) Hexabromocyclohexane (HBCDD)<br/>10) Polybrominated Biphenyl (PBBs)</p>   | Removal<br>Storage<br>Waste treatment   |
| 11) Radioactive substances  | Removal<br>Storage<br>Waste treatment   |
| <p>Other Persistent Organic Pollutants (POPs):<br/>12) Polychlorinated biphenyls (PCB)<br/>13) Perfluorooctane sulfonic acid (PFOS)<br/>14) Polychlorinated Naphthalenes (more than 3 chlorine atoms)<br/>15) Certain Short-Chain Chlorinated Paraffins (SCCP)</p>  | Removal<br>Storage<br>Waste treatment   |
| 16) Hazardous liquids, residues and sediments   | Removal<br>Storage<br>Waste treatment   |
| 17) Paints and coatings that are highly flammable and/or lead to toxic release  | Removal<br>Storage<br>Waste treatment   |
| 18) Other Hazardous Materials not listed above and that are not part of the ship structure (specify)  | Removal<br>Storage<br>Waste treatment   |

**PART V: Statement concerning the recycling of EU Member States flag ship**

RECYCLING OF SHIPS FLYING THE FLAG OF A MEMBER STATE OF THE EUROPEAN UNION

Hereby, (*name*) .....

on behalf of .....

(*company*)

(hereafter 'the company') confirms that the company will accept ships flying the flag of EU Member States for recycling only in accordance with the requirements laid out in Regulation (EU) No 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling. Furthermore, the company will:

- (a) prior to any recycling of the ship:
  - send the ship recycling plan, approved by the competent authority according to the procedure applicable (1), to the ship owner and the administration or a recognised organisation authorised by it;
  - report to the administration that the ship recycling facility is ready in every respect to start the recycling of the ship;
- (b) when the total or partial recycling of a ship is completed in accordance with this Regulation, within 14 days of the date of the total or partial recycling in accordance with the ship recycling plan, send a statement of completion to the administration which issued the ready for recycling certificate for the ship. The statement of completion will include a report on incidents and accidents damaging human health and/or the environment, if any.

Place ..... Date .....

Signature:

NB: The statement does not imply that the facility may not accept ships flying the flag of a third country.

**PART VI: Statement concerning waste recovery and disposal operations**

WASTE RECOVERY AND DISPOSAL OPERATIONS

Further to the 2009 Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, Regulation (EU) No 1257/2013 of the European Parliament and of the Council on ship recycling aims to prevent, reduce, minimise and, to the extent practicable, eliminate accidents, injuries and other adverse effects on human health and the environment caused by ship recycling. Article 15(5) of the Regulation requires that the ship recycling company must be able to demonstrate that the waste management facility which receives the waste will be operated in accordance with human health and environmental protection standards that are broadly equivalent to relevant international and European Union standards.

Hereby, (*name*) .....

on behalf of .....

(*company*)

(hereafter 'the company') confirms to the best of its knowledge that the waste management facility or facilities receiving the waste from the ship recycling facility is (are):

- (a) authorised by its competent national authorities to deal with the waste it receives;
- (b) operated in accordance with human health and environmental protection standards that are broadly equivalent to relevant international and European Union standards;

Along with this statement, the company provides a copy of all relevant documents obtained by the waste management facility or facilities (see Part 2).

Place ..... Date .....

Signature:

**PART VII: Ship Recycling Facility Plan**

**SHIP RECYCLING FACILITY PLAN**

In accordance with Article 15(2)(g) of Regulation (EU) No 1257/2013 of the European Parliament and of the Council on ship recycling of 20 November 2013, the ship recycling company is required to confirm that it has adopted a ship recycling facility plan, taking into account the relevant IMO guidelines.

I (name).....

declare that a Ship Recycling Facility Plan was adopted by (*company*) .....

A copy of the Ship Recycling Facility Plan is attached to the application file.

Place ..... Date .....

Signature:

**PART VIII: Safe-for-hot work and Safe-for-entry criteria**

As per Article 15(2)(d) of EU SRR, the ship recycling company provides evidence that the ship recycling facility is capable of establishing, maintaining and monitoring of the safe-for-hot work and safe-for-entry criteria throughout the ship recycling process.

|                           | Evidence attached to the application file <sup>1)</sup> |
|---------------------------|---|
| Safe-for-hot work         |   |
| Safe-for entry conditions |   |

<sup>1)</sup> Refer to the relevant extracts of the Ship Recycling Facility Plan attached to this application.

### List of amendments effective on 15 March 2017

| <i>Item</i>           | <i>Title/Subject</i>         | <i>Source</i>   |
|-----------------------|------------------------------|---|
| <a href="#">1.3</a>   | Normative references' update | Commission Implementing Decision<br>(EU) 2016/2323<br>(C /2016 /8507) |
| <a href="#">4.1.3</a> | Requirements updated         | Commission Implementing Decision<br>(EU) 2016/2323<br>(C /2016 /8507) |

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