Ship Recycling

- IHM Preparation for New Building Ships -

November 2010

The Shipbuilders' Association of Japan

Contents

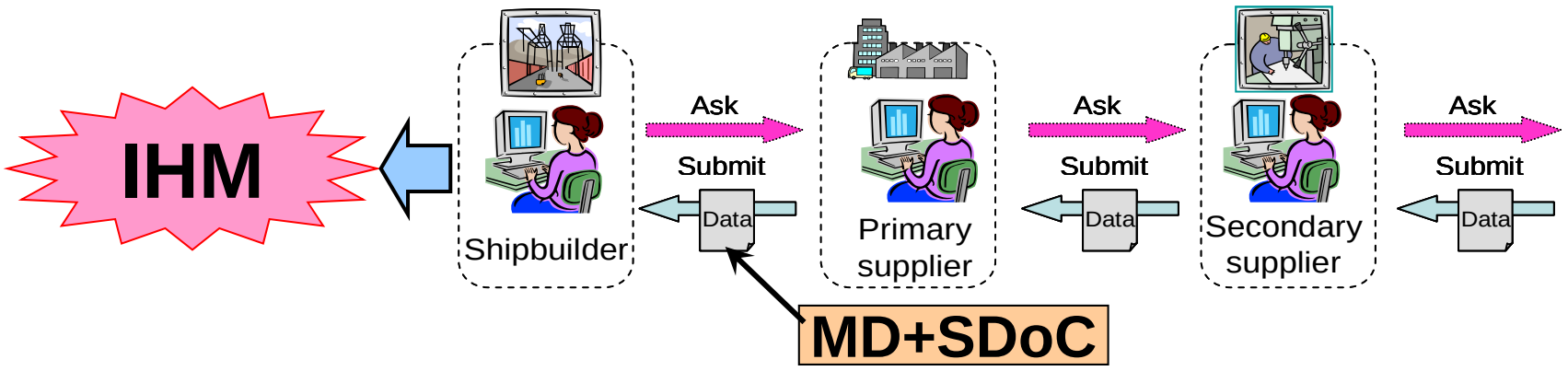
1. IHM Preparation for New Building Ships

"The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009"

Adopted May 2009

Inventory of Hazardous Materials (IHM) is requested.

Shipbuilders shall collect Materials Declaration (MD) and Supplier's Declaration of Conformity (SDoC) from the products' suppliers and prepare the IHM.



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Definition of MD and SDoC

Supplier:

A company such as manufacturer, trader or agency who provides products to shipyards and has responsibility for the products

Materials Declaration (MD):

The document identifying whether the material contained in table A materials (materials prohibited or restricted) and table B materials (specific chemical substance) designated in accordance with the Convention and Guidelines

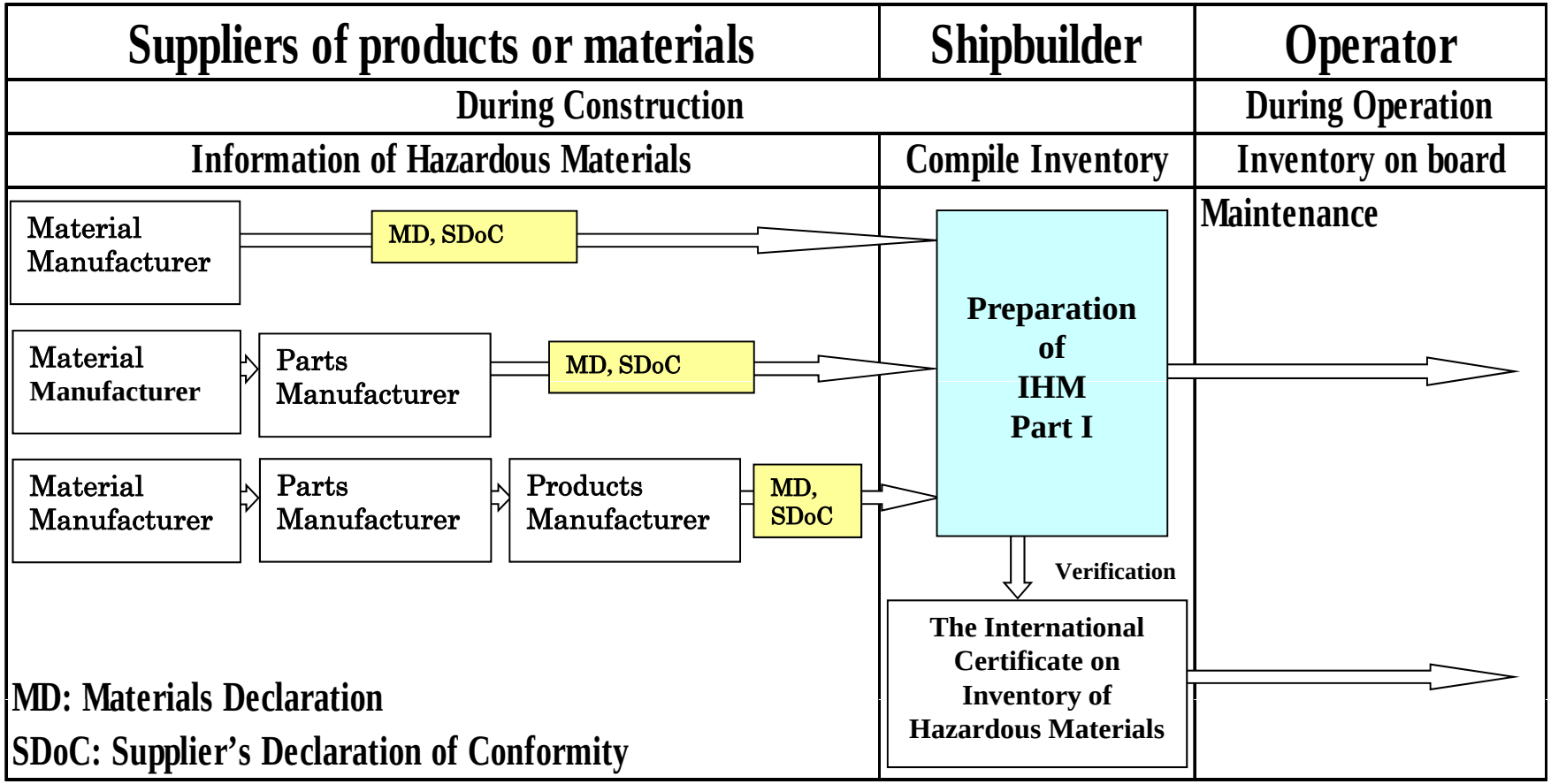
Supplier's Declaration of Conformity (SDoC):

The document assuring that the product and its related MD conforms to the law and is suitable for the management and control of the information on chemical substances contained, and who is responsible for the product and MD

MD shall be prepared for all the products regardless of existence of materials listed in table A and table B or not.

2. Procedure of IHM Preparation

(1) Collection of Hazardous Materials Information
(2) Check of Hazardous Materials Information
(3) Preparation of the IHM Part I
(4) Submission of the IHM Part I for the Certification



3. Trials of IHM Preparation

The Shipbuilders' Association of Japan (SAJ) conducted trials for IHM preparation two times.

3.1 First Trial of IHM Preparation

First trial: from Oct. 2007 to Feb. 2008
IHM of 3 vessels according to the draft of Guidelines

<Trial results of IHM Preparation>

- Acquisition of MD ⇒ 75 to 85%
- Description of MD & SDoC ⇒ Not correct
- Made comments on the guidelines to the Japan National Committee of Ship Recycling.
- We, shipbuilders, found necessity to develop software to compile a great number of MDs and prepare the IHM.

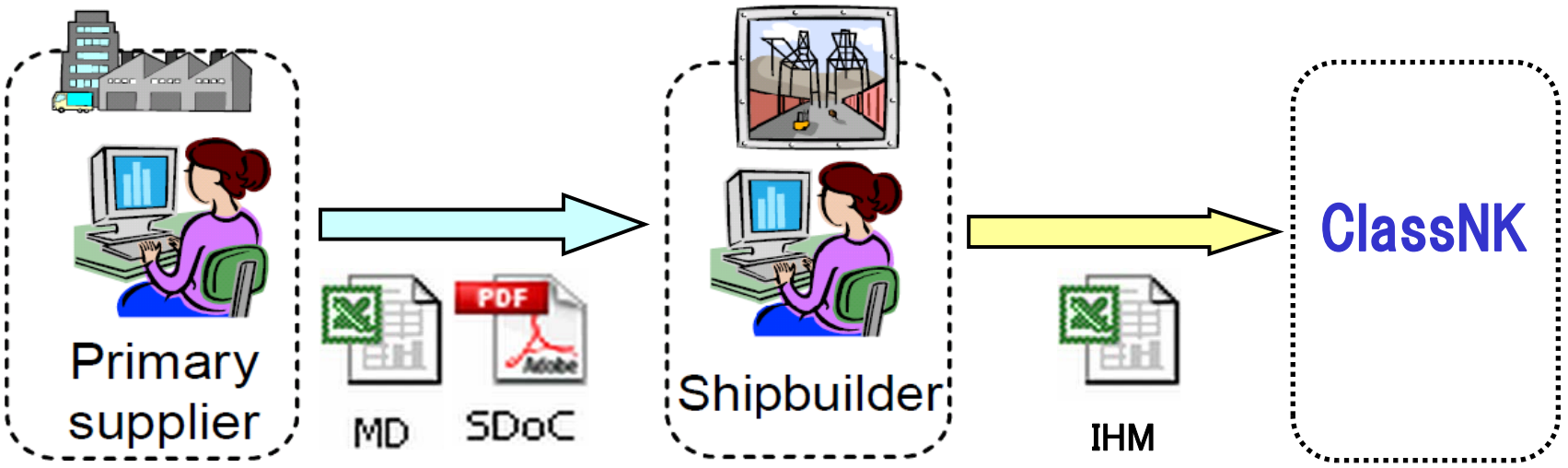
3.2 PrimeShip-INVENTORY

Nippon Kaiji Kyokai (ClassNK) also practiced trial development of IHM for new building ships and trial surveys, and issues as below were found.

- Cooperation through Maritime Supply Chain is essential.
- Interpretation of Guidelines for developing IHM, MD & SDoC is also needed.
- Standardization of forms of MD & SDoC is needed.

Then, “PrimeShip-INVENTORY” has been developed for preparation and approval for IHM of new building ships efficiently using by e-Format concept. And ClassNK offered everybody to use the “PrimeShip-INVENTORY” without fee.

Outline of PrimeShip-INVENTORY



Prepare MD by “MD Tool” and prepare SDoC

Import MD & SDoC files

Input Location information

Prepare IHM

Examine IHM and issue the Certificate

3.3 Second Trial of IHM Preparation

Second trial: from Jan. 2009 to Dec.2009
IHM of 10 vessels using PrimeShip-INVENTORY

<Trial results of IHM Preparation>

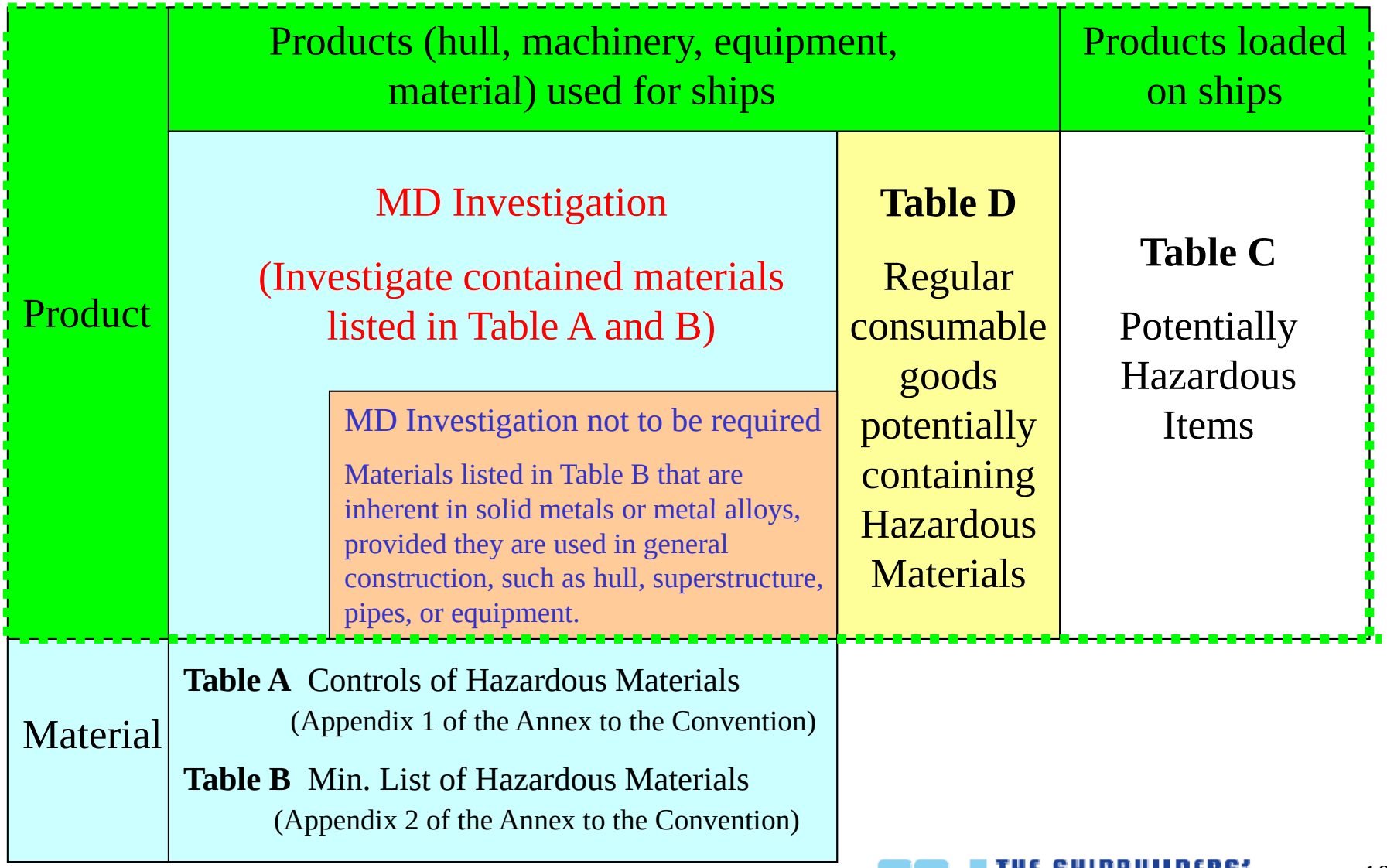
- Acquisition of MD ⇒ 80 to 99%
- Description of MD & SDoC ⇒ Still not correct
- Correction and collection of MD & SDoC ⇒ Long time

Lessons learned from the trials;

- MD should be correctly described.
- Unified format of MD is required for accuracy and time-saving.

4. Materials Declaration (MD)

4.1 Object of MD Investigation



4.1 Object of MD Investigation

In general, Materials Declarations (MDs) should be collected for all the products that consist of hull, machinery, equipment and material.

Exception

MD investigation is not required for materials listed in table B that are inherent in solid metals or metal alloys, provided they are used in general construction, such as hull, superstructure, pipes, or equipment.

For example:

- Hull construction, superstructure and other structures such as rudder plate
- Normally used steel or alloy pipes such as steel, AlBr, copper and stainless steel
- Large fittings such as masts, tanks, etc.

However, MD should be obtained in case the above steel plates and pipes being coated or plated.

4.1 Object of MD Investigation

Regular consumable goods which are fixed and composed in ship's equipment or machinery shall be requested by MD investigation as a part of the equipment or machinery.

For example:

Interior fluorescent lamp

Socket	MD required
Lamp	MD not required

Refrigerator

Large refrigerator on the market	MD not required
Refrigerator composed of part of hull construction	MD required

Personal computer

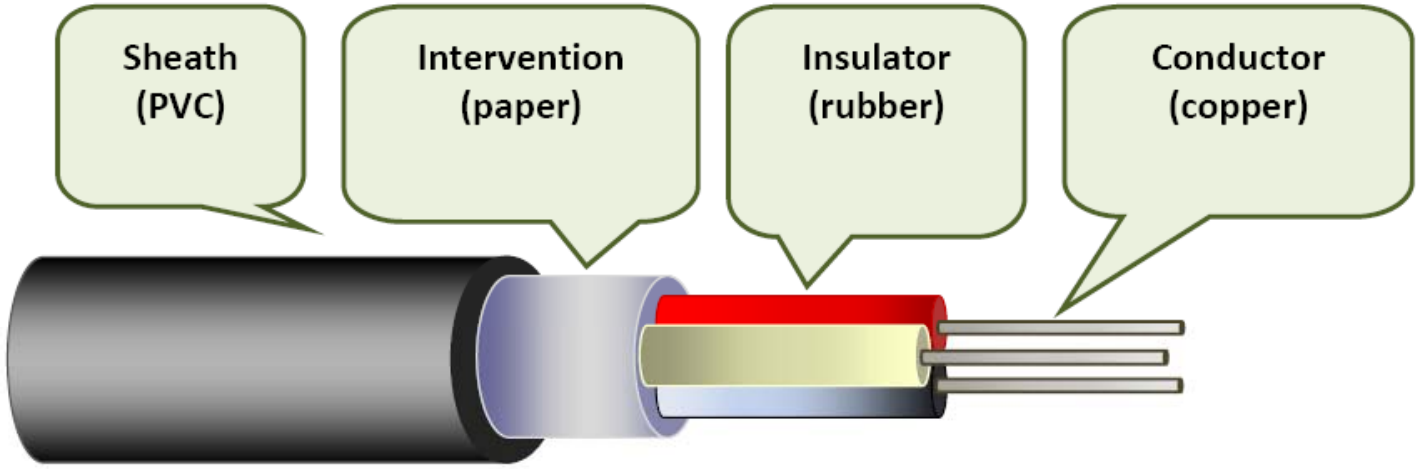
PC composed in an equipment	MD required
Personal use (not composed in)	MD not required

MD should be collected in general, in case it is not clear whether MD is required or not.

Definition of Homogeneous Materials

Homogeneous materials mean
the material of uniform composition throughout, and
cannot be mechanically disjointed into different materials.

Electric cable: Sheath, intervention, insulator and conductor are all individual homogeneous materials.



Plating: Base metal and plating layer are treated as not mechanically separable. (Base metal and plating layer consist of one homogeneous material.)

Paint: Paint itself consists of one homogeneous material.
(Each layer of coating paints is treated respectively.)

4.2 Check Points of MD

SDoC ID No. described in Materials Declaration (MD) coincides with the ID No. of Supplier's Declaration of Conformity (SDoC).

FORM OF MATERIAL DECLARATION

<Date of declaration>

Date	

<MD ID number>

MD- ID-No.	

<Other information>

Remark 1	
Remark 2	
Remark 3	

<Supplier (respondent) information>

Company name	
Division name	
Address	
Contact person	
Telephone number	
Fax number	
E-mail address	
SDoC ID no.:	XXXXXXX

Coincident

FORM OF SUPPLIER'S DECLARATION OF CONFORMITY

Supplier's Declaration of Conformity for Material Declaration management

1) Identification number: XXXXXXX

Check of Hazardous Materials Information

All figures need to calculate the amount of hazardous materials shall be informed.

The products containing table A materials over the threshold level are prohibited.

FORM OF MATERIAL DECLARATION

<Product information>

Product name	Product number	Delivered unit: Amount	Delivered unit: Unit	Product information
xxxxxxxx	xxxxxxxxxx	(1)	(A)	

Coincide

HM=(1)x(2) (C)

<Materials information>

This materials information shows the amount of hazardous materials contained in 1 (B) (unit: piece, kg, m, m², m³, etc) of the product.

Table	Material name		Threshold level	Present above threshold level: Yes / No	If yes, material mass: Mass	If yes, material mass: Unit	If yes, information on where it is used
Table A	Asbestos	Asbestos	no threshold level	No			
	Polychlorinated biphenyls (PCBs)	Polychlorinated biphenyls (PCBs)	no threshold level	No			

Table	Material name	Threshold level	Present above threshold level: Yes / No	If yes, material mass: Mass	If yes, material mass: Unit	If yes, information on where it is used
Table B	Cadmium and cadmium compounds	100 mg/kg	No			
	Hexavalent chromium and hexavalent chromium compounds	1,000 mg/kg	Yes	(2)	(C)	

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Point of MD Preparation

MD should be prepared paying attention to;

- One MD should be prepared for one product in principle.
- The content of the hazardous materials (HM) shall be specified in case of exceeding the threshold level.

  In case not exceeding the threshold level, “No” shall be specified.

  Threshold level means the concentration value in homogeneous materials (mg/kg).
- Content of HM can be specified either by designed, calculated, theoretical, controlled or measured figures.
- Table B materials are contained in the following products;

Galvanization	Cadmium, Lead
Copper alloy	Cadmium, Lead
Solder	Lead
Electric contactor	Cadmium, Lead
Electric cable (vinyl stabilizer)	Lead
Fluorescent lamp	Mercury

Point of MD Preparation

MD should be prepared paying attention to;

- In case the same HM is contained in many parts or portions, such names of the parts or portions should be described, and the total amount of HM also described.

  For identical common or mass-product items, such as bolts, nuts and valves, there is no need to list each item individually.

- In case the parts of product contain the HM above the threshold level and are arranged on different location of the vessel, the MD of the parts should be prepared separately.

  For example;

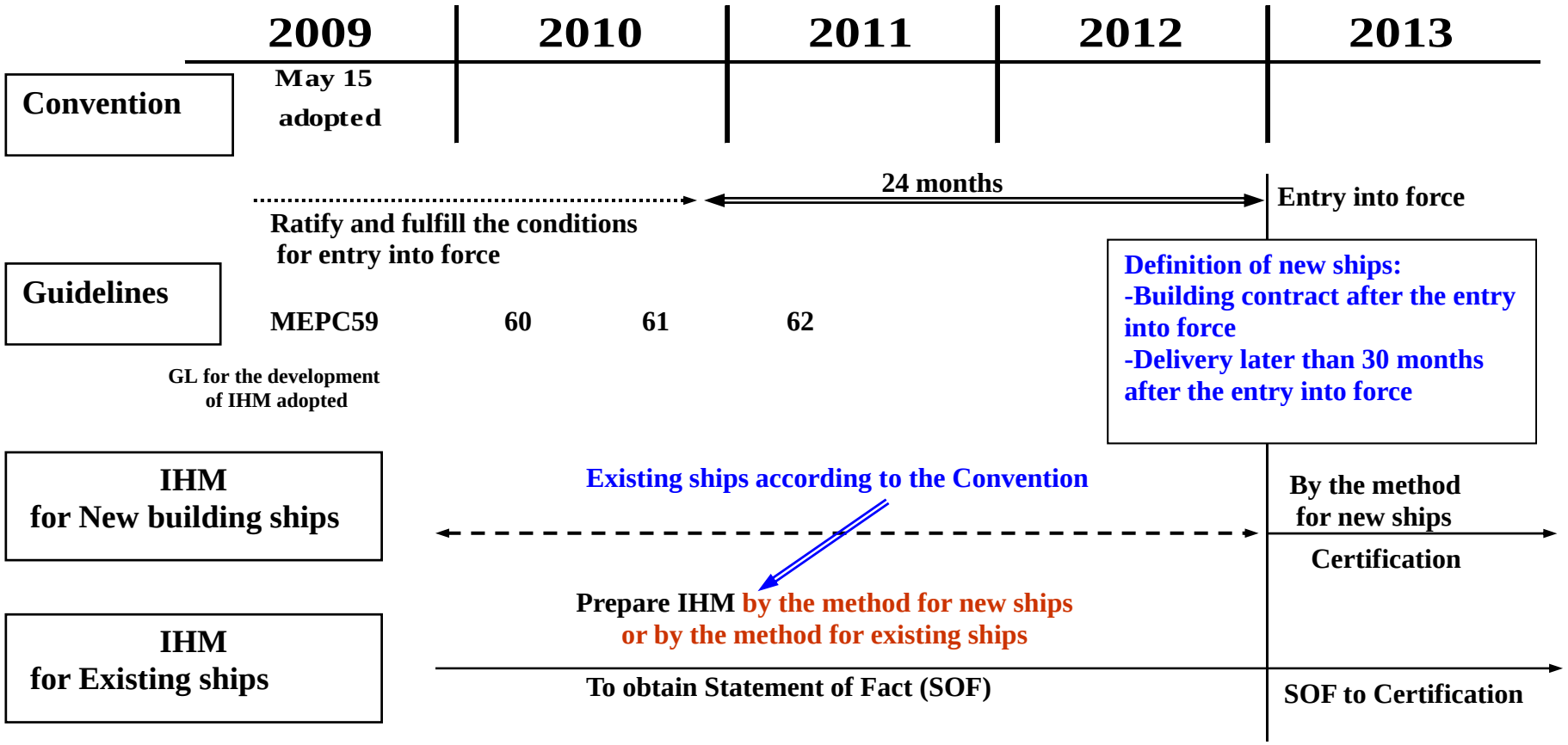
  Refrigerator and diffusers of air conditioning system

  Sensor and gauge of level indicator

To avoid potential confusion after the Convention entry into force, the unified manual among shipbuilding industry is requested

5. IHM Preparation from Now on

At the earliest, the Convention may enter into force in 2012.



New building ships before entry into force ⇒ Treated as existing ships

The SAJ will enhance the usage of unified format of MD.

Thank you for your kind attention!!