Standardization of the Inventory of Hazardous Materials, Material Declaration, and Suppliers' Declaration of Conformity

Nippon Kaiji Kyokai 3 December 2009
Contents

1. Inventory of Hazardous Materials (IHM) for Newly Built Ships
2. IHM for Existing Ships
3. Japan’s Activities towards Implementation of Development and Survey of IHM, MD and SDoC

Before going to main slides, I would like to introduce outline of the Convention briefly.
Why?
We need Standardization in development of IHM for New Ships.
Shipbuilder is requested to develop the Inventory-Part 1* for New Ships at the time of delivery.

* Quantity and Location of Hazardous Materials of Ship Structure and Equipment.

We practiced Trial Developments of IHM for Newly Built Ships and Trial Surveys, and issues as below were found.

Cooperation through Maritime Supply Chain is essential,

Interpretation of Guidelines for developing IHM, MD, and SDoC is also needed,

As a result of Trial Development,

A manual including some interpretation of Guidelines helps development of IHM, MD and SDoC for Newly Built Ships.
IHM, MD and SDoC for New Ships

- When Shipbuilders request different forms of MD and SDoC, Suppliers have difficulties in filling them in.
- When Suppliers submit different forms of MD and SDoC, Shipbuilders have difficulties in collecting them and developing IHM from them.
- Standardization of forms of MD and SDoC is needed.
MD-Form & SDoC-Form

Submission of “What the product contains?”
Supplier shall identify and declare whether Table A & B Materials are intentionally added above the threshold level using special form: Material Declaration (MD)

Submission of “How the product is made?”
* Supplier’s Declaration of Conformity (SDoC) shall be submitted with Material Declaration (MD).

Contents to be declared in SDoC
1. Company policy
2. Applicable laws
3. Management responsibility
4. Acquisition of chemical content info.
5. Revision notification of chemical content info.
6. Documentation management
7. Conduction of Internal audit
8. Management review

✓ Supplier’s Declaration of Conformity (SDoC) gives assurance of conformity on the related MD.
Conclusion of Development of IHM, MD, and SDoC for New Ships

- A manual including interpretation of Guidelines for developing IHM, MD, and SDoC is needed.
- Standardization of forms of MD and SDoC is needed.
e-Format is also an idea.

**NO NEED** when e-system is made.

- ✓ to collect MD & SDoC one by one by FAX or Post
- ✓ to screen MD with Hazardous Materials (HM) by hand
- ✓ to calculate the mass of HM at each location by hand
- ✓ to prepare IHM by hand
- ✓ to submit and keep MD/SDoC in paper format

Greatly reduces the Industry’s work for developing the Inventory
Another Standardization of Development of IHM - It’s for Existing Ships.
Level of investigation
“Shall comply as far as Practicable”, at least Table A Materials should be identified.

Deadline for development of the Inventory
Within 5 years after the Convention enters into force

Method of the development
Same steps as New Ships (trace supply chain)

OR
Alternative procedures by Experts according to the necessary steps prescribed in “the Guideline for the Convention”
Steps of IHM for Existing Ships

We practiced Trial Developments of IHM for Existing Ships and Surveys for Implementation and Confirming Steps.

<Step1> Collection of necessary information
As-fitted drawings, Manuals, Data on sister ships etc.

<Step2> Analysis and Definition of scope of investigations
Table A Materials are compulsory, Table B recommended.

<Step3> Preparation of Visual/Sampling Check Plan
Classify the area for (1) Visual check, (2) Sampling check, (3) Potential.

<Step4> Onboard Visual Check and Sampling Check
The area where Check cannot be done are classified as Potential area.

<Step5> Preparation of IHM - Part I
Classify into “Containing Hazardous Material” or “Potentially containing Hazardous Material” with quantity and location.

<Administration or RO> On Board Survey
Administration/RO has on-board survey through IHM and/or VSC plan

<Administration or RO> Approval of IHM
Steps of IHM for Existing Ships

1. Investigation of Plans

- **<Step1> Collection of necessary information**
  - As listed drawings, Manuals, Data on sister ships etc.

- **<Step2> Analysis and Definition of scope of investigations**
  - Table A Materials are compulsory, Table B recommended.

- **<Step3> Preparation of Visual/Sampling Check Plan**
  - Classify the area for (1) Visual check, (2) Sampling check, (3) Potential.

- **<Step4> Onboard Visual Check and Sampling Check**
  - The area where Check cannot be done are classified as Potential area.

- **<Step5> Preparation of IHM - Part I**
  - Classify into “Containing Hazardous Material” or “Potentially containing Hazardous Material” with quantity and location.

- **<Administration or RO> On Board Survey**
  - Administration/RO has on-board survey through IHM and/or VSC plan

- **<Administration or RO> Approval of IHM**
Steps of IHM for Existing Ships

2. Onboard Check (at Store Survey)

- **Step 1**: Collection of necessary information
  - As-fitted drawings, Manuals, Data on sister ships etc.

- **Step 2**: Analysis and Definition of scope of investigations
  - Table A Materials are compulsory, Table B recommended.

- **Step 3**: Preparation of Visual/Sampling Check Plan
  - Classify the area for (1) Visual check, (2) Sampling check, (3) Potential.

- **Step 4**: Onboard Visual Check and Sampling Check
  - The area where Check cannot be done are classified as Potential area.

- **Step 5**: Preparation of IHM - Part I
  - Classify into “Containing Hazardous Material” or “Potentially containing Hazardous Material” with quantity and location.

- **Administration or RO**: On Board Survey
  - Administration/RO has on board survey through IHM and/or VSC plan

- **Administration or RO**: Approval of IHM

*Surveying Store for investigating used packing.*
3. Onboard Check (Sampling Check)

- **Step 1**: Collection of necessary information
  - As-fitted drawings, Manuals, Data on sister ships etc.

- **Step 2**: Analysis and Definition of scope of investigations
  - Table A Materials are compulsory, Table B recommended.

- **Step 3**: Preparation of Visual/Sampling Check Plan
  - Classify the area for (1) Visual check, (2) Sampling check, (3) Potential.

- **Step 4**: Onboard Visual Check and Sampling Check
  - The area where Check cannot be done are classified as Potential area.

- **Step 5**: Preparation of IHM - Part I
  - Classify into “Containing Hazardous Material” or “Potentially containing Hazardous Material” with quantity and location.

- **Administration or RO**: On Board Survey
  - Administration/RO has on-board survey through IHM and/or VSC plan

- **Administration or RO**: Approval of IHM

*Sampling check of turbo charger.*
Steps of IHM for Existing Ships

4. Making IHM

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1.   | Collection of necessary information  
As-fitted drawings, Manuals, Data on sister ships etc. |
| 2.   | Analysis and Definition of scope of investigations  
Table A Materials are compulsory, Table B recommended. |
| 3.   | Preparation of Visual/Sampling Check Plan  
Classify the area for (1) Visual check, (2) Sampling check, (3) Potential. |
| 4.   | Onboard Visual Check and Sampling Check  
The area where Check cannot be done are classified as Potential area. |
| 5.   | Preparation of IHM - Part I  
Classify into “Containing Hazardous Material” or “Potentially containing Hazardous Material” with quantity and location. |
|       | Administration or RO > On Board Survey  
Administration/RO has on-board survey through IHM and/or VSC plan |
|       | Administration or RO > Approval of IHM |

Making IHM and submitting to Administration or RO for approval.
Inventory of Hazardous Materials:

**Part I: HAZARDOUS MATERIALS CONTAINED IN THE SHIP'S STRUCTURE AND EQUIPMENT**

### 1.1 Paints and Coating Systems containing materials listed in Table A and Table B of Appendix 1 of the Guidelines

<table>
<thead>
<tr>
<th>No</th>
<th>Application of Paint</th>
<th>Name of Paint</th>
<th>Location</th>
<th>Materials (Classification in Appx)</th>
<th>Appx Quantity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tin type AF paint of KP ACE SP A/F 100 Brown &amp; Red Oxide until April, 1994.</td>
<td>Boot top</td>
<td>TBT</td>
<td>To be written after the result of sampling analyses has been gotten.</td>
<td>kg</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tin type AF paint of KP ACE SP A/F 100 Brown &amp; Red Oxide until August 1991.</td>
<td>Vertical bottom</td>
<td>TBT</td>
<td>To be written after the result of sampling analyses has been gotten.</td>
<td>kg</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Tin type AF paint of KP ACE SP A/F 100 Brown &amp; Red Oxide until August 1991.</td>
<td>Flat bottom</td>
<td>TBT</td>
<td>To be written after the result of sampling analyses has been gotten.</td>
<td>kg</td>
<td></td>
</tr>
</tbody>
</table>

### 1.2 Equipment and Machinery containing materials listed in Table A and Table B of Appendix 1 of the Guidelines

<table>
<thead>
<tr>
<th>No</th>
<th>Name of Equipment and Machinery</th>
<th>Location</th>
<th>Materials (Classification in Appendix I)</th>
<th>Parts of Use</th>
<th>Appx Quantity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main engine</td>
<td>Lower floor</td>
<td>Asbestos</td>
<td>Packing for air cooler</td>
<td>0.24 kg</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Gasket for governor</td>
<td>0.06 kg</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Propeller</td>
<td></td>
<td>Asbestos</td>
<td>Brake lining for turning gear</td>
<td>0.03 kg</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Sheet Packing</td>
<td>0.32 kg</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Sterntube seal</td>
<td></td>
<td>Asbestos</td>
<td>Sheet packing (No.11)</td>
<td>0.28 kg</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Sheet packing (No.11)</td>
<td>0.16 kg</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Sheet packing (No.11)</td>
<td>0.16 kg</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Sheet packing (No.11)</td>
<td>0.16 kg</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Sheet packing (No.11)</td>
<td>0.16 kg</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Sheet packing (No.11)</td>
<td>0.16 kg</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Sheet packing (No.11)</td>
<td>0.16 kg</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td>Asbestos</td>
<td>Sheet packing (No.11)</td>
<td>0.16 kg</td>
<td></td>
</tr>
</tbody>
</table>

**Japanese Government and ClassNK have already established standard way of development of IHM for Existing Ships.**
Japan’s Activities toward Implementation of Development and Survey of IHM, MD and SDoC

Activities for Implementation of Scheme of the Convention
Cooperation of Maritime Sector in Japan

Stake Holders of Maritime Sector in Japan are cooperating together on Implementation of Development and Survey of IHM, MD and SDoC.
Activities in Japan for Implementation of Developing IHM

✓ Trial of Existing Ships (40 Ships)
✓ Trial of Newly Built Ships (20 Ships)
✓ Making a software for Development of IHM
✓ Arrangement of Seminars on the Convention and Meetings with Owners, Shipyards etc.
ClassNK and the Convention

ClassNK is cooperating with all the concerned parties (ship owners, shipbuilders, etc.) for necessary preparation to ensure smooth implementation of the Convention.

*For this, the following actions are being undertaken*

- **Development of the software “PrimeShip-INVENTORY”** for the preparation of Inventory for **Newly Built Ships**
- **Trial Survey** of the Inventory development of **Existing Ships**
- **Preparation** of the **Guidelines** for smooth implementation, judgment, approval, etc.
“PrimeShip-INVENTORY” has been developed for the preparation and approval of Inventory of Newly Built Ships efficiently.

- Development in cooperation with Japanese shipbuilders
- Trial use is on-going for IHM of ships under construction
- Distribution in early 2010
Concept of PrimeShip-INVENTORY

**Supplier**
- Create Material Declaration (MD) Data file by “MD Tool” [Excel-based]
- Create Supplier’s Declaration of Conformity (SDoC) file [pdf]

**Shipbuilder**
- PrimeShip-INVENTORY
- Import MD & SDoC files
- Set Locations for the MD data containing Hazardous Materials
- Inventory is prepared Automatically

**Inventory**
- Export the data for NK Approval/Owner
PrimeShip-INVENTORY is fitted to the concept of e-Format.

**e-Format is also an idea.**

**NO NEED when e-system is made.**

- to collect MD & SDoC one by one by FAX or Post
- to screen MD with Hazardous Materials (HM) by hand
- to calculate the mass of HM at each location by hand
- to prepare IHM by hand
- to submit and keep MD/SDoC in paper format

Greatly reduces the Industry’s work for developing the Inventory
Trial Survey of Existing Ship

Aim is to develop Inventory of Existing Ships in a smooth and efficient way

- In cooperation with Japanese shipowners
- 30 Existing Ships were surveyed by ClassNK.
Outcome of ClassNK’s Trial

- Issue of “Statement of Fact” of the Inventory for smooth rewriting into Conventional Certificate

Both for New Ships (by PrimeShip-INVENTORY) and Existing Ships (by Experts)
Preparation of Guidelines

- Preparation of guidelines for smooth implementation, judgment, and approval
- Creation of circumstances for smooth and efficient development of Inventory by conducting seminars, meetings, etc.

Lecture on ship recycling
Role of Classification Societies

Survey and certification of Ships are required
(Article 5 of the Convention)

<table>
<thead>
<tr>
<th>Survey Type</th>
<th>New Ship</th>
<th>Existing Ship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Survey</td>
<td>At delivery</td>
<td>At the development of Inventory - Part I</td>
</tr>
<tr>
<td>Renewal Survey</td>
<td>At intervals not exceeding 5 years</td>
<td></td>
</tr>
<tr>
<td>Additional Survey</td>
<td>After a major repair, etc.</td>
<td></td>
</tr>
<tr>
<td>Final Survey</td>
<td>Prior to the start of Recycling</td>
<td></td>
</tr>
</tbody>
</table>

ClassNK has prepared to become a Recognized Organization (RO) of flag administrations for conducting survey and certification for Ship Recycling Convention.
Thank you!
Aim of the Convention

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

Achieve "Safe and Environmentally Sound Recycling of Ships"

Measures to achieve

✓ Ship ⇒ Develop & maintain a list indicating details of Hazardous Materials on board the ship (Inventory of Hazardous Materials)

✓ Recycling Facility ⇒ Ensure environmental protection, provide enough facilities, and ensure labor safety and health

✓ Preparation of Recycling ⇒ Ensure delivering Inventory, thorough ‘gas-freeing’, development of recycling plan, etc.
1. Applicable to ships of above 500GT

(Ships engaged only in domestic voyage throughout her life is exempted)

2. Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009.5</td>
<td>IMO Conference Adoption</td>
</tr>
<tr>
<td>2010</td>
<td>Requirement for entry into force is fulfilled (Assumption)</td>
</tr>
<tr>
<td>2012</td>
<td>Entry into force (Assumption)</td>
</tr>
<tr>
<td>2017</td>
<td>Deadline for Existing Ships</td>
</tr>
</tbody>
</table>

ClassNK: Around 7,000 Existing Ships
Stake Holders of Maritime Sector in Japan are cooperating together on Implementation of Development and Survey of IHM, MD and SDoC.
Cooperation of Maritime Sector in Japan

## Activities in Japan for Implementation of Developing IHM

- **Trial of Existing Ships (40 Ships)**
- **Trial of Newly Built Ships (20 Ships)**
- Making a software for Development of IHM
- Arrangement of Seminars on the Convention and Meetings with Owners, Shipyards etc.
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Let’s start main slides.
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