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**Development of  
Industrial Standards for  
Ship Construction File**

**The Shipbuilders' Association of Japan**

# What is SCF ?

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SCF is described in following 4 documents.

SOLAS II-1/3-10 Goal-based ship construction standards for bulk carriers and oil tankers  
SOLAS requirement

Res. MSC.287(87) ADOPTION OF THE INTERNATIONAL GOAL-BASED SHIP CONSTRUCTION STANDARDS FOR BULK CARRIERS AND OIL TANKERS  
Transparency and IP right

MSC.1/Circ.1343 “Guidelines for the information to be included in a Ship Construction File”  
LIST OF INFORMATION TO BE INCLUDED IN THE SCF

MSC 87/5/4 “Guidelines for Ship Construction File implementation”  
SCF on board and SCF Supplement ashore model  
Outline of Access procedure  
Functional requirement of Archive center

## What is SCF ? SCF in SOLAS

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1. **SOLAS II-1/3-10** Goal-based ship construction standards for bulk carriers and oil tankers

4 **A Ship Construction File** with specific **information on how the functional requirements of the Goal-based Ship Construction Standards** for Bulk Carriers and Oil Tankers have been applied in the ship design and construction shall be provided upon delivery of a new ship, and **kept on board the ship and/or ashore\*** and updated as appropriate throughout the ship's service. The contents of the Ship Construction File shall, at least, **conform to the guidelines developed by the Organization.**

Introduction of SCF on board -  
SCF Supplement ashore model

# What is SCF ? SCF in SOLAS

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## 2. Res. MSC.287(87) ADOPTION OF THE INTERNATIONAL GOAL-BASED SHIP CONSTRUCTION STANDARDS FOR BULK CARRIERS AND OIL TANKERS

### 5 TIER II –FUNCTIONAL REQUIREMENTS

#### II.10 Design transparency

Ships shall be designed under a reliable, controlled and **transparent** process made accessible to the extent necessary to confirm the safety of the new as-built ship, **with due consideration to intellectual property rights**. Readily available documentation shall include the main goal-based parameters and all relevant design parameters that may limit the operation of the ship.

*Design Transparency*



*IPR*

# What is SCF ? SCF in SOLAS

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## 3. MSC.1/Circ.1343 GUIDELINES FOR THE INFORMATION TO BE INCLUDED IN A SHIP CONSTRUCTION FILE

SOLAS II-1/3/10 refers this MSC.1/Circ.1343

1. Purpose
2. Definition
3. Scope of information
4. Availability and storage
  - ..... **The intellectual property** provisions within the SCF should be **duly complied with.**
5. Updates

APPENDIX “LIST OF INFORMATION TO BE INCLUDED IN THE SHIP CONSTRUCTION FILE(SCF)”

# What is SCF ? SCF in SOLAS

## APPENDIX “LIST OF INFORMATION TO BE INCLUDED IN THE SHIP CONSTRUCTION FILE(SCF)”

Tier II items	Information to be included	Further explanation of the content	Example documents	Normal storage location
	<ul style="list-style-type: none"> <li>gross hull girder section modulus</li> <li>minimum hull girder section modulus along the length of the ship to be maintained throughout the ship's life</li> </ul>	<ul style="list-style-type: none"> <li>plan showing highly stressed areas prone to yielding and/or buckling</li> </ul>	<ul style="list-style-type: none"> <li>areas prone to yielding and/or buckling</li> </ul>	on board ship
	<ul style="list-style-type: none"> <li>gross scantlings of structural members</li> </ul>	<ul style="list-style-type: none"> <li>structural drawings</li> </ul>	<ul style="list-style-type: none"> <li>general arrangement</li> <li>key construction plans</li> <li>rudder and rudder stock</li> <li>structural details</li> <li>yard plans</li> <li>dangerous area plan</li> <li>lines plan</li> </ul>	<ul style="list-style-type: none"> <li>on board ship</li> <li>on board ship</li> <li>on board ship</li> <li>on board ship</li> <li>on shore archive</li> <li>on board ship</li> <li>on shore archive</li> </ul>
	<ul style="list-style-type: none"> <li>calculating conditions and results;</li> <li>assumed loading conditions</li> <li>fatigue life calculation results</li> </ul>	<ul style="list-style-type: none"> <li>structure(s)</li> <li>assumed loading conditions and rates</li> <li>bulky output of fatigue life calculation</li> </ul>	<ul style="list-style-type: none"> <li>SCF-specific</li> <li>structural details</li> <li>fatigue life calculation</li> </ul>	<ul style="list-style-type: none"> <li>on board ship</li> <li>on board ship</li> <li>on shore archive</li> </ul>

**Highly Intellectual Property sensitive Information with not absolutely necessary and relevant to be on board at all times to be stored at ashore archive center.**

- Yards Plan
- Lines Plan
- Bulky Output of Strength Calc.

# What is SCF ? SCF in SOLAS

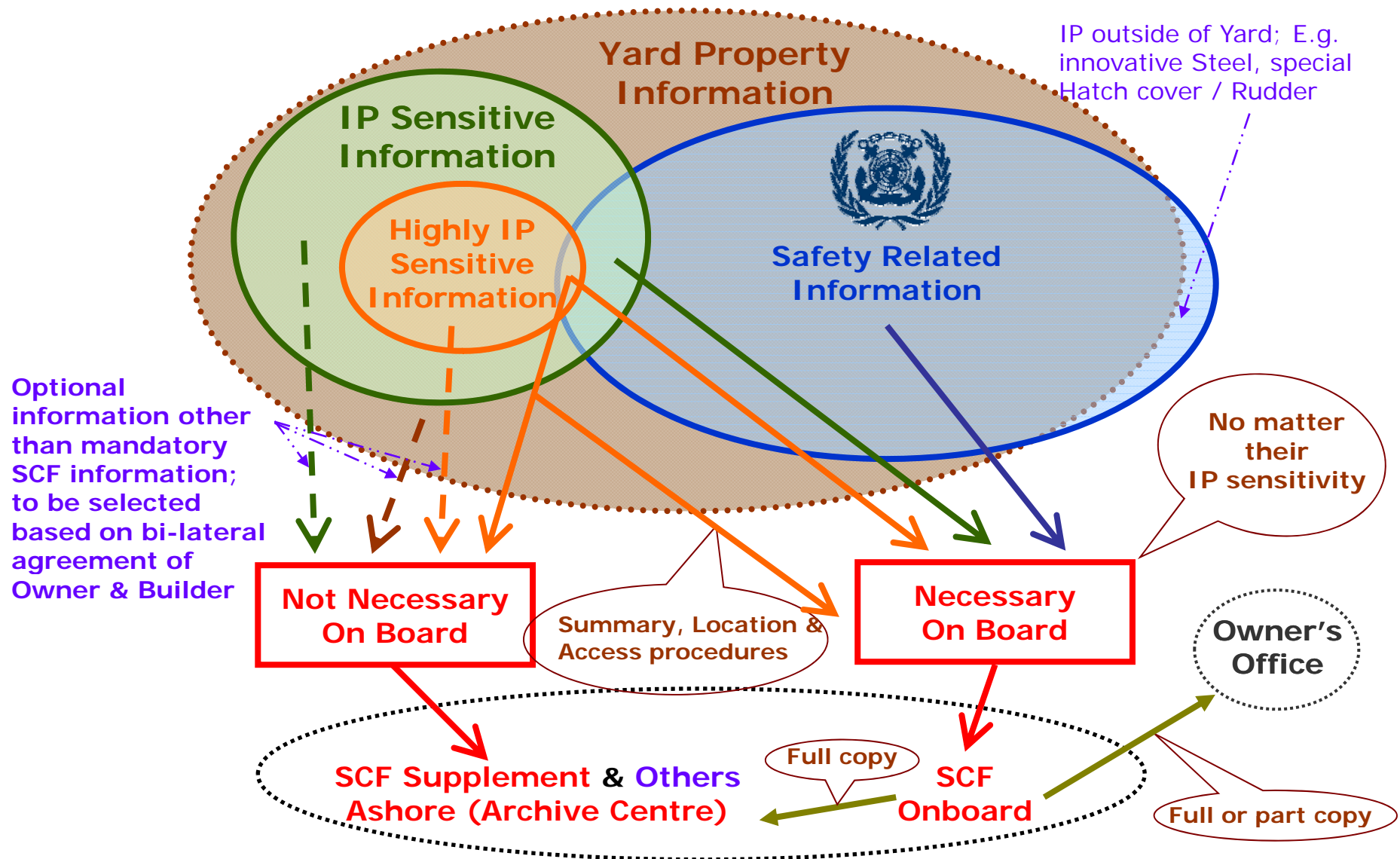
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## 4. MSC 87/5/4 Guidelines for Ship Construction File implementation

- MSC 87/5/4 was submitted at IMO MSC 87.
- MSC 87/5/4 describes the **basic framework of SCF industry standards** to be developed by cross industry.

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1. The “**SCF onboard – SCF Supplement ashore**” model
  2. Functional requirements of **archive center**
  3. **Access procedures** to SCF
  4. **SCF to be stored at archive center**

# SCF onboard – SCF Supplement ashore model





## What is SCF ? Summary

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- ✓ SCF shall be required in SOLAS II-1/3-10
- ✓ SCF shall include specific information on how the functional requirement of the GBS (Tier II items) applied in the ship design and construction.
- ✓ SCF shall be kept on board the ship and/or ashore.
- ✓ Highly IP sensitive information shall be stored at ashore archive center.
  - ✓ Yard Plan
  - ✓ Lines Plan
  - ✓ Bulky Output of strength calculation
- ✓ SCF shall be dully complied with IP rights



⇒ Cross industry has to **define details of the SCF industry standard** toward practical operation.

# An Idea of Contents of Industry Standard

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## ✓ Content of the SCF information

- **Concrete image of information** to be included in the SCF
- Linkage of SCF information with GBS Tier II requirements

## ✓ Availability and storage

- **Standard access procedures** for SCF onboard and SCF Supplement ashore
  - ✓ **The level of IP sensitivity** of each SCF item
  - ✓ Access procedures according to various IP sensitivity and requesting parties
  - ✓ Access procedures when the IP owner/holder cease trading or renounce their property rights
  - ✓ Standard confidentiality terms and conditions
- Functional requirements for **ashore archive centre(s)**

## ✓ Updates and maintenance of SCF

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## Key to resolution for IPR protection

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1. Every SCF information shall be available under reasonable access procedure  
⇒ Development of IPR access procedure
2. Highly sensitive information shall be stored on independent ashore archive center.  
⇒ Functional requirement Archive Center



## IP access procedure

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- Level of IP sensitivity of each information to be included in SCF
  - Minimum IP sensitive information
  - Low IP sensitive information
  - Medium IP sensitive information
  - Highly IP sensitive information
- Applicable access means and IP access procedures/measures for each IP sensitivity levels



**⇒ Concrete access procedures has to be developed.**

## What is Ashore Archive Center ? – Functional req.

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- Life-times services
- Neutral among IP holders
- Internationalized
- Excellent in security control
- Early backup and recovery
- Quality and cost-efficient services
- Open 24 hours and 365 days



## What is Ashore Archive Center ? – Advantages

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- Long-term data storage can be guaranteed
- Replacement of damaged SCF on board
- Better IP protection for the highly IP sensitive information



## What is Ashore Archive Center ? – Important features

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- Information on archive center (location, access procedure...) is provided in the SCF onboard.
- The archive center shall deliver the requested information to authorized parties within a defined schedule based on the industry standard.
- Access to the specific information in the archive center is subject to general confidentiality and registration.
- The information in the archive center has clear identification of its IP holders
- In the case of ship owners, notification and verification procedures are needed for new access
- Owners must update the information

## Current Status of Cross Industry Activity

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- ✓ Cross industry members discussed promoting better understanding of SCF after MSC 87.
- ✓ The discussions are summarized as Q&A list.
- ✓ Principal points of discussion are follows,
  - What is image of **Access procedure** on board for SCF ?
  - Who will be the operator of **Archive center** ?
  - How to control **Flag State** access to SCF

Hereafter, it is necessary to

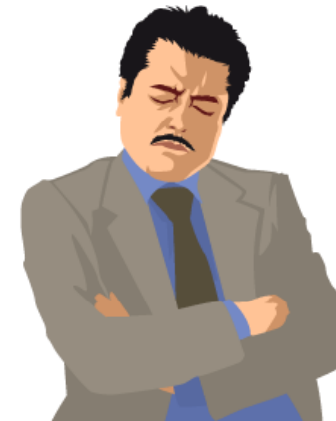
- ✓ Clarify matters to be solved
- ✓ Reflect the solution into development of Industry Standard



## Open issues to be solved

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- ✓ Who can operate ashore archive centre?
- ✓ How to supervise the access control of the onboard SCF?
- ✓ Shall we have access procedures for IP holders?
- ✓ Who should choose the archive centre?
- ✓ Cost issues?



# Development schedule of Industry Standard

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**Oct/2010:** Tripartite meeting

**17-18/Nov./2010 :** ASEF

**31/Aug/2012:** Shipbuilding industry submit the draft industry standard to the cross industry for discussion.

**31/Dec/2012:** The cross industry complete the 1st draft industry standard for discussion. The 1st draft will be revised among the cross industry through several meetings coordinated by CESA

**May/2013:** The cross industry submits an Info. paper on the development of Industry Standard to MSC92.



## Development schedule of Industry Standard

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**31/Dec/2013:** The cross industry issue the Industry Standard in combination with submission of HCSR to verification of conformity with GBS.

**1/July/2016:** The cross industry issues the Industry Standard for GBS application.

**End of 2017:** Archive centers will be operated for GBS application.



## SAJ's activities for Industry Standard

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SAJ has established the Working Team to develop the SCF industry standard for the benefit of shipbuilders.



- 3 Sub-Working Groups under 1 steering WG

**SCF project management WG**

SCF Information

System

Legal issues

# SAJ's activities for Industry Standard

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## Tasks of 3 Sub-Working Groups

### **SCF Information Sub-WG**

- More detail and clear definitions of SCF information showing example documents
- Definition of standard IP Sensitivity levels of SCF information

### **System Sub-WG**

- Development of storage, access, searching, and recording procedures for SCF information discussing multi-procedures
- Standard specifications and agreement of archive centers.

### **Legal issues Sub WG**

- Solution for the legal issues including the balance of design transparency and IPR.



## SAJ's activities for Industry Standard

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SAJ will propose the draft proposal of industry standards for SCF to shipbuilding industry by the beginning of 2012.

SAJ will widely incorporate shipbuilder's opinion to the draft proposal.

Shipbuilding industry will submit the draft industry standard to the cross industry for discussion by 31/Aug/2012.

The cross industry will complete the 1st draft industry standard for discussion by 31/Dec/2012:

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*Thank you for attention !!*