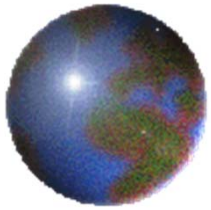
27-28 November, 2014
The 8th Asian Shipbuilding Experts' Forum
Jeju, Korea



GBS – Ship Construction File (SCF)

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Contents of Presentation

【Part 1】

Industry Standards and Unified Interpretation of the Ship Construction Fife

【Part 2】

Introduction to ClassNK Archive Center

Contents of Part 1 Presentation

1. Review of Ship Construction File
2. Course of the SCF Industry Standards
3. Outline of the SCF Industry Standards (New Version)

   (Alteration parts from Version 1.0)
4. Plan

Review of Ship Construction File

- SCF shall be required in SOLAS II-1/3-10(GBS).
- 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.
- SCF shall be duly complied with Intellectual Property Rights(IPR).
- Highly IP sensitive information shall be stored at ashore archive center.
    - Yard plan
    - Lines plan
    - Bulky output of strength calculation

Course of SCF Industry Standards

【October 2012】

The SCF Industry Standards (Version 1.0) was developed

◆ 1st Cross Industry Meeting (at BIMCO)

【June 2013】

◆ 2nd Cross Industry Meeting (during MSC91)

Discussed ways to go forward against concerns shown by the shipowners

【September 2014】

The SCF Industry Standards (New Version) and

The Unified Interpretation of the SCF Industry Standards

was proposed to shipowners for their review

Outline of the SCF Industry Standards (New Version) (Alteration parts from Version 1.0)

(1) Industry Standards and Unified Interpretation of the SCF

(2) IP Levels

(3) Time-dependent IP Levels

(4) Writing style

(5) Format

(6) Management

Outline of the SCF Industry Standards (New Version) (Alteration parts from Version 1.0)

(1) Industry Standards and Unified Interpretation of the SCF

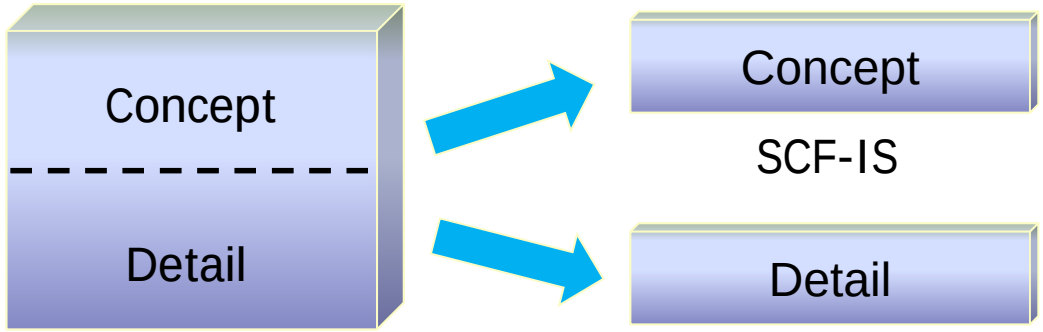
Divided into Two documents

The SCF Industry Standards (Tier I) :

The SCF-IS provide procedures for implementing the SCF, which is defined in four IMO documents – MSC.287 (87) (adopted at MSC May 20, 2010), MSC.290 (87) (adopted at MSC May 21, 2010), MSC.296(87) (adopted 20 May, 2010) and MSC.1/Circ.1343 (circulated at MSC June 2, 2010) and supplement those IMO documents based on MSC87/5/4 (endorsed by MSC87).

The Unified Interpretation of the SCF-IS (Tier II) :

To facilitate practical use of the SCF-IS from the administrative and operational point of view, while according with the SCF-IS, this UI of the SCF-IS provides users with more detailed guidance. These details aim to further clarify the SCF-IS, with concrete explanations and examples.



Outline of the SCF Industry Standards (New Version) (Alteration parts from Version 1.0)

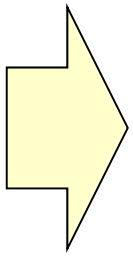
(1) Industry Standards and Unified Interpretation of the SCF

Contents

1. Preamble
2. Definitions
3. Principals, Scope & Application
4. Contents of SCF Information
5. Shipowners Items
6. IP-Holders Items
7. Archive Center Items
8. Strict Conformance to the Industry Standards by Way of Agreement
9. Revision of Industry Standards

Annex-1 Practical Guidelines for SCF Information Definition
Annex-2 Safekeeping and Access Guidelines - Basic Principals
Annex-3 Preparation of SCF and Provision for Shipowner
Annex-4 Operational Requirements for Archive Center
Annex-5 Safekeeping and Access Guidelines – Details
Annex-6 SCF Information Disclosure and Management Standard Terms and Conditions
Annex-7 Quick Reference Table for Principal Rights and Duties of Principal Parties (Shipowner, IP- Holder and Archive Center)

SCF-IS (Ver. 1.0)



1. Definitions
2. Principals, Scope & Application
3. SCF Information
4. Management of SCF Information
5. Revision of the Industry Standards

SCF-IS

1. Purpose
2. Definitions
3. SCF Information
4. Shipowners Items
5. IP-Holders Items
6. Archive Center Items
7. Revision of Unified Interpretation

Annex-1 Practical Guidelines for SCF Information Definition
Annex-2 Safekeeping and Access Management
Annex-3 Preparation of SCF and Provision for Shipowner
Annex-4 Operational Requirements for Archive Center

UI of SCF-IS

Outline of the SCF Industry Standards (New Version) (Alteration parts from Version 1.0)

(2) IP Levels

IP Levels : Four → Three

IP security level	IP Class(*3)	Document name used in Industry Standards	Normal storage location
Minimum	B	Capacity plan (*2)	on board ship
	B	Loading manual (*1)	on board ship
	B	Trim & stability booklet (*1)	on board ship
	C	Loading instrument (Shear force, Bending moment)	on board ship
	C	Operation and maintenance manual (*1)	on board ship
	B	General arrangement (*2)	on board ship
	C	Docking plan	on board ship
Low	C	Calculation of hull girder section modulus	on board ship
	C	Dangerous area plan	on board ship
	C	Coating technical file	on board ship
	C	Structural details of hatch covers, doors and other closings integral with the shell and bulkheads	on board ship
	C	Intellectual property provisions	on board ship
	C	Summary, location and Access procedure for part of SCF Information on shore	on board ship
	C	Inspection schedule for ship structures	on board ship
	C	Copies of certificates of forgings and castings welded into the hull	on board ship
	C	Tank testing plan	on board ship
	C	Non destructive testing plan	on board ship
	C	Areas prone to yielding and/or buckling	on board ship
	C	Areas prone to fatigue	on board ship
	C	Areas prone to excessive corrosion	on board ship
	C	Detail of bottom plug	on board ship
	C	Details for in-water survey	on board ship
	C	Means of access to other structure-integrated deep tanks and large void spaces	on board ship
	B	Ship structure access manual	on board ship
	C	SCF-specific (1) to (15)	on board ship
Medium	B	Midship section	on board ship
	B	Main O.T. and W.T. transverse bulkheads	on board ship
	B	Construction profiles/plans	on board ship
	B	Shell expansions	on board ship
	B	Forward and aft sections in cargo tank (or hold) region	on board ship
	B	Engine-room construction	on board ship
	B	Forward construction	on board ship
	B	Stern construction	on board ship
	B	Rudder and rudder stock	on board ship
	B	Stern frame	on board ship
	B	Structural details	on board ship
	B	Equivalent to Lines plan	on board ship
High	A	Strength calculation	on shore archive
	A	Fatigue life calculation	on shore archive
	A	Yard plans	on shore archive
	A	Lines plan	on shore archive

Minimum

Low

Medium

High

IP Level	Document name used in Industry Standards	Storage location
Low	Capacity plan (*2)	on board ship
	Loading manual (*1)	on board ship
	Trim & stability booklet (*1)	on board ship
	Loading instrument (Shear force, Bending moment)	on board ship
	Operation and maintenance manual (*1)	on board ship
	General arrangement (*2)	on board ship
	Docking plan	on board ship
Medium (*3)	Calculation of hull girder section modulus	on board ship
	Dangerous area plan	on board ship
	Coating technical file	on board ship
	Structural details of hatch covers, doors and other closings integral with the shell and bulkheads	on board ship
	Intellectual property provisions	on board ship
	Summary, location and Access procedure for part of SCF Information on shore	on board ship
	Inspection schedule for ship structures	on board ship
	Copies of certificates of forgings and castings welded into the hull	on board ship
	Tank testing plan including details of the test requirements	on board ship
	Non destructive testing plan	on board ship
	Areas prone to yielding and/or buckling	on board ship
	Areas prone to fatigue	on board ship
	Areas prone to excessive corrosion	on board ship
	Detail of bottom plug	on board ship
	Details for in-water survey	on board ship
	Means of access to other structure-integrated deep tanks and large void spaces	on board ship
	Ship structure access manual	on board ship
	SCF-specific (1) to (15)	on board ship
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	Rudder and rudder stock	on board ship
	Stern frame	on board ship
	Structural details	on board ship
	Equivalent to Lines plan	on board ship
High (*3)	Strength calculation	on shore archive
	Fatigue life calculation	on shore archive
	Yard plans	on shore archive
	Lines plan	on shore archive

Minimum → Low

Low + Medium → Medium

High → High

Outline of the SCF Industry Standards (New Version) (Alteration parts from Version 1.0)

(3) Time-dependent IP Levels

10 years after : **Medium → Low**

(4) Writing style

Legally oriented expressions → Practical and guidance information oriented

(5) Format

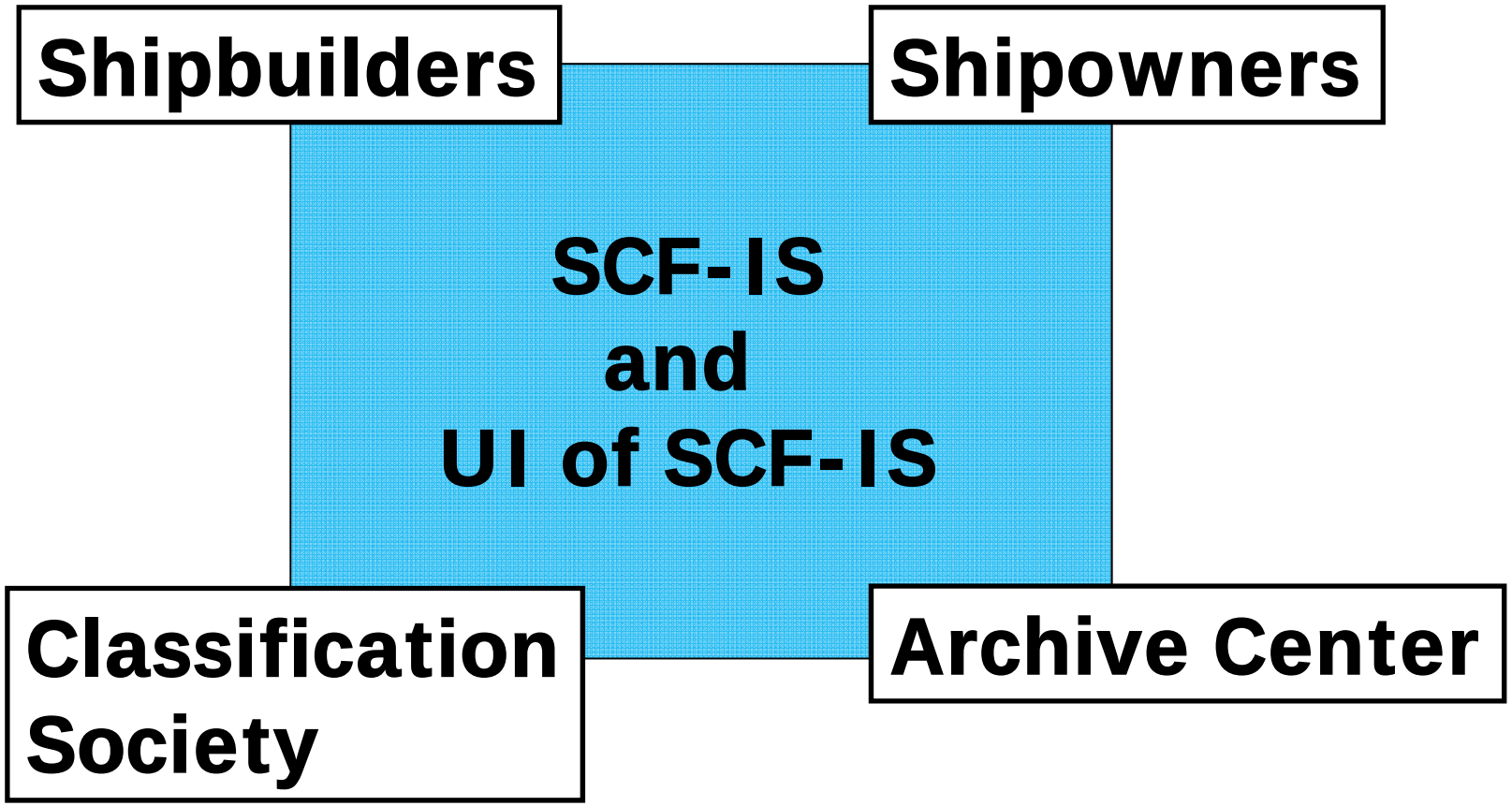
SCF documents can be made available in digital or paper format

(6) Management

Shipowner's independent management is respected

Plan

22 Sep, 2014	Draft IS and UI of the SCF circulated to Shipping Industry
Nov-Dec, 2014	Assessment of draft by each industry
Early 2015	3rd Cross Industry Meeting
	Finalization of SCF-IS
May, 2015	Outcome report submission to IMO MSC95
June, 2015	MSC95 IMO notes SCF-IS
1 July, 2015	CSR-H and UR Z23 (referring SCF) apply to new contracts
1 July, 2016	GBS and SCF apply to new contracts
1 July, 2020	GBS and SCF apply to delivery of new ships



Thank you for your attention