

Expert discussion on IMO Goal Based Standards (GBS), **CSR**, Safety Level Approach and their **impact on European and national legislation**



Ship Construction










Probability of a ship to become substandard due to its delivery conditions (inspection vs design and construction)

Inspección	Deficiente			
	Normal			
	Excelente			
		Excelente	Normal	Deficiente
		Diseño y Construcción		







	Peligro cierto de convertirse en Subestándar
	Puede muy fácilmente pasar a ser Subestándar
	Probabilidad moderada de pasar a ser Subestándar
	Probabilidad media
	Probabilidad baja
	Probabilidad muy baja

Ship in Service

Probability of a ship to become substandard following a «normal» delivery condition

Inspección	Deficiente			
	Normal			
	Excelente			
		Excelente	Normal	Deficiente
		Mantenimiento y Reparaciones		



 Buque subestándar a muy corto plazo
 Buque subestándar a corto plazo
 Peligro cierto de convertirse en Subestándar
 Gran peligro de convertirse en Subestándar
 Peligro moderado de convertirse en Subestándar
 Peligro bajo de convertirse en Subestándar

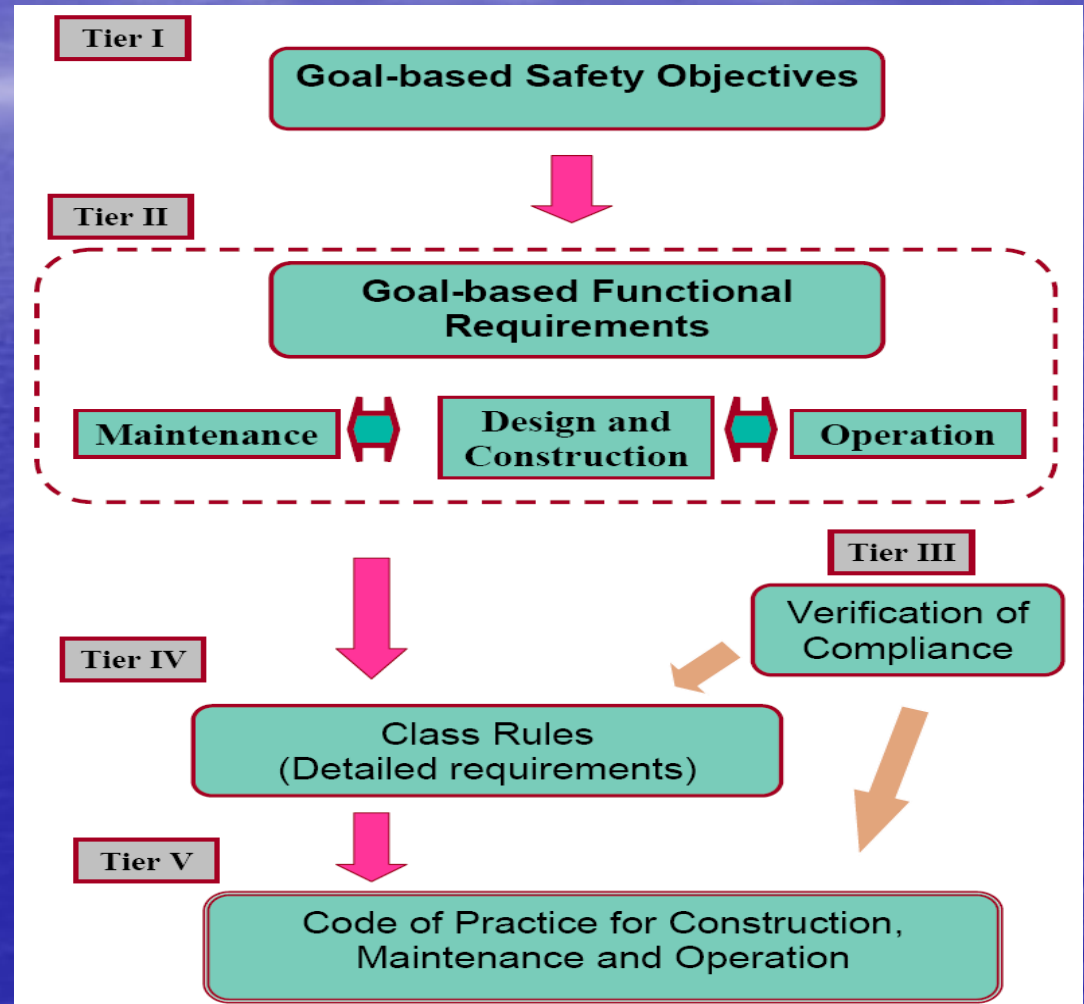


The requirements shall be achieved through satisfying applicable structural requirements of an **organization which is recognized** by the Administration in accordance with the provisions of regulation XI-1/1, or **national standards of the Administration**, conforming to the functional requirements of the Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers

Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers

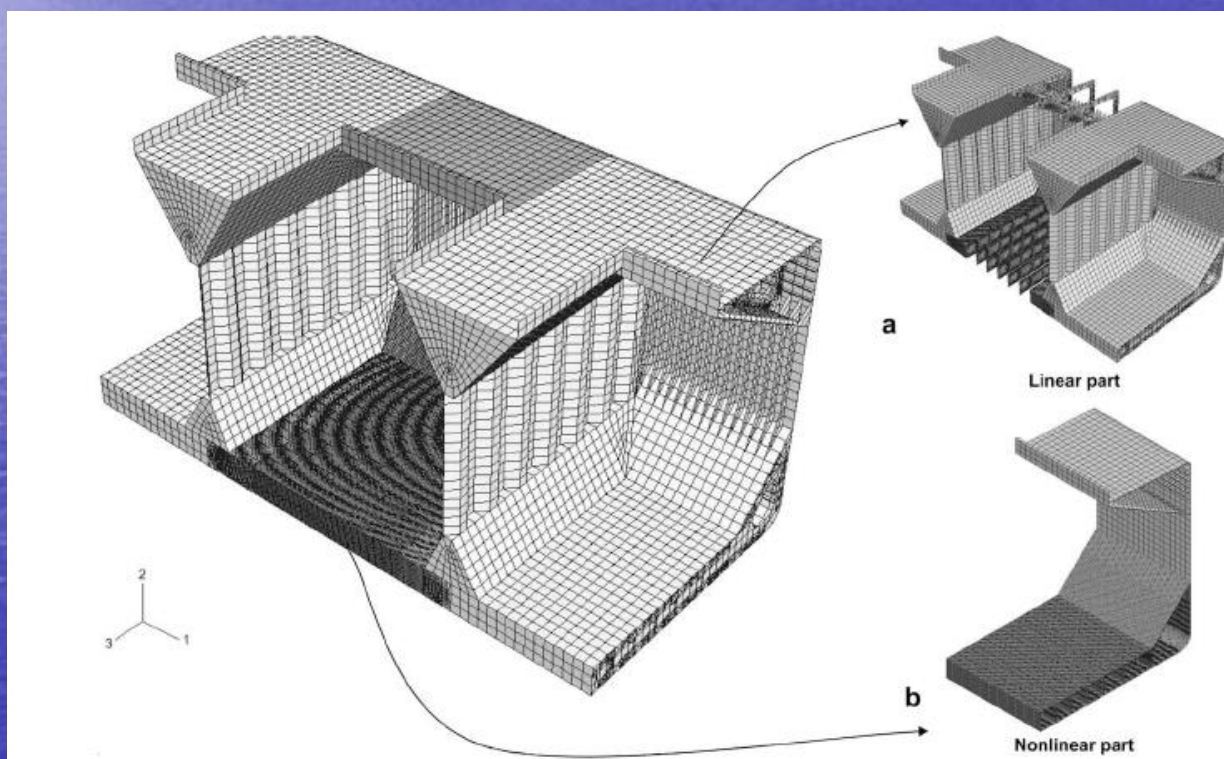
Adopted by resolution MSC 287 (87)

(note: picture with original intention by group)



Tier III – Verification of conformity

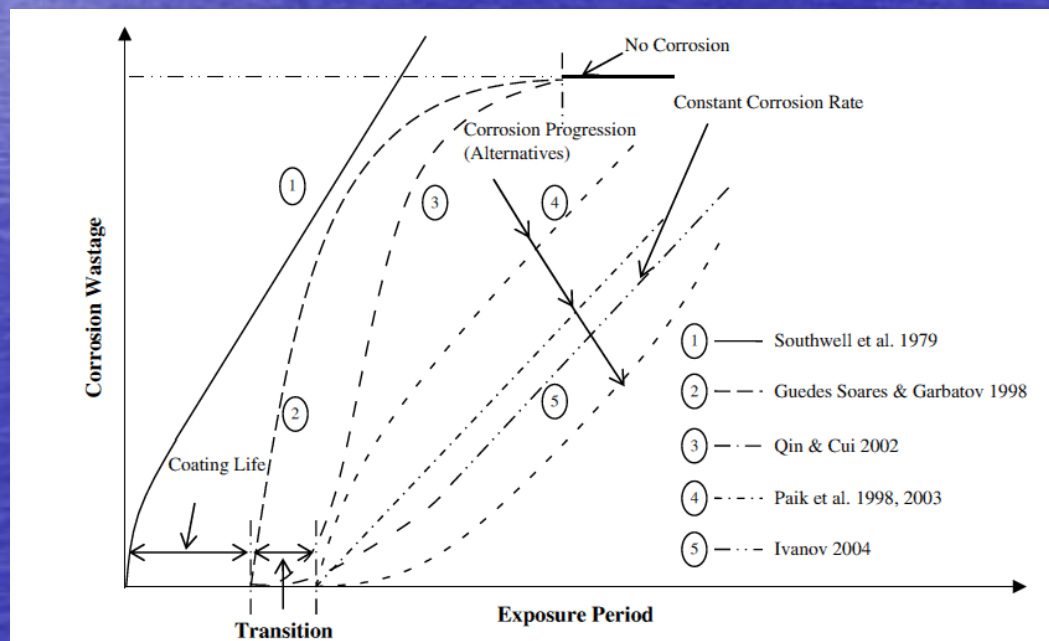
"Procedures for verifying that the rules and regulations for ship design and construction conform to the goals and functional requirements".



Following MSC 296 (87)....

RESOLUTION MSC.296(87)

Adoption of the Guidelines for verification of conformity with Goal-Based ship construction standards for bulk carriers and oil tankers

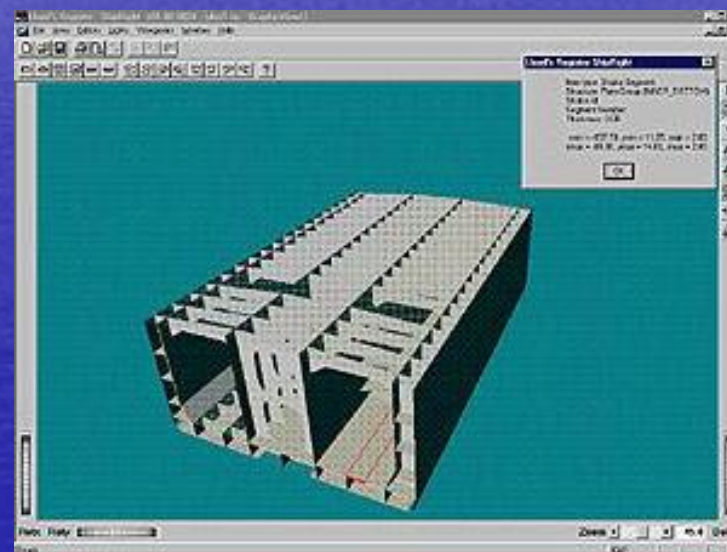


Tier III, Section 6 of the Standards requires that:

"The rules for the design and construction of bulk carriers and oil tankers of an organization ... or national rules of an Administration used as an equivalent to the rules of a recognized organization according to SOLAS regulation II-1/3-1, shall be verified as conforming to the goals (Tier I) and functional requirements (Tier II) of the Standards, based on this guidelines developed by the Organization"

Definitions.

RULE, RULE SET means regulations
for hull design and construction of
bulk carriers and/or oil tankers
operating in unrestricted worldwide
service



Definitions.

SELF ASSESMENT, *Self-assessment* means the Submitter assesses its rules for the design and construction of bulk carriers and/or oil tankers for conformity with the goals and functional requirements as set out in the Standards.

FINDING, means an observation or a non-conformity



Definitions.

VERIFICATION, (and any variation of the word *verify*) means the rules for the design and construction of bulk carriers and oil tankers have been compared to the Standards and have been found to be in conformity with or are consistent with the goals and functional requirements as set out in the Standards.

VERIFICATION AUDIT or *audit* means the process of evaluating the Submitter's rules, self-assessment and supporting documentation to ascertain the validity and reliability of information. The purpose of the audit is to assess the conformity of the submitted rules with the Standards based on work done on a sampling basis.



Part A. Verification Process

Scope of Verification

"Establishes the procedure"

Initial Verification

"Request to Secretary General by Admin"

Submission "information to be provided"

Audit Process "iterative process"

Appeal

SUBMISSION TEMPLATE

1 FLAG STATE INFORMATION	
1 Name of flag State:	
2 Full contact details for the designated single point of contact:	
Name and title:	
Address:	
Telephone No.:	
Fax No.:	
E-mail address:	
3 Organization recognized by flag State:	

2 RECOGNIZED ORGANIZATION INFORMATION	
1 Name of recognized organization:	
2 Full contact details for the designated single point of contact:	
Name and title:	
Address:	
Telephone No.:	
Fax No.:	
E-mail address:	
3 Rules coverage:	Oil tanker Bulk carrier

3 SELF-ASSESSMENT SUMMARY			
Functional requirement	Fully covered in rules	Not covered in rules	Comments
Design			
1 Design life			
2 Environmental conditions			
3 Structural strength			
4 Fatigue life			
5 Residual strength			
6 Protection against corrosion			
6.1 Coating life			
6.2 Corrosion addition			
7 Structural redundancy			
8 Watertight and weathertight integrity			
9 Human element considerations			
10 Design transparency			
Construction			
11 Construction quality procedures			
12 Survey during construction			
In-service considerations			
13 Survey and maintenance			
14 Structural accessibility			

Part A. Verification Process

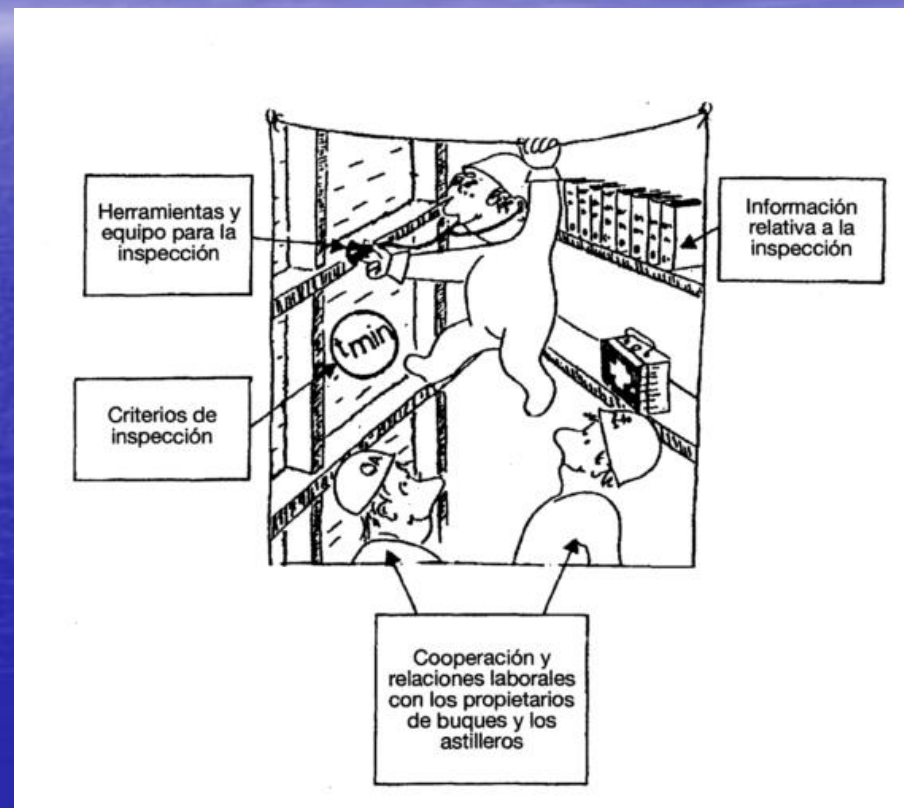
Maintenance of Verification

"at least annually" to "Secretary General and to all Administrations that have recognized them"

"indication impact of changes in conformity with the standards"

GBS Audit team

With adequate knowledge, submitted by Administration to IMO



Part B. Information/documentation requirements and evaluation criteria

Introduction

"to assist the submitter"

"includes statement of intent, information and documentation requirements and evaluation criteria."



EVALUATION CRITERIA:

Considered as the basis for conducting the self-assessment and audit

*KEY ELEMENTS:
Description;*

Explanation; and

Justification.

4 RULE LINKAGE SUMMARY TABLE

1 (Title and text of the relevant functional requirement)

1.1 (Text of the Statement of intent)

Information and documentation requirement	Regulation submitted (2)	Rule type (3)	Reference (4)
1.2.1 (Text) (1)			

Justification (If applicable) (5):

Evaluation criterion	Summarized comment (7)	Satisfied by rules (8)	Rule linkage (9)
1.3.1 (Text) (6)		(YES/NO)	

Detailed technical explanation (10):

Information and documentation requirement	Regulation submitted (2)	Rule type (3)	Reference (4)
1.2(n) (Text) (1)			

Justification (If applicable) (5):

Evaluation criterion	Summarized comment (7)	Satisfied by rules (8)	Rule linkage (9)
1.3(n) (Text) (6)		(YES/NO)	

Detailed technical explanation (10):

Appendix 2. Format of GBS Audit team reports

Upon completion auditors should follow the structure indicated in this annex for both the interim and final report.

Functional requirement	Conforming	Not conforming	Summary comment
Design			
1 Design life			
2 Environmental conditions			
3 Structural strength			
4 Fatigue life			
5 Residual strength			
6 Protection against corrosion			
6.1 Coating life			
6.2 Corrosion addition			
7 Structural redundancy			
8 Watertight and weathertight integrity			
9 Human element considerations			
10 Design transparency			
Construction			
11 Construction quality procedures			
12 Survey during construction			
In-service considerations			
13 Survey and maintenance			
14 Structural accessibility			
Recycling considerations			
15 Recycling			

Impact on European and National Legislation



Compliance with GBS, SOLAS regulation II-1/3-10 Requires rules for the design and construction in compliance with:

- ...
- II-6 Protection against corrosion (coating life and corrosion additions)**
- II-8 Watertight and weather tight integrity**
- ...
- II-9 Human element considerations (ergonomic principles to ensure safety during operations, inspection and maintenance)**
- II-11 Construction quality procedures**
- II-12 Survey during construction**
- II-13 Survey and maintenance (access to ship structure, identification of areas of inspection based on design parameters)**
- II-14 Structural accessibility**
- II-15 Recycling**

Ship in
Compliance
with GBS
compliant set
of rules
(design and
construction)



SCF



SOLAS XI-2+ ESP
Code ---C.E.R.
(+files)

Set of Structural Rules (i.e CSR-H)

Load Lines Convention-----Load Line
Certificate

SOLAS II-1 /3-1

SOLAS XII, Bulk Carriers

SOLAS II-1/ 3-2 + PSPC---Coating Technical File

SOLAS II-1/3-6 + MSC 133(76)—Ship Structure
Access Manual

Quality of Construction

Human Element (?)

Recycling Considerations (HK Convention,
structure)

?

DIRECTIVE 2009/15/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2009

....

(i) 'statutory certificate' means a certificate issued by or on behalf of a flag State in accordance with the international conventions;

(k) 'class certificate' means a document issued by a recognised organisation certifying the fitness of a ship for a particular use or service in accordance with the rules and procedures laid down and made public by that recognised organisation;

It follows that classification certificates issued by a recognized organization for a ship in order to attest compliance with classification rules and procedures, including when verified by a flag state as a proof of compliance with SOLAS II-1/3-1, 3-2?, 3-6?, XII?, and ILLC?, are documents of strictly private nature and are therefore neither acts of a flag state nor carried out on a flag State's behalf.

RO CODE (MSC 349(92) AND MEPC 238 (65))

3.9.2 Communication/cooperation with flag State

3.9.2.2 The RO shall allow participation in the development of its rules and/or regulations by the flag State.

III Code A 1070 (28), PART 2 – FLAG STATES, Implementation

16 A flag State should establish resources and processes capable of administering a safety and environmental protection programme, which, as a minimum, should consist of the following:

.1 administrative instructions to implement applicable international rules and regulations as well as developing and disseminating any interpretative national regulations that may be needed including certificates issued by a classification society, which is recognized by the flag State in accordance with the provisions of SOLAS regulation XI-1/1, and which certificate is required by the flag State to demonstrate compliance with structural, mechanical, electrical, and/or other requirements of an international convention to which the flag State is a party or compliance with a requirement of the flag State's national regulations;

III Code A 1070 (28), PART 2 – FLAG STATES, Implementation

Delegation of authority

19 No flag State should mandate its recognized organizations to apply to ships, other than those entitled to fly its flag, any requirement pertaining to their classification rules, requirements, procedures or performance of other statutory certification processes, **beyond convention requirements (?) and the mandatory instruments of the Organization.**

DRAFT RESOLUTION MSC.[...](94) (adopted on [...]) ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS AND OIL TANKERS, 2011 (2011 ESP CODE)

Part B

CODE ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS HAVING DOUBLE-SIDE SKIN CONSTRUCTION/DOUBLE-HULL OIL TANKERS

*"6.4.2 For bulk carriers/**Double hull oil tankers** subject to SOLAS regulation II-1/3-10, on completion of the survey, the surveyor should verify that the update of the **Ship Construction File (SCF)** has been done whenever a modification of the documentation included in the SCF has taken place.*

6.4.3 For bulk carriers subject to SOLAS regulation II-1/3-10, on completion of the survey, the surveyor should verify any addition and/or renewal of materials used for the construction of the hull structure are documented within the Ship Construction File list of materials."

Part B

CODE ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF OIL TANKERS (N/A).

END

