



# **IMO GBS for Ship Building**

## **Who benefits?**

**EMSA Workshop on GBS, CSR and SLA**  
**11 Nov 2014, Lisbon**

**Ian Harrison, INTERTANKO**



## Introduction

- IACS Common Structural Rules (CSRs)
  - industry initiatives
  - the initiation of the CSRs
- IMO Goal Based Standards Initiative
- GBS and IACS CSR (and Harmonised CSR)
- Industry Expectations from GBS



**INTERTANKO**

# International Association of Independent Tanker Owners

A non-governmental organization established in 1970 to speak authoritatively and proactively on behalf of tanker operators

**MEMBERSHIP** is open to independent tanker owners and operators of oil and chemical tankers

213 Members

285m dwt

75% of independent fleet

3100 tankers

43 countries

## MISSION

To provide leadership to the Tanker Industry in serving the world with the safe, environmentally sound and efficient seaborne transportation of oil, gas and chemical products.

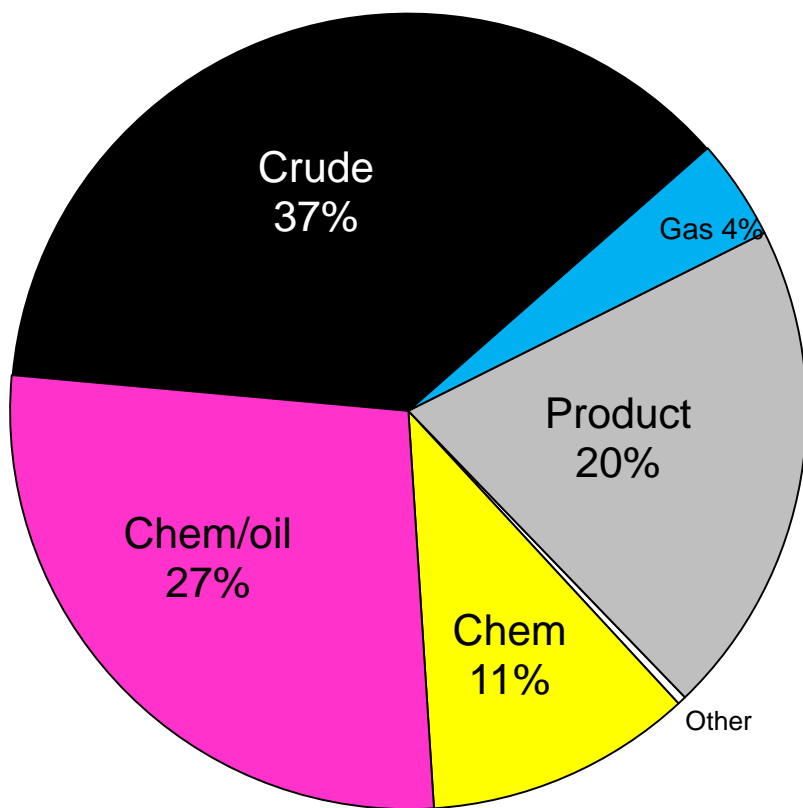
## VISION FOR THE TANKER INDUSTRY

A responsible, sustainable and respected Tanker Industry, committed to continuous improvement and constructively influencing its future.

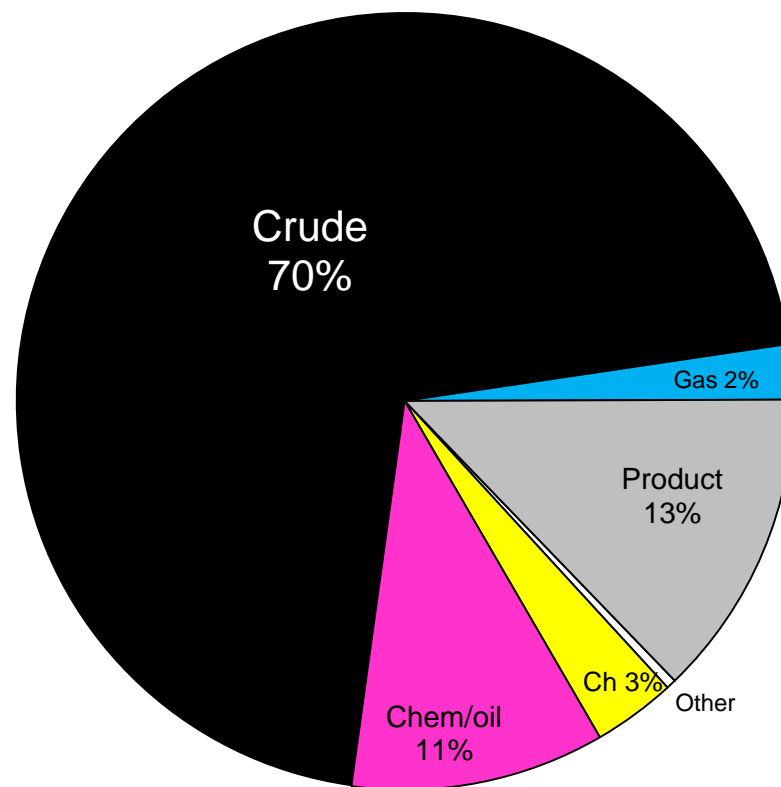


## INTERTANKO membership end 2013

by type of tanker (numbers)

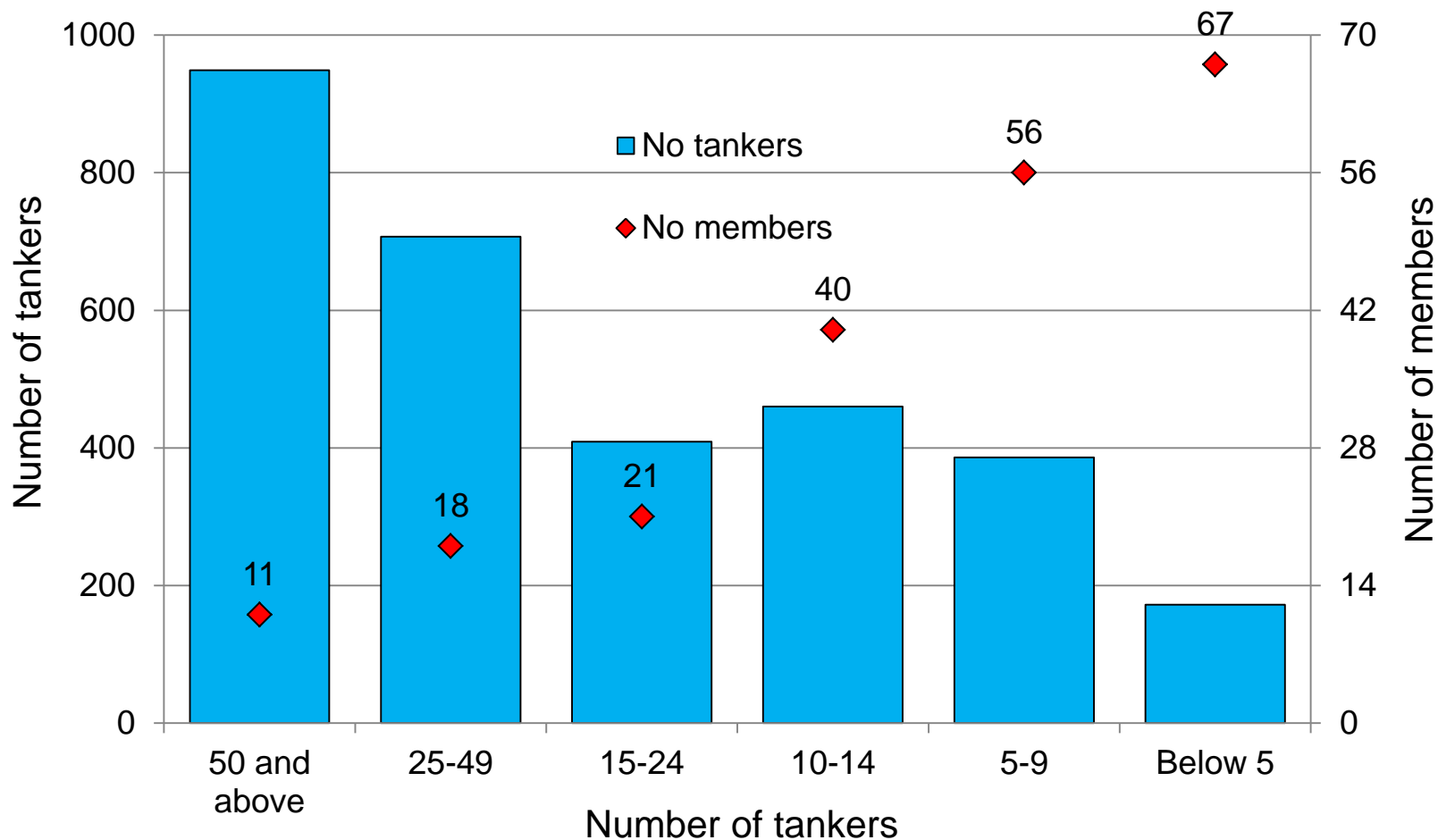


by type of tanker (DWT)





## Members by size of fleet

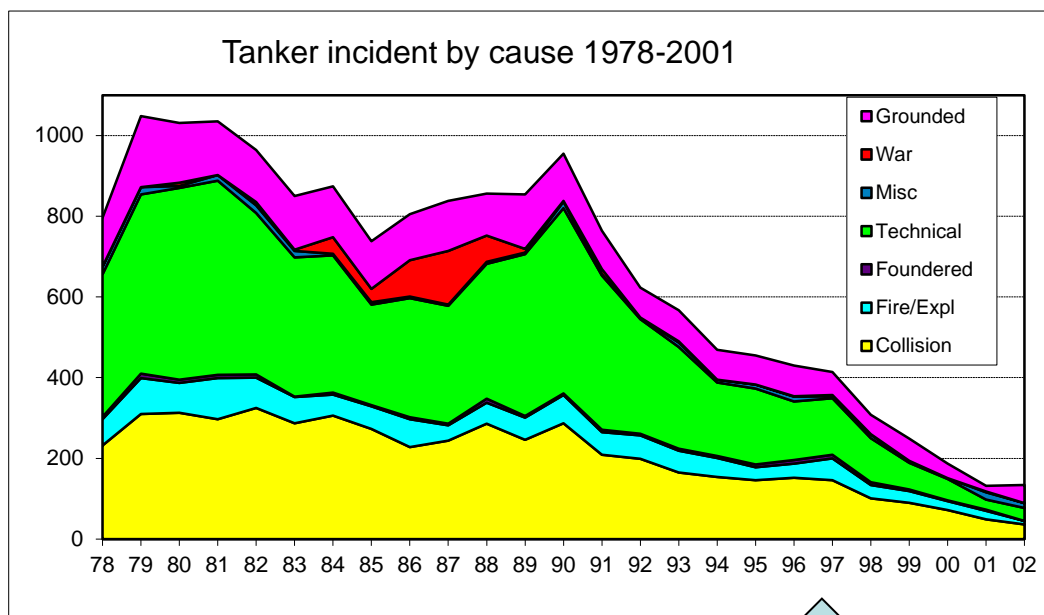




# IACS CSR – Industry Initiatives

**INTERTANKO**

Tanker incident by cause 1978-2001



**ESP Task Force initial scope: bring elements from CAP into the regular Class Survey**

**New items on ESP (new buildings standard issue included)**

**1990s - OCIMF and INTERTANKO have independently approach IACS to “enhance the class survey programme”**

**1997 – IACS/OCIMF form the ESP group**

**1998 – INTERTANKO joins the group which becomes “ESP Task Force”**

**1999 – OCIMF paper “An Expanded Scope for the ESP”**

**1999 – a new tripartite working group IACS/OCIMF/INTERTANKO on ESP**



# IACS CSR – Industry Initiatives

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## Three Accidents That Have Changed The Industry

- M/T ERIKA – December 1999
- M/T CASTOR – December 2000
- M/T PRESTIGE – November 2002



**BBC: Oil spill reaches Spanish shore**



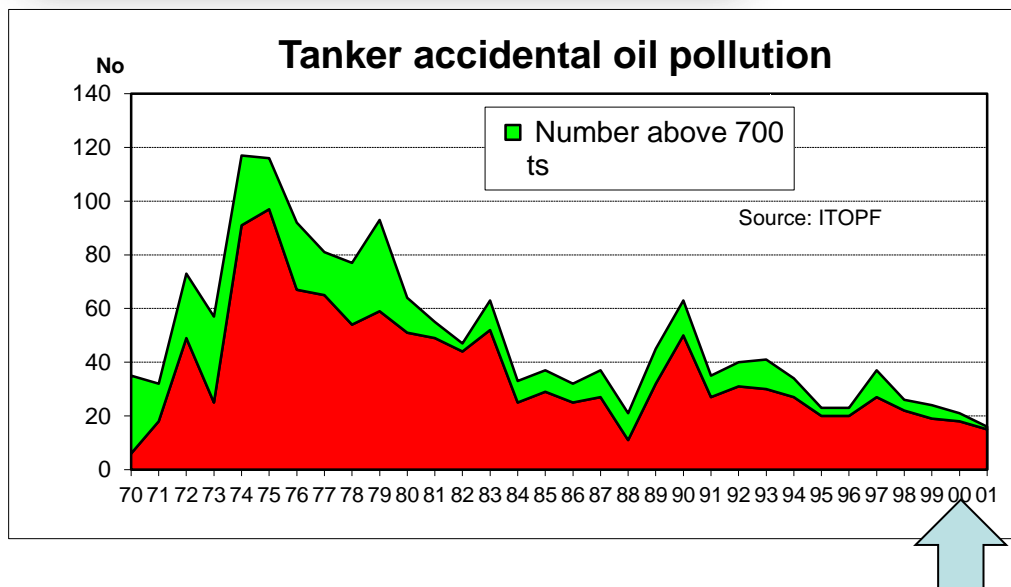
**BBC: Migratory birds at risk**





# IACS CSR – Industry Initiatives

**INTERTANKO**



FINANCIAL TIMES WEDNESDAY NOVEMBER 20 2002

The sinking of the Prestige, which is owned, chartered and managed by different countries, has revived debate over vessel inspection and enforcement of shipping laws

By Leslie Crawford  
and Toby Shelley

When a stricken tanker is registered in the Bahamas, owned by a Liberian company, managed by Greek administrators, chartered by a Swiss-based Russian oil trader and sails under the command of a Greek captain who is ultimately responsible for the environmental and economic damage caused by oil spills?

The sinking of the Prestige, an ageing, single-hulled ship, off the northern Spanish coast yesterday with 70,000 tonnes of industrial fuel, has rekindled debate over the inspection of seafaring vessels and enforcement of international shipping laws.

The 26-year-old tanker developed a crack in its hull during a storm last week. It has already spilled 10,000 tonnes of its highly toxic cargo, causing a 150km oil slick that has contaminated much of Galicia's rich fisheries. More than 1,000 fishermen have been thrown out of work, seabirds have been coated in oil and lobster banks destroyed.

Maritime traffic is intense in the north Atlantic, and this is not the first time an oil spill has blackened Spain's north-west coast.

France, too, has suffered ecological disasters caused by shipping accidents and yesterday, President Jacques Chirac called for "draconian" maritime security measures to protect Europe's coastline.

In 1999, the Erika sank off the coast of Brittany, spilling 15,000 tonnes of fuel which contaminated more than 400km of coast. After the incident, France asked the European Union to set up a maritime safety organisation, but discussions got bogged down over where to locate it.

"We have made very firm propositions, notably after the Erika drama," Mr Chirac said. "It is now urgent to take measures that are a bit draconian, serious and severe, even if they conflict with the interests of certain companies."

José María Aznar, Spain's prime minister, has threatened legal action to recoup the cost of the environmental clean-up.

But who could the prime minister sue? Lawyers say it has become increasingly difficult to enforce international maritime law at a time when companies and ship owners are cutting costs by registering their vessels in tax havens and hiring cheap, but often poorly trained, crews.

The Prestige was no exception. Registered in the Bahamas, it was owned by Mare Shipping, a Liberian company, managed by Universe Maritime, a Greek company, and had been chartered by Crown Resources, a Swiss-based Russian commodities trader.

So far, Spanish authorities have only been able to get hold of Apostolos Magarinos, the Greek captain, who has been remanded in custody in the port of La Coruña.

Politics also gets in the way. When the Prestige ran into trouble last week, the Spanish government jumped on the fact that the tanker was heading for Gibraltar – a territory claimed by Spain – to accuse the British colony of failing to comply with EU directives on the inspection of maritime vessels.

Loyola de Palacio, a Spanish minister and the EU's transport and energy commissioner, went further and blamed Gibraltar for the disaster.

Nonsense, replied the British government. In a letter to the European Commission, obtained by the Financial Times, Sir Nigel Shattenkirk, permanent representative to the EU, says the Prestige was not operating to Gibraltar on its ill-fated last voyage.

"The only time in the last

five years that the Prestige has stopped in Gibraltar was on June 13 2002, to refuel, without even entering the port," the letter says.

"The clean-up costs will fall under the remit of the International Maritime Organisation's Civil Liability Convention of 1992. Under this, the shipowner has strict liability for a tanker spill but it is capped, currently to a maximum of \$80m.

In 95 per cent of cases, CLC compensation is sufficient to fund a clean-up, according to Intertanko, the trade association of independent tanker owners. Where it is not, the International Oil Pollution Compensation Fund, financed by the owners of oil, comes into play. The maximum combined compensation under the two regimes is \$180m.

The accident has also focused attention on the inspection of ageing vessels. Yesterday, the European Commission demanded governments move faster to enforce new inspection rules.

Under these rules, port authorities will be required to check at least 25 per cent of all ships coming into dock, starting with older, single-hull vessels. Ships flying flags of convenience are to be given priority, an EU spokesman said.

## Spain 'could have saved tanker'

By Juliette Jovit,  
Transport Correspondent

The Prestige was probably on one of its last voyages under international shipping law it would have been too old to operate by 2005. Single-hulled ships must be retired after 30 years, and the Prestige was 26 years old.

The ship had not been inspected by port authorities for three years, but in 1999 underwent several surveys in the US and Rotterdam in Holland. These revealed four faults – all apparently minor as the ship was not detained. Yesterday senior shipping industry figures dismissed

calls from the Spanish government for new regulations to clamp down on vulnerable 'single-hulled' oil tankers. There were adequate regulations – enacted in 1995 and toughened last year, they said.

However, there was concern that the Spanish authorities refused to help the ship when it first got into trouble last week – a problem also reported in the Erika oil tanker disaster off France in December 1999.

Edmund Brookes, deputy director-general of the UK-based Chamber of Shipping, said if the Prestige had been allowed into a Spanish port

it could have been protected by calmer seas and the oil could have been removed.

The Spanish government blamed rough seas and the ship's captain for refusing to speed up the engines to get into calmer waters.

But shipping experts said speeding up engines when waves were breaking against the side of the damaged ship would have increased the danger.

"You needed somebody to tie next to it and take it slowly in, she was only a few miles off the shore when it started," said one person. "The captain was trying to

save the damned thing." The 26-year-old Prestige is one of about 600 'Aframax' oil tankers, which measure 70,000-110,000 deadweight tonnes. This class of tanker makes up about one third of the world tanker fleet.

After the massive Exxon Valdez oil tanker spill in 1990, US authorities said single-hulled ships would be banned from American ports after 2015. Last year the International Maritime Organisation – under pressure from the European Commission after the Erika spill – also brought in a deadline of 2015 for removing the ships from service.

**PUBLIC IMAGE HAS TAKEN THE DRIVING SEAT FOR NEW RULEMAKING**

Leading the way; making a difference





# IACS CSR – Industry Initiatives

**INTERTANKO**

- May 2000 – post – Erika meetings between IACS and Industry
- INTERTANKO Position Paper on IACS and Classification Societies
- OCIMF/INTERTANKO Aid Memoire for members when meeting Class Societies
- Intensive meetings between OCIMF/INTERTANKO and some leading Class Societies certifying tankers
- 2001 - LAN takes initiative for CSR on Oil Tankers
- 2001 – IACS agrees to develop CRS for Oil Tankers and Bulk Carriers

Wednesday, April 19, 2000

## INTERTANKO Position paper on IACS and CLASSIFICATION SOCIETIES

### OBJECTIVE

INTERTANKO is a strong supporter of the Class concept and has always assisted Class Societies and IACS to improve their performance.

INTERTANKO believes that in the main, IACS classification societies have good expertise and, in general have proven to perform a reliable activity. However, due to repeated serious accidents to ships classed by IACS members (and in particular where ships have been inspected by a Class Inspector, a relatively short time before such accidents), the question of the credibility of Class has been raised again.

Class failures have a negative impact on tanker owners to a degree beyond the impact on Class Societies themselves, INTERTANKO sees the need of a constructive but critical review of some important aspect of the Class activities.

Class performance and reliability is very important to shipowners and associations like INTERTANKO must intervene to improve it. Lack of confidence in Class has generated a huge proliferation of inspection onboard tankers.

### AREAS TO BE ADDRESSED

1. General/administrative issues
2. Standard of the Class Regulations: New buildings and Class Inspection
3. Implementation of Class/IACS rules, self-control and corrective actions
4. Liability and responsibility in case of negligence

### 2. STANDARD OF THE CLASS REGULATIONS: NEW BUILDINGS AND INSPECTION

#### 2.1 Common standards of new buildings

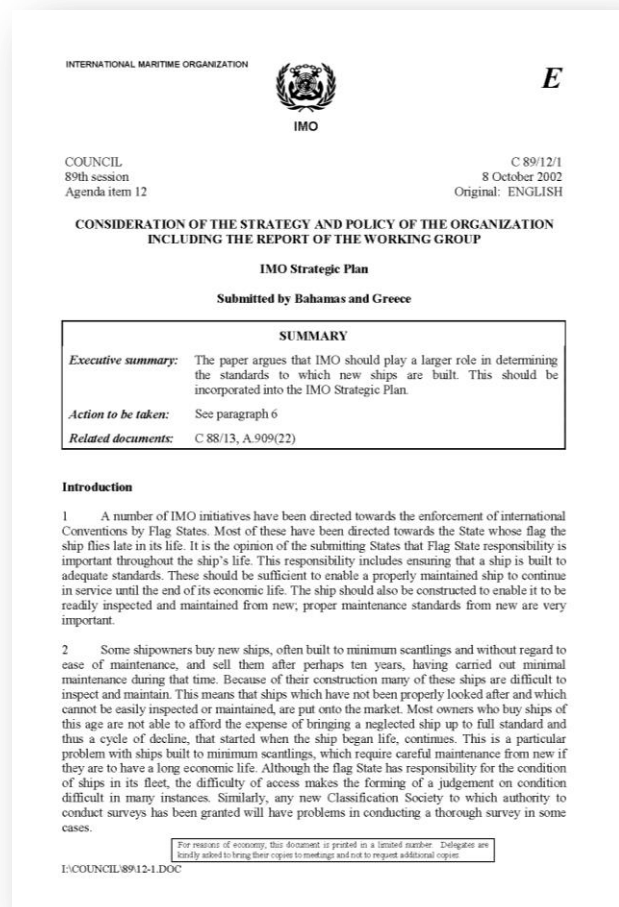
Competition between class and yards has led to the diminution of scantlings, for "optimised" hull strength. There should be an increase in common class standards with improved scantlings.

Changes in classification society Rules for Construction have resulted in reduced scantlings on younger vessels and have thereby reduced the corrosion margin on these vessels, relative to earlier designs. Deck and bottom shell plating thickness in today's VLCCs can be one-half of the thickness of the same plates in simpler vessels built in the 1960s. Although Class Societies explain and justify this from an engineering and design point of view, the margin for corrosion is obviously reduced substantially and reliance on coating and the accuracy of applying the coat become essential. Coating protection should not be a substitute for reserve strength.

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# IMO Initiates Goal Based Standards (GBS)



## MSC 76/5/10 (Greece) Building of robust ships

## C 89/12/1 (Greece & Bahamas)

- Remove the possibility of competition between Classification Societies on the quality of the construction of ships
- Permit innovation in design
- Remain safe for their economic life
- Permit proper inspection and ease of maintenance



# IMO Initiates Goal Based Standards (GBS)

## GBS Proposal (Bahamas and Greece)

The areas to be covered by IMO standards may include, for example:

1. Structural arrangements, scantlings
2. Materials (steel and welding)
3. Loads and fatigue life
4. Means of access
5. Load bearing fixtures and fittings e.g. winches, fairleads, bitts
6. Closing appliances, watertight and weather tight fittings
7. Coatings and cathodic protection
8. Surveys
9. Inspections and maintenance

This is not intended to be an exhaustive list. . . . .



## IMO Goal Based Standards (GBS)

- Amendments to SOLAS Chapter II-1 making the GBS standards for bulk carriers and oil tankers mandatory [Adopted IMO Res. MSC 290 (87)]
- International Goal-Based Ship Construction Standards for Bulk Carriers and Oil Tankers [Adopted IMO Res. MSC 287 (87)]
- Guidelines for Verification of Conformity with Goal-Based Ship Construction Standards for Bulk Carriers and Oil Tankers [Adopted IMO Res. MSC 296(87)]
- Guidelines for the Information to be included in a Ship Construction File (SCF) [Approved MSC.1/Circ.1343]

**Applicable to Oil Tankers 150m in length and above and Bulk Carriers 90m in length and above (starting 2016)**

**Class Responded with Harmonised Common Structural Rules**



## IMO Goal Based Standards (GBS)

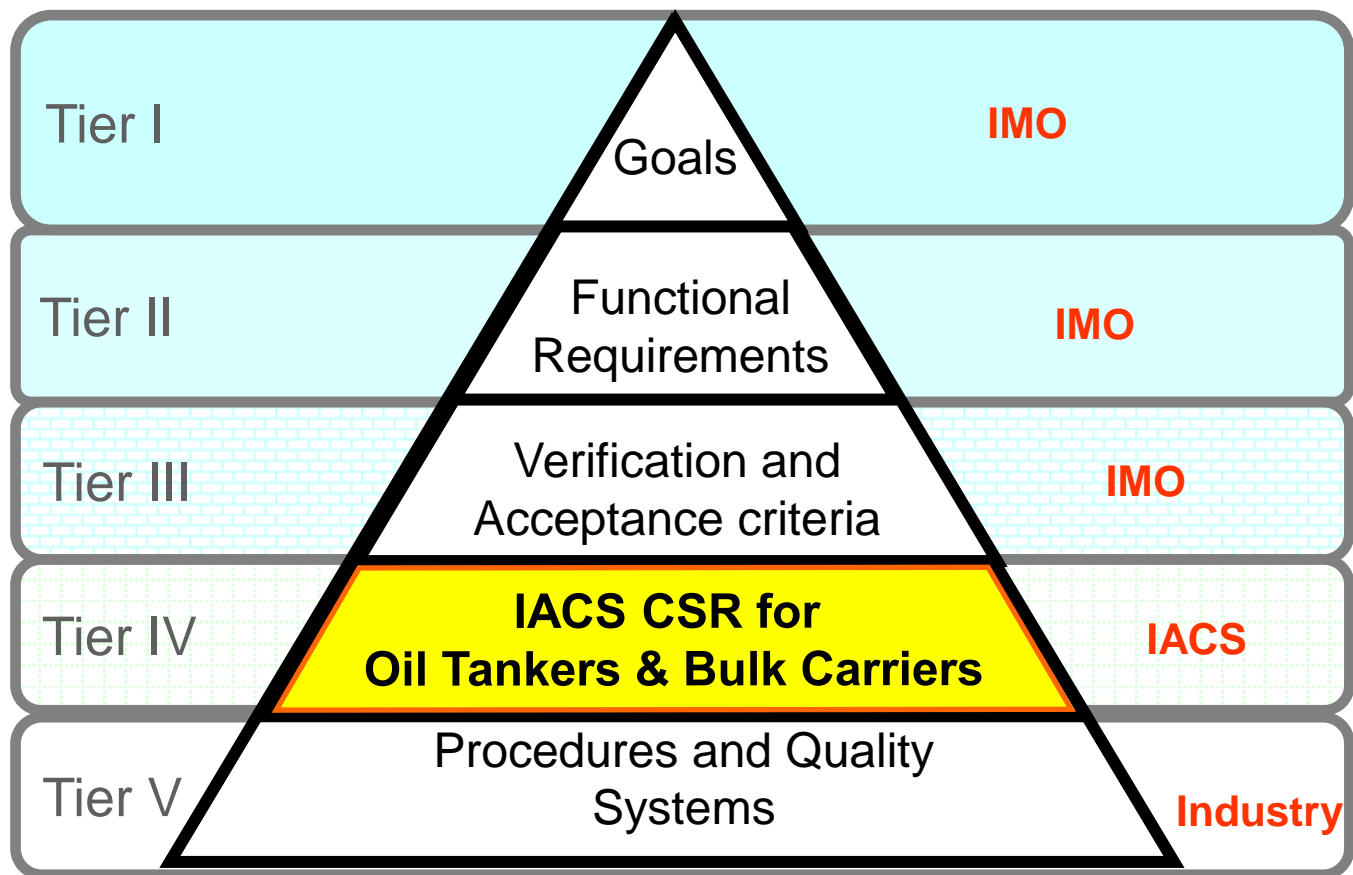
A high-level list of goals which are stated in order to provide overall guidance for the development of Rules and Standards

- GBS contains multi-layers (tiers) that provide greater detail information as one goes from one level to the next
- GBS intended for developers of Rules or Standards and is not a Rule or Standard itself, a set of “Rules for Rules”
- Designers apply the classification Rules and Standards



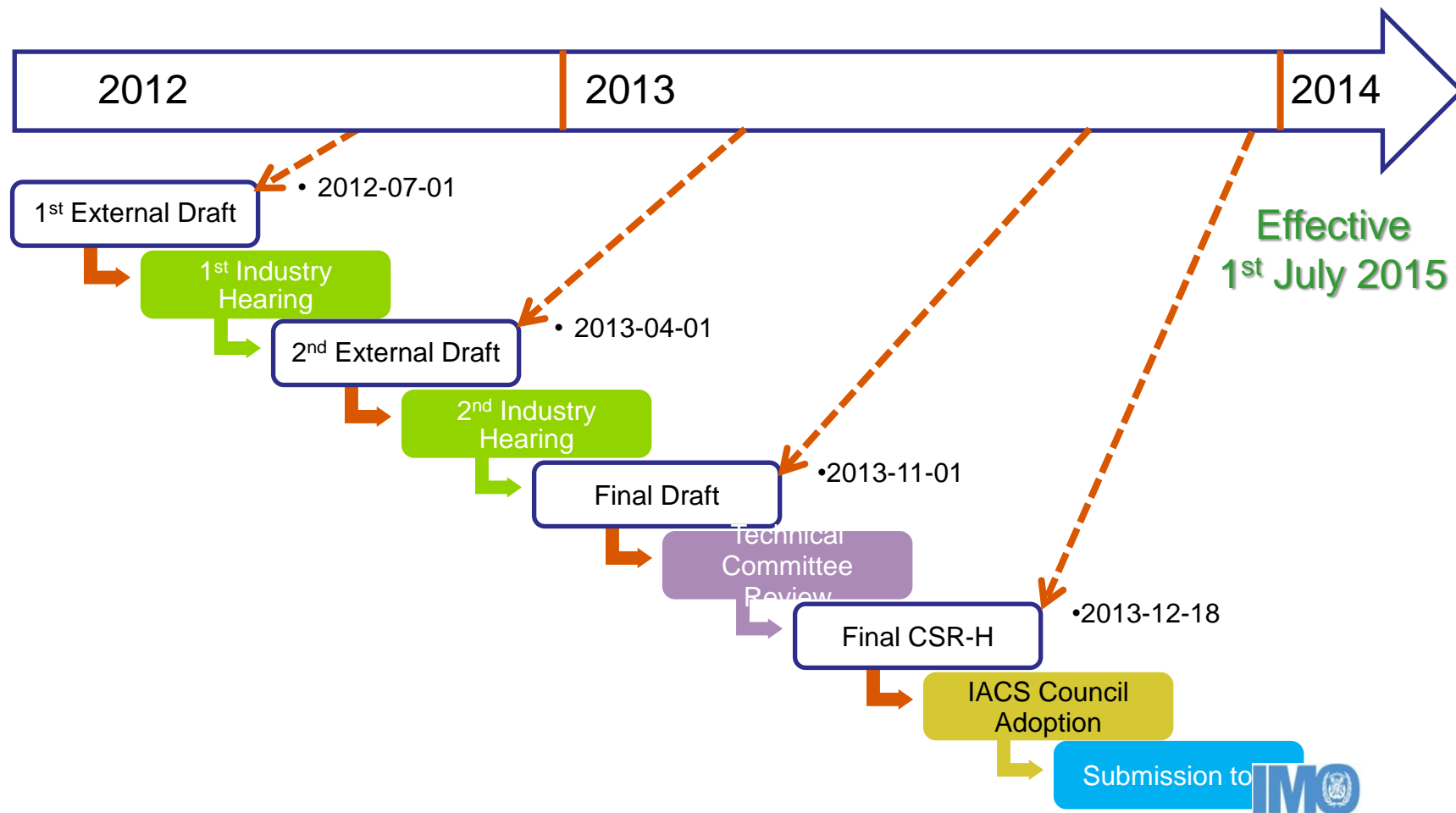
## IMO Goal Based Standards (GBS)

“Rules for the rules”: if Class Rules satisfy GBS, and ships are constructed to Class Rules, then ships satisfy GBS





# IACS Harmonised Common Structural Rules (H-CSR)







## Could the adopted CSR meet the goals set by the IMO's GBS?

*broad, over-arching safety, environmental and/or security standards that ships are required to meet during their lifecycle*

*the required level to be achieved by the requirements applied by class societies and other recognized organizations, Administrations and IMO*

*clear, demonstrable, verifiable, long standing, implementable and achievable, irrespective of ship design and technology*

*specific enough in order not to be open to differing interpretations*

## **INTERTANKO believes that all these goals are achievable provided that:**

- the “Rules for the Rules” principle is not a hindrance for common application of the CSR in practice
- application of GBS/CSR will ensure robustness of actual ships as built
- application of GBS/CSR will bring innovation & standardisation instead of “optimisation”



**INTERTANKO is positive to the outcome so far**

**INTERTANKO members will monitor the application of GBS/CSR**

**Deviations and inconsistencies will be communicated to IACS & IMO**

**Important each stakeholder ASSUMES its responsibility:**

- designers (class approves the design)
- builders (class & Administrations certify the ship is compliant)
- ship operators (for tanker sector, controlled through the vetting system)

N.B. one should remember these are Goal Based New Ship Construction Standards

**INTERTANKO see possible weakness:**

- “blue prints” might have modifications from the approved designs
- lack of transparency on local design modifications by shipyards
- survey of quality of construction
- Rule updates must be well managed and transparent



- Benefit to all, but innovation and progress has to be generated by ship designers and ship yards
- Regulators promote prescriptive regulations if designers do not provide innovative solutions
- Experience from tankers and bulkers could extend to other ship types
- Experience from hull design could extend to machinery, equipment, etc.
- Concept of GBS for environmental protection related equipment needs special attention, particularly a tight “fit for purpose” control
- Innovation/rule development must not be hindered by GBS verification
- IMO may set and define the minimum required safety level
- Manufacturers could compete to achieve higher levels



**INTERTANKO**

# Thank you

[www.intertanko.com](http://www.intertanko.com)