IACS

Safer and Cleaner Shipping

IACS Harmonised Common Structural Rules

September 2012

Gary Horn
IACS Hull Panel Chairman

IACS

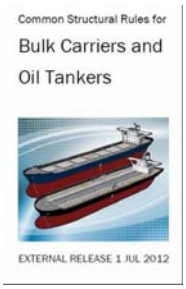
Safer and Cleaner Shipping

IACS Harmonised CSR Industry Presentations

- **Welcome, and thank you for attending**
- **Safety first**

Agenda

Topic	Presenter
Welcome & Introduction	G. Horn
General Principles	G. Horn
Loads	P. Baumans
Coffee Break	
Hull Girder Strength & Local Prescriptive Requirements	P. Baumans
Direct Strength Analysis	Å. Bøe
Lunch	
Buckling Criteria	P. Baumans
Fatigue Strength	Å. Bøe
Coffee Break	
Consequence Assessment	H. Ocakli
Debriefing of the day	All



CSR Harmonisation – Project Team Composition 2011

	HPTs	ABS	BV	CCS	GL	IRS	KR	LR	NK	DNV	RINA	RS	Total per PT
HPT01	Wave Loads		P		x		x	x	x	x			6
HPT02	Buckling		x	P	x		x	x	x	x	x		8
HPT03	FEA	x		x	x		P	x	x	x	x		8
HPT04	Corrosion	P						x	x			x	4
HPT05	Welding	x		x		x						P	4
HPT06	PT 6 (ex 53)	x			P		x	x	x	x			6
HPT07	SiO		x	x	x					x	P		5
HPT08	Fatigue	x	x	x	x	x	x	x	x	P			9
HPT09.1	Prescriptive: Safety Criteria and Principles		P	x					x	x			4
HPT09.2	Prescriptive: Detailed Requirements	x			x		x			P			4
HPT10	Consequence Assessment	x	x	x	x	x	x	P	x	x	x	x	11
													69

External Review of the Harmonised CSR

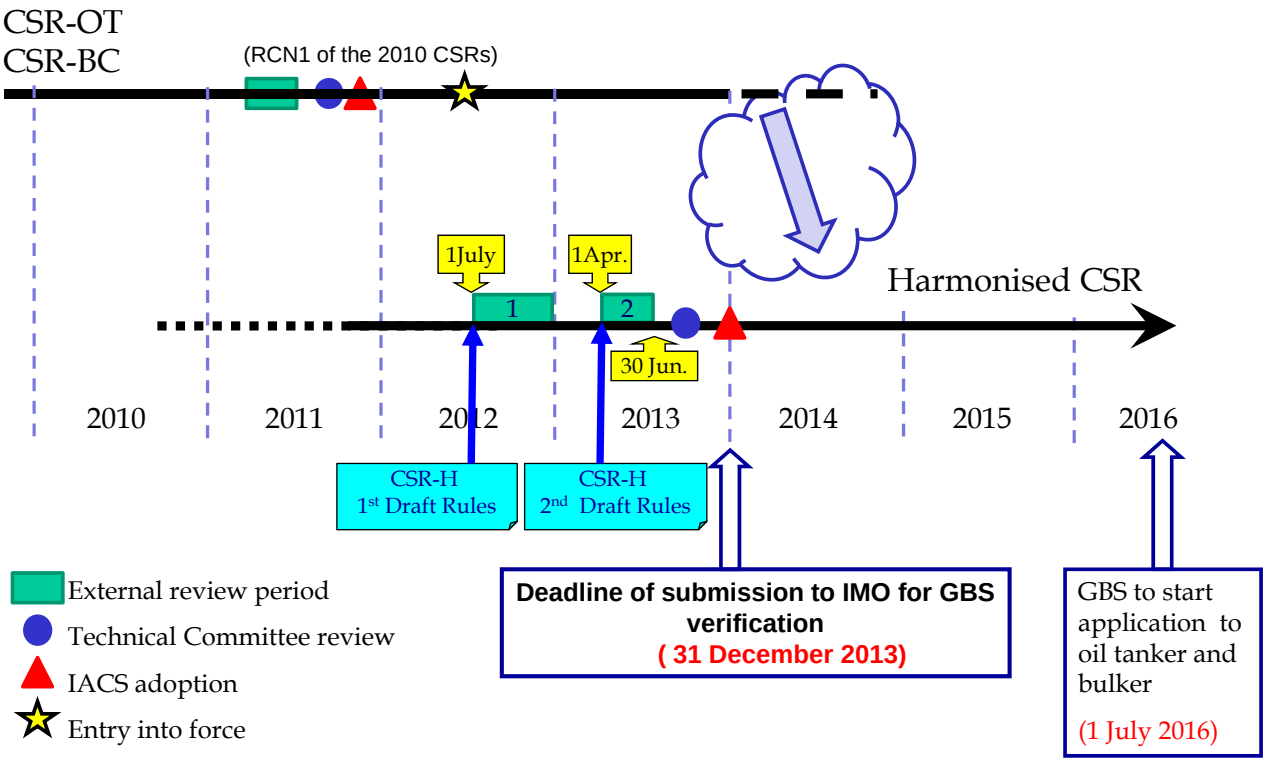
- **Preview by an External Advisory Group (EAG) nominated by;**
  BIMCO/INTERTANKO, CANSI, ICS, INTERCARGO, KOSHIPA, OCIMF and SAJ.

  Meetings: **London Dec 6-7, 2010**
  Shanghai, Feb 21-22, 2011
  Oslo, June 9-10, 2011
  Houston, Oct 27-28, 2011
  London, Apr 25-26, 2012

- **Webinars held in March 2012**
- **General review of the draft Rules by the Industry, starting July 2012.**
  - **Two separate rounds of Industry review.**
  - **Will include IACS presentations and Consequence Assessment results.**
- **Review of the final draft Rules by Members' Technical Committee.**

EAG Workshop: EAG, Hull Panel, PMT and Project Team Leaders.

Goal based standards & Harmonised CSR



Harmonised CSR Schedule

	Schedule
First draft (External)	1 Jul 2012
1st Industry Review	1 Jul – 31 Dec 2012 (6 months)
Second draft	31 Mar 2013
2nd Industry Review	1 Apr – 30 Jun 2013 (3 months)
Third (TC) draft	31 Aug 2013
TC Review	1 Sep – 30 Nov 2013 (3 months)
IACS Adoption	December 2013

CSR-H External Review

External Release 1 July 2012

- First industry review period July 2012 to December 2012
- Draft Rules:
  - Subject to change based on feedback, further development, etc.
  - "In progress" items identified in the Foreword to the rules.
- Comments may be given via e-mail to csr@iacs.org.uk
- CSR-H Knowledge Center at http://www.iacs-csrkc.org.uk/:
  - Specific to CSR-H
  - Accessible by anyone to see answers so far published
- Presentation available on IACS web site by September end (pdf format)

"In Progress"

Main "In Progress" items

- **Direct Strength Analysis (FE), Ch 4, Sec 8, Ch 7, Sec 2 and Sec 3**
- **Buckling of side structure of single side BC, Ch 8, Sec 5**
- **Fatigue, Ch 9**

Rule Reference	Subject	Comment
Pt 1, Ch 1, Sec 1, [3.2.2]	Rule general principles, additional class notation GRAB [X]	Reviewing the requirements associated with the 40 t grab for BC-A and BC-B bulk carriers above 70,000 t deadweight.
Pt 1, Ch 3, Sec 4	Rule general principles, corrosion protection	Reviewing the requirements associated with SOLAS II-1/3-2 (IMO PSPC-ballast).
Pt 1, Ch 4, Sec 4, [2.3.3] to [2.3.5]	Loads, hull girder permissible shear force corrections	Reviewing the clarity of the shear force corrections in various prescriptive rule sections, including the corrections in the FE section such as Pt 1, Ch 7, Sec 2, [4.3.3].
Pt 1, Ch 4, Sec 8	Loads, loading conditions, direct strength assessment	Reviewing the direct strength loading conditions for outside the midship region, especially for the foremost and aftmost cargo holds/tanks.
Pt 1, Ch 6, Sec 3, Table 1	Hull local scantling, minimum net thickness for plating	Reviewing the shell and deck minimum net thickness requirements in way of the machinery space and aft part.
Pt 1, Ch 7, Sec 2	Direct strength analysis, cargo hold structural strength analysis	Reviewing and updating the analysis procedure for the envelop assessment method (EM) for the midship cargo hold region and the analysis procedure outside the midship cargo hold region.
Pt 1, Ch 7, Sec 3	Direct strength analysis, local fine mesh structural strength analysis, screening procedure	Reviewing and updating the analysis procedures and requirements mainly for locations outside midship.
Pt 1, Ch 8, Sec 5, Table2	Buckling, plate capacity, plane plate panels	Reviewing and updating requirements concerning buckling capacity of side shell of bulk carriers.
Pt 1, Ch 8, Sec 5, Table 3	Buckling, plate capacity, curved plate panels	Reviewing and updating the buckling capacity requirements for curved plate.
Pt 1, Ch 8, Sec 5, [2.3]	Buckling, capacity of stiffeners	Reviewing and updating requirements for warping effects.
Pt 1, Ch 8, App 1, [1.2]	Buckling, stress-based assessment	Reviewing and updating the reference stress-based buckling method.
Pt 1, Ch 9	Fatigue	Reviewing and updating the analysis procedures and requirements, particularly for the FE fatigue analysis.
Pt 2, Ch 1, Sec 2, [3.1]	Bulk carriers, structural design principles, double bottom structure	Reviewing and updating double bottom height and the floor/girder spacing requirements together with Pt 1, Ch 2, Sec 3, [2].

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