



Technical Activities Report for TWG, ARTs and SWGs

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Accredited Representative (Technical) of ASEF

Contents



- **ASEF, as an NGO of IMO**
- **TWG's report on technical activities**
- **ARTs' report on technical activities**
- **Status report on SWGs' activities**
- **Summary and suggestion**

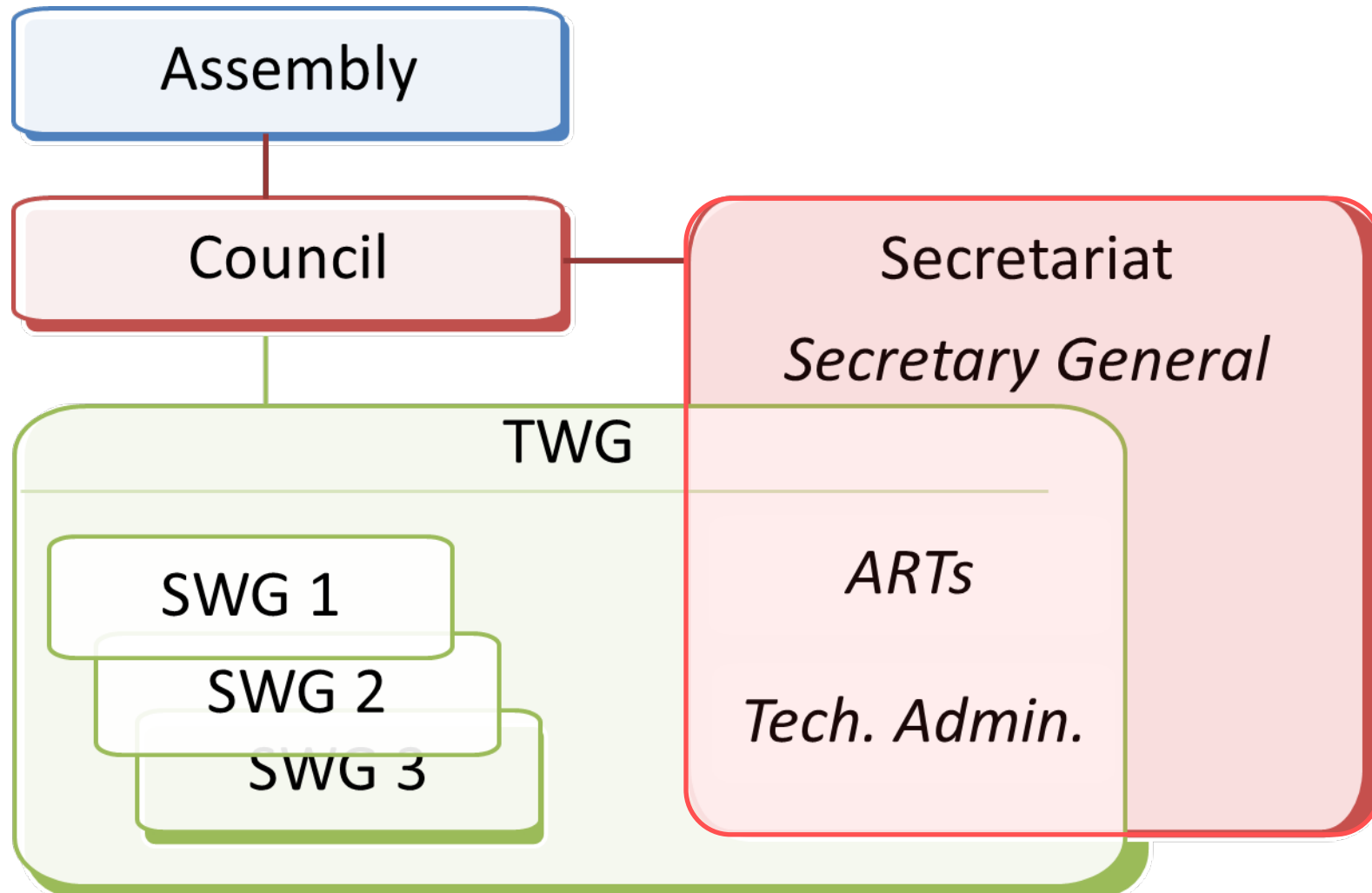
ASEF, as an NGO of IMO

- The IMO 30th Assembly (held from 27 Nov. to 6 Dec. 2017) endorsed the decision of the 118th session of the Council to **grant consultative status to ASEF**.
- From 2018, **ASEF** has been participated in many IMO meetings, as an NGO of IMO.
- The technical works in ASEF carried out by **TWG**, **ART** and **SWG**.



What is TWG, ART and SWG?

Structure of TWG, ART and SWG



Technical Working Group - TWG

- ASEF consists of an Assembly, a Council, a **Technical Working Group (TWG)** and such subsidiary organs as ASEF may at any time consider necessary, and a Secretariat.

— — *ASEF Charter, Article 5 (Organs)*

- TWG functions as a platform for common technical issues among ASEF members, whose **missions** are:
 - ✓ to identify the technical issues of common interests among the ASEF members that must be considered;
 - ✓ to exchange information about relevant points, trends, and movements of external organizations;
 - ✓ to prepare the key principles and strategic policies on the relevant issues;
 - ✓ to recommend establishment or abolishment of SWGs; and
 - ✓ to harmonize activities of SWGs, as far as practical.
- TWG consists of **SWG Chairs, ARTs, and members of SWG relevant to the discussion items**, if any.

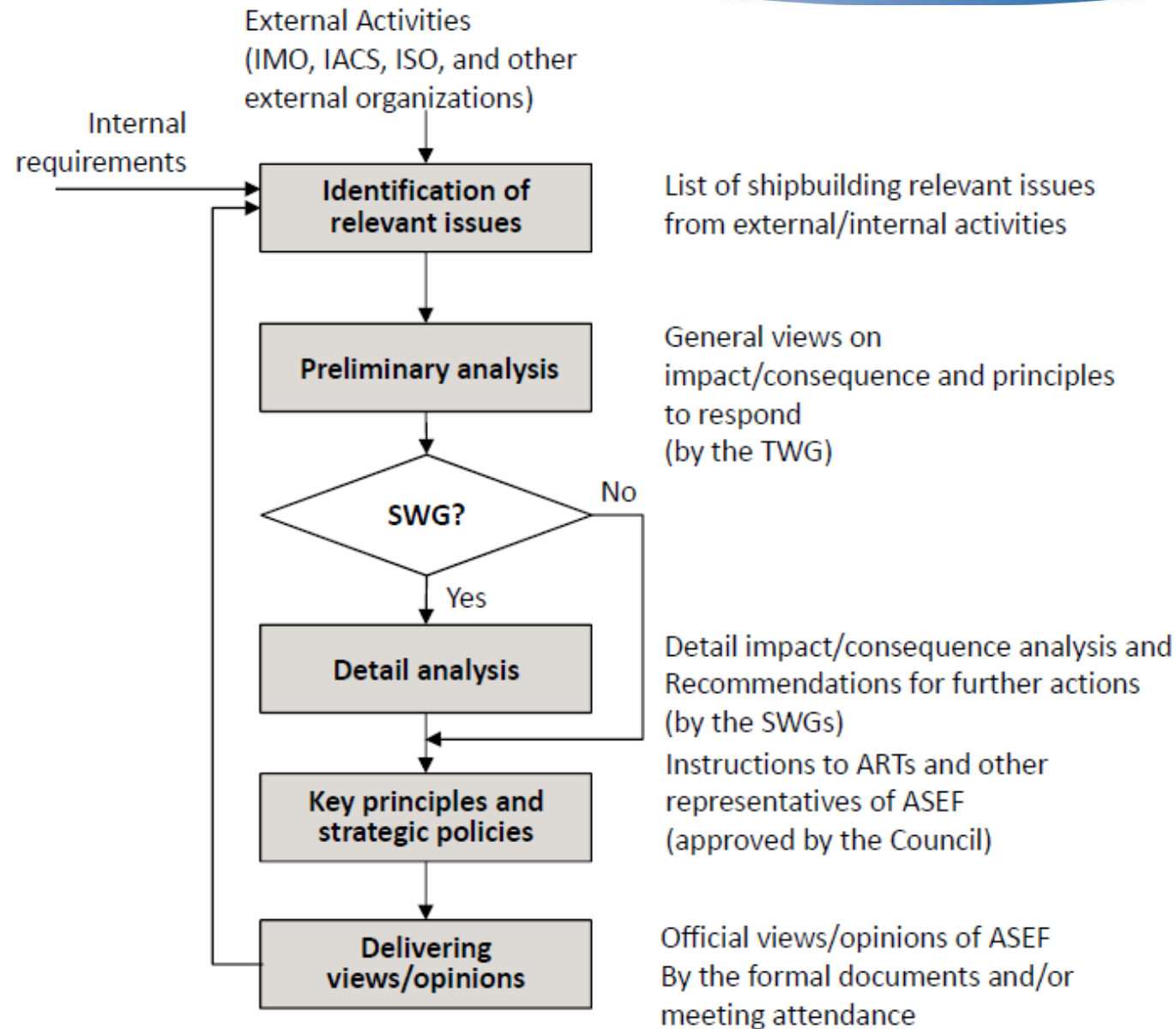
Accredited Representative (Technical) – ART

- At the 1st APT meeting 2018, it was agreed to use **ART** (Accredited Representative (Technical)) to replace **APT** (Accredited Person (Technical)) in the Charter.
- **ARTs belong to ASEF/Secretariat, and are also members of TWG.**
- ARTs are responsible for the **overall technical issues** raised in IMO, IACS, ISO and other international organizations in following activities:
 - ✓ to keep up with state-of-the-art maritime issues;
 - ✓ to evaluate the impact of maritime technology, rules, regulations or standards on the shipbuilding industry by qualitative and/or quantitative analysis;
 - ✓ to participate in various maritime technical meetings or maritime activities and deliver the shipbuilder's information, views and opinions in an active manner while monitoring and analysing the information obtained through participants to support future decisions of ASEF;
 - ✓ to give feedback on the possible adverse effects of new rules, regulations or standards on the shipbuilding industry or express needs or ideas of the shipbuilding industry for future ship safety, security and environmental protection in a timely manner.

Sub-working group – SWG

- SWGs for important technical issues
- ToR for each SWG prepared by TWG
- **Missions** of SWGs:
 - to study and/or monitor the relevant issues under discussion or development by external organization(s);
 - to exchange information, views and opinions on the issues among SWG members through e-mail correspondence, in principle;
 - to make detailed reports of progress and future plans of their activities to the Council through the Chair of TWG and the Secretary General which are to be shared by all ASEF members;
 - to provide ARTs with information, views, opinions and proposals of ASEF in timely manner; and
 - to draft documents which are to be submitted to external organization(s)

Technical work flow in ASEF



TWG's report on technical activities

- A draft guidelines for technical works in ASEF titled with “**Interim Guidelines for Technical Works – for TWG and ART Activities**” was developed and submitted to the Secretariat, and **has approved by the Council meeting.**
- **1st TWG meeting was held on 22 Oct. 2018:**
 - **Participants:** (3) ARTs, (6) SWG Chairs, (16) Experts, (5) observers, incl. SG, Council members and CANSI staff
 - **Agenda:**
 - ✓ Introduction of the draft Interim Guidelines for technical works
 - ✓ Review of the progress of ongoing SWGs
 - ✓ Review of current activities of ART
 - ✓ Any other technical issues (incl. Tripartite, A-3 meeting, etc.)
 - **Notes:** ASEF/TWG will gradually optimize the TWG management process, be more active in maritime activities, continue to promote the work progress of each SWG, focusing on GHG issue or reduce CO₂ emission, human centered design, ship safety, marine pollution control, desulfurization technology, cyber safety/security and autonomous or smart ships, and strengthen cooperation with other international organizations.

ARTs' report on technical activities

- Currently (3) ARTs are working:
 - Mr. Jiameng Wu, MARIC/CANSI
 - Mr. Jongkap Lee, KRISO/KOSHIPA
 - Mr. O Kitamura, MHI/SAJ (until 30 Jun 2018); successor: Mr. Naoki Ueda, MHI/SAJ
- Attending meetings for express/sharing of views and opinions of ASEF:
 - **IMO**: SDC5, SSE5, ISWG-GHG, **MEPC72**, **MSC99**, IMO 70 Forum, MASS workshop
 - **ISO**: ISO/TC8/SC8 plenary meeting, ISO/TC8 CSAG meeting, ISO/TC8 plenary meeting
 - **IACS**: **IACS Council - Industry meeting**, EAG meeting, **IACS - Industry technical meeting**, **Tripartite meeting**
 - **ASEF**: **ART meeting**, **WG meeting**, **Council**, **Assembly**, **ASEF Forum**
 - **Other**: ASEF-CESA/Sea Europe meeting, ACS Seminar
- Four ART meetings in 2018:
 - 4th ART meeting on 27 Mar. 2018 in Beijing, China
 - An extraordinary ART meeting on 15 May 2018 in London, UK
 - 5th ART meeting on 14 Jun. 2018 in Xiamen, China
 - 6th ART meeting on 22 Oct. 2018 in Dalian, China

ARTs' report on technical activities

- Working on the development of the *Interim Guidelines for technical works – for TWG and APT activities*, including the issues of:
 - Basic principles of TWG and ART activities
 - Framework of technical works
 - Arrangement of meetings for TWG, ART and SWG
- Working on the ToR of new SWGs and chairing some new SWGs
 - Mr. Kitamura for ToR of SWG4 and SWG7, chairing SWG7 (until 30 Jun 2018)
 - Mr. Lee for ToR of SWG6, Chairing SWG6
 - Mr. Wu for ToR of SWG5
- Important technical activities by ARTs:
 - **Express ASEF's views and proposals when discussion during WG and meetings**, e.g. at WG on GBS in MSC99, at WG on safe mooring operations at SDC 5, at WG on OLAW at SSE 5, etc.
 - **Make presentations in meetings to deliver Shipbuilder's information, views and opinions**, e.g. interim progress report for cyber resilience, and ISO 21984:2017 & ISO 20283-5:2016 at the IACS-Industry technical meetings, ongoing technical issues in ASEF at the ACS Seminar

SWGs in ASEF

SWG	Mission	Current Chair	When established	Status
SWG1	PSPC and biofouling	KOSHIPA (Mr. Jongwoo Park / STX)	2016.1	In progress
SWG2	Containership safety	CANSI (Mr. Jiameng Wu / MARIC)	2015.12	In progress
SWG3	Ship vibration standard	SAJ (Mr. O Kitamura / MHI)	2015.12	Finished (2017.12)
SWG4	GBS and CSR maintenance	SAJ (Mr. Toshihiro Fujii / Oshima Shipbuilding Co., Ltd.)	2018.4	In progress
SWG5	MASS and related issues	CANSI (Mr. Shiping Lu/ MARIC)	2018.7	In progress
SWG6	Environmental (GHG) issues	KOSHIPA (Dr. Jongkap Lee/KRISO)	2018.7	In progress
SWG7	Safe mooring operations & OLAW	SAJ (Mr. Tetsuo Shiroyama / Imabari Shipbuilding Co. Ltd.)	2018.4	In progress


Categories of SWGs in ASEF

SWG	Mission	Ship safety	Marine Environment protection
SWG1	PSPC and biofouling	√	√
SWG2	Containership Safety	√	
SWG3	Ship Vibration Standard with regard to habitability		√
SWG4	GBS and CSR Maintenance	√	
SWG5	MASS and Related Issues	√	√
SWG6	Environmental (GHG) Issues		√
SWG7	Safe mooring operations, onboard lifting appliances and anchor handling winches(OLAW)	√	

Status report on SWGs' activities

SWG1: PSPC and biofouling

Active Shipbuilding Experts' Federation

ASEF 

New Start, New Dream!

2017/18 ANNUAL REPORT OF ASEF/TWG/ SWG1

PSPC Review and Biofouling issue

2018. 10. 23
ASEF TWG/SWG1 CHAIR
JONG WOO PARK

2018 ASEF EVENT FROM 22 TO 24 SEPTEMBER IN DALIAN, CHINA

SWG2: Containership Safety ¹

Key principles/strategic policies of ASEF/TWG/SWG2:

Exchange of information and views on IACS UR S11A “Longitudinal Strength Standard for Container Ships”, UR S34 “Functional Requirements of Load Cases for Strength Assessments of Container Ships by Finite Element Analysis” and Class Rules under development, and clarification of Technical Background (TB) and/or rule change of IACS and/or relevant Classification Societies are to be requested by ASEF as appropriate, with a view to minimizing Shipbuilders’ risks, and further develop discussions.

From 2017, ASEF/TWG/SWG2 has another mission to keep the track of the progress of a new Project Team set by IACS Team to aim at gradually expanding the quantitative requirements for whipping effects on Hull Girder Ultimate Strength of containerships.

SWG2: Containership Safety ²

- List of Participants of ASEF/TWG/SWG2 (11 members)

First Name	Family Name	Organization	ASEF Member
Jiameng	WU	Marine Design & Research Institute of China	Chair/CANSI (ART/CANSI)
Huaiyuan	REN	Dalian Shipbuilding Industry Co. Ltd.	CANSI
Jiaying	WANG	Hudong-Zhonghua Shipbuilding (Group) Co. Ltd.	CANSI
Deyu	WANG	Shanghai Jiaotong University	CANSI
Dajian	XIE	Nantong COSCO KHI Ship Engineering Co. Ltd.	CANSI
Byung-DO	LEE	STX Offshore & Shipbuilding	KOSHIPA
Dong-Ki	KANG	Hyundai Heavy Industries	KOSHIPA
Hiroaki	HIRASAWA	Japan Marine United Corporation	SAJ
O	KITAMURA	Mitsubishi Heavy Industries, Ltd.	APT/SAJ
Hoang Van	THOA	Technical & Production Department	SBIC
Tran Xuan	DUC	Shipbuilding Industry Designing Department	SBIC

SWG2: Containership Safety ³

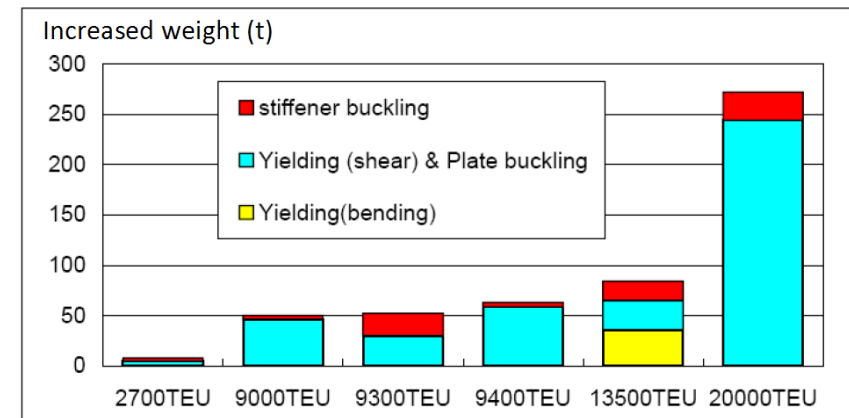
● What has been done by ASEF/TWG/SWG2

■ Feedback ASEF's comments and concerns on UR S11A

- ✓ Hull girder ultimate strength - recalibration of Partial Safety Factors (PSFs)
- ✓ Wave bending moment - 5 knots speed for CVs at rough sea?
- ✓ Whipping effect - Unified min. requirement by IACS

■ Consequence assessments for UR S11A and S34

- ✓ Main impact by UR S11A is **shear buckling** induced by increased wave shear forces;
- ✓ Main impact by UR S34 is the **one bay empty** condition in cargo hold analysis;
- ✓ By EDW analysis for a typical containership, it was found that the **non-uniform wave heading distribution** may have little effect on long-term values, whereas the effects brought by **variant speed** (speed reduction in dependence of the actual wave conditions) cannot be neglected;
- ✓ There is a gap for hull girder yielding strength at gross (by UR S11) and at net scantlings (by UR S11A) comparing to UR S11 and CSR for bulk carriers and oil tankers.



Source: Annual report of ASEF/TWG/SWG2 at the 10th ASEF Forum, 2016

SWG2: Containership Safety ⁴

● ASEF/TWG/SWG2 will continue to:

■ Follow the progress on Containership whipping by IACS (PT PH38) and focus on:

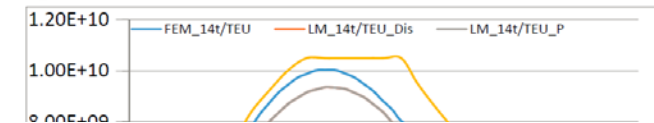
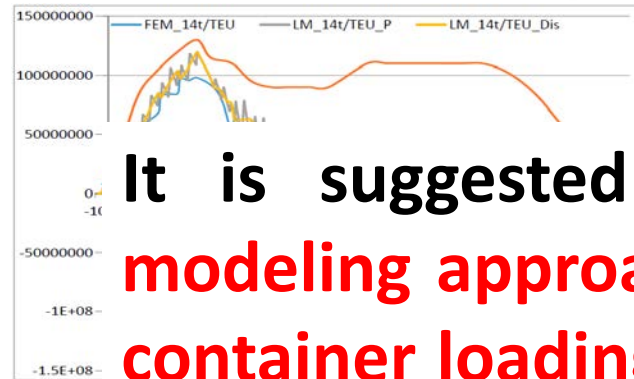
- ✓ The functional requirement and detail procedures for calculation
- ✓ How to consider whipping effect on hull girder ultimate strength and the recalibration of PSFs
- ✓ Ship speed of 5kn in whipping calculation

■ Further research on SWSF by different modelling approach for containers in loading manual and/or computers:

- ✓ Two modelling approach for containers in cargo holds or on hatch covers:
 - By **uniform loads** in NAPA Macros and/or loading computers, like liquid or bulk cargo;
 - By **point loads** in global FE based on Individual Class Rule
- ✓ It was found for typical loading conditions by two modelling approach both in NAPA and global FE that:
 - Different modeling approach will **only impact SWSF distribution** but no effect on SWBM distribution;
 - At the location of transverse BHD (W.T. or supporting BHD), the SWSF, by point load modeling approach, will have **a sudden increase**, which is line with that by global FE.
 - SWSF **when 40ft container loaded** is more server than 2*20ft container loaded by point load modeling approach although the deadweight and SWBM is the same.

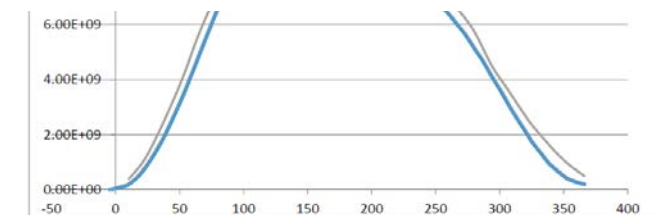
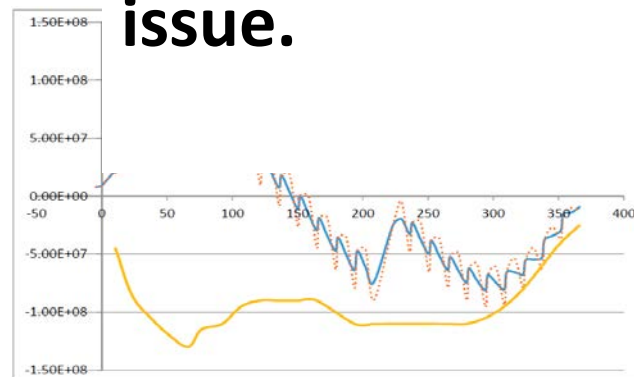
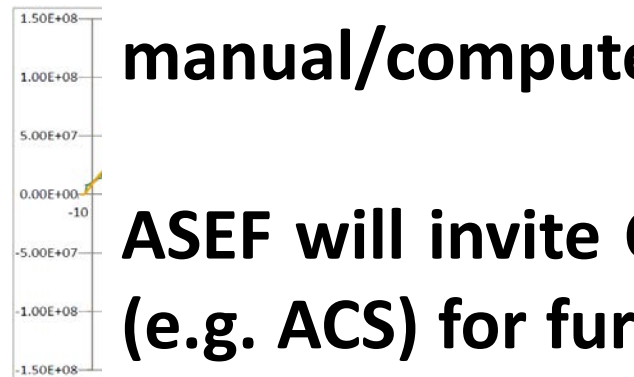
SWG2: Containership Safety ⁵

- For a 18000TEU CV,
 - Comparison of a load condition with 20ft (14t) full loaded at Tsc in loading manual and global FE model
 - Comparison of a load condition with 40ft (28t) full loaded at Tsc in loading manual and global FE model
 - Approx. 30% increase of SWSF i.w.o. transverse BHD by point load modelling approach comparing 40ft v.s. 2*20ft loading conditions



It is suggested to use **point load modeling approach** and consider **40ft container loading condition** in loading manual/computer by ASEF.

ASEF will invite Classification Societies (e.g. ACS) for further research on such issue.



SWG3: Ship vibration standard

● Background

- ISO 20283-5 (to replace ISO 6954:2000), handled by ISO/TC108/SC2, is found impractical for numbers of merchant ships: No distinction between **passengers** on board **passenger ships** and **crew** on board **merchant ships**, unlike ISO 6954:2000 and IMO SOLAS requirements.

● What has been done by ASEF/TWG/SWG3

- To develop a supplementary ISO standard (ISO 21984) “*Guidelines for measurement, evaluation and reporting of vibration with regard to habitability on **specific ships***” under ISO/TC8/SC8, which is finally approved and has been published in 2017.
- Following the successful achievements by SWG3, the notification of ISO 21984:2017 to shipbuilders, Shipowners, Class, etc. is of great importance.

● Activities by ASEF for ship vibration standard in 2018:

- ASEF ART has delivered a circulated presentation on “*ISO 20283 and ISO 21984 in relation to on-board vibrations*” in IACS-Industry technical meeting to explain the background and difference between the two parallel existing vibration standard.
- **ASEF ART reminds IACS members when they update their guidelines for vibration, which ISO standard is implemented is to be seriously considered.**

SWG4: GBS and CSR Maintenance ¹

● Background

- Amendments to GBS verification Guidelines of IMO under discussion at MSC
- CSR maintenance of verification audits
- Re-establishment of the External Advisory Group (EAG) for CSR
- Annual rule change proposal by IACS for CSR
- Important Feedback on CSR from ASEF members in real ship design project

● Challenges

- Make sure IACS develop the criteria for the full penetration welding around BHD regarding to RCP2017
- Support EAG member registered from ASEF at the EAG meeting
- Review the impact of safety, hull weight and construction stage due to the future Rule change and make comments as shipbuilding industry

Under such situation, the establishment of SWG4 “GBS and CSR maintenance” was approved at the 5th Council meeting.

SWG4: GBS and CSR Maintenance ²

● Key principles/strategic policies of ASEF/TWG/SWG4:

- **Monitor the progress in the amendments to GBS Verification Guidelines of IMO** under discussion at MSC 99 and MSC 100, in particular the frequency in periodic maintenance of verification audits for changes of CSR, and take appropriate actions through ARTs so that ...
- **Assist the experts registered by ASEF with external advisory group (EAG)** of IACS for annual maintenance of CSR, where plan of rule change proposals (RCP 20XY) is preliminarily discussed, in expressing shipbuilders' views at the regular and ad-hoc EAG meetings, if any, so that ...
- **Review the official rule change proposals** made annually by IACS and **make comments** on them as appropriate, and distribute rule change of CSR adopted annually by IACS with notice to all ASEF members in a timely manner through SG so that ...
- **Monitor the maintenance of verification audits** to be conducted by IMO periodically and ad-hoc, if any, for Class rule changes, and take appropriate actions through ARTs so that ...
- **Collect feedback of importance on CSR from ASEF members**, if any, and request IACS to incorporate it into relevant RCP as appropriate.

SWG4: GBS and CSR Maintenance ³

- List of Participants of ASEF/TWG/SWG4 (9 members)

First Name	Family Name	Organization	ASEF Member
Toshihiro	Fujii	Oshima Shipbuilding Co., Ltd.	Chair/SAJ
Jiameng	Wu	Marine Design & Research Institute of China	ART/CANSI
Xiaolong	Xie	Marine Design & Research Institute of China	CANSI
Ting	Dai	Dalian Shipbuilding Industry Design & Research Institute	CANSI
Honggan	Lu	Shanghai Merchant Ship Design & Research	CANSI
Woo Ram	Lee	Hyundai Heavy Industries Co., Ltd.	KOSHIPA
Takumi	Yoshida	Kawasaki Heavy Industries, Ltd.	SAJ
Shinji	Takiguchi	Sasebo Heavy Industries Co., Ltd.	SAJ
Masahiro	Takemura	Mitsui E&S Shipbuilding Co., Ltd.	SAJ

SWG4: GBS and CSR Maintenance ⁴

● What has been done by ASEF/TWG/SWG4:

- Four experts from ASEF became **EAG** members for external review on CSR.
- In IMO MSC 99, ASEF ART (also SWG4 member) proposed the ASEF's position to papers MSC 99/6/2 by IACS and MSC 99/6/3 by Germany, and expressed ASEF's views & proposals on the maintenance of verification audits at WG on GBS, e.g.:
 - ✓ Support the proposal by IACS and Germany and make some comments. Their proposal is that the rule change will be categorized by the IACS self assessment depend on the impact of safety and environmental protection issue.
 - ✓ Agreement on three-year verification cycle in principle.
- Feedback to IACS to CSR RCP or URCP, mainly on:
 - ✓ URCP dealing NC04 for less years of protection against corrosive condition
 - ✓ RCP 2017 for the expanded application of full penetration welding

SWG4: GBS and CSR Maintenance ⁵

- **ASEF/TWG/SWG4 will continue to:**

- As IACS has promised ASEF to review/reconsider ASEF's feedback on the unreasonably expanded application of full penetration welding stipulated in CSR BC&OT, the Chair would like to make this issue forward as a future task of SWG4.
- Support the experts registered by ASEF in expressing shipbuilders' views on CSR in IACS EAG meeting.
- Review the official CSR RCP made annually by IACS and make comments.
- Collect feedback of importance on CSR from ASEF members, if any, and request IACS to incorporate it into relevant RCP as appropriate.

SWG5: MASS and related issues ¹

● Background

- IMO has started exploring how safe, secure and environmentally-conscious Maritime Autonomous Surface Ships (**MASS**) operating can be addressed in IMO instruments.
- Joint Working Group on cybersecurity (**JWG/CS**) was set up and chaired by IACS, aiming to develop cybersecurity requirements (e.g. IACS UR E22) for new-build vessels.
- **WG10** (Smart shipping) by **ISO/TC8** was set up for smart shipping related standard.
- MASS and related issues become hot issues in maritime research.

● Action by ASEF: A Sub Working Group was established to cope with the above issues at the 6th ASEF Council meeting, which is **ASEF/TWG/SWG5** “MASS and related issues”:

- SWG5-1: Cyber resilience, related to IACS
- SWG5-2: MASS, related to IMO
- SWG5-3: Smart shipping, related to ISO/TC8

SWG5: MASS and related issues ²

● Key principles/strategic policies of ASEF/TWG/SWG5:

- **Express shipbuilders' views or opinions** on IACS UR E22 and other IACS draft documents for cyber related issues in international maritime meeting, incl. IACS JWG/CS meeting, define and assign roles in management of such cyber resilience system for new ships, monitor the possible revision for UR E22 and detailed requirements, if any, and take appropriate actions through ART so that ...
- **Monitor the action and progress for undertaking a regulatory scoping exercise to determine how the safe, secure and environmentally sound operation of MASS within the existing IMO instruments** with a target completion date of 2020, in particular the regulatory barriers to MASS in civilian commercial shipping and resulting needs for amendments and/or additions to the existing regulatory framework in IMO, take appropriate actions through ART and/or the experts registered by ASEF with the working groups or the supporting intersessional CG for MASS related issues, review the MASS related papers, if any, and make comments on them as appropriate or express the Shipbuilders' view or opinions on MASS by ASEF's paper so that ...
- **Monitor the progress of ISO/TC8 WG10 (smart shipping) for standard related issues**, including data communication format, interface with maritime system, and etc., review draft smart shipping related standards, if any, make comments on them as appropriate, and distribute such standards with notice to all ASEF members in a timely manner through SG so that ASEF member countries can make right choice while voting.
- Monitor the progress of other MASS related issues and take actions as appropriate.

SWG5: MASS and related issues ³

- List of Participants of ASEF/TWG/SWG5 (14 members)

First Name	Family Name	Organization	ASEF Member	Sub Group
Shiping	Lu	Marine Design & Research Institute of China	Chair/CANSI	
Xingchen	Wang	Marine Design & Research Institute of China	CANSI	SWG5-1
Xin	Li	Shanghai Merchant Ship Design & Research	CANSI	SWG5-2
Weimin	Chen	Shanghai Ship & Shipping Research Institute	CANSI	SWG5-2
Yinghua	Guan	Dalian Shipbuilding Industry Group Co., Ltd.	CANSI	
Xiaofeng	Wu	Shipbuilding Information Center of China	CANSI	SWG5-3
Lifeng	Xu	Cosco Shipping Heavy Industry Co., Ltd.	CANSI	
Tae-shik	Jung	Hyundai Heavy Industries Co., Ltd.	KOSHIPA	SWG5-1
Dongsoo	Kang	Samsung Heavy Industries	KOSHIPA	SWG5-2
S.D.	Bae	KOSHIPA	KOSHIPA	SWG5-3
Masaki	Omine	Kawasaki Heavy Industries, Ltd.	SAJ	SWG5-1
Hiromasa	Gotoh	Japan Marine United Corporation	SAJ	SWG5-1
Toshifumi	Kihana	SAJ	SAJ	SWG5-1
Taichi	Tanaka	Mitsubishi Shipbuilding Co., Ltd.	SAJ	SWG5-2

SWG5: MASS and related issues ⁴

● Developments so far

- For MASS, MSC has endorsed a framework for a regulatory scoping exercise, as work in progress, including preliminary definitions of MASS and degrees of autonomy, as well as a methodology for conducting the exercise and a plan of work with two steps.
- For cybersecurity, JWG/CS has put forward some draft recommendations on cyber system. In Tripartite meeting, one of the intersessional work items for ASEF was, **“Define and assign roles in management of cyber resilience for new ships”**. A proposal for such issue has been presented in Tripartite 2018 by ASEF/SWG5 member.
- For Smart Shipping, the roadmap has been put forward and discussed recently.

● Challenges

- Find the regulatory barriers to MASS and resulting needs or amendments and/or additions to the existing regulatory framework in IMO.
- Knowledge for MASS, cybersecurity and smart shipping is beyond the traditional shipbuilders' skills and need experts from different majors.

● ASEF/TWG/SWG5 will continue to:

- ASEF will be active in the discussion of MASS in MSC 100.
- ASEF will review the draft recommendations on cyber system by IACS.
- ASEF will review the roadmap of Smart Shipping by ISO/TC8.

SWG6: Environmental (GHG) Issues ¹

● Background

- The Initial IMO Strategy on Reduction of GHG Emissions from ships was adopted in April 2018 (MEPC.304(72)).
- The Establishment of a new SWG was recommended for the environmental issues including IMO GHG strategy at the ART meeting in Beijing, on 27 March 2018.
- The Council decided to establish SWG 6 for the GHG issues with following high level ToR, with the chair from KOSHIPA.

SWG6: Environmental (GHG) Issues ² -- ToR

The SWG is instructed, taking into account the environmental issues being raised at IMO and other relevant organizations/ events, to:

- monitor and identify the emerging issues that are relevant and commonly interesting to the shipbuilding industry, including;
 - Ballast Water Management Systems
 - Air pollution and energy efficiency
 - Reduction of GHG emissions from ships
- analyze the expected impact of these issues on ship design and construction with performance, cost, and delivery;
- prepare ASEF's' views and proposals to the relevant external organizations/events, in a timely manner, especially for:
 - the development of the IMO Strategy on reduction of GHG emissions from ships and the implementation roadmap
 - the development of the appropriate measures at IMO and ISO/TC8
- report the progress to the Council through the Secretary General.

SWG6: Environmental (GHG) Issues ³

- Latest list of Participants of ASEF/TWG/SWG6 (12 members)

First Name	Family Name	Organization	ASEF Member
Jong-kap	Lee	Korea Research Institute of Ships and Ocean Engineering	Chair/KOSHIPA (ART/KOSHIPA)
Cailian	Wang	Marine Design & Research Institute of China	CANSI
Lu	Li	Shanghai Merchant Ship Design & Research Institute	CANSI
Jingpu	Chen	China Ship Scientific Research Center	CANSI
Shuyang	Liu	China Ship Design & Research Center Co. Ltd.	CANSI
Dae-youl	Kang	Samsung Heavy Industries	KOSHIPA
U-shin	Lee	Daewoo Shipbuilding & Marine Engineering, Co., Ltd.	KOSHIPA
Jung-Hyuk	Chun	Hyundai Heavy Industries	KOSHIPA
Norihiro	Tsuzuki	Mitsubishi Shipbuilding Co.,Ltd.	SAJ
Kazumasa	Inoue	Oshima Shipbuilding Co.,Ltd.	SAJ
Narihiro	GON	SAJ	SAJ
Mehtap K.	Ozdemir	GISBIR	GISBIR

SWG6: Environmental (GHG) Issues ⁴

- **Future plan (before the 8th Council meeting):**
 - Review of ‘IMO Resolution MEPC.304(72) Initial IMO Strategy on Reduction of GHG Emissions from ships’ and related documents;
 - Review the results of ISWG-GHG 4 and MEPC 73 meeting;
 - Identify common interests to be considered in ASEF;
 - Prepare “Key principles and strategic policies” of ASEF; and
 - Prepare an action plan for SWG 6
 - Prepare for MEPC 74 in May 2019

SWG7: Safe mooring operations and OLAW ¹

● Background

- OCIMF started a project to update its 3rd edition of the Mooring Equipment Guidelines and submitted a draft document concerning “Safe Mooring Operations” to SDC5 of IMO with several concerns over the concept of the design by ship specific risk assessment.
- IACS UR A3 and Rec No.10
- The threshold capacity value (500kg or 1000kg) for onboard lifting appliances became an agenda item of SSE5 of IMO and was discussed.

● Challenges

- The definition of “**Human-centred design (HCD) approach**” expressed in the revised SOLAS in safe mooring arrangement design.

Under such situation, the establishment of SWG7 “Safe mooring operations and OLAW” was approved at the 5th ASEF Council meeting.

SWG7: Safe mooring operations and OLAW ²

● Key principles/strategic policies of ASEF/TWG/SWG7:

- Assist ART who Joins in IMO MSC, SDC & SSE and relevant CGs & WGs on “Safe Mooring Operation” and “Onboard Lifting Appliances and Anchor Handling Winches (OLAW)” and makes all possible efforts to:
 - ✓ present the information and views of Shipbuilders so that impractical functional objectives and requirements, including but not limited to mandatory mooring arrangement design and OLAW design based on ship-specific risk assessment and/or FSA, are not included in the revised SOLAS and related IMO Guideline;
 - ✓ minimize excessive and/or inflexible requirements for the Shipbuilders in the related IMO Guidelines and enhance responsibility of Shipowners and Classification Societies in service for conducting inspection, survey, maintenance, repair and replacement of OLAW and mooring/towing equipment including lines and supporting hull structures so that Shipbuilders’ risk is reduced; and
 - ✓ try to clarify the definition of “**Human-centred design approach**” expressed in the revised SOLAS so that Shipbuilders can develop the actual design of mooring/towing equipment without ambiguity.
- Review relevant Industry Guidelines (by OCIMF, NI, ISO, etc.) which are placed in the Reference of the related IMO Guidelines and notify all ASEF members of the key points needing careful considerations in designing mooring arrangements and selecting mooring equipment & fittings.

SWG7: Safe mooring operations and OLAW ³

- Latest list of Participants of ASEF/TWG/SWG7 (11 members)

First Name	Family Name	Organization	ASEF Member
Tetsuo	Shiroyama	Imabari Shipbuilding Co. Ltd.	Chair/SAJ
Wei	Huang	Marine Design & Research Institute of China	CANSI
Wei	Sang	Marine Design & Research Institute of China	CANSI
Qingtao	Xie	Nantong COSCO KHI Ship Engineering Co., Ltd.	CANSI
Xuefeng	Guo	Cosco Shipping Heavy Industry Co. Ltd.	CANSI
Deok-seung	Yoon	Hanjin Heavy Insutries & Construction Co., Ltd.	KOSHIPA
Yasuhiro	Haraoka	Namura Shipbuilding Co., Ltd.	SAJ
Toshifumi	Kihana	SAJ	SAJ
Vu Minh	Phu	Shipbuilding Industry Corporation	SBIC
Nguyen Quang	Hung	Shipbuilding Industry Corporation	SBIC
Mehtap	Karahalli Ozdemir	Turk Loydu (Turkish Classification Society)	GISBIR

SWG7: Safe mooring operations and OLAW ⁴

- **What has been done by ASEF/TWG/SWG7:**

- ASEF participated in the intersessional CG on “Safe Mooring Operations” and feedback ASEF’s comments & proposals, including 3 round so far.
- ASEF participated in the intersessional CG on “OLAW”, which is in many aspects related to mooring and/or towing equipment, and feedback ASEF’s comments & proposals, including 3 round so far.

- **ASEF/TWG/SWG7 will continue to:**

- Participate in IMO meetings, incl. SDC 6, and other relevant meetings
- Review relevant Industry Guidelines and CG report on “Safe Mooring Operations” and “OLAW”, pay more attention to “Human-centered design approach”

Summary and Suggestions

ASEF, as an NGO of IMO, needs:

- **To be more active** as one of the main contributors for the enhancement of the world maritime safety, marine environment protection and maritime security.
 - Participate in more International maritime meetings to express ASEF's opinions/comments/proposals, and share Shipbuilder's information
 - **Submit papers to IMO**
- **More communications and close cooperation:**
 - With external organizations
 - Among internal member nations (associations)
- **More Sub-Working Groups (SWGs)** to deal with the hot technical issues being handled at IMO, ISO and IACS, **following the guidelines for technical works in ASEF.**
- **To improve Resource management (experts database, etc.) in ASEF/TWG**



***Thank you very much
for your kind attention!***