

Summary of the session 1 (Safety Session) by Mr. Wu Jiameng (CANSI)

Safety session was held in the afternoon of 27th November, 2014 from 14:30 to 18:00.

The session was grouped into 4 topics:

- IACS Harmonized CSR
- GBS/SCF (Ship Construction File)
- Testing tanks and tight boundaries
- Alternative fuel

1. IACS Harmonized CSR

The speaker, Mr. Shibasaki, kohta from SAJ-Japan Marine United Corporation discussed the further impact on Bulker design by the latest version of CSR-H, based on the founding that hull structural weight increase of bulk carriers is bigger than oil tankers. Two different impacts of CSR-H on bulk carriers are illustrated. One is on design works, including huge number of FE analyses and complicated structural design process for fore and aft part outside of parallel body; while the other is on structural design and construction for bulk carriers, mainly on severe results for buckling strength of outer shell in fore and aft part and fatigue strength requirement, especially for upper deck longitudinals. The speaker also suggests keeping compatibility of FE models and design philosophy between mid part and fore or aft parts as well as flexibility of current design and possibility of new design applied with CSR-H.

The session noted that, on one hand, the industry would ask for IACS to solve some unsolved problems such as fatigue issues for bulk carriers, to further investigate for some items such as plate thickness requirement due to grab, to share the trouble and casualty information of the current operated vessels to the industries for the verification of reasonability of the structural rules, and to prepare efficient software

tools and enough workload for approval; while on the other hand, shipbuilders ourselves are expected to adequately prepare the effective design tools for optimized design and upgrade the quality of construction.

2. GBS/SCF

There are totally four participators for the topic of GBS/SCF. Dr. Son Myeong-jo from KR, gave the introduction of safe & flexible SCF archive center, the estimation of archive capacity, three independent cloud system of cloud server, cloud DB server and cloud storage, web portal of archive center and future works. Mr. Kamita Kenji from SAJ-Imabari Shipbuilding Co. Ltd. gave a review of SCF and explained the course and outline of the SCF Industry Standards (New version) and future plan. Two experts from ClassNK, Mr. Kozuma Naruchika and Mr. Kawaguchi Sosei together gave an introduction to ClassNK archive center and an interesting demo exhibition.

The former two speakers both mentioned the new characteristics of new version of SCF Industry Standards, such as new time-dependent three IP levels, writing style, format, shipowner's independent management and etc. KR-SCF archive center and NK-SCF archive center (SCFSS) based on cloud and offline service both gave deep impression to the industry. The session noted that all archive centers should pay more attention to security of the web portal and the authentication system, which were concerned and required by the industry.

3. Testing tanks and tight boundaries

The speaker, Mr. O Kitamura from SAJ-Mitsubishi Heavy Industries, Ltd. made a presentation on alternative procedures for testing tanks and tight boundaries. The background of tank testing issues, including the SOLAS requirements on testing watertight spaces, the discussions at IMO as well as different opinions or actions from each stakeholder was introduced. The speaker also explained the reasons why the alternative methods are important for shipbuilding industry. At the same time,

enhanced Quality Management System (QMS) was also mentioned, if appropriate, as the primary condition to apply the alternative methods in order to ensure the structural stress and integrity. Such enhanced QMS for verifier may only be guidance, not a new system like ISO9001, to verify shipyards' procedure for tank testing, while the draft guidance developed by the #2 intersessional JWG could be a good base for such QMS issue.

The session also noted the lessons learned from tank testing issues that shipbuilders should keep careful watch on what discussed and what to be discussed at IMO, etc. and joint actions taken by shipbuilders in a timely manner are needed not to invite unreasonable expansion of regulatory controls over shipbuilding industry and extreme results missing practicality.

4. Alternative fuel

The first speaker, Mr. Yoo Byeong-Yong from KOSHIPA-DSME introduced the DSME Fuel Gas Supply System (FGSS) technology: HiVAR® system, which utilized High pressure (HP) pump and vaporizer to supply high pressure to ME-GI engine, and its process for design and verification as well as the successful application for the world 1st LNG-fuelled container ship. The session noted that DSME HiVAR® technology has contributed to development of shipbuilding industry by accelerating LNG marine fuel market growth.

The second speaker, Mr. Oh Young-Sam from KOGAS, gave us an impressive overview of LNG bunkering business prospect, strategy and activities in China and Korea. Two possible LNG bunkering projects, including Korea-China joint project of LNG fuelled ferry and Hangang LNG fuelled tour ferry project, were suggested by the speaker.

This is the end of the summary for safety session. Thank you very much for your kind attention.