Report of SDC 7

Sub-committee on Ship Design and Construction
3rd – 7th February 2020
International Maritime Organization (IMO), London headquarters

ITF delegation

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The Sub-committee on Ship Design and Construction (SDC) undertakes technical and operational matters related to ship design and construction, including subdivision and stability, testing and approval of construction and materials, load lines, tonnage measurement, safety of fishing vessels and the carriage of industrial personnel. The importance is in direct relations to maritime professionals working and living environment. It has been trying to improve the shipboard environment taking into account hydrodynamic aspects and the human element.

The Sub-committee at this session considered the following agendas:

- Safety measures for fishing vessels and pleasure yachts operating in polar waters Res. A 1137;
- Safe carriage of industrial personnel for offshore facilities, a new SOLAS chapter XV;
- Developing second generation intact stability criteria; and
- *Revision of the Guidelines for wing-in-ground craft* (MSC.1/Circ.1592) to be a new output.

Working Group on Carriage of more than 12 Industrial Personnel on board Vessels Engaged on International Voyages

Industrial personnel (IP) is those who employed to engaged in offshore facilities, such as wind farm, offshore oil rigs, etc. The maritime transport is the mode to transport them to where they work, thus the safety and security for them are under the scope of the IMO. The Code is going to be a new SOLAS chapter, meaning mandatory as of 1st January of 2024. The Code has a clear structure with goals, functional requirements and regulations for effective implementation. The interests for the ITF are training of IPs in communicating with ships' crew to enhance safety and securing the safe transfer operations.

Outcome of the Group

1. The applications of the new SOLAS chapter XV, the IP Code are categorised as at this session:

- The new ships, constructed after the entry into force in 2024, will have to comply with the new Code; and

- The existing ships that apply to the interim Recommendations (Resolution MSC.418(97)) could continue its practice.

2. Master is responsible for safety and security of all persons onboard. Proofs of medical fitness and safety trainings can be required and checked by the Master of the ship.

3. A model form of the Administration's issuing of IP Certificate is annexed to the Group's report part II in due course.

4. In terms of safety related training of IP, communication with ship's crew is critical. The training requirements in the IP Code are to ensure both crew and IP have equivalent level of understanding in terms of safety and good communications amongst them.

5. The application of life-saving appliances requirement pursuant to SOLAS Chapter III, depends on the number of aggregated persons (60 or 240 persons) onboard encompassing passenger, special personnel and industrial personnel. Safety measures on board a ship need to be appropriately equipped and installed.

6. In relation to launching time of life-saving appliances should be within 10 minutes If it is less than 60 persons. In case of more than 60, it should take within 30 minutes.

Further work

1. The 7th session of Sub-Committee on Human element, Training and Watchkeeping (HTW 7), in June 2020, will review whether there is linkage between IP trainings and STCW requirements. The ITF will make sure the training requirements provided in the draft are purely regarding safety trainings.

2. Regarding the applications of the Code by ship's construction date and commencement of its transferring function after entry into force of the Code, IMO Maritime Safety Committee is to make decisions whether:

- ships constructed but have not commenced as IP ships before the entry into force, will have to comply the Code; or

- will not have to do so.

3. When a ship is sailing in high speed, stability is pivotal importance. Thus, high-speed crafts require more stringent safety provisions. The Group will continue developing standards for high-speed crafts transporting aggregated number of personnel up to 60, including industrial personnel and special purpose personnel, in line with the requirements provided in the International Code of Safety for High-Speed Craft, 2000 (HSC Code) for cargo ships. The ITF participates in the Correspondence Group.

Working Group on Subdivision and Damage Stability

A ship's subdivisions should be designed and constructed to ensure robust water tightness and sound stability against any damage. Subdivision and Damage Stability Regulations, the SOLAS Chapter II-1, requires for cargo ships to be damage resistant.

Explanatory Notes to regulations of SOLAS chapter II-1 *Subdivision and Damage Stability* are to assist Administration's the uniform interpretation and application.

During ninety-eighth session of Maritime Safety Committee (MSC 98), June 2017, significant amendments to SOLAS chapter II-1 regulations were adopted and entered into force from 01 January 2020.

Consequently, Explanatory Notes to regulations of SOLAS chapter II-1 had to be updated. The Group finalised the amendments to Explanatory Notes. These Revised Explanatory Notes are applicable for both passenger and cargo ships constructed on or after 01 January 2009.

Outcome of the Group and further work

1. The Group finalised the draft consolidated Revised Explanatory Notes and the associated draft MSC resolution on *Revised Explanatory Notes to the SOLAS Chapter II-1 Subdivision and Damage Stability Regulations*, with a view to submission to MSC 102 for subsequent adoption.

2. The alarms for the watertight doors should be located at the central operating console at the navigation bridge. For cargo ships, the alarms should be located at the navigation bridge (MSC.1/CIRC.1572 *Unified Interpretations of SOLAS Chapters II-1 And XII, of the Technical Provisions for Means of Access for Inspections (Resolution Msc.158(78)) and of the Performance Standards for Water Level Detectors on Bulk Carriers and Single Hold Cargo Ships other than Bulk Carriers (Resolution MSC.188(79))*, paragraph 3.5).

3. Applicability of water level detectors to all non-bulk carrier cargo ships with multiple cargo holds has been drafted and will be inserted as a new Regulation II-1/25-1 of SOLAS after regulation II-1/25 Water level detectors on single hold cargo ships other than bulk carriers. The IMO Secretariat will complete the check/monitoring sheet duly.

4. Concerning doors in watertight bulkheads, the relevant regulations of MARPOL Annex I, Load Line Conventions, the IBC and IGC Codes will accommodate consistency by following text (refer to SDC 7/WP.4, Annex 4):

> "remotely operated *sliding watertight sliding doors, hinged watertight access doors with open/closed indication locally and at the navigation bridge and be of the quick-acting or single-action type that are normally closed at sea, hinged watertight doors that are permanently closed at sea".*

Working Group on Safety measures for non-SOLAS ships operating in polar waters

Growing number of ships in polar waters that are not applicable for SOLAS Convention and increasing traffic in those regions, urgency of regulating safety issues has been raised. By 2021, the IMO will develop legislative measures. The goal of this work is to eliminate risks of threats to life in polar waters.

Outcome of the Group and further work

1. The draft Guidelines refer to the pending Cape Town Agreement of 2012 and the International Code for Ships Operating in Polar Waters (Polar Code). Meaning, when developing legislative measures to enhance safety of non-SOLAS ships in polar region, the two mentioned instruments shall be prerequisite.

2. The sub-committee on Human element, Training and Watchkeeping to peer review on the following paragraph on training for personnel on fishing vessels in polar water:

> *11.5.1 In addition to the training requirements specified in the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995 (STCW-F), consideration should be given to additional training that may be required to equip persons on board appropriately to operate safely in conditions specific to polar waters.*

3. The ongoing work of the revision of the STCW-F will be finalised in 2021, meaning the training, certification and watchkeeping requirements for personnel on fishing vessels in polar water will be developed after the first revision of the Convention. The Group should follow the progress of STCW-F revision.

4. The current draft Guidelines is applicable for pleasure yacht above 500GT, so has a regulatory gap for those above 300GT but less than 500GT. To resolve such issue, cargo ship measures to be developed based on the advice that will has been given to the sub-committee.

5. There will be no correspondence group established, but regarding navigation, communication and search and rescue related matter will continue being carried out developing these Guidelines by the sub-committee on Navigation, Communication and Search and Rescue (NCSR). The ITF is part of the Group.

Draft Group on Finalization of second generation intact stability criteria

Outcome of the Group

1. The development of the interim guidelines on *Second generation intact stability criteria* covering the specification of direct stability assessment; the preparation and approval of operational limitations and operational guidance; and vulnerability criteria for all five stability failure modes: pure loss of stability; parametric roll; surf-riding/broaching; dead ship condition; and excessive accelerations. The Group finalised the draft.

2. These interim guidelines could be amended as any related issue arises. On the other hand, the completion of this work means improvement of international regulatory securing ship's stability which is utmost prominent for seafarers' working and living condition onboard.

Further work

1. With the completion of the interim guidelines, the agenda title will be “Development of Explanatory Notes to the Interim guidelines on second generation intact stability criteria”.

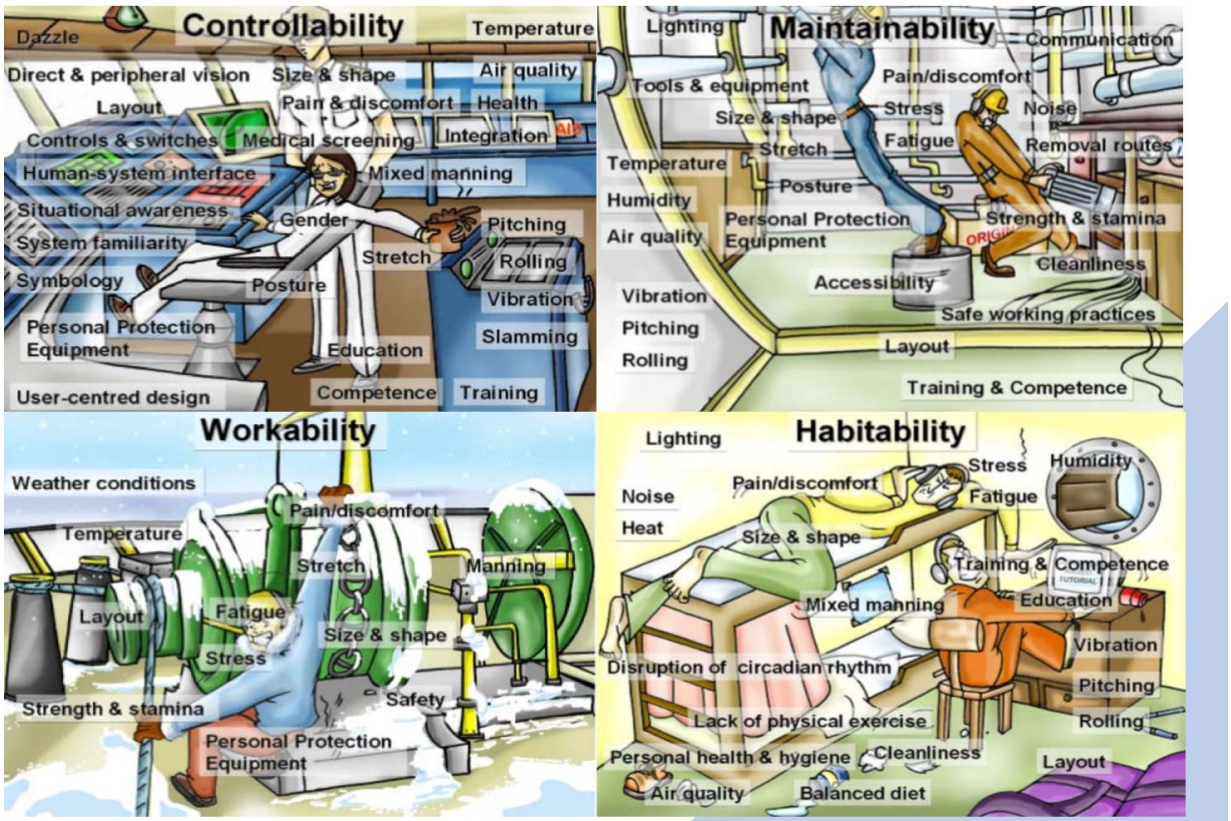
Acton point

Regardless of mode types, transportation industries have a great tendency to introduce and adopt new technologies. Transport workers are in the frontline of the consequences of such changes.

Industrial Personnel ships, fishing vessels or pleasure yachts in polar waters, wing-in-ground crafts, bulk-carriers, non-bulk carriers, etc., whichever ship you are in or about be in must have assurance regarding safety and stability.

The key of such assurance is for maritime workers to know how to control a ship safe and stable under various conditions. The ITF delegation at the IMO underscores the utmost predominance of human-centred design and appropriate trainings and onboard familiarisation scheme.

Last but not least, if there is a problem, report and address. You have not only the knowledge but also the experience no one could have.



(Myles, 2005)

*Aforementioned IMO documents can be provided if requested.