MEANS OF ESCAPE IN THE EVENT OF CAPSIZING

OCEAN LOVER

Index

O.L

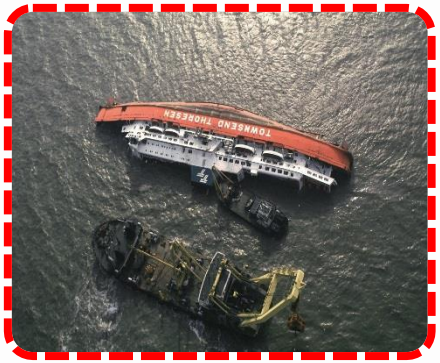
Ocean Lover

1.1 Background

☐ Types of Ship Accident

Collision

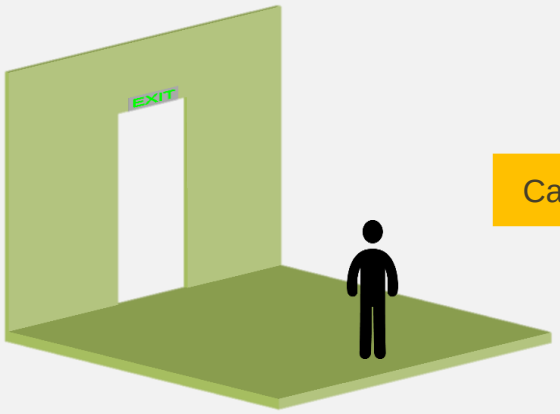
Run aground



Capsizing

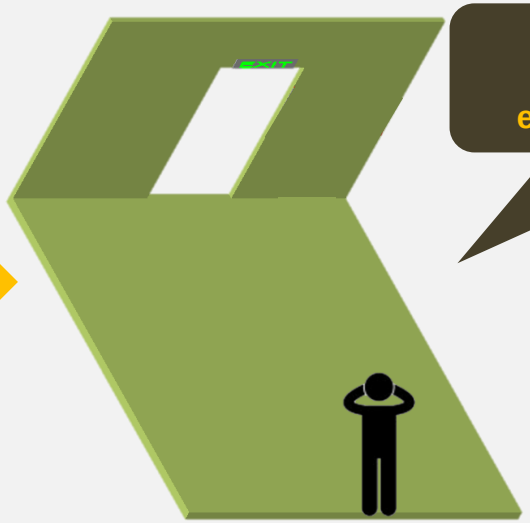
Sinking

In the case of Capsizing



Large space

Capsizing



Isolation of passengers from steep angle

Emergency equipment which prevents isolation and allows escape after accident possible

Accident

1.2 Background

☐ Cause of Capsizing

Man-made Hazard

2012.01.13 Italy
Costa Concordia

2014.04.16 South Korea
MV Sewol

2013.08.16 Philippines
Thomas Aquinas

Natural Hazard

2008.06.21 Philippines
Mv Princess of the stars

2014.09.14 Philippines
MAHARLIKA II

2015.06.13 China
Dong Fang Zhi Xing

It is impossible to prevent capsizing caused by natural hazards in advance

Requires pre-emptive measures to protect passengers in the event of capsizing

1.3 Background

SOLAS II-2 Regulation 13 Means of escape

❖ Content of Regulation 13

1. Purpose
2. General requirements
3. Means of escape from control stations, accommodation and service spaces
   - 3.1 General requirements
   - **3.2 Means of escape in passenger ships ***
   - 3.3 Means of escape in cargo ships
   - 3.4 Emergency escape breathing devices *

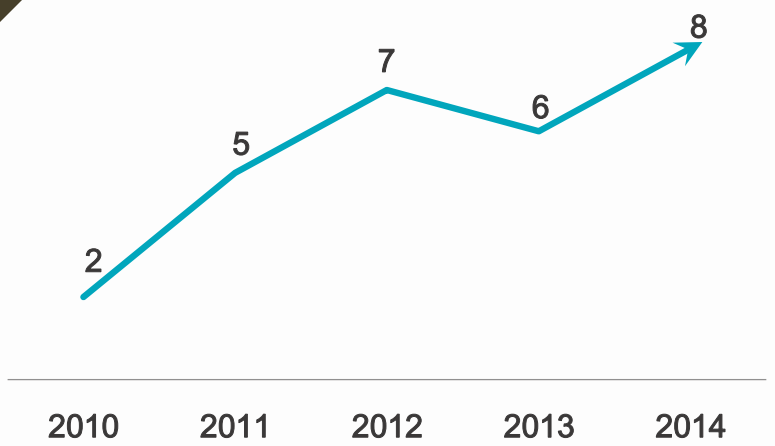
Does not specify the case of capsizing

INTERNATIONAL MARITIME ORGANIZATION

IMO safety regulation only covers International vessels

- The reason for technical gaps between countries
  → No supervision over coastal liners

< Number of Capsizing Accidents >



2.1 Purpose of Agenda and Applicable Subjects

Objective

- To require minimum emergency equipment in order to prevent isolation and provide means of escape

Applicable subject of agenda

- International Vessels
- Coastal Liners

"In the wake of the sinking of MV Sewol, IMO's attention has been brought to make regulations regarding the safety of Coastal Liners, which are being discussed at hand"

- 15.10.22 The Kukmin Ilbo

Suggestion of agenda

- Amendment to the SOLAS II-2 Regulation 13 Means of escape

Tacit Acceptance procedure – Which provides that an amendment shall enter into force on a specified date unless, before that date, objections to the amendment are received from an agreed number of Parties.

IMO
INTERNATIONAL MARITIME ORGANIZATION

3.1 Content of Agenda

INTERNATIONAL MARITIME ORGANIZATION

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MARITIME SAFETY COMMITTEE
1nd session
Agenda item 1

MSC 1/1/1
5 November 2015
Original: ENGLISH

Means of Escape In The Event of Capsizing

Submitted by the Republic of Korea

SUMMARY

Executive summary:	Executive summary: This resolution provides a basis for discussion for proposed change of SOLAS II-2 Regulation 13 by introducing an amendment on Means of Escape by suggesting an appendix in the event of capsizing.
Action to be taken:	Paragraph 4
Related documents:	MSC/Circ. 1238

Background

1 Looking into the latest incidents of MV Sewol, Dong Fang Zhi Xing at Yangtze, Maharlika II In Philippines and Costa Concordia in Tuscany, the steep incline caused by the overturning of the vessel stranded many passengers with no means of escape.

2 Recalling the SOLAS Chapter II-2 Regulation 13 Clause 1 (Purpose) states that it is to provide means of escape but does not specify the case of capsizing. The purpose of this document is to suggest an appropriate means of escape route in all situations. Therefore, Sub-Committee suggests that the fourth clause is added stating the means of escape in the event of capsizing.

3 Deeply concerned with the safety of passengers, Sub-Committee proposes an additional clause specifying the installment of an emergency ladder-like structure in the event of capsizing (3.2.4.6) under the Details of means of escape (3.2.4).

Action proposed of the Sub-Committee

4 Accordingly, the Sub-Committee is proposed to:

.1 Consider appendix to the sub-clause 3 in SOLAS Chapter II-2 Regulation 13 Clause 1 [Purpose] stating "Means of escape shall be provided in the event of capsizing. Additional aids for escape shall be provided as necessary to ensure accessibility, clear marking, degree of and adequate design for all emergency situations, including capsizing."

.2 Consider inclusion of the sub-clause 6 under the Details of means of escape (3.2.4) stating "Ladder-like structure of equal strength, size and shape should be equipped in all spaces that exceed certain lateral distances from the entrance to the far end of the wall, in order to reach the exit, which may be on any or all sides of the room"

***

4.1 Strategy of agenda proposed by the Republic of Korea

The proposal of an agenda that provides a win-win situation for both developing and developed countries

Shipyard country

- Creation of “repairing of shipbuilding” demand
- Vitalizing the shipbuilding economy

Developed country

- Increase the safety of passengers and crew
- Recovers the number of passenger ships which declined from past accidents

Developing country

- Reduction of casualties in the event of an accident
- Solves social issues

Resolving issues of the international community

- ▶ Improving the reliability of ship
- ▶ Lowering the social loss caused by accidents

IMO

Enhancing the safety of passengers and crew

- ▶ Relieve the anxiety of passengers
- ▶ Minimizing casualties in the event of capsizing

5.1 Escape Solution

The requirements of escape equipment

Product with the ease of manufacturing

- Adjustable operational angle based on the ship's stability
- Reduction of costs through the standardization of production

Product that considers design

- Consideration of the aesthetic aspect of housing
- Convenience of storing when not in use by projectile method

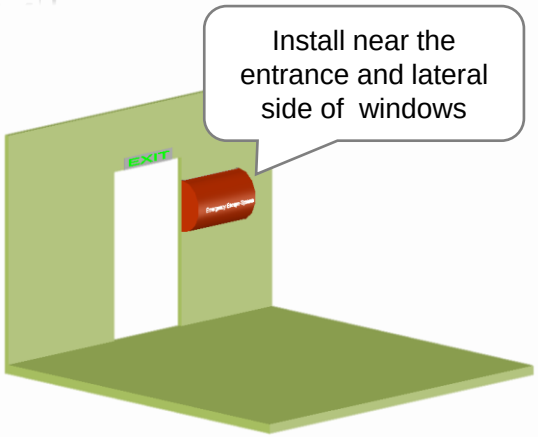
Shipyard country

- Standardization of production line
- Reducing the price per unit by exclusive commercialization

Developed country

- Cruise ship : Aesthetic design
- Lowering the psychological anxiety of passengers

Area of installation



Developing country

- Narrowing the technology gap betweenn developed countries
- Ease of installation and maintenance

Packaged product

- Ease of installing and using a packaged product
- Ease of maintenance through inspection device

5.1 Escape Solution

Make-up of product

Protective case

» Protects the ladder and various equipment functions in the event of capsizing by projectile method

Inclination detection device

» Transmits an electrical signal to the open-and-close device once the vessel reaches an angle where it loses stability

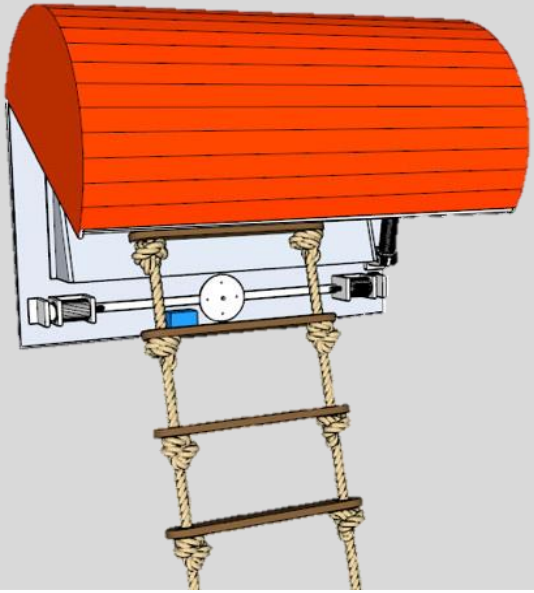
Ladder

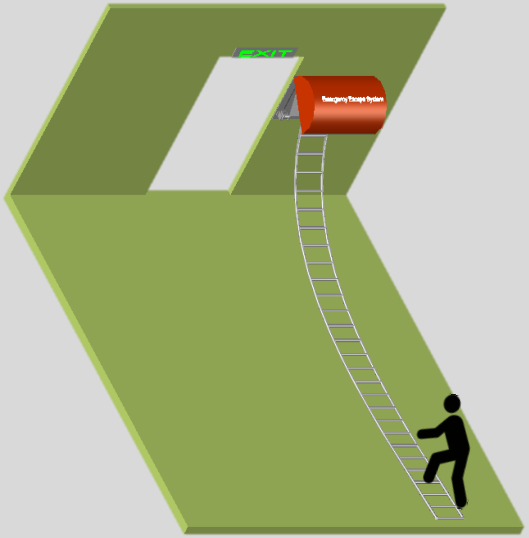
» Is released from protective casing once the open-and-close device functions, prevents the isolation within vessel of passengers and crew

Open-and-close device which functions automatically and manually

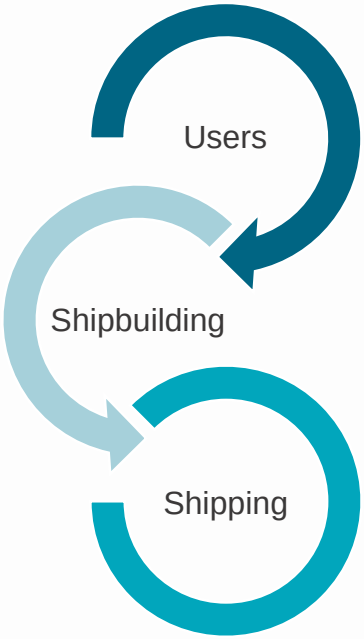
» Operates when it receives a signal from the inclination detection device

Packaged product for coastal vessel





6.1 Expected Effect



Will improve reliability of vessel usage and prevent massive casualties

- Can give passengers a sense of relative stability
- Can provide means of escape in the event of isolation within ship

The creation of ship equipment related demand

- The demand for ship equipment will increase due to regulation

The safety of passengers and crew will be ensured

- Can prevent the isolation of passengers and crew from happening in the event of a capsizing accident

Resolving international issues and presenting a systematic agenda that takes the position of shipbuilding and shipping countries into consideration

Thank You