III International Maritime Congress

Passenger ship casualties in recent years and lessons learned

Executive Director
Markku Mylly
Contents

- EU and maritime sector / cluster
- EMSA - general overview
- EMSA - improving maritime safety
- Passenger ship casualties in recent years and lessons learned
Importance of EU maritime transport

\(~25\%\) of WT registered under EU flag and 40\% of world fleet controlled by EU shipping companies

90\% of external trade and 40\% of internal trade is carried by sea

Direct production value 450 € billion

3.8 billion tonnes of cargo and 400 million passengers are passing through EU ports per year

The EU maritime sector generate 2,25\% of total European employment, about 4,8 million people employed
Legal basis

Erika sinks off the coast of Brittany, 12/12/1999
Decision taken to reinforce EU maritime legislation

- Erika I safety package
- Erika II safety package
  - EMSA established under Regulation (EC) No 1406/2002
Legal basis

Amendments to the founding regulation

- **2002**: Regulation (EC) No 1406/2002
  - Administrative and budgetary provisions
- **2002**: Regulation (EC) No 1644/2002
  - Ship security
  - Technical/scientific assistance for oil pollution
- **2013**: Regulation (EU) No 100/2013
  - Core/ancillary tasks
  - Oil/gas installations
  - Technical assistance ENP
  - Funding for response to marine pollution by ships
EMSAs activities and role

- Providing technical and scientific assistance to the Member States and the European Commission in the proper development and implementation of EU legislation on maritime safety, security, prevention of pollution by ships and maritime transport administrative simplification;

- Improving cooperation with, and between, Member States in all key areas;

- Providing operational assistance, including developing, managing and maintaining maritime services for ships’ monitoring;

- Carrying out operational preparedness, detection and response tasks with respect to pollution caused by ships and marine pollution by oil and gas installations.
EMSA’s mission statement:
“To ensure a high, uniform, and effective level of maritime safety, maritime security, prevention of, and response to, pollution caused by ships as well as response to marine pollution caused by oil and gas installations”

EMSA’s vision:
“To promote a safe, clean and economically viable maritime sector in the EU”

EMSA’s values:
Efficiency, effectiveness, transparency, flexibility, creating added value
Key tasks

- Appoints the Executive Director
- Adopts the final budget as well as strategic documents
  - work programme, annual report, multiannual strategy, etc.
- Establishes methodology for visits to Member States
EMSA Commitments 2003 - 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Authorised CA</th>
<th>Committed</th>
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</thead>
<tbody>
<tr>
<td>2003</td>
<td>2.650</td>
<td>1.043</td>
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<tr>
<td>2004</td>
<td>13.300</td>
<td>7.503</td>
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<tr>
<td>2005</td>
<td>35.360</td>
<td>29.714</td>
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<td>2006</td>
<td>44.738</td>
<td>34.287</td>
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<td>2007</td>
<td>48.249</td>
<td>43.280</td>
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<td>2008</td>
<td>50.203</td>
<td>46.467</td>
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<td>2009</td>
<td>48.335</td>
<td>45.427</td>
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<tr>
<td>2010</td>
<td>54.352</td>
<td>53.203</td>
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<tr>
<td>2011</td>
<td>56.445</td>
<td>53.718</td>
</tr>
<tr>
<td>2012</td>
<td>55.030</td>
<td>51.701</td>
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<tr>
<td>2013</td>
<td>57.820</td>
<td>56.705</td>
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</table>
EMSA staff by nationality
EMSA in a nutshell

- Accident Investigation
- Ship Safety Standards
- SafeSeaNet
- Environment
- Port State Control
- LRIT
- Equasis - Statistics
- Training - Cooperation
- CleanSeaNet
- Marine Equipment
- Visits - Inspections
- MAR-ICE
Unique European database on accidents
807 accidents reported in 2014

10 very serious casualties
25 lives lost
405 injuries

114 Contacts
96 Damage to ship or equipment
82 Groundings
69 Losses of propulsion
55 Fires/explosions

Member States
launched 15 investigations
published 5 investigation reports.
ANNUAL OVERVIEW
OF MARINE CASUALTIES AND INCIDENTS 2014
13 January 2012, Grounding, 32 fatalities, 17 injuries
Norman Atlantic

28 December 2014
Fire
18 fatalities, 4 injuries
### Notable EU maritime accidents since 1990

<table>
<thead>
<tr>
<th>Year of the accident</th>
<th>Name of the ship</th>
<th>Fatalities</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>Scandinavian Star</td>
<td>159</td>
<td>Fire (arson)</td>
</tr>
<tr>
<td>1991</td>
<td>Moby Prince</td>
<td>140</td>
<td>Collision with tanker – Fire</td>
</tr>
<tr>
<td>1993</td>
<td>Jan Heweliusz</td>
<td>55</td>
<td>Capsize in heavy seas</td>
</tr>
<tr>
<td>1994</td>
<td>Estonia</td>
<td>852</td>
<td>Bow visor failure – Capsize</td>
</tr>
<tr>
<td>2000</td>
<td>Express Samina</td>
<td>82</td>
<td>Grounding - Capsize</td>
</tr>
<tr>
<td>2012</td>
<td>Costa Concordia</td>
<td>32</td>
<td>Grounding - Capsize</td>
</tr>
<tr>
<td>2014</td>
<td>Norman Atlantic</td>
<td>~18</td>
<td>Fire on ro-ro deck</td>
</tr>
</tbody>
</table>
The ESTONIA accident led to significant changes in the Regulations on:

- Damage stability (phase out of ‘one-compartment’ ships, Stockholm Agreement);
- Life saving appliances;
- Radio communications;
- Safety of Navigation.
Focus on damage stability

Following the ESTONIA and the EXPRESS SAMINA accidents, the Stockholm Agreement was adopted as Directive 2003/25/EC.

However, the “water on deck” remains a sensitive issue, notably with the introduction of the probabilistic method.

EMSA commissioned 2 studies to provide information to the question:

\[
\text{SOLAS2009} = \text{SOLAS90} + \text{Stockholm Agreement}\]
The COSTA CONCORDIA accident led to:

- Increased focus on damage stability of passenger ships;
- Mandatory passenger safety drills to take place prior to, or immediately upon, departure;
- Interim recommended operational measures;
- EU Commission Passenger Ship Safety Initiative
EMSA3 (ongoing) takes a holistic view on damage stability of passenger ships including:

- A revision of the damage stability framework after collisions based on accident statistics;
- An investigation on a probabilistic framework for grounding and raking damages based on accident statistics;
- An investigation on the increase of risk from the operation of watertight doors based on real data taken from ships in operation.
• Work carried out following the FSA process;
• 6 passenger ships have been designed and a relevant ‘business model’ has been defined;
• Probabilistic software tool for groundings has been developed;
• Actual data from the operation of watertight doors have been collected.
• Conducted by DNVGL and 14 Sub-contractors;
• Interim reports published (http://www.emsa.europa.eu/damage-stability-study.html) and submitted to IMO;
• FSA to be finalised in July 2015;
• To be reviewed by IMO FSA Expert Group in November 2015; and
• Awaited at SDC3 for the final decisions on damage stability.
The NORMAN ATLANTIC accident is currently being investigated, however:

- Fire Safety Regulations in relation to ro-ro decks have been updated in the recent years;
- A number of similar accidents (fires on ro-ro decks) have occurred in the last 10 years;
- This issue was raised by Casualty Analysis Correspondence Group at IMO;
- EMSA intends to organise a workshop on this issue in 2015
Fires on ro-ro decks

Number of accidents

- Total Number FSI 21/5
- Very Serious FSI 21/5
- Total Number EMCIP*
- Serious or Very Serious EMCIP

*Data for 2014 expected to increase
EMSA carries out risk-based audits of classification societies

Passenger ship safety has already been the focus of EMSA

It will be an area of continued focus in the coming period
More information…

http://www.emsa.europa.eu

https://emcipportal.jrc.ec.europa.eu/

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Thank you for your attention!!