TRACECA REGIONAL SEMINAR ON
MARPOL
AWARENESS AND IMPLEMENTATION

Moldova – 21 to 23 July 2015

Annex I Requirements

MARPOL how to do it
(Part IV) Implanting the regulations

- Regulations for the Prevention of Pollution by Oil

Brief History

1859 Oil Discovered
1861 First Oil Shipped in Barrels
1896 First Bulk Oil Ship (GLUCKAUF)
1926 International Maritime Conference Washington, D.C.
1935 League of Nation prepares draft convention
1954 International Convention for the Prevention of Oil Pollution (OILPOL 54)
1967 TOREY CANYON oil spill
1969 International Convention for the Prevention of Pollution from Ships (MARPOL 73)
1973 MARPOL 73 Amendments
1978 EXXON VALDEZ oil spill
1989 BRAER oil spill
1990 US Oil Pollution Act (OPA 90)
1992 MARPOL 92 Amendments
1993 BRITISH MASTER oil spill
1999 AMOCO CADIZ oil spill
1999 BRAER oil spill
1999 SEA EMPRESS oil spill
1999 ERIKA oil spill
Implementing the Regulations

- In this session we will look at what has to be done by the following:
  - Shipbuilders and shipowners regarding equipment, construction, procedures and training
  - Maritime Administrations regarding own flag ships, port State duties and coastal State duties
  - Ports regarding provision of waste reception facilities

Annex I in Brief

- Entry into force – 2 Oct ’83
- Applies to all ships (not just oil tankers)
- Controls discharges of oil
- Sets equipment/construction standards
- Requires maintenance of Oil Record Book
- Requires Survey and Certification of ships
- Needs Ports to provide reception facilities

("revised") MARPOL ANNEX I

CHAPTER 1 – GENERAL
DEFINITIONS – APPLICATION – EXEMPTIONS – EXCEPTIONS – EQUIVALENTS
REGULATIONS 1 - 5

CHAPTER 2 – SURVEYS AND CERTIFICATION
SURVEYS – ISSUE AND ENDORSEMENT OF CERTIFICATE – FORM – VALIDITY – PSC
REGULATIONS 6 - 11
MARPOL Annex I: Regulations for the Prevention of Pollution by Oil

Chapter 1 – General

Regulation 1 Definitions
Regulation 2 Application
Regulation 3 Exemptions and waivers
Regulation 4 Exceptions
Regulation 5 Equivalents

Regulation 1 Definitions

- Nearest land
  - distances are given from the baseline from which territorial sea is measured, except off north eastern Australia where distance is measured from the outer Great Barrier Reef

- Special Area
  - recognised technical reasons linked to an areas oceanographical and ecological condition and to the particular character of its traffic
    - Mediterranean, Baltic Sea, Black Sea, Red Sea areas, 'Gulf area', Gulf of Aden, Antarctic, NW European waters, Oman area and Southern South Africa waters

Chapter 2 – Surveys and certification

Regulation 6 Surveys
Regulation 7 Issue or endorsement of certificate
Regulation 8 Issue or endorsement of certificate by another Government
Regulation 9 Form of certificate
Regulation 10 Duration and validity of certificate
Regulation 11 Port State control on operational requirements
MARPOL ANNEX I

Requirements for Ship Surveys and Certification

EVERY OILTANKER >150 GT

EVERY SHIP OTHER THAN AN OILTANKER >400GT

Oil tankers of 150 GT and above, and other Ships of 400 GT and above

- **Initial survey** to include
  - structure,
  - equipment,
  - systems,
  - fittings,
  - arrangements
  - material

Issue of International Oil Pollution Prevention Certificate
(Valid for maximum of 5 years)
**Annual Survey**

- Within 3 months before or after each anniversary date of the Certificate
- To include general inspection of:
  - structure,
  - equipment,
  - systems,
  - fittings,
  - arrangements
- To be endorsed on certificate

**Intermediate Survey**

- Within 3 months before or after the second anniversary date or within 3 months before or after the third anniversary date of the Certificate
- May take the place of one Annual Survey
- To ensure that equipment, pumps and piping systems (including ODME, COW, oil separating/filtering systems) are in good working order
- To be endorsed on the Certificate

**Renewal Survey**

- Not exceeding 5 years from issue of certificate,
- To ensure compliance of
  - structure
  - equipment
  - systems
  - fittings
  - arrangements
  - material
- Leads to renewal of OPPC Certificate
- ALSO for Repairs (general or partial survey)
Chapter 3 – Requirements for machinery spaces of all ships

Part A - Construction

Regulation 12 Tanks for oil residues (sludge) capacity / separation from bilge water systems

12A Oil fuel tank protection location guidance / max capacity 2500 m3

Regulation 13 Standard discharge connection specifications

Part B - Equipment

Regulation 14 Oil filtering equipment (15 ppm +/- stop)

Part C - Control of operational discharge of oil

Regulation 15 Control of discharge of oil

A: Discharge outside special areas

B: Discharges in special areas

C: Requirements for ships of less than 400 gross tonnage in all areas except the Antarctica area

D: General requirements

Regulation 16 Segregation of oil and water ballast and carriage of oil in forepeak tanks

Regulation 17 Oil Record Book, Part I – Machinery space operations (operation codes, language)
Control of Machinery Space Oil Discharges – All Ships

<table>
<thead>
<tr>
<th>Sea Area</th>
<th>Ship type and size</th>
<th>Discharge criteria</th>
</tr>
</thead>
</table>
| Anywhere outside a special area | Ships of 400 GT and above | **No discharge** except when:  
1. The ship is proceeding *en route*; and  
2. The oil content of the effluent is 15 ppm or less; and  
3. Ship has oil filtering equipment as required by reg.14 of Annex I (needs stop control for inside SA) and  
4. On oil tankers, oily mixture does not originate from cargo pump room bilges or is not mixed with oil cargo residue Reg. 15.2 |
| Anywhere except the Antarctic | Other ships of less than 400GT | Retain on board or as above Reg. 15.6                                                                                                                     |

**ANTARCTIC - No discharge - Reg 15.4**

Chapter 4 – Requirements for the cargo areas of oil tankers

**Part A - Construction**

- Regulation 18: Segregated ballast tanks
- Regulation 19: Double hull and double bottom requirements for oil tankers delivered on or after 6 July 1996
- Regulation 20: Double hull and double bottom requirements for oil tankers delivered before 6 July 1996 *(phase out/CAS)*
- Regulation 21: Prevention of oil pollution from oil tankers carrying heavy grade oil as cargo *(oil definition + DH/DB)*
- Regulation 22: Pump-room bottom protection *(DB)*

**Part A – Construction (continued)**

- Regulation 23: Accidental oil outflow performance *(calc.)*
- Regulation 24: Damage assumptions *(calc.)*
- Regulation 25: Hypothetical outflow of oil *(calc.)*
- Regulation 26: Limitations of size and arrangement of cargo tanks *(calc.)*
- Regulation 27: Intact stability *(calc.)*
- Regulation 28: Subdivision and damage stability *(calc.)*
- Regulation 29: Slop tanks *(arrangements, min.capacity 3/1/0.8 %)*
- Regulation 30: Pumping, piping and discharge arrangement *(above the waterline)*
**Part B - Equipment**

- Regulation 31: Oil discharge monitoring and control system (records 3 yr)
- Regulation 32: Oil/water interface detector (specification ref)
- Regulation 33: Crude oil washing requirements (specification ref)

**Part C - Control of operational discharge of oil**

- Regulation 34: Control of discharge of oil
  - A: Discharges outside special areas
  - B: Discharges in special areas
  - C: Requirements for oil tankers of less than 150 gross tonnage
  - D: General requirements
- Regulation 35: Crude oil washing operations (manual)
- Regulation 36: Oil Record Book, Part II – Cargo/ballast operations (operation codes, language)

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**KEY POINTS FOR CONSIDERATION**

- **Construction regulations**
  - are very complex and depend on the tanker designation, size of ship and date of delivery (detailed information is provided in MARPOL)
  - Segregated ballast water tanks (SBT) and Crude oil washing (COW) Reg. 18, 33
  - Clean ballast tanks (CBT) on product carriers Reg. 18.8
  - Protection location of SBT in new crude oil tankers Reg.18.12
  - Double bottom/double hull Regs. 19,20
  - No ballast water to be carried in oil fuel tanks Reg. 16
  - ODME and slop tank arrangements Reg. 29, 31

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**Control of Cargo Oil Operational Discharges, Oil tankers**

<table>
<thead>
<tr>
<th>Sea area</th>
<th>Discharge Criteria</th>
</tr>
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<tbody>
<tr>
<td>Within 50 n miles from land</td>
<td>No discharge except for clean or segregated ballast (as for special areas)</td>
</tr>
</tbody>
</table>
| Outside special areas + more than 50 n miles from land | No discharge except for either: Clean or segregated ballast or when:  
  - Tanker is en route; and  
  - Rate does not exceed 30 L per n. mile and  
  - Quantity does not exceed 1/30,000 of total quantity of cargo carried on previous voyage; and  
  - The tanker has in operation a slop tank arrangement and an oil discharge monitoring and control system (Annex I Regs. 29 and 31) |
| Within a Special Area | No discharge except clean or segregated ballast (Reg.1.17 and 34.4) |
Records and documents

- Oil Record Books Reg. 17, 36
- Loading & Damage Stability info Reg. 28
- Oil discharge monitor/control manual Reg. 31, 36.6
- COW operations manual Reg. 35
- CBT operations manual Reg 18.8

Oil tankers less than 150 GT and other ships less than 400 GT

- No survey is required but must comply with appropriate measures set by administration to ensure that the applicable provisions of Annex I are met
- The Administration may require:
  - Oily water separating equipment and sludge tank,
  - A holding tank
- No IOPP Certificate issued
- No Oil Record Book or shipboard oil pollution emergency plan is required

Chapter 5 – Prevention of pollution arising from an oil pollution incident

Regulation 37 Shipboard oil pollution emergency plan (SOPEP)

Chapter 6 – Reception facilities

Regulation 38 Reception facilities (includes Special Area provisions)

Chapter 7 – Special requirements for fixed or floating platforms

Regulation 39 Special requirements for fixed or floating platforms
Special requirements for fixed or floating platforms

- Drilling rigs, FPSOs, FSUs linked to offshore production and storage of oil (Chapter 7, Reg.39)
- Must comply with requirements for ships of 400GT and above (other than oil tankers)

Except that:
Reg.12 and 14 (sludge tank/oil filtering equipment) – as far as practicable
Operations record – form as approved by Administration
Discharge prohibited unless undiluted oil content less than 15 ppm

Unified Interpretation (63)
1. Machinery space drainage
2. Offshore processing drainage
3. Production water discharge
4. Displacement water discharge
5. Contaminated seawater from operational purposes

Only machinery space drainage and contaminated ballast subject to MARPOL (otherwise national/regional regs)

Chapter 8 – Prevention of pollution during transfer of oil cargo between oil tankers at sea
Regulation 40 Scope of application (exceptions FPSO, bunkering, etc)
Regulation 41 General rules on safety and environmental protection (STS operations plan)
Regulation 42 Notification (information, not less than 48 hours)

Chapter 9 – Special requirements for the use or carriage of oils in the Antarctic area
Regulation 43 Special requirements for the use or carriage of oils in the Antarctic area (specs. for prohibited oils)
Recent amendments to MARPOL

Regional arrangements for port reception facilities under MARPOL Annexes I, II, IV and V MEPC.216(63) (1/6/13)

Forms A+B of Supplements to the IOPP Certificate – removal of incinerator capacity MEPC.239(65) (1/8/13)

Condition assessment scheme, Annex I – update of references reflecting adoption of the 2011 ESP Code MEPC.238(65) (1/10/14)

RO Code mandatory – Annex I and II MEPC.238(65) (1/1/15)

Pending amendments to MARPOL

Annexes I, II, III, IV and V – Mandatory use of the III Code MEPC.236(65) (1/1/16)

Annex I – Mandatory requirements for a stability instrument MEPC.236(65) (1/1/16)

Annex I – Carriage of heavy grade oil as ballast on ships operating in the Antarctic area MEPC.236(65) (1/1/16)

Annex III – Criteria for harmful substances in packaged form (exclusion of radioactive materials) MEPC.236(65) (1/1/16)

Annexes I, II, IV and V – Mandatory use of the Polar Code MEPC.236(65) (1/1/17)

Annex I – Update of Reg.12 – Tanks for oil residues (sludge) MEPC.236(65) (1/1/17)

Actions by the maritime Administration

- Notify IMO of exemptions granted and equivalent equipment allowed (Reg. 3, 5)
- Carry out surveys as required (Reg. 6)
- Establish measures for other ships (Reg. 6)
- Institute unscheduled inspection (Reg. 6)
- Delegate surveys if necessary (Reg. 6)
- Issue certificates (Reg. 6, 7, 8)
- Investigate violations (Reg. 15.7)
- Approve COW systems, installations and manuals (Reg. 33, 35)
- Approve oil content meters (Reg. 18.8.3)
Actions by the maritime Administration

- Approve CBT operations manual (Reg. 18)
- Consider equipment waivers (various)
- Agree and approve special ballast arrangements (Reg. 18)
- Approve oil discharge monitoring equipment (Reg. 31)
- Approve oil/water interface detectors (Reg. 32)
- Approve oil filtering equipment (Reg. 14.6)
- Approve Oil Record Book (Reg. 36.9, 39)
- Approve shipboard oil pollution emergency Plans (Reg. 37)
- Approve equipment and construction requirements of Annex I in conjunction with surveys
- Approve STS operations plan

Action by ports

- The Government of each party to MARPOL undertakes to ensure the provision of adequate reception facilities for oily mixtures and residues in all ports
- Arrangements need to be in place for implementation of the Annex

Ship operator requirements

- Ship operators/ owners should ensure that every ship has:
  - Been equipped to Annex I requirements
  - Been surveyed if over 400GT or a tanker over 150 GT
  - An appropriate IOPP Certificate (or domestic document)
  - An oil record book; and
  - A crew instructed and trained to comply with the discharge criteria