



**INTERTANKO**

# ***API Tanker Conference***

***June 24, 2008***

# **INTERTANKO**

# **Initiatives to Fill Human Element Gaps**

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DEPUTY MANAGING DIRECTOR**



# **HUMAN ELEMENT**

- **MANNING**
  - IMO Safe Manning Document
  - ILO Convention 180
  - Maritime universities
- **TRAINING**
  - Cadet berths
  - Tanker Officer Training Standards (TOTS)



## **IMO SAFE MANNING DOCUMENT (SOLAS V/14)**

- **IMO Resolution A.890(21)** contains guidelines on the principles of safe manning
- **IMO objective** is to revise these guidelines to ensure that ships are properly manned for the safe and secure operation of the ship and the avoidance of seafarer fatigue
- **IMO Maritime Safety Committee** has tasked STW Subcommittee with considering the need for **mandatory requirements** for safe manning
- **INTERTANKO** is actively involved in STW Subcommittee deliberations



# **MANNING**

- **ILO CONVENTION No. 180** – adopted in 1996, seafarers hours of work and manning of ships
  - 14 hours of work in any 24 hour period; and
  - 72 hours in any 7 day period, ORMinimum hours of rest –
  - 10 hours in any 24 hour period; and
  - 77 hours in any 7 day period
- **INTERTANKO** recognized –
  - difficulties by shipboard staff to comply with the regulations for hours of work and rest; and
  - PSC regimes would inspect for compliance
- **INTERTANKO** has developed “**Guidance Booklet on Seafarers Hours of Work and Rest**”



## **INTERTANKO GUIDANCE BOOKLET ON SEAFARERS HOURS OF REST AND WORK**

- **Summary of ILO 180 requirements**
- **Summary of IMO STCW work/rest requirements**
- **Explanation of IMO safe manning document**
- **General guidelines regarding manning levels**
- **Guidelines for compliance with requirements**
- **Implementation of ILO 180 hours of rest/work**
- **Maintaining records, endorsements and monitoring**
- **Watch keeping patterns**
- **Optional watch keeping systems**
- **Evidence of compliance for Port State Control officers**



## MARITIME UNIVERSITIES

- **Working with** maritime universities around the world who have alumni, graduates and cadets seeking at sea and shoreside positions to bring “the supply” in contact with “the demand”
- **Helping to identify** specific needs of maritime industry with regard to necessary skills and expertise and numbers that need training
- **Working with** ABS to possible develop a “Guide for Crew Habitability on Ships” to improve crew living conditions on board ships



## CADET BERTHING

Conducted survey of members in 2006 and determined that there were insufficient berths on new buildings to accommodate cadets

**INTERTANKO “BEST PRACTICES”** revised to reflect members commitment or agreement to:

- Enlist cadets and cadet officers on each ship where suitable cabin space exists
- New-buildings should include suitable cabin space for cadets in new-building specifications

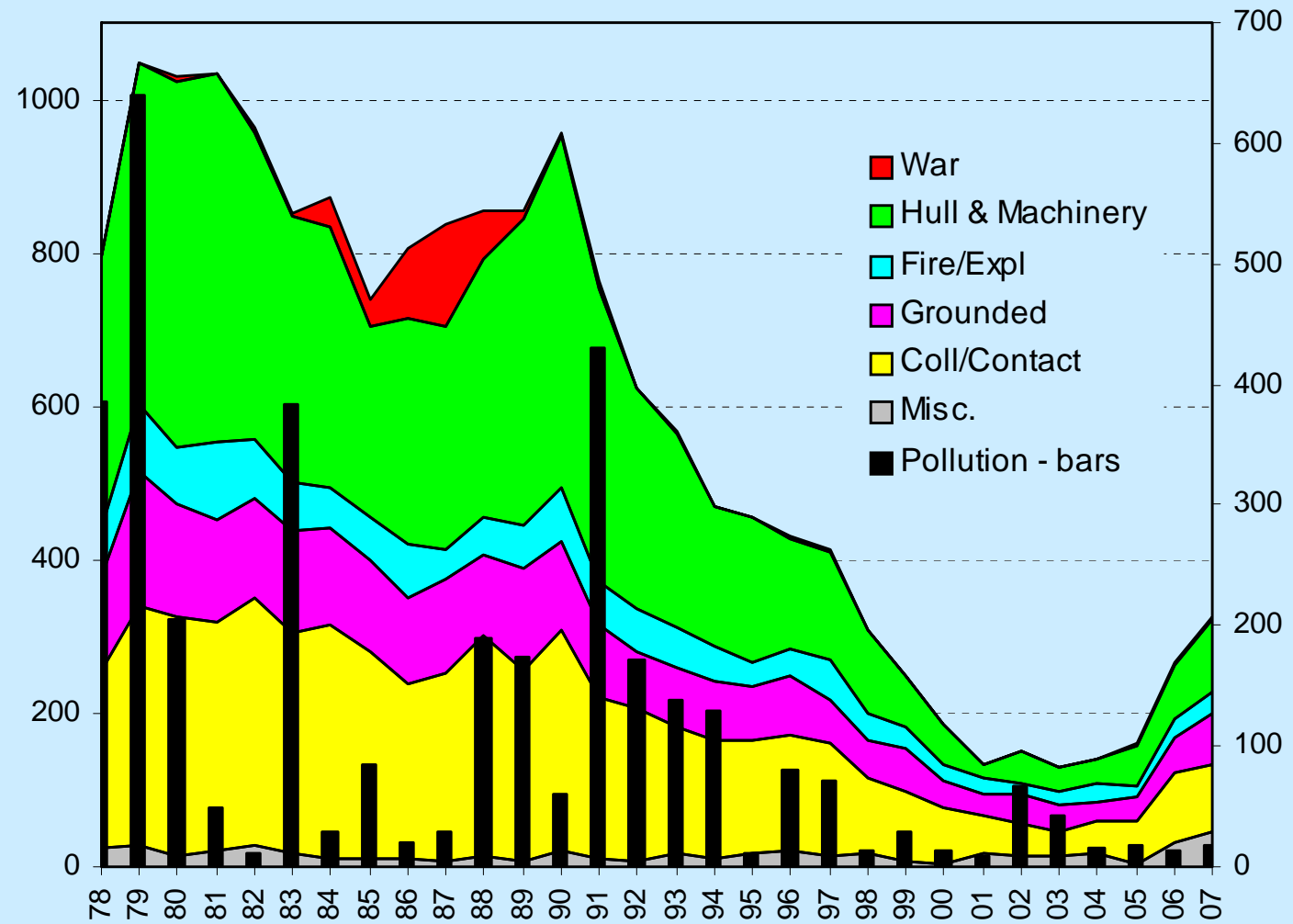


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# Tanker incidents by type and accidental pollution

No. incidents

1000 ts oil pollution

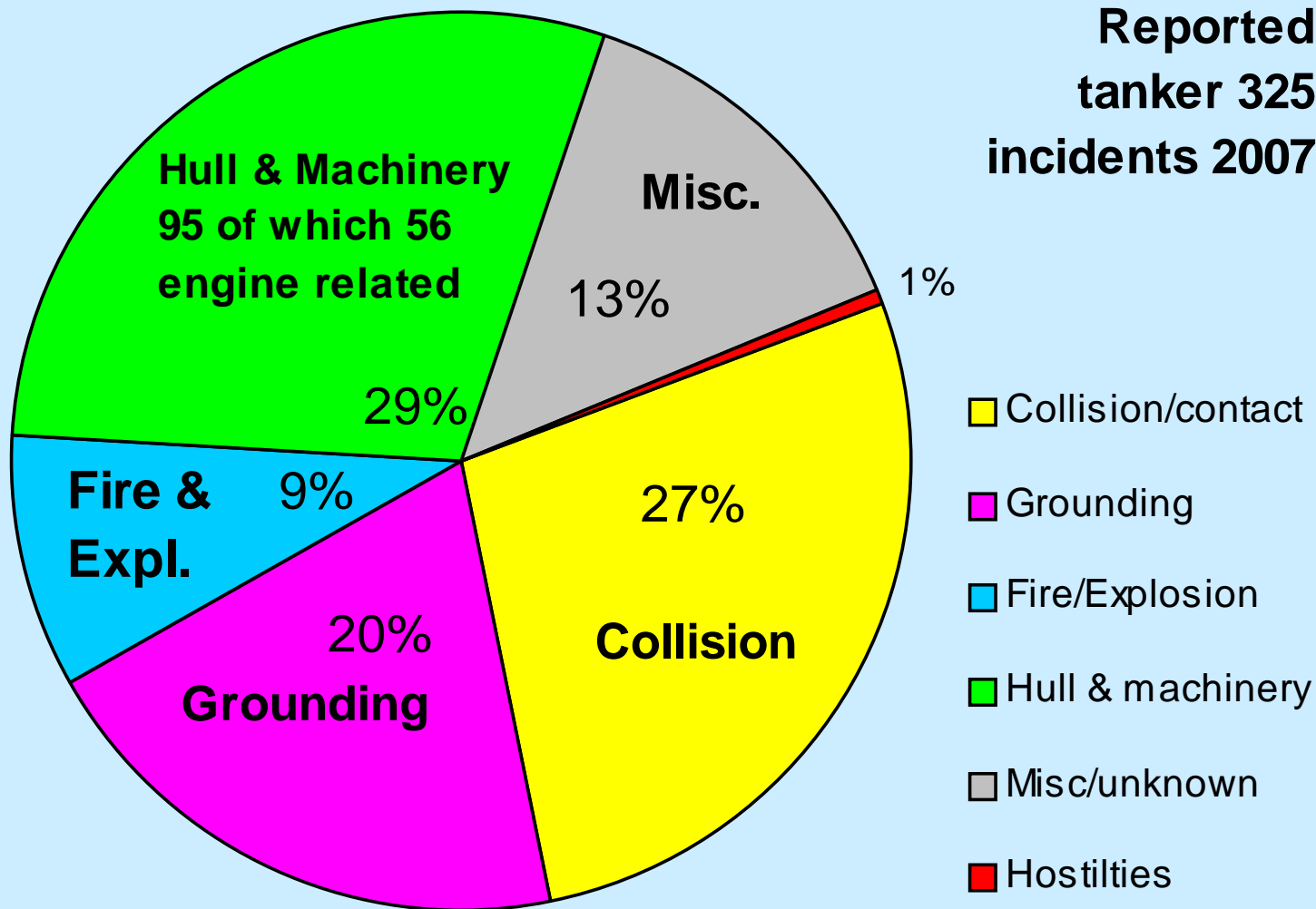


Source: INTERTANKO/LMIU/ITOPF/various



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# Tanker incidents 2007 by type

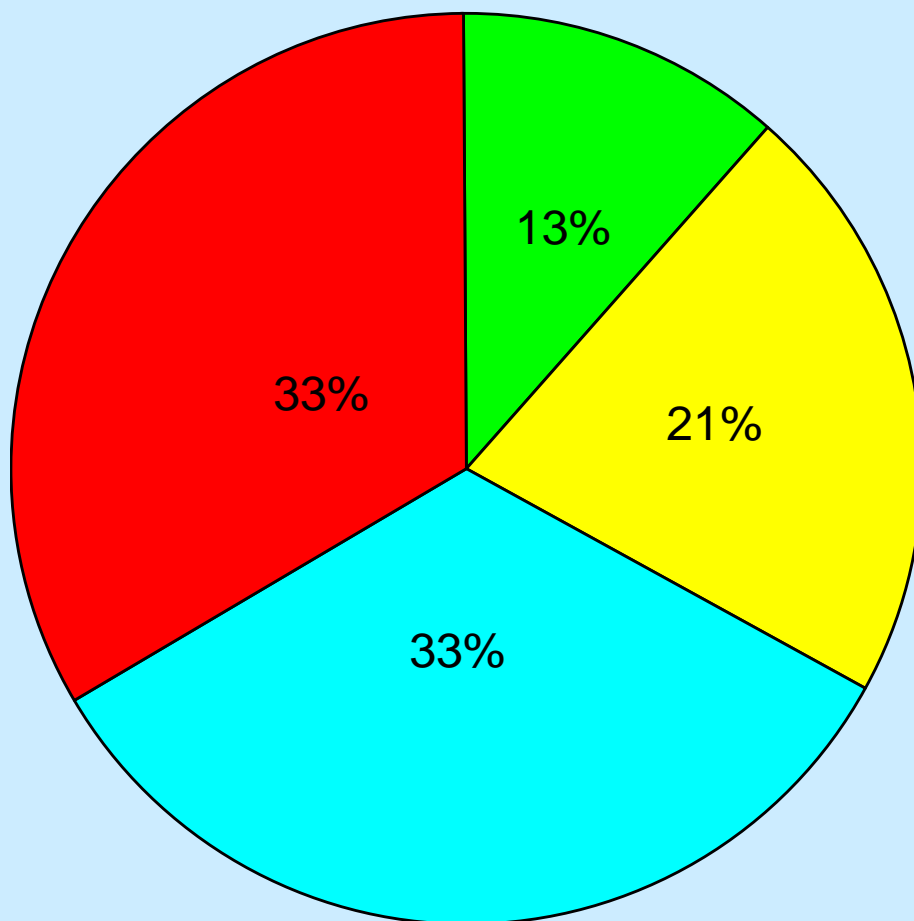


Source: INTERTANKO/LMIU/various



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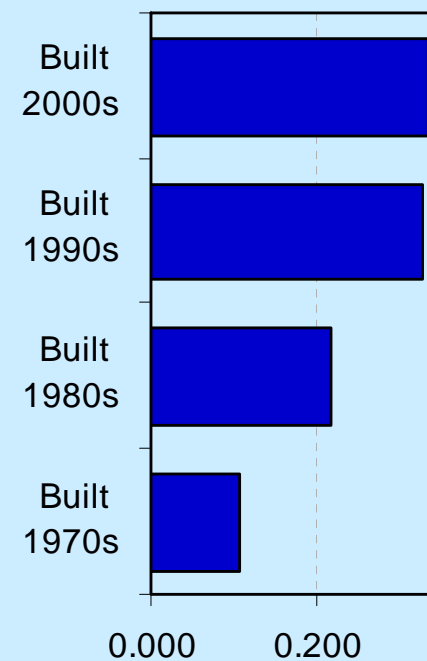
# Tanker incidents 2007 by age



325 incidents

- Built 1970s -
- Built 1980s
- Built 1990s
- Built 2000s

Incidents/no tankers:





# TRAINING

- **Growing concern** over recent increase in tanker incidents caused by the lack of expertise
- **Regulatory response** – review and update of IMO Standards for Training, Certification and Watchkeeping (STCW) Convention
- **Oil Company Response -**
  - Currently, STCW and Tanker Endorsements do not provide the level of comfort required
  - Officer Matrix Requirements (*“Time with Company”* and *“Time in Rank”*) established by TOTAL, Shell, Chevron, Conoco Phillips, Koch

## Tanker Officer Training Standards (TOTS)

**INTERTANKO initiative** which:

1. Addresses increasing trend in tanker accidents
2. Provides a coordinated response to oil companies which:
  - Demonstrates an enhanced level of competency on board (via training and verification process)
  - Eases compliance with Officer Matrix Requirements

It is **NOT** a replacement Tanker Endorsement

It is **NOT** an alternative Tanker Endorsement

It is a **VOLUNTARY** program



# **TRAINING - TOTS**

## **Four Elements of the TOTS**

1. TOTS: Training Record Books:  
**Time in Rank**  
**Time with Company**
2. TOTS: Computer Based Assessment (CBA)  
**Time in Rank**
3. TOTS: Company Verification (CBA)  
**Time with Company**
4. TOTS: Ship Specific Practical Simulator  
Verification/Training  
**Tanker Type Specific**  
**Time in Rank Specific**



# **TRAINING - TOTS**

## **1. TRAINING RECORD BOOKS**

- **TOTS: Time in Rank**

Three levels of training record book established:

1A. Command Module

1B. Senior Engineer Officers

1C. Junior Officer Tanker Module (Deck and Engine)

- **TOTS: Time with Company**

One generic record book

1D. Generic Record Book Module



# TRAINING - TOTS

## Command Module

- A.1 Ship Handling & Characteristics
- A.2 Pilotage
- A.3 Mooring Equipment & Operations
- A.4 Passage Planning/Navigation
- A.5 Navigating in Restricted Visibility
- A.6 Heavy Weather Navigation
- A.7 Emergencies, Drills & Fire Fighting Equipment
- A.8 Ship/Shore Interface
- A.9 Ship to Ship Transfer
- A.10 Helicopter Operations
- A.11 Pollution Prevention & Environmental Protection
- B.1 General Tanker Section
  - B.2.1 Flammability Composition Diagram
- B.3 Fixed & Portable Gas Detections Systems
- B.4 Enclosed Spaces/Tank Atmosphere Evaluation
- B.5 Familiarisation prior Cargo Operations
- B.6 Cargo Information Personnel Safety – Health
- C. CHEMICAL TANKERS
- D. PRODUCT TANKERS
- E. CRUDE OIL TANKERS



# TRAINING - TOTS

## Senior Engineer Officers

- A.1 Engine Room Operations during manoeuvring
- A.2 Engine Room Operations during special circumstances
- A.3 Watchkeeping in the Engine Room
- A.4 Operation, monitoring and trouble shooting machinery
- A.5 Electrical, Electronic and Control Operations
- A.6 Maintenance and Repair
- A.7 Control of operations and Care of personnel onboard
- B.1 Management of the Engineering Department
- C. EMERGENCIES, DRILLS & FIRE FIGHTING EQUIPMENT
- C.1 Emergencies, Drills & Fire Fighting Equipment.
- D. POLLUTION & ENVIRONMENT PROTECTION
- D.1 Pollution & Environment Protection
- E. GENERAL TANKER SECTION
- E.1 General Tanker Section
- F. FLAMMABILITY COMPOSITION DIAGRAM
- F.1 The Flammability Diagram (Ref: ISGOTT 5th Edition)
- G. FIXED & PORTABLE GAS DETECTION SYSTEMS
- G.1 Fixed and Portable Gas Detection systems
- G.2 Enclosed Spaces/Tank Atmosphere Evaluation
- H. FAMILIARISATION PRIOR CARGO OPERATIONS
- H.1 Familiarisation prior cargo operations
- H.2 Cargo Information-Requirements-Precautions-Personnel Safety-Health Data

## Junior Officer Tanker Module (Deck and Engine)

- A. GENERAL SHIPBOARD OPERATIONS (DECK)
- A.1 Ship Handling & Characteristics (Deck)
- A.2 Pilotage (Deck)
- A.3 Mooring Equipment & Operations (Deck)
- A.4 Emergencies, Drills & Fire Fighting Equipment
- A.5 Pollution Prevention & Environmental Protection
- B. NAVIGATION (DECK)
- B.1 Passage Planning/Navigation/Chart Correction
- B.2 Navigating in Restricted Visibility (Deck)
- B.3 Heavy Weather & Ice Navigation (Deck)
- C. GENERAL TANKER SECTION
- C.2.1 Flammability Composition Diagram
- C.3 Fixed & Portable Gas Detections Systems
- C.4 Enclosed Spaces/Tank Atmosphere Evaluation
- C.5 Familiarisation Prior Cargo Operations (Deck)
- C.6 Cargo Information-Precautions-Personnel Safety
- D. CHEMICAL TANKER SUPPLEMENT
- E. PRODUCT TANKER SUPPLEMENT
- F. CRUDE OIL TANKER SUPPLEMENT
- G. GENERAL SHIPBOARD OPERATIONS
- G.1 Engine room operations during Manoeuvring
- G.2 Watchkeeping in the Engine Room (Engine)
- G.3 Operation, monitoring troubleshooting Machinery
- G.4 Maintenance and Repair
- G.5 Control of Operations and Care of Persons
- H.1 Management of the Engineering Department
- I. POLLUTION & ENVIRONMENT PROTECTION



# **TRAINING - TOTS**

## **TOTS: Time in Rank**

**Human Element** addressed in each record Book:

- Situational awareness
- Planning & Decision making
- Communications
- Teamwork
- Emotional climate
- Stress
- Managing Stress
- Commercial Organizational Pressures & Morale
- Fatigue

## 2. COMPUTER BASED ASSESSMENT (CBA)

- TOTS: Time in Rank

CBA (CD-ROM) to verify candidates understanding of “Time in Rank” tasks

- CBA = ~2000 Questions: Total Dataset
- 18-20 CBA assessments per Record book
- TOTS Time in Rank Certification follows the Candidate



## **3. COMPANY VERIFICATION**

- **TOTS: Time with Company**
  - CBA based company verification process to verify candidates understanding of “Time with Company”
  - Tailor made Company Specific
  - **If the Officer changes company, they must re-train for Time in Company with the new company**



## **4. Ship Specific Practical Simulator Verification and Training**

- Simulator courses designed to meet TOTS standard
- Can be run by any externally accredited Maritime Training Centre
- Trains & Verifies tanker type knowledge with 6 courses in three areas...



## **4. Ship Specific Practical Simulator Verification and Training**

### 6 TOTS Specific Model Simulator Courses

- 4A Chemical Tanker Simulator Model Training Course
- 4B Chemical Tanker Simulator Model Verification Course
- 4C Product Tanker Simulator Model Training Course
- 4D Product Tanker Simulator Model Verification Course
- 4E Crude Oil Tanker Simulator Training Course
- 4F Crude Oil Tanker Simulator Verification Course



# **TRAINING - TOTS**

- Meetings with OCIMF, Chevron and SIRE Focus Group (Chevron, BP, Shell, Total, ExxonMobil) – TOTS positively received
- “Frequently Asked Questions” (FAQ) and detailed summary brochure
- TOTS Working Books: completed
- TOTS CD-ROMs for CBA: completed
- TOTS launched April 22 at INTERTANKO Annual Tanker Event in Istanbul, Turkey



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***THANK YOU***

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