



Important ship accidents with impact on maritime regulations (1)

A/A	Ship	Accident & Location	Resulted Legislation	Basic Effect on Regulations
1	Titanic (Passenger Ship)	1912, sinking, Contact with iceberg , N. Atlantic, 1532 lost, 706 survives	Introduction of SOLAS Convention (8 chapters), SOLAS 1914 & SOLAS 1929	Water-tightness of bulkhead deck and enhancement of life saving appliances
2	Empress of Ireland (Passenger Ship)	1914, Gulf of St. Lawrence Collision, 1,012 lost, 465 survives	SOLAS 1929	
3	Andrea Doria (Passenger Ship)	1956, capsized, collision, 46 lost, 1660 survives	Strongly affected SOLAS 1960	First provisions on GZ requirements after damage
4	Heraklion (Ferry)	1966, opened side door in heavy seas , Falconera-Milos Island/Greece, 200+ lost, 47 survives	National Legislation	Introduction of 'sail permit' in bad weather conditions for passenger ships leaving Greek ports
5	Torrey Canyon (Tanker)	1967, grounding , Polland Rock	MARPOL 1973 STCW 1978 SOLAS 74: fire safety provisions for tankers.	First considerations on protection of marine environment. Pollution by chemicals, packed goods, sewage & garbage as well as oil & global minimum professional standards for seafarers.



Important ship accidents with impact on maritime regulations (2)

A/A	Ship	Accident & Location	Resulted Legislation	Basic Effect
6	Amoco Cadiz (Tanker, VLCC)	1978, France grounding	Amendments of SOLAS 1974 Implementation of MARPOL 1978 Protocol	Crude oil washing (new tankers). Protective location of Segregated Ballast Tanks (SBT). Requirements on main steering gear & gear control systems.
7	European Gateway (RoRo Passenger)	1982, Harwick collision	Amendments of SOLAS First considerations for ISM Code	Requirements on watertight doors.
8	Herald of Free Enterprise (RoRo Passenger)	1987, open bow visor , Zeebrugge 193 lost	IMO A 647 (16), 1989 SOLAS Amend. (Ch.II-1): SOLAS 90 Introduction of ISM Code & FSA framework.	Enhanced damage stability criteria - Watertight closure provisions Damage prevention & control
9	Scandinavia Star (RoRo Passenger)	1988, fire Norway-Denmark, 157 lost	Safety Management System, Norway ISM Code & STCW 1995Amendments SOLAS 1992	Fire safety standards Fire protection of new passenger ships
10	Exxon Valdez (Tanker)	1989, Alaska ran aground	Oil Pollution Act, USA (OPA 90) MARPOL	First regional agreement concerning the protection of US coast. Vessel Emergency Response Plan (ERP).



Important ship accidents with impact on maritime regulations (3)

A/A	Ship	Accident & Location	Resulted Legislation	Basic Effect
11	Bulk Carriers Lost early 1990 and earlier loss of <u>Derbyshire</u> (1981)	Various accidents in N. Atlantic, China Sea, Japan Sea, heavy weather	SOLAS Ch. XII (1997)	Reinforcement of hatch covers, cargo holds No. 1 & 2, forecastle region.
12	<u>Estonia</u> (RoRo Passenger)	1994, NASF bow visor, Baltic Sea	ISM Code SOLAS Amendments (Ch. II-1, SOLAS 95) Stockholm Agreement	Enhanced damage stability for North European Waters [Stockholm Regional Agreement]. Compartment standard related to the # of passengers. Enhanced research on RoPax damage survivability (WOD).
13	<u>Erika</u> (Tanker)	1999, France NASF	New, accelerated phase-out schedule for single-hull tankers Revision of Reg. 13G of MARPOL 73/78	
14	<u>Express Samina</u> (RoRo Passenger)	2000, Greece grounding	EU Directive 2003/25/EC	Extension of Stockholm Regional Agreement to South Europe
15	<u>Prestige</u> (Tanker)	2002, Spain NASF	European Union: Regulation 1726/2003 Amendments to Regulation 13G Regulation 13H to Annex I of MARPOL	Accelerated compliance of existing ships with revised MARPOL 73/78.



Important accidents: cruise ship Sea Diamond

Sea Diamond (2007): grounding in Santorin Island-Greece

Length: 142,95 m, Breadth: 24,70 m, Draught: 6,15 m
10 decks, maximum 1355 guests in 570 cabins,

Ship sank 16 hrs after grounding, 2 missing





Important accidents: cruise ship Costa Concordia

Costa Concordia (2012): grounding, 32 lost lives

On January 13, 2012, Costa Concordia hit a rock off the coast of Giglio, an island on Italy's Tuscan coast.

Several hours later, the ship capsized under the cover of night. Before then, more than 4,000 passengers and crew were able to abandon ship, though by all accounts under chaotic circumstances.

Ship Type: Passengers ship

Year Built: 2006

Length x Breadth: 291 m X 38 m





Major ship accidents:

Worst passenger ship accident in peacetime

Dona Paz (20th Dec, 1987) of Philippines:
**collision with tanker VECTOR in the
Tables Strait (Philippines)
causing *fire and sinking,***

**4,341 lost lives,
24 (Dona Paz)+2 (VECTOR) survivors**