

Classification Societies

What is the role of Class in the 21st Century?

Rob Brindle

26 September 2018



It started with a cup of coffee



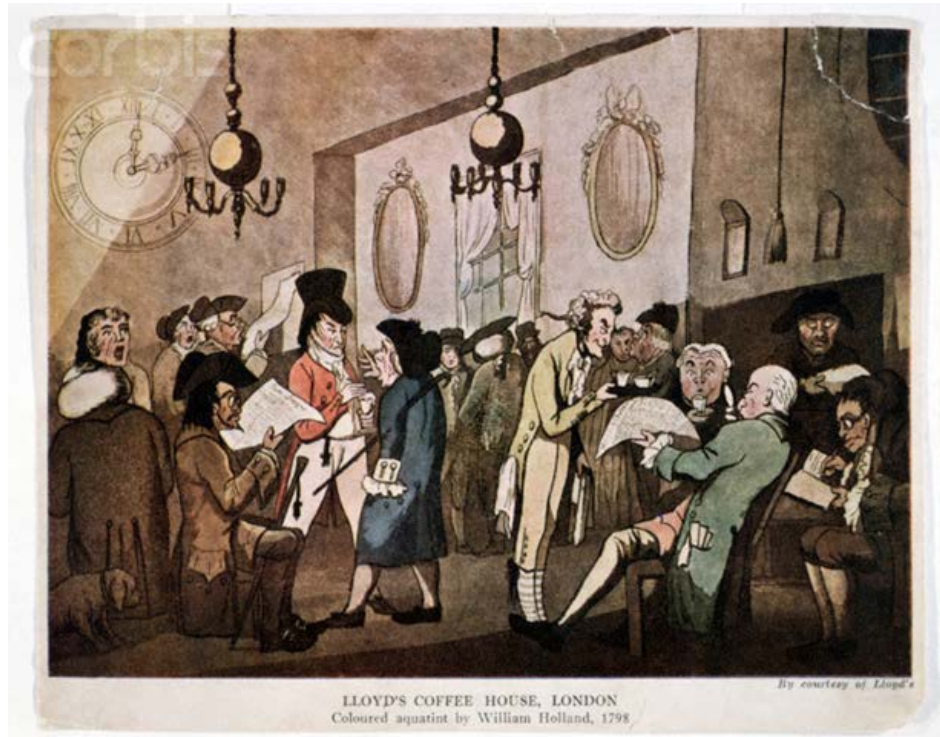
History

Coffee Shop Gossip



History

Edward Lloyd sets up shop



History

Lloyd's List



Lloyd's LIST. N^o 996

FRIDAY, June 7. 1745.

THIS List, which was formerly publish'd once a Week, will now continue to be publish'd every *Tuesday* and *Friday*, with the Addition of the Stocks Course of Exchange, &c.—Subscriptions are taken in at Three Shillings per Quarter, at the Bar of *Lloyd's Coffee-House* in *Lombard-Street*.
Such Gentlemen as are willing to encourage this Undertaking, shall have them carefully deliver'd according to their Directions.

LONDON,		<i>Aids in the Excheq.</i>		
EXCHANGES On			<i>given for</i>	<i>Paid off</i>
Amt. 34 9		21st 4 Shil. 1743	2000000	1892000
Ditto Sight 34 6		22d Ditto 1744	2000000	1090000
Rott. 34 11		Salt— 1741	1200000	163400
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Flamb: 33 9 a 10 2½ U				
Paris — 32½		Gold in Coin - - -	3 19	
Ditto at 2U 31½		Ditto in Barrs - - -	3 18 11	
Bourdeaux } 31½		½ Pillar large - - -	0 5 6¼	
2 Ufance }		½ Ditto Small - - -	per 0 5 6¼	
Cadiz — 39¼		½ of Mexico large - -	0 5 6¼	
Madrid — 40		½ Ditto Small - - -	0 5 6¼	
Bilboa — 40		Silver in Barrs - - -	0 5 7½	

History

Lloyd's of London



Lloyd's Register in the 21st Century



IACS

Classification Societies

IACS

INTERNATIONAL ASSOCIATION
OF CLASSIFICATION SOCIETIES



RINA



ClassNK



BUREAU
VERITAS

Lloyd's Register

IACS members

Lloyd's Register: 1760

Bureau Veritas: 1832

RINA: 1861

American Bureau of Shipping: 1862

Det Norske Veritas: 1864 and GL: 1867

NKK: 1899

RS: 1913

PRS: 1936

CRS: 1956

CCS: 1956

KRS: 1960

IRS: 1975

Classification – a general definition

- What is classification?

A system for arranging elements with similar characteristics into groups or categories.

Classification - A Marine definition

Development, publication and global implementation of Rules which define standards of quality, safety and reliability for ships.

Worldwide application of Rules covering:

- - Structural strength of the hull
- - Watertight integrity of the hull
- - Safety and reliability of main propulsion and steering systems
- - Safety and reliability of essential auxiliary systems





Purpose and Objectives of Classification Societies

- To provide classification and statutory services
- To provide assistance to the maritime industry and regulatory bodies on maritime safety and pollution prevention issues, based on the accumulation of maritime knowledge and technology.
- Primary Objective: Verification of the **structural strength** and integrity of essential parts of the ship's hull and the **reliability and function of the propulsion and steering systems, power generation** and other essential services.
- HOW? through the development and application of their own Rules and by verifying compliance with International and/or National Statutory regulations on behalf of Flag Administrations.

Class notations - Origins

- 1764 A, E, I, O, U (hull) & G, M, B (equipment)
 - Best notation: AG Worst notation: UB
- 1768 A, B, C (hull) & 1, 2, 3 (equipment)
 - Best notation: A1 Worst notation: C3
- 1853 ✕ Maltese cross. To signify “Built under Special Survey”
- 1854 A1 For Iron Ships, qualified with a period of 6, 9, or 12 years
- 1870 100A1
 - Iron Ship Rules revised and based on certain dimensions 100A1, 90A1, 85A1 and 80A1, the first two classes to be subject to Special Survey every 4 years and the lower classes every 3 years. Iron ships suitable for sea-going service

Class notations

First iron ship to be awarded ✠100A1 the Lizzie Leslie
circa 1870



Lloyd's Register



Launch of the S.S. Great Britain 19 July 1843
Built of Iron, steam powered with screw propeller

Class notations

Example 1

- ✕100A1 Double Hull Oil Tanker, ESP, Shipright (SDA, FDA, CM), *IWS
- LI, IGS
- ✕LMC, UMS

Class notations

Example 2

- ✘ 100A1 Liquefied Gas Carrier, Ship Type 2PG, Anhydrous Ammonia, Butadiene, Butane, n-iso-Butane, Isoprene, Propane, Butane/Propane mixtures, Propylene, Propylene Oxide, Butylenes (Mixtures), Ethylene Oxide/Propylene Oxide mixtures with ethylene oxide content of not more than 30% by weight, in One Independent Tank- Type C, Maximum Vapour Pressure 7.0 bar , Minimum Temperature Minus 48 °C
- ✘ LMC, UMS

Why?

The world needs class

- Minimise risk to life, property and the environment.



Why?

The world needs class

- Provide proof that a vessel is suitable for its intended purpose.



Why?

The world needs class

- Maintain a ship's value during its service life and help the owner.



But...

Classification isn't the answer to everything

- Classification is not the ship industries policeman
- Classification does not guarantee the ship's seaworthiness.
- Classification surveyors are not permanently onboard the ship.
- Classification surveys do not cover the whole ship, e.g.:
 - Stability
 - Life saving appliances
 - Pollution prevention
 - Structural fire protection



Statutory Certification

- Classification Societies also carry out surveys and certification on behalf of over Flag Administrations in relation to International Maritime Organisation (IMO) Conventions and codes
- SOLAS (Safety of Life at Sea)
- Load Line
- MARPOL (Pollution)
- Tonnage Regulations
- STCW (Standards of Training & Certification for Watchkeeping)
- ISM (International Safety Management Code)
- ISPS (International Ship & Port Facility Security Code)
- MLC (Maritime Labour Convention)
(International Labour Organisation (ILO) Convention and Code)

Getting Class

- First Entry / New Build
- Transfer of Class
- Acceptance into Class
- Reclassification

Maintaining Class

Periodical Surveys

- Machinery items: Tail-shaft, Boilers, Sea Connections, Electrical Equipment, Pumps, and the Engine(s)
- Hull items: Shell Plating, Rudder, Tanks, Crew / Passenger spaces, holds and the Engine Room
- Other: Condition of class items, memoranda, alterations, damages, repairs

Keeping Class

- Carry out periodical surveys on time
- Ensure certification issued by IACS member
- Don't fall foul of port state detentions
- Pay on time
- Don't stray from an agreed service area
- Operate in an appropriate environment
- Load and operate the ship in accordance approved guidance

Port State Control

Detainable deficiency



Keeping Class

Maintaining the ship

- Planned maintenance systems covering machinery and the fabric of the ship
- Competent, well trained crew to ensure that the planned maintenance is actually carried out
- Effective communication with the classification society when deficiencies occur

Classification

Summary

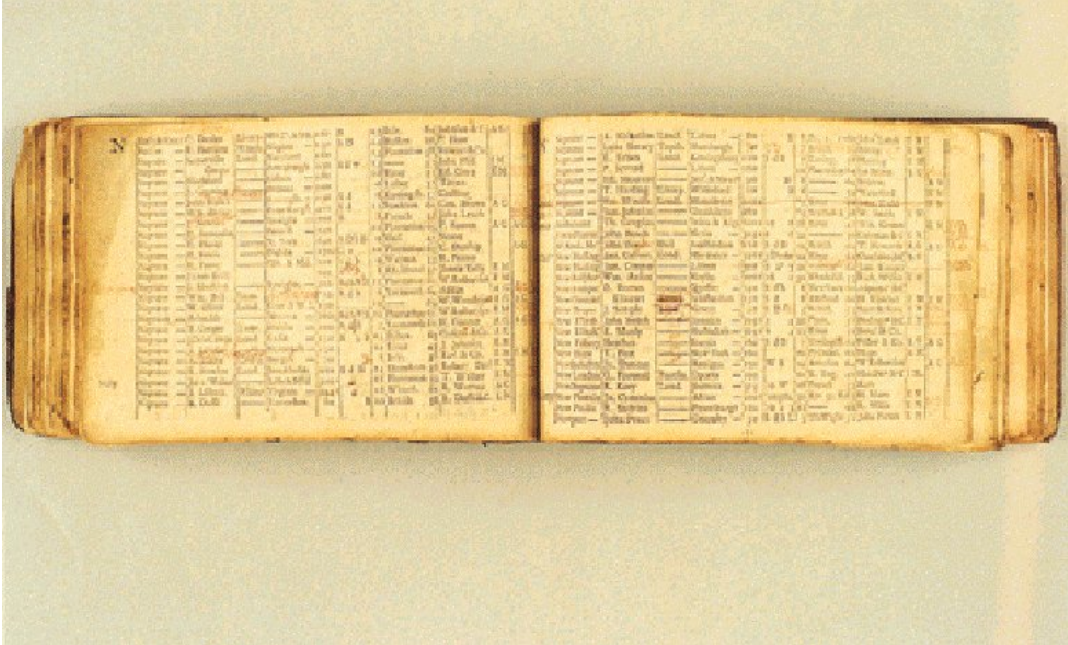
- A system for ensuring that a ship meets recognised technical standards specific to its intended purpose
- First register of ships published 1764 but independent company not formed until 1834
- Classification process is governed by the industry it serves.

The future

Vessel developments and impact for classification societies

- Autonomous Vessels
- Materials
- Goal Based Standards
- Autonomous survey methods
- Cyber security

Any questions?



Thank you

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