

QUEEN MARY 2

TECHNICAL INFORMATION

KEY DATES

PROJECT ANNOUNCEMENT:	8 June 1998
LETTER OF INTENT SIGNED:	10 March 2000
CONTRACT SIGNED:	6 November 2000
FIRST STEEL CUT:	16 January 2002
KEEL LAID:	4 July 2002
MAST COIN CEREMONY:	16 March 2003
FLOAT OUT:	21 March 2003
SHIPYARD SEA TRIALS:	25 – 29 September 2003
OWNERS' SEA TRIALS:	7 – 11 November 2003
NAMING CEREMONY:	8 January 2004
MAIDEN VOYAGES:	12 January 2004 Southampton to Fort Lauderdale
	31 January 2004 (Caribbean) Fort Lauderdale to Fort Lauderdale
	16 April 2004 (Transatlantic Westbound) Southampton to New York
	25 April 2004 (Transatlantic Eastbound) New York to Southampton with QE2

VITAL STATISTICS

TONNAGES

Gross: 151,400 tons

Net: 98,720 tons

LENGTHS

Overall: 1132 feet (345 metres)

BEAM: 135 feet (41 metres)

BEAM AT BRIDGE WINGS: 147 feet 6 inches (45 metres)

DRAFT: 32 feet 8 inches (10 metres)

HEIGHTS

Keel to Funnel: 236 feet 2 inches (72 metres)

The overall height of **Queen Mary 2** is limited by the need to pass under New York's Verazzano Narrows Bridge.

GENERAL

BUILT BY: ALSTOM Chantiers de l'Atlantique,
St Nazaire, France

COST: £550 million

PORT OF REGISTRY: Southampton

SIGNAL LETTERS: GBQM

IMO NUMBER: 9241061

SHIPYARD HULL NUMBER: G32

CLASSIFICATION SOCIETY: Lloyd's Register

GUEST CAPACITY:

Lower berth	2,620
Maximum	3,090

CREW: 1,238

NATIONALITY OF OFFICERS: Mainly British

NATIONALITY OF CREW: International

DECKS:

Total	17
Guest	14

ELECTRIC CURRENT: 110 and 220

LIFTS

Guest 22

There are four guest stair towers arranged along the length of the ship. The forward and aft stairs have three lifts arranged across the beam of the ship within the stair tower. These lifts are sized for 21 persons and are grouped for triplex operation. The two remaining stair towers each have six 12 person lifts arranged in triples. Four panoramic lifts are arranged on board, two within the Grand Lobby (capacity of 11 persons) and two (capacity of 16 persons) running up the outside of the forward superstructure.

Crew 9

Service 6

ITINERARIES:

Queen Mary 2 will offer regularly scheduled transatlantic crossings between Southampton and New York, in addition to voyages to the Mediterranean, Northern Europe, the Caribbean and Canada.

MECHANICALLY SPEAKING...

In order to propel **Queen Mary 2** at speeds of up to 30 knots (34 miles per hour), a great deal of power and technology is needed. The ship is powered by an advanced environmentally-friendly plant with electricity generated by four diesel engines and two gas turbines.

Gas Turbines:

These are situated below and behind the funnel because of their requirement for large air intake. Such a location reduces the need for space being taken up by ducting.

The two General Electric LM2500+ gas turbines will generate 25MW of electricity each, which is equivalent to 81,000 shp. They run at 3,600 rpm and turn a generator through a reduction gearbox. The turbines burn marine gas fuel oil and are generally only run when the ship needs to achieve higher speeds.

Diesel Engines:

The four diesel engines generate electricity and are located low down in the ship due to their size and weight. Each engine is 12.5 metres long, 4.4 metres wide, 5.5 metres high and weighs 217 tonnes.

The diesel engines were built by Wartsila and are V engines with 16 cylinders. They have a bore of 460mm and a stroke of 580 mm.

Each engine runs at 514 rpm and produce 16.8 MW of power. They run on conventional heavy fuel oil.

The engines are of the enviroengine design that uses commonrail technology utilising water injection into the chambers to reduce noxious emissions.

Mermaid Pods:

Queen Mary 2 features four Mermaid pods built by Rolls Royce-owned Kamewa and Alstom Powers Motors. She is the first passenger ship to be driven by four pods. The forward two pods are fixed in place while the aft two are able to turn through 360-degrees to steer and manoeuvre the ship.

Each of the pods weighs 250 tons – the largest and most powerful ever made at 21.5 MW each. This gives a total propulsion power of 86 MW. The pods are individually hydrodynamically shaped to help attain the speeds required of **Queen Mary 2**.

Unusually the propellers themselves are stainless steel and have a highly skewed fixed pitch.

Thrusters:

Queen Mary 2 has three thrusters of 3.2 MW each allowing the ship to turn in her own length in port without the use of tugs. These operate with a fingertip touch by an officer on the Bridge.

The total plant is capable of producing nearly 118MW of electricity - that is about twice the power of a 100,000-ton conventional cruise ship.

Speed:

Normal cruising speed: between 24 and 26 knots (approximately 30 mph); with the power being obtained from the four diesels.

Maximum speed: approximately 30+ knots (34.5 mph) which is obtained from both the diesels and gas turbines.

Stabilisers:

Queen Mary 2 has four 'VM Series' folding fin stabilisers built by Brown Brothers of Edinburgh. There are one piece, passive type design (which means they don't have flaps) and when combined reduce the ship's roll by 90%.

Each stabiliser:

- weighs approximately 70 tonnes
- is 2.5 metres wide
- extends beyond the ship's side by 6.25 metres
- has a surface area of 15.63 square metres
- provides 1070 kN lift
- takes approximately 30 seconds to extend or house

Anchors:

There are three 23 tonne anchors provided, two working and one spare – the latter mounted on top of the forward end of the breakwater. The U3 anchor chains are collectively 770 metres long, of 114mm section 2 weigh 273 tonnes and have a breaking strain of 9300kN.

Dynamic Positioning:

Queen Mary 2 is the most technically advanced ship with regard to manoeuvre control ever built.

She is capable of being manoeuvred by a single joystick on the Bridge that can move the ship sideways or at an angle or even keep station over a fixed spot on the earth by use of satellite and wind gauges. The system involves the pods at the rear of the ship and the thrusters at the forward end.

The Bridge:

The Bridge of **Queen Mary 2** is huge and, again, utilises the latest technology. It is almost 50 metres wide with a layout designed to take into account today's philosophy of Safe Bridge Team Management, but using a new idea of presenting information to Bridge Officers for them to manage the ship's systems. Equipment was provided by Kelvin Hughes. Flat screens are used to show radar, navigation displays, safety management systems, manoeuvring systems, power management displays, water consumption, ballast transfer and weather systems. All the same screens can be interswitched at the operators' discretion. Close circuit camera pictures show in the corner of the screens a picture similar to a picture in picture television that is becoming more common in homes today.

Environment and Safety:

Queen Mary 2's systems set the benchmark for many years to come.

Strength:

The ship has an extra thick steel hull for strength and stability for Atlantic crossings.

BUNKERING

Bunker Capacities

Heavy Fuel	5,350 tonnes
Marine Gas Oil	3,885 tonnes

Fuel Tanks

Heavy Fuel	9
Marine Gas Oil	13

Fuel Consumption

- The diesel engines burn approximately 3 tonnes per hour each
- The gas turbines burn approximately 6 tonnes per hour each

Queen Mary 2 uses grade IFO 380 and marine gas oil.

LIFESAVING EQUIPMENT

Queen Mary 2's lifesaving equipment was provided by Schat Harding.

LIFEBOATS

- 2 fast 6-person rescue boats (up to 25 knots)
- 14 150-person semi-enclosed lifeboats (6 knots)
- 8 150-person combinations tender lifeboats

LIFERAFTS

- These have a capacity of 37 persons each

Queen Mary 2'S WHISTLE

Queen Mary 2 has two traditional 'Typhon' style whistles and these are located at the forward end of the funnel. The starboard side whistle is an original from the **Queen Mary** which was mounted on that ship's middle funnel. Since **Queen Mary** became a museum ship at Long Beach the whistle was until recently been stored inside the ship. The whistle was offered on permanent loan to Cunard and has been reconditioned by the original manufacturers, Kockums Ab Sweden. A replica of the whistle was ordered as part of the shipbuilding contract and the original and facsimile are now mounted on the funnel on small platforms. The two whistles sound a characteristic deep bass 'A' note are now driven by 30 bar compressed air from the diesel engine start air system rather than by steam. The sound can be heard up to 10 miles away.

HOTEL FACTS AND CONSUMPTION STATISTICS

Wine and Champagne

- The wine list consists of 343 different labels of wine.
- Annual wine sales will be 230,000 bottles.
- Over 7,000 bottles of champagne will be consumed during the QM2's inaugural events period.

Annual Consumption Figures

Tea bags	1,350,000
Coffee	55,000 lbs
Eggs	1,728,000
Breakfast Cereal	420,000 packets
Smoked Salmon	38,000 lbs
Fruit Juice	346,000 gallons
Potatoes	249,000 lbs
Tooth Picks	540,000

General

- The annual sugar consumption would make eight million scones.
- Enough toilet tissue will be used to wrap the earth almost five times.
- The QM2 will use almost 7,000 boxes of strawberries each year.
- The annual tea consumption would fill an Olympic size swimming pool.
- The QM2 will serve 1.5 million drinks per year, not including wine sales.
- The annual beef consumption would supply a city the size of Southampton each year.
- The on board baking requires the use of nearly 8,000 industrial size flour bags. Stacking them would make a pile five times higher than the Eiffel Tower.
- The weight of pineapples used per year match the weight of 50 SUVs, almost 90 metric tons.

PUBLIC ROOMS AND GUEST FACILITIES

Grand Lobby

The main entrance to **Queen Mary 2** is a six-storey Grand Lobby atrium with a lounge area around a piano on the lower level. The Lobby features a grand staircase, interior glass lifts and a bridge located over the atrium on the highest level. 12 (D1 grade) cabins overlook the Atrium from decks 5 and 6.

Restaurants

NAME	DECK	CAPACITY	
Queens Grill	7	200	Reserved for Q grade guests.
Princess Grill	7	178	Reserved for P grade guests.
Britannia Restaurant	2 and 3	1,347	This three-storey restaurant (dining on two levels) is QM2's main restaurant.
Todd English	8	156 inside 56 outside	A reservations-only alternative to the main dining rooms.
King's Court	7	478	The main informal dining area for buffet style breakfast and lunch. In the evening it divides into four restaurants: Italian (66 seats), Carvery (164 seats), Asian (212 seats) and Chef's Galley (36 seats). Chef's Galley features a chef giving a live demonstration of the meal preparation that is broadcast via closed circuit TV onto a large screen.
Boardwalk Café		66	For the serving of breakfast and lunch buffets
Terrace Pool and Bar		56	Available for lunch and dinner.

Lounges / Bars / Public Rooms

NAME	DECK	CAPACITY	SQ FT	CAPACITY / NOTES
Royal Court Theatre	2 and 3	1,094	10,120	Main showlounge.
Illuminations	2 and 3	493	9,365	A cinema and auditorium that includes the only Planetarium at sea (seating 150). The Planetarium dome will allow high-tech programmes including astronomy shows and virtual reality movies (such as a roller coaster ride).
Queens Room	3	562	10,500	Two-storey formal ballroom with the largest dancefloor at sea.
Winter Garden	7	278	7,000	The venue for afternoon tea and pre-dinner snacks.
G32	3 and 4	251	6,135	Named after Queen Mary 2's yard number, this is a two-level nightclub / disco.
Chart Room	3	87	2,960	Cocktail bar.
Veuve Clicquot Champagne Bar	3	69	1,400	Another sea-going first for Queen Mary 2 .
Golden Lion Pub	2	123	2,960	Traditional English-style pub offering pub food and games and a small dance floor.
Sir Samuel's	3	66	1,615	An up-market, modern wine bar.
Commodore Club		115	3,390	Observation lounge with sweeping views over Queen Mary 2's bow.
Churchill's Cigar Lounge	9	14 seated	380	
Boardroom	9	15 seated	380	Available for meetings and small parties.
Atlantic Room	11	22 – 100	915	Small meeting room; can also be used as a Card Room.
Queens Grill Lounge	7	86	1,990	Reserved for Queens Grill guests.

ConneXions	2	227	10,225	Seven classrooms, two dedicated to computer learning centres (which can be combined into one larger room for 40)
Empire Casino	2	200		
Mayfair Shops	3		5,000	8 shops featuring, among others, Dunhill.
Library and Bookshop	8			The largest library at sea featuring 8,000 hardbacks, 500 paperbacks, 200 audio books and 100 CD-ROMs.
Concierge Lounge	9			Private room for Queens Grill and Princess Grill guests.
Queens Grill Terrace	11			Private outside deck for Queens Grill guests with jacuzzi and bar service.

The Lookout	13	Observation platform.
Gallery		Walkway between decks 2 and 3 featuring an Art Gallery with works of art for sale.
Images		This photo gallery incorporates state-of-the-art technology combining interactive touch-screens for the viewing of digital photographs and traditional photo displays When the photo gallery is closed it will be transformed into a fine art gallery.
Regatta Bar	13	Outdoor bar.
Pavilion Bar	12	Located by the Pavilion Pool.
Video Arcade	2	Featuring the latest video games for guests of all ages.

HEALTH FACILITIES

- **Canyon Ranch SpaClub at Sea**

This 20,000 square foot (1,800 square metres) Health Club is managed by Canyon Ranch Health Resorts and is located over two decks. The facility is staffed by 51 Canyon Ranch personnel.

Facilities include:

- Thalassotherapy pool
- Massage and skin care treatment rooms
- Aromatic steam room
- Finnish sauna
- Life fitness weight machines
- Free weight area
- Individual equipment TV / music system
- Fitness Centre includes
 - 14 treadmills
 - 10 Elliptical Gliders
 - 4 upright bikes
 - 4 steppers
 - 4 recumbent bikes
 - 2 rowing machines

General sports facilities are located on Decks 12 and 13 – 200 feet above sea level. Two virtual reality golf machines (Fairways) are also to be found.

Facilities include:

- basketball court
- putting green
- quoits
- shuffleboard
- deck games
- a giant chess board
- a paddle tennis court.

CHILDREN'S FACILITIES

- **The Play Zone**

Supervised area for toddlers and children up to seven years old, staffed by two British nannies and two junior assistants. Capacity: 27 children.

- **The Zone**

Geared towards children aged 8 – 12 and includes older toys and games, TV, computers and books. Capacity: 27 children

- **Nursery**

Toddlers will be supervised by British nannies.

Children have their own deck area and swimming pool (Minnows) located aft of The Play Zone and The Zone.

SWIMMING POOLS / JACUZZI WHIRPOOLS

QM2 features five swimming pools:

- Splash Pool Deck 13
- Pavilion Pool Deck 12 Complete with Magrodome sliding glass roof
- Terrace Pool Deck 8 Adults Only
- Minnows Pool Deck 6 Childrens Only
- Therapy Pool Deck 7 Canyon Ranch Spa

There are eight jacuzzi whirlpool tubs: five outdoor, one indoor and two either (under the Magrodome).

MEDICAL FACILITIES

Covering 4,500 square feet with 11 beds for in-patients, three of which are for the care of patients requiring intensive care and two equipped to treat infectious diseases in isolation. Staff include two doctors, five nurses, one medical dispenser, one physiotherapist and two medical assistants. On some voyages a dentist will also be in attendance.

OTHER SERVICES / FACILITIES / FEATURES

NAME	DECK	CAPACITY / NOTES
'Maritime Quest'	All	A museum quality audio tour that winds throughout the ship telling the story of Cunard, the most famous name in shipping.
'Drive-In' Movies	12	Held outdoors on deck – with popcorn available.
Art Collection	All	Valued at £3.5 million. Renowned international artists have been commissioned to produce over 300 works of art from a trompe l'oeil painted ceiling in the Winter Garden and a huge tapestry in the Britannia Restaurant to a monumental sculptural relief in the Grand Lobby.
Kennels	12	Complete with exercise area.
Pursers Office / Tours Office	2	
Tender Embarkation Lounges	1	These four lounges permit easier embarkation and disembarkation, and are named after well-known areas of London: Kensington, Knightsbridge, Belgravia and Chelsea.

PASSENGER ACCOMMODATION

Total number of staterooms:	1,310
Outside doubles	1,017
Inside doubles	293
Balconies	955
Staterooms-equipped for disabled guests	30

- 955 (73%) of staterooms feature balconies – more than any other ship serving the British market. All of the balconies are very large - approximately 2.5 metres (8 feet) deep.
- 77.6% of staterooms are outside
- At 194 square feet, **Queen Mary 2** offers the largest standard staterooms of any British-registered passenger ship.
- **Disabled cabins:** 30 staterooms (in various category grades) are designed to be fully accessible to disabled persons. Facilities include wheelchair access, wider doors, disabled toilets. Facilities for blind guests include braille signs and tactile room signs.
- 36 staterooms have been designed to accommodate deaf or hearing impaired guests with public room facilities including headsets in the Theatre and Planetarium and closed caption television.
- **Interactive TV:** Available in all staterooms. 20-inch television with concealed keyboard including: digital video on demand, music on demand with 3,000 titles, audio books on demand, e-mail and digital photographs preview and purchase. The system can be blocked for children by means of an access code.

COMBINATIONS

- The four Forward Suites can be combined to create one suite of over 5,000 sq ft.
- Grand Duplex Apartments can be joined at the lower level to the adjacent Penthouse making each 2,185 sq ft total.
- Duplexes may be combined with the Grand Duplexes and two Penthouses for a living space measuring an unprecedented 8,288 sq ft (770 m²) – excluding balconies.

TYPES OF STATEROOM

There are 10 different ‘types’ of stateroom: Grand Duplex Apartments, Duplex Apartments, Royal Suites, Penthouses, Suites, Junior Suites, Deluxe and Premium Balcony, Standard Outside, Atrium and Standard Inside.

The breakdown is as follows:

TYPE	NUMBER	SQ. METRES
Grand Duplex Apartments	2	209
Duplex Apartments	3	120
Royal Suites	4	145 / 174
Penthouses	6	70
Suites	82	47
Junior Suites	76	35
Deluxe and Premium Balcony	782	23 / 25
Standard Outside	62	18
Atrium	12	18
Standard Inside	281	18
TOTAL	1,310	

STATEROOM GRADING

CATEGORY	NUMBER	DESCRIPTION	SIZE (sq ft) (m ²)
QUEENS GRILL DINING			
Q1	2	Grand Duplex	2,249 sq ft (209 m ²)
Q2	5	Duplex Apartment	1,291 sq ft (120 m ²) *
		Queen Mary / Queen Elizabeth	1,194 sq ft (145 m ²)
Q3	2	Royal Suite	796 sq ft (74 m ²)
Q4	6	Penthouse	758 sq ft (70 m ²)
Q5	78	Suite	506 sq ft (47 m ²)
Q6	4	Suite	506 sq ft (47 m ²)

* Holyrood Duplex is 1,566 sq ft (145 m²)

PRINCESS GRILL DINING			
P1	68	Junior Suite	381 sq ft (35 m ²)
P2	8	Junior Suite	381 sq ft (35 m ²)

BRITANNIA RESTAURANT DINING			
B1	112	Deluxe Balcony	269 sq ft (25 m ²)
B2	98	Deluxe Balcony	269 sq ft (25 m ²)
B3	98	Deluxe Balcony	269 sq ft (25 m ²)
B4	162	Premium Balcony	248 sq ft (23 m ²)
B5	162	Premium Balcony	248 sq ft (23 m ²)
B6	146	Premium Balcony	248 sq ft (23 m ²)
B7	4	Premium Balcony	248 sq ft (23 m ²)
C1	26	Standard Outside	194 sq ft (18 m ²)
C2	20	Standard Outside	194 sq ft (18 m ²)
C3	12	Standard Outside	194 sq ft (18 m ²)
C4	4	Standard Outside	194 sq ft (18 m ²)
D1	12	Atrium	194 sq ft (18 m ²)
D2	50	Standard Inside	194 sq ft (18 m ²)
D3	106	Standard Inside	194 sq ft (18 m ²)
D4	72	Standard Inside	194 sq ft (18 m ²)
D5	46	Standard Inside	194 sq ft (18 m ²)
D6	7	Standard Inside	194 sq ft (18 m ²)

THE SHIP'S COMPANY

Crew:	1,253
Nationality of Officers:	Mainly British
Nationality of Staff:	International

FINALLY...

QM2 has...

- 2,500 kilometres of electric cable
- 310 miles (500 kilometres) of ducts, mains and pipes
- 2,000 bathrooms
- 80,000 lighting points
- 280,000 square yards (250,000 square metres) of fitted carpets
- 144,000 square yards (120,000 square metres) of insulating material
- 3,800 square yards (3,200 square metres) of galleys
- 3,000 telephones
- 8,800 loudspeakers
- 5,000 stairs
- 5,000 fire detectors
- 1,100 fire doors
- 8,350 automatic extinguishers

- Ends -

For Further PRESS Information

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