

= RMS Queen Mary 2 =

RMS Queen Mary 2 (also referred to as the QM2) is a transatlantic ocean liner . She is the only major ocean liner built for Cunard Line since Queen Elizabeth 2 in 1969 , the vessel she succeeded as flagship of the Cunard Line .

The new ship was named Queen Mary 2 by Queen Elizabeth II in 2004 after the first 1936 namesake ship RMS Queen Mary . Queen Mary was in turn named after Mary of Teck , consort of King George V. With the retirement of Queen Elizabeth 2 in 2008 , Queen Mary 2 is the only transatlantic ocean liner in line service between Southampton and New York , which operates for part of each year . The ship is also used for cruising , including an annual world cruise .

The ship was designed by a team of British naval architects led by Stephen Payne , and was constructed in France by Chantiers de l'Atlantique in 2003 . At the time of her construction , Queen Mary 2 was the longest passenger ship ever built , and with her gross tonnage of 148 @, @ 528 also the largest . She no longer holds this distinction after the construction of Royal Caribbean International 's 154 @, @ 407 GT Freedom of the Seas in April 2006 , but remains the largest ocean liner ever built .

Queen Mary 2 was intended for routine crossings of the Atlantic Ocean , and was therefore designed differently from many other passenger ships . The ship 's final cost was approximately \$ 300 @, @ 000 US per berth . Expenses were increased by the high quality of materials , and having been designed as an ocean liner , she required 40 % more steel than a standard cruise ship . Queen Mary 2 has a maximum speed of just over 30 knots (56 km / h ; 35 mph) and a cruising speed of 26 knots (48 km / h ; 30 mph) , much faster than a contemporary cruise ship . Instead of the diesel @-@ electric configuration found on many ships , Queen Mary 2 uses integrated electric propulsion to achieve her top speed . This uses gas turbines to augment the power generated from the ship 's diesels .

Queen Mary 2 's facilities include fifteen restaurants and bars , five swimming pools , a casino , a ballroom , a theatre , and the first planetarium at sea . There are also kennels and a nursery on board .

= = Characteristics = =

Queen Mary 2 is the flagship of Cunard Line . The ship was constructed for eventual replacement of the aging Queen Elizabeth 2 , the Cunard flagship from 1969 to 2004 and the last major ocean liner built before the construction of Queen Mary 2 . Queen Mary 2 had the Royal Mail Ship (RMS) title conferred on her , as a gesture to Cunard 's history , by Royal Mail when she entered service in 2004 on the Southampton to New York route .

Queen Mary 2 is not a steamship like many of her predecessors , but is powered primarily by four diesel engines , with two additional gas turbines used when extra power is required ; this integrated electric propulsion configuration is used to produce the power to drive her four electric propulsion pods as well as powering the ship 's hotel services .

Like her predecessor Queen Elizabeth 2 she is built for crossing the Atlantic Ocean , though she is regularly used for cruising ; in the winter season she cruises from New York to the Caribbean on twelve- or thirteen @-@ day tours . Queen Mary 2 's 30 @-@ knot (56 km / h ; 35 mph) open ocean speed sets the ship apart from cruise ships , such as MS Oasis of the Seas , which has an average speed of 22 @. @ 6 knots (41 @. @ 9 km / h ; 26 @. @ 0 mph) ; QM2 's normal service speed is 26 knots (48 km / h ; 30 mph) . While the hull of a cruise ship will typically have a block coefficient of 0 @. @ 73 (a number closer to 1 @. @ 0 would represent a rectangular block) Queen Mary 2 has a coefficient of 0 @. @ 61 .

= = Design and construction = =

Cunard completed a design for a new class of 84 @, @ 000 GT , 2 @, @ 000 passenger liners on 8 June 1998 , but revised them upon comparing those specifications with Carnival Cruise Line 's 100

@, @ 000 GT Destiny @-@ class cruise ships and Royal Caribbean International 's 137 @, @ 276 GT Voyager class .

In December 1998 , Cunard released details of Project Queen Mary , the project to develop a liner that would complement Queen Elizabeth 2 . Harland and Wolff of Northern Ireland , Aker Kværner of Norway , Fincantieri of Italy , Meyer Werft of Germany , and Chantiers de l 'Atlantique of France were invited to bid on the project . The contract was finally signed with Chantiers de l 'Atlantique , a subsidiary of Alstom , on 6 November 2000 . This was the same yard that built Cunard 's former rivals , the SS Normandie and SS France of the Compagnie Générale Transatlantique . Due to QM2 's size and complexity , the shipyard resourced the project at 1 @. @ 7 to 2 times higher than a typical cruise ship .

Her keel was laid down on 4 July 2002 , in the construction dock at Saint @-@ Nazaire , France , with the hull number G32 . Approximately 3 @, @ 000 craftsmen spent around eight million working hours on the ship , and around 20 @, @ 000 people were directly or indirectly involved in her design , construction , and fitting out . In total , 300 @, @ 000 pieces of steel were assembled into 94 " blocks " off the dry dock , which were then stacked and welded together to complete the hull and superstructure . After floating out on 21 March 2003 , the QM2 was fitted out in the large fitting out basin (" Bassin C ") , the first ship to use this huge dry dock since the shipyard built large tankers in the 1970s , such as the MV Gastor . Her sea trials were conducted during 25 ? 29 September and 7 ? 11 November 2003 , between Saint @-@ Nazaire and the offshore islands of Île d 'Yeu and Belle @-@ Île . The final stages of construction were marred by a fatal accident on 15 November 2003 , when a gangway collapsed under a group of shipyard workers and their relatives who had been invited to visit the vessel . In total , 32 people were injured and 16 were killed , after a 15 @-@ metre (49 ft) fall into the drydock .

Construction was completed on schedule . Cunard took delivery in Southampton , England , on 26 December 2003 . On 8 January 2004 , the liner was officially named by Queen Elizabeth II .

= = = Exterior = = =

Queen Mary 2 's principal naval architect was Carnival 's in @-@ house designer , Stephen Payne . Payne intended many aspects of the ship 's design to resemble notable aspects of former ocean liners , such as Queen Elizabeth 2 and the ship 's predecessor Queen Mary . These features include the three thick black lines that wrap around either edge of the ship 's bridge screen , and at the stern end of the superstructure , which are to recall the appearance of the crossovers of the forward decks on the first Queen Mary .

Queen Mary 2 has 14 @, @ 164 square metres (152 @, @ 460 @. @ 0 sq ft) of exterior deck space , with wind screens to shield passengers as the ship travels at high speeds . Three of the ship 's four swimming pools are outdoors . One of the pools on Deck 12 is covered with a retractable magrodome . The indoor pool is on Deck 7 , in the Canyon Ranch Spa Club .

In common with liners such as RMS Queen Mary , there is a continuous wrap @-@ around promenade deck on Deck 7 . The promenade passes behind the bridge screen and allows passengers to completely circumnavigate the deck while protected from the strong winds generated by the ship at speed . One circuit of the promenade is a distance of 620 m (2 @, @ 030 ft) . The flanking promenades are created by the need to step the superstructure in , to allow for space for lifeboats . By SOLAS standards , the lifeboats should have been lower on the ship 's hull (15 m (49 ft) above the waterline) , but for the sake of Queen Mary 2 's appearance as well as to avoid the danger of large North Atlantic waves damaging the boats in a storm , Payne convinced SOLAS officials to exempt Queen Mary 2 from this requirement , and the boats are 25 m (82 ft) above the waterline .

Payne 's initial intent was to make the ship 's stern profile with a spoon shape , similar to that on most previous ocean liners , but the mounting of the propeller pods required a flat transom . The compromise was a Constanzi stern ? a combination of the two . The final design was agreed upon , as a Constanzi stern provides the transom required for azimuthal pod propulsors , and provides better seaholding characteristics in a following swell than a standard transom stern . In common with

many modern ships , both passenger and cargo , Queen Mary 2 has a bulbous bow to reduce drag and thereby increase speed , range , and fuel efficiency .

While of a design similar to that of Queen Elizabeth 2 , Queen Mary 2 's funnel has a slightly different shape , because a taller funnel would have made it impossible for the ship to pass under the Verrazano ? Narrows Bridge in New York City at high tide . The final design now permits a minimum of 13 feet (4 @. @ 0 m) of clearance under the bridge at high tide .

As Queen Mary 2 is too large to dock in many ports , passengers are ferried to and from the ship in tenders , which can be used as lifeboats in an emergency . These are stored while at sea in davits alongside the lifeboats . To transport passengers to shore the tenders pull up to one of four loading stations , each of which has a large hull door that hydraulically opens outwards to form a boarding platform , complete with railings and decking .

Queen Mary 2 is a post @-@ panamax ship . As a result , Queen Mary 2 must circumnavigate South America to cross between the Atlantic and Pacific oceans . The decision not to constrain her size to transit the Panama Canal was taken as Queen Elizabeth 2 only transited once a year , during the world cruise . Cunard decided to pass up the convenience of the occasional passage in favour of a greater passenger capacity .

= = = Interior = = =

As is the case with many modern passenger ships , many of the major public rooms on board Queen Mary 2 are on the lowest public decks of the ship , with the passenger cabins stacked above . This is the opposite of the traditional practice on ocean liners , but the design allowed for larger rooms to be contained within the stronger hull , as well as for more passenger cabins to have private balconies higher up on the ship , where they are less affected by large waves . Payne attempted to create a central axis to the two main public room decks (similar in fashion to the Normandie) , but a full vista is broken by various public rooms that span the full beam of the ship . The dining rooms were placed further aft , though not directly at the stern , where the fore @-@ and @-@ aft pitching of the ship is most noticeable , and might cause discomfort to dining passengers .

Deck 2 , the lowest passenger deck , contains the Illuminations theatre , cinema and planetarium (the first at sea) ; Royal Court Theatre ; Grand Lobby ; " Empire Casino " ; " Golden Lion Pub " ; and the lower level of the " Britannia Restaurant " . Deck 3 holds the upper levels of " Illuminations " , the " Royal Court theatre " and the " Britannia Restaurant " , as well as a small shopping arcade , " Veuve Cliquot champagne bar " , the " Chart Room " , " Sir Samuel 's " wine bar , the " Queen 's Room " , and the " G32 " Nightclub . The other main public deck is Deck 7 , on which are the " Canyon Ranch Spa " , " Winter Garden " , " King 's Court " , the " Queen 's Grill Lounge " , and the " Queen 's Grill " and " Princess Grill " restaurants for higher @-@ fare passengers . The public rooms on Deck 8 include the à la carte Todd English Restaurant , an 8 @, @ 000 @-@ volume library , (the largest of any cruise ship) a book shop and the upper part of the Canyon Ranch Spa . Also on Deck 8 is a large outdoor pool and terrace at the stern . The kennels , located aft on starboard side of Deck 12 , are available only for transatlantic crossings . They can accommodate up to twelve dogs and cats in six small and six large cages .

The King 's Court area on the ship is open twenty four hours a day , serving as a buffet restaurant for breakfast and lunch . The overall space is divided into quarters , with each section decorated according to the theme of the four separate alternate dining venues that are " created " each evening through lighting , tableware , and menus : Lotus , which specialises in Asian cuisine ; the Carvery , a British style grille ; La Piazza , with Italian food ; and the Chef 's Galley , which offers an interactive experience to food preparation .

The passengers ' dining arrangements on board are dictated by the type of accommodation in which they choose to travel . Around 85 % of passengers are in Britannia class , and , therefore , dine in the main restaurant . However , passengers can choose to upgrade to either a " junior suite " , and dine in the " Princess Grill " , or a suite , and dine in the " Queens ' Grill " . Those in the two latter categories are grouped together by Cunard as " Grill Passengers " , and they are permitted to use the " Queens ' Grill Lounge " and a private outdoor area on deck 11 with its own whirlpool . This

feature is also present on both Queen Victoria and Queen Elizabeth . However , all other public areas can be used by all passengers .

As the Britannia Restaurant takes up the full width of the ship on two decks , a ' tween deck , called Deck 3L , was devised to allow passengers to walk from the Grand Lobby to the Queen 's Room without traversing the dining room mid @-@ meal . The deck consists of two corridors that run beneath the upper balcony of the restaurant on Deck 3 , and above the main dining area on Deck 2 . This is why the balcony of the Britannia has tiers that step up towards the hull . This arrangement is illustrated on the hull where there is a stack of three rows of windows in the area where the main restaurant sits , the two upper and lower most rows illuminate the dining room , while the centre row serves Deck 3L . There is a similar arrangement through the Royal Court Theatre . As well , the passages that run on either side of Illuminations on Deck 3 ramp upwards to compensate for the change in deck elevation between the entrance to Illuminations and an elevator bank forward of the room .

More than 5000 commissioned works of art are visible in Queen Mary 2 's public rooms , corridors , staterooms and lobbies , having been created by 128 artists from sixteen different countries . Two of the most notable pieces are Barbara Broekman 's tapestry , an abstract depiction of an ocean liner , bridge , and New York skyline which spans the full height of the Britannia Restaurant , and the British sculptor John McKenna 's sheet bronze relief mural in the Grand Lobby , a 7m square portrait of the ship fabricated in bronze inspired by the Art Deco mural in the main dining room of the original Queen Mary .

== == 2016 refit == ==

In July 2015 , Cunard announced plans for a month @-@ long refit of Queen Mary 2 at the Blohm + Voss Shipyard in Germany in late May and June 2016 . Major changes include the addition of fifteen individual staterooms , which will be the first on the ship , thirty additional balcony staterooms , and ten more animal kennels .

== Technical ==

== Power plant and propulsion system ==

Queen Mary 2 's power plant comprises both four sixteen cylinder Wärtsilä 16V46CR EnviroEngine marine diesel engines , generating a combined 67 @, @ 200 kW (90 @, @ 100 hp) at 514 rpm , as well as two General Electric LM2500 + gas turbines , which together provide a further 50 @, @ 000 kW (67 @, @ 000 hp) , all of which is converted into electricity used to power electric motors that drive the propellers . Such an arrangement , known as integrated electric propulsion , provides for economical cruising at low speed combined with an ability to sustain much higher speeds when required , and has been common in naval vessels for some time . While Queen Mary 2 is the first passenger ship to feature IEP propulsion , the first major passenger vessel to be powered by gas turbines was the Finnish ferry GTS Finnjet in 1977 .

Thrust is provided by four Rolls @-@ Royce Mermaid azimuth thruster type podded propulsion units , each featuring one forward @-@ facing low @-@ vibration propeller with separately bolted blades . The forward pair of thrusters is fixed , but the aft pair can swivel through 360 ° , removing the need for a rudder . The Queen Mary 2 is the first quadruple @-@ propeller passenger ship completed since the SS France in 1961 . Queen Mary 2 carries eight spare blades on the foredeck , immediately forward of the bridge screen .

Because Queen Mary 2 's propulsion machinery is electrically decoupled from her propellers , her propulsion arrangement may arguably be more accurately described as " CODLAG electric " (by analogy with turbo @-@ electric and diesel @-@ electric) ; however " integrated electric propulsion " is the term of art . The diesel engines and gas turbines drive electric generators , which provide the power to drive four 21 @, @ 500 kW (28 @, @ 800 hp) Alstom electrical motors located inside the

podded propulsors (and thus entirely outside the vessel 's hull) . Unusually , Queen Mary 2 's gas turbines are not housed along with her diesels in the engine room deep in her hull , but instead are in a soundproofed enclosure directly beneath the funnel . This arrangement allowed the vessel 's designers to supply the oxygen @-@ hungry turbines with air intakes without having to run air ducts the height of the ship , which would have wasted valuable interior space .

= = = Navigation = = =

Queen Mary 2 has a state @-@ of @-@ the @-@ art navigation system designed by British firm Kelvin Hughes , meeting and exceeding all International Maritime Organization regulations . The system consists of six radar navigation scanners and eight multifunction display units . The system includes the latest generation of Electronic Chart Display and Information System (ECDIS) , allowing for fully paperless navigation and redundancy of operation .

Queen Mary 2 is fitted with Kelvin Hughes solid state SharpEye ? radar scanners .

= = = Water supply = = =

Fresh water aboard Queen Mary 2 is supplied by three seawater desalination plants . The plants , each with a capacity of 630 @,@ 000 litres (170 @,@ 000 US gal) per day , use multiple effect plate (MEP) distillation technology . The plants ' energy is supplied primarily by steam and cooling water from the ship 's gas turbines and diesel engines , or if needed by steam from the ship 's two oil @-@ fired boilers . The traditional multiple @-@ effect distillation technology has been improved for the ship 's plant , so that scaling of plates is reduced , vastly reducing maintenance required . The desalinated water has a very low salt content of less than five parts per million . Average total water production is 1 @,@ 100 @,@ 000 litres (290 @,@ 000 US gal) per day with a capacity of 1 @,@ 890 @,@ 000 litres (500 @,@ 000 US gal) so that there is ample spare capacity . The ship could easily be supplied by only two of the three plants . Potable water tanks have a capacity of 3 @,@ 830 @,@ 000 litres (1 @,@ 010 @,@ 000 US gal) , enough for more than three days of supply . If the engines are running on low load (when the ship is running at a slow speed) the engine jacket cooling water temperature is insufficient to heat the seawater to run the desalination plants . In that case steam from oil @-@ fired boilers is used to heat the sea water . This is uneconomical as generating steam is expensive . It may be cheaper , therefore , to buy water in a particular port than to produce it on board . The seawater intakes are located in the hull of the ship . Concentrated salt solution (brine) is discharged to the sea closer to the ship 's stern together with cooling water from the engines . An additional plant was added during the 2016 refit works .

= = Service history = =

On 12 January 2004 Queen Mary 2 set sail on her maiden voyage from Southampton , England , to Fort Lauderdale , Florida , in the United States , carrying 2 @,@ 620 passengers . She was under the command of captain Ronald Warwick , who had previously commanded Queen Elizabeth 2 . Warwick is the son of William (Bil) Warwick , who had also been a senior Cunard officer and the first captain of Queen Elizabeth 2 . The ship returned to Southampton late from her maiden voyage after bow doors covering the thrusters failed to shut in Portugal .

During the 2004 Summer Olympics Queen Mary 2 sailed to Athens and docked at Piraeus for two weeks for use as a floating hotel , serving the then Prime Minister of the United Kingdom Tony Blair and his wife Cherie , French President Jacques Chirac , then United States President George W. Bush , and the United States Olympic men 's basketball team . Queen Mary 2 's passengers have also included jazz musician Dave Brubeck , comedian and actor John Cleese , actor Richard Dreyfuss , author and editor Harold Evans , director George Lucas , singer Carly Simon , singer Rod Stewart , talk show host Katie Couric , and financier Donald Trump .

One 2005 transatlantic crossing saw Queen Mary 2 carrying , in a locked steamer trunk , the first United States copy of J. K. Rowling 's book Harry Potter and the Half @-@ Blood Prince ,

autographed by the author . In a promotional press release for the event , Cunard said that this marked the first time a book had been transported to its international launch aboard an ocean liner .

In January 2006 Queen Mary 2 embarked on a circumnavigation of South America . Upon departure from Fort Lauderdale , one of her propeller pods was damaged when it struck a channel wall , forcing the ship to sail at a reduced speed , which resulted in Commodore Warwick 's decision to skip several calls on its voyage to Rio de Janeiro . Many of her passengers threatened to stage a sit @-@ in protest because of the missed calls , before Cunard offered to refund the voyage costs . Queen Mary 2 continued to operate at a reduced service speed and several itinerary changes were necessary until repairs had been completed after the ship returned to Europe in June , where Queen Mary 2 paid a visit to dry dock and the damaged propeller pod was unseated . In November , Queen Mary 2 was drydocked once more at the Blohm + Voss yard in Hamburg (drydock Elbe 17) for the reinstallation of the repaired propeller pod . At the same time , sprinkler systems were installed in all of the vessel 's balconies to comply with new safety regulations which had come into effect since the MS Star Princess fire . Additionally , both bridge wings were extended by two metres to improve visibility .

After completing the journey around South America , on 23 February 2006 , Queen Mary 2 met her namesake , the original RMS Queen Mary , which is permanently docked at Long Beach , California . Escorted by a flotilla of smaller ships , the two Queens exchanged a " whistle salute " which was heard throughout the city of Long Beach . Queen Mary 2 met the other serving Cunard liners Queen Victoria and Queen Elizabeth 2 on 13 January 2008 near the Statue of Liberty in New York City harbour , with a celebratory fireworks display ; Queen Elizabeth 2 and Queen Victoria made a tandem crossing of the Atlantic for the meeting . This marked the first time three Cunard Queens have been present in the same location . Cunard stated this would be the last time these three ships would ever meet , due to Queen Elizabeth 2 's impending retirement from service in late 2008 . However this would prove not to be the case , as the three Queens met in Southampton on 22 April 2008 . Queen Mary 2 rendezvoused with Queen Elizabeth 2 in Dubai on Saturday 21 March 2009 , after the latter ship 's retirement , while both ships were berthed at Port Rashid . With the withdrawal of Queen Elizabeth 2 from Cunard 's fleet and its docking in Dubai , Queen Mary 2 became the only operational ocean liner left in active passenger service .

On 19 October 2011 , Queen Mary 2 had her registry changed to Hamilton , Bermuda , from her previous home port of Southampton , to allow the ship to host on @-@ board weddings . This marked the first time in its 171 @-@ year history that Cunard has not had a ship registered within the UK .

= = = World cruises = = =

On 10 January 2007 , Queen Mary 2 started her first world cruise , circumnavigating the globe in 81 days . On 20 February , she met her fleet @-@ mate , Queen Elizabeth 2 , also on her 2007 world cruise , in Sydney harbour . This is the first time two Cunard Queens had been together in Sydney since the original Queen Mary and Queen Elizabeth served as troop ships in 1941 . Despite the early arrival time of 5 : 42 am , the Queen Mary 2 's presence attracted so many viewers that the Sydney Harbour Bridge and Anzac Bridge were blocked . With 1 @,@ 600 passengers leaving the ships in Sydney , Cunard estimated the stopovers injected more than \$ 3 million into the local economy .

On 10 January 2012 , the ship embarked on a three @-@ month world cruise from Southampton , travelling south and then east around Africa , a first ever circumnavigation of Australia , to Japan , then back to Southampton along the south coastline of Eurasia and through the Suez Canal .

= = = Anniversary voyage = = =

In October 2009 , Queen Mary 2 celebrated her fifth year in service with an 8 @-@ night voyage around the British Isles . The voyage included maiden visits to Greenock and Liverpool .

=== The Boston Cup ===

Carried aboard Queen Mary 2 is the Boston Cup . Sometimes referred to as The Britannia Cup , this artifact was created for Sir Samuel Cunard in Boston , United States , to commemorate the arrival of his first vessel RMS Britannia . Cunard had selected Boston as the American port for his Atlantic service , which resulted in a strong connection between Boston and the Cunard Line . It is believed that the cup was presented to Sir Samuel Cunard sometime in 1840 ; however , for much of its life it was missing . It was discovered in an antique shop in 1967 and returned to Cunard , where it was placed aboard Queen Elizabeth 2 . In 2004 , when QM2 became the flagship , the Boston Cup was placed aboard QM2 . It is in a glass case , aft of the Chart Room lounge .

In July 2007 the National Geographic Channel broadcast an episode of the documentary series Megastructures about Queen Mary 2 . The vessel also featured in the pilot episode of the documentary TV series Mighty Ships .

=== Propulsion failures ===

The Rolls @-@ Royce Mermaid propulsor pods fitted to QM2 have proven to be prone to failure . The failures had been so frequent and extensive that Carnival Corp. (USA) , by way of its Cunard Line division , has taken Rolls @-@ Royce Corp. (UK) to court in the United States in January 2009 . The former placed claim that the Mermaid pod propulsion systems fitted to Cunard Line 's flagship Queen Mary 2 are inherently defective in design . Cunard contends that Rolls Royce knew about the design deficiencies and deliberately conspired to mislead , deceive and defraud in the course of winning the contract . The Achilles heel of the design has been the motors ' massive thrust bearings , which have continued to show a tendency to fail even after numerous attempts at redesign . In January 2011 Carnival Corporation was awarded US \$ 24 million (approx . UK £ 15 million at the time of verdict) by the United States court due to the repeated failure of the propulsors .

=== Cunard Royal Rendezvous ===

Two years after the first Cunard Royal Rendezvous on the same date Queen Mary 2 met up with Queen Victoria and the then brand @-@ new MS Queen Elizabeth for another Royal Rendezvous in New York City on 13 January 2011 . Queen Victoria and Queen Elizabeth made a tandem crossing of the Atlantic for the event . All three ships met in front of the statue of Liberty at 6 : 45 pm for Grucci fireworks . The Empire State Building was lit up in red to mark the event .

On 5 June 2012 , the three Queens met again , but this time in Southampton to celebrate the Diamond Jubilee of Queen Elizabeth II .

=== Atlantic rowing ===

Queen Mary 2 has rendezvoused with ocean rowing teams in the middle of the Atlantic . On 30 July 2010 she met up with Artemis Investments whose rowing crew were Don Lennox , Livar Nysted , Ray Carroll , Leven Brown . Carroll had been a former engineer and was patched through via marine VHF radio and QM2 's tannoy system to speak to the captain and crew . On 26 September 2013 Queen Mary 2 resupplied solo @-@ rower Mylène Paquette and her vessel Hermel with a replacement satellite phone , drogue anchor and groceries . Queen Mary 2 changed her course by 20 @-@ degrees and only added 14 miles to the overall distance of the crossing .

=== Engine fire ===

A small fire broke out in the gas turbine engine room (located high on the ship behind the Queen Mary 2 sign) on the evening of 5 October 2011 . The fire was started in one of the ship 's gas turbines . No injuries were reported , and crew on board the ship managed to safely extinguish the

fire .

= = = Plant incident = = =

On 23 September 2010 , an explosion occurred in Queen Mary 2 's aft harmonic filter room . This resulted in the shutdown of all four propulsion motors and a loss of electrical power throughout the ship . Within an hour of the explosion , the ship 's main generators were restarted and it was able to resume passage . The explosion was caused by electrical arcing within the aft harmonic filter igniting leaked dielectric fluid vapour .

= = = 200th transatlantic voyage = = =

On 6 July 2013 Queen Mary 2 departed New York en route to Southampton on her 200th transatlantic voyage . On board speakers were Stephen Payne OBE ? the ship 's designer ? and presenter and newsreader Nick Owen , who presented talks about the ship 's design .

= = = 10th birthday celebrations = = =

On 6 May 2014 , all three Queens met up for the first time in Lisbon , Portugal . The three ships sailed abreast of each other from Lisbon to Southampton . On 9 May 2014 Queen Elizabeth and Queen Victoria led Queen Mary 2 up the Southampton channel where they docked in formation at the QEII terminal and performed a birthday salute to Queen Mary 2 . The anniversary included a tour of the ship by His Royal Highness The Duke of Edinburgh .

= = = Cunard 175th anniversary = = =

On 25 May 2015 , all three Queens met , once again , at Liverpool , in order to celebrate the 175th anniversary of the shipping line . After arriving at Liverpool the previous day , Queen Mary 2 made a brief excursion to the entrance of the River Mersey to welcome her two fleetmates into port in the early afternoon . The three Cunarders then sailed , in formation , towards Liverpool . The ships spent several hours together , before the departure of Queen Mary 2 to Saint Peter Port , Guernsey .

On 2 July 2015 , Queen Mary 2 began a 175th Anniversary Crossing in Southampton . She sailed first to Liverpool , leaving that city after a fireworks display on 4 July , the actual anniversary date of Cunard 's first transatlantic voyage . Queen Mary 2 followed the route of the original ship Britannia , calling first at Halifax , Nova Scotia . After a day there , she headed first upriver into the harbor , using her bow thrusters and swivel @-@ pod motors to negotiate the tight turnaround to come back down close to the cityfront . A 21 @-@ gun salute and bagpipe band honored the ship .

From Halifax , the ship sailed to Boston and was there for a full day at the cruise terminal . (Boston was the terminus of the original crossing in 1840 .) In the evening , the captain backed the ship out of the slip and continued backing up all the way to the Maritime History Museum , where a fireworks display was presented before Queen Mary 2 sailed away . After a night and day at sea , the vessel entered New York Harbor early the morning of 14 July and docked at the Brooklyn Cruise Terminal . Later in the evening the vessel sailed to the lower harbor , between the Statue of Liberty and the Battery , for the Forever Cunard Queen Mary 2 Light Show .

= = In art and culture = =

On 3 August 2007 three men were stopped by police while escorting and piloting a replica of the first American combat submarine within 200 feet (61 m) of Queen Mary 2 , then docked at the cruise ship terminal in Red Hook , Brooklyn . The replica was created by New York artist Philip " Duke " Riley and two out @-@ of @-@ town residents , one of whom claimed to be a descendant of David Bushnell , who had invented it . The Coast Guard issued Riley a citation for having an unsafe

vessel , and for violating the security zone around Queen Mary 2 .

= = Environmental performance = =

When designing Queen Mary 2 , the designers aimed to reduce the ship 's impact on the environment by improving fuel efficiency , and through better management of waste , not only to reduce fuel costs , but also to increase the service life of the ship , as it was predicted that tighter environmental regulations would be implemented while the ship was in service . Initial targets included the reuse of treated wastewater for non @-@ potable uses and zero discharge of solid waste into the sea . For economic and other reasons , as well as in order to reduce energy consumption from incineration , some of these measures were not implemented . However , Queen Mary 2 's environmental performance exceeds that of many older ships , as well as international standards on waste .

According to Cunard , the ship exceeds some requirements of the International Convention for the Prevention of Pollution From Ships (MARPOL 73 / 78) of the International Maritime Organization . It discharges waste into the sea only in areas more than 12 nmi (14 mi) from any coast , although MARPOL allows discharge of treated organic waste and treated bilge water closer to the shore . Discharges of potentially harmful substances , in particular the residual oil content of treated bilge water and air emissions , are monitored regularly to ensure compliance with environmental standards . In areas where air pollution from sulfur dioxide , which causes acid rain , is a concern , the ship switches to low @-@ sulfur fuel to minimise air pollution .

According to the carbon offset company Climate Care , passenger ships release more carbon dioxide into the atmosphere per passenger mile than long haul flights . Cunard attempted to reduce the carbon footprint of Queen Mary 2 by improving engine efficiency and reducing friction while the ship is in motion . In November 2008 , the ship was given a refit in Hamburg , part of which involved the repainting of the hull in paint which is designed to reduce drag , and thus improve fuel economy . According to Blohm + Voss , her 2016 refit will include the installation of " scrubbers " and exhaust gas filters to reduce emissions .