

Lusitania

(John Brown Shipbuilding & Engineering Co Ltd, Clydebank, Yard No. 367)

She was the largest, fastest and most luxurious ship of her generation and when she sank in 1915 a country went to war. Read on to find out more...

The formation of the International Mercantile Marine Company in 1902 by the American businessman J. Pierpont Morgan caused great national concern in Britain. Morgan had acquired a number of major British shipping lines (including the well known White Star Line) with the intention of giving the United States of America a major place in the transatlantic passenger trade. Some relief was expressed in Britain when it was known that the ships would fly the British flag. Morgan had realised that this would result in a 25% reduction in costs to run the ships. There was also considerable public concern in Britain that the prestigious speed records on the North Atlantic (known as the 'Blue Riband') had, since 1897, been held solely by German passenger liners.

Considerable press and public outcry resulted in the British Government concluding a twenty-year agreement with Cunard Line in 1903. Cunard had, despite overtures from Morgan, avoided the tentacles of International Marine. The company was to remain British owned and two new record-breaking ships with naval auxiliary cruiser capability were to be built with the aid of a government loan and, in addition, an annual subsidy to cover the degree of Admiralty specification built into their construction.

It was realised that the sheer size of the two ships, which would be the largest and fastest in the world, would require special consideration as to the hull form and means of propulsion adopted. Tank tests on ship models showed that to achieve the desired service speed of 23.5 knots these 31,500 gross ton vessels would require machinery capable of sustaining 68,000-shaft horsepower. Conventional steam reciprocating engines could not be considered as suitable therefore the decision was made to adopt the relatively untried steam turbine, a brave decision that was to revolutionise the whole future of the world's major passenger liners. The very large power requirement would necessitate the use of four propeller shafts each driven by one direct drive steam turbine. These turbines would be built by the shipbuilder to designs supplied by the Parsons Marine Steam Turbine Company of Newcastle-upon-Tyne. Each port and starboard set would comprise of one high-pressure turbine on the outer propeller shaft exhausting into one low-pressure turbine on the inner shaft. The whole concept was very much 'a leap in the dark' for both Cunard and the respective engine builders.

John Brown & Co. at Clydebank and Swan, Hunter & Wigham Richardson Ltd. at Wallsend were the preferred bidders for the contract. The contracts for the two ships were signed in London on 18 May 1905 at a meeting between Cunard and the two shipbuilders. At Clydebank the first sections of the keel for yard no.367 (later to be known as *Lusitania*) had already been laid down on the slipway on 17 August 1904, the delay in signing the contract resulting from detail changes having to be made.

The enormous scale of the construction of *Lusitania* involved the shipyard in considerable expense in the provision of additional plant and facilities to cope with this. The launch took place at 12.30 on 7 June 1906 when Lady Inverclyde (the widow of the former Cunard chairman, who had died in 1905) broke the customary bottle over the bows thus sending the ship into the River Clyde.

The Clydebank shipyard was to be at a distinct advantage when it came to the installation of the steam turbine machinery in *Lusitania*. In 1905 they had completed the smaller Cunard liner *Carmania*, which was to be the first Cunard liner, fitted with such machinery. A sister ship *Caronia* was also constructed. She was fitted with more conventional propulsion machinery so that a comparison could be made between the two types.

This comparison would obviously have been of little value to the *Lusitania* contract at that time since construction was already well advanced but served to show that Cunard already had every confidence in the future of turbine propulsion.

Following completion of the fitting out of the *Lusitania* acceptance trials were scheduled to commence on 27 July 1907. These would take place on the Skelmorlie measured mile in the Firth of Clyde. Immediately prior to these trials it was necessary for the *Lusitania* to sail to Canada Dry Dock in Liverpool for hull inspection and cleaning as no dry dock large enough to accommodate the ship was available on the Clyde. On the first two trial runs a speed of 25.63 knots was attained. Subsequent trial runs were made at varying speeds to determine fuel consumption. A few days later longer distance speed trials were carried out over recognised courses when similar speed results were obtained. The trials were completed to the complete satisfaction of the owners and the 'largest ship in the world' was eventually handed over to Cunard on 26 August 1907.

The maiden voyage from Liverpool to New York was commenced on 7 September 1907 and no real attempt was made to break the North Atlantic speed record until the following month. Then she attained an average speed of 23.99 knots on the westbound passage and 23.61 knots eastbound, thus taking the 'Blue Riband' from the German liner *Kaiser Wilhelm II*. The *Lusitania* subsequently made her fastest ever average passage in 1909 when she achieved 25.85 knots. Despite the prodigious coal consumption of between 900 and 1000 tons per day at full speed the effectiveness of turbines for high power in high-speed vessels had been demonstrated.

The *Lusitania* continued uneventfully on her North Atlantic passages up until the outbreak of World War I. The Admiralty then abandoned their original intention of utilising the ship as an armed merchant cruiser due to her size and fuel consumption. She therefore continued on her Liverpool-New York passenger service although six of her twenty-six boilers were shut down to conserve fuel thus reducing her service speed to 21 knots. Before she left New York on 1 May 1915 the German authorities in the U.S.A. published warnings that she would be attacked by their submarines and advised passengers not to sail. As she approached southern Ireland, nearing the end of her crossing, it appears that the British Admiralty gave her no warnings of known U-boat activity in the area. According to instructions that were ignored at the time *Lusitania* should have been steering on a zigzag course and also avoiding any close proximity to land.

At 2.15pm on 7 May a torpedo from the submarine U20 struck her starboard side. This was followed quickly by another explosion thought initially to have been caused by a second torpedo, but which is generally accepted to have been an explosion on board the ship itself. The *Lusitania* sank within twenty minutes, resulting in the loss of 1,198 passengers and crew out of a total complement of 1,959. Much has been written regarding the legality of the German action against an apparently innocent merchant ship with some sources claiming that the ship was carrying ammunition as cargo. The resulting outrage felt in the USA is said to have been a factor in bringing America into the war in 1917.

It should not be forgotten that the *Lusitania*'s Tyneside-built sister ship *Mauretania* survived World War I and went on to have an illustrious career as one of the most popular ships of all time. Completed a few months after the *Lusitania*, she was always slightly the faster of the two ships during their brief period together. Had the *Lusitania* not been so tragically lost, one wonders how this competitive situation would have developed.