

= HMS Iron Duke (1870) =

HMS Iron Duke was the last of four Audacious class central battery ironclads built for the Royal Navy in the late 1860s . Completed in 1871 , the ship was briefly assigned to the Reserve Fleet as a guardship in Ireland , before she was sent out to the China Station as its flagship . Iron Duke returned four years later and resumed her duties as a guardship . She accidentally rammed and sank her sister ship , Vanguard , in a heavy fog in mid 1875 and returned to the Far East in 1878 . The ship ran aground twice during this deployment and returned home in 1883 . After a lengthy refit , Iron Duke was assigned to the Channel Fleet in 1885 and remained there until she again became a guardship in 1890 . The ship was converted into a coal hulk a decade later and continued in that role until 1906 when she was sold for scrap and broken up .

= = Design and description = =

The Audacious class was designed as a second class ironclad intended for overseas service . They were 280 feet (85 m) long between perpendiculars and had a beam of 54 feet (16 m) . Iron Duke had a draught of 21 feet 7 inches (6 m) forward and 22 feet 7 inches (6 m) aft . The Audacious class ships displaced 6,034 long tons (6,131 t) and had a tonnage of 3,774 tons burthen . They had a complement of 450 officers and ratings .

Iron Duke had a pair of two cylinder , horizontal return , connecting rod steam engines , each driving a single 16 foot 6 inch (5 m) propeller , using steam provided by six rectangular boilers . The engines were designed to give the ships a speed of 13 knots (24 km / h ; 15 mph) ; Iron Duke , however , reached a speed of 13 m 64 knots (25 m 26 km / h ; 15 m 70 mph) from 4,268 indicated horsepower (3,183 kW) during her sea trials on 2 November 1870 . She carried a maximum of 450 long tons (460 t) of coal .

The Audacious class was ship rigged with three masts and had a sail area of 25,054 square feet (2,327 m²) . Around 1871 they were re rigged as barques with their sail area reduced to 23,700 square feet (2,200 m²) To reduce drag , the funnel was telescopic and could be lowered . Under sail alone , they could reach 10 knots (19 km / h ; 12 mph) .

The main armament of the Audacious class ships consisted of 10 RML 9 inch (229 mm) rifled muzzle loading guns . Six of these were positioned on the main deck , three on each broadside , and the other four guns were mounted on the corners of the upper deck battery . The battery protruded over the sides of the ships to give the guns a certain amount of end on fire . The shell of the nine inch gun weighed 254 pounds (115 kg) while the gun itself weighed 12 long tons (12 t) . It had a muzzle velocity of 1,420 ft / s (430 m / s) and was rated with the ability to penetrate 11 m 3 inches (287 mm) of wrought iron armour at the muzzle .

The ships were equipped with four RML 6 in (152 mm) 71 cwt guns as chase guns , two in the bow and another pair in the stern . They fired a 64 pound (29 kg) , 6 m 3 inch (160 mm) shell . They also had six RBL 20 pdr (3 m 75 inch (95 mm)) rifled breech loading guns that were used as saluting guns . In 1878 , the ships received four 14 inch (356 mm) torpedo launchers on the main deck and the 6 m 3 inch guns were replaced by four breech loading BL 5 m 3 inch guns during the mid 1880s .

The wrought iron waterline armour belt of the Audacious class covered the entire length of the ships . It was eight inches (203 mm) thick amidships , backed by eight to ten inches (203 to 254 mm) of teak , and thinned to six inches towards the ends of the ships . It had a total height of 8 feet (2 m 4 m) of which 5 feet (1 m 5 m) was below water and 3 feet (0 m 9 m) above at deep load . The main deck citadel 's ends were protected by a 5 m 3 inch (127 mm) forward bulkhead and a 4 m 3 inch (102 mm) one aft . The sides and embrasures of the upper battery were six inches thick , but its ends were unprotected . The ships also had a one man conning tower with walls 3 inches (76 mm) thick .

= = Construction and career = =

Iron Duke , named after the nickname for Arthur Wellesley , 1st Duke of Wellington , was the first ship of her name to serve in the Royal Navy . The ship was laid down at Pembroke Dockyard on 23 August 1868 , launched on 1 March 1870 and was completed on 1 January 1871 , at a cost of £ 208 @, @ 763 . She was initially assigned as a First Reserve Guardship at Plymouth , but was assigned as the flagship of the China Station in September . En route to the Far East , she became the first ironclad to use the Suez canal ; virtually all of her coal had to be unloaded to reduce her draught and she was towed by three tugboats through the canal in three days . Relieved by her sister ship , Audacious , Iron Duke returned to the UK in 1875 . To save money on the return ship , no tugboats were hired and the ship ran aground four times and frequently scraped the sides of the canal during her four @-@ day transit . Upon her arrival , she was paid off in May .

Iron Duke recommissioned two months later and was assigned as the guardship at Hull . During the First Reserve Squadron 's summer cruise on 1 September , she was en route with three other ironclads between Dublin and Queenstown (now Cobh) . In a thick fog , the ship accidentally rammed her sister , Vanguard , off Kish Bank , in Dublin Bay . Iron Duke had her bowsprit wrecked , but was otherwise little damaged . Her ram , however , had torn a 9 @-@ by @-@ 3 @-@ foot (2 @.@ 74 by 0 @.@ 91 m) hole in Vanguard 's side . The ram also damaged the watertight bulkhead between Vanguard 's engine and boiler rooms which flooded both compartments and prevented her crew from using her steam @-@ powered pumps . The ship sunk in a little over an hour after all of the crew abandoned ship .

Following the loss , Iron Duke replaced Vanguard as the guardship at Kingstown (now Dún Laoghaire) , where she received the latter 's crew and remained until July 1877 when the ship began a lengthy refit that lasted until August 1878 . She was inspected by Admiral Thomas Symonds , Commander @-@ in @-@ Chief , Plymouth , on 22 July . Iron Duke then departed Plymouth on 4 August , bound for the China Station ; en route , she pulled the P & O steamship SS Bengal off a reef in the Red Sea on 7 September after two days ' effort . Vice @-@ Admiral Robert Coote hoisted his flag aboard Iron Duke on 9 November . The ship ran aground herself on a sandbar entering the Huangpu River in May 1880 , after five days , she was pulled free by the American paddlewheel river gunboat Monocacy with little damage . Princes Arisugawa Taruhito and Arisugawa Takehito visited Iron Duke on 22 July while she was visiting Yokohama , Japan . Several weeks later , Arisugawa Takehito came aboard to serve as a midshipman . The ship struck a rock off the coast of Hokkaido en route to Aniva Bay , Sakhalin Island , on 30 July 1880 . She floated off on 1 August after another ship had also grounded while trying to assist ; her repairs required a month in drydock in Hong Kong . On 28 January 1881 , Coote hauled down his flag and was relieved by Vice @-@ Admiral George Willes , the new Commander @-@ in @-@ chief , of the China Station . On 10 October , the ship was drydocked in Nagasaki , Japan and then sailed to Wusong District , Shanghai , China on 26 October . Iron Duke returned home in January 1883 and began a lengthy refit that included the replacement of her boilers .

On 16 April 1885 , the ship became a member of Admiral Geoffrey Hornby 's Particular Service Squadron until August , when she joined the Channel Squadron . After the ironclad Sultan broke loose from her anchors in Lisbon on 24 December 1886 during a gale and accidentally rammed and sank the French steamship SS Ville de Victoria , Iron Duke 's crew manned one boat in search for survivors , although it is uncertain how many they saved . The following year , Iron Duke participated in Queen Victoria 's Golden Jubilee Fleet review on 1 July 1887 at Spithead . She was reduced to reserve in 1890 and was converted to a coal hulk in 1900 , serving at Kyles of Bute . The ship was transferred from Fleet Reserve to Dockyard Reserve at Portsmouth in April 1902 , and eventually sold for scrap on 15 May 1906 to Galbraith of Glasgow .