

= HMS Northumberland (1866) =

HMS Northumberland was the last of the three Minotaur @-@ class armoured frigates built for the Royal Navy during the 1860s . She had a different armour scheme and heavier armament than her sister ships , and was generally regarded as a half @-@ sister to the other ships of the class . The ship spent her career with the Channel Fleet and occasionally served as a flagship . Northumberland was placed in reserve in 1890 and became a training ship in 1898 . She was converted into a coal hulk in 1909 and sold in 1927 , although the ship was not scrapped until 1935 .

= = Design and description = =

The Minotaur @-@ class armoured frigates were essentially enlarged versions of the ironclad HMS Achilles with heavier armament , armour , and more powerful engines . They retained the broadside ironclad layout of their predecessor , but their sides were fully armoured to protect the 50 guns they were designed to carry . Their plough @-@ shaped ram was also more prominent than that of Achilles .

Northumberland was 400 feet 4 inches (122 @. @ 0 m) long between perpendiculars and had a beam of 58 feet 5 inches (17 @. @ 8 m) and a draught of 27 feet 9 inches (8 @. @ 5 m) . The ship displaced 10 @, @ 584 long tons (10 @, @ 754 t) and had a tonnage of 6 @, @ 621 tons burthen . Her hull was subdivided by 15 watertight transverse bulkheads and had a double bottom underneath the engine and boiler rooms . The ship was considered " a steady gun platform , able to maintain her speed in a seaway and satisfactory in manoeuvre " . She was authorized a crew of 705 officers and enlisted men , but actually carried 800 men .

= = = Propulsion = = =

Northumberland had a two @-@ cylinder trunk steam engine , made by John Penn and Sons , driving a single propeller using steam provided by 10 rectangular fire @-@ tube boilers . It produced a total of 6 @, @ 558 indicated horsepower (4 @, @ 890 kW) during the ship 's sea trials on 15 September 1868 and Northumberland had a maximum speed of 14 @. @ 1 knots (26 @. @ 1 km / h ; 16 @. @ 2 mph) . The ships normally carried 750 long tons (760 t) of coal , but had a maximum capacity of 1 @, @ 400 long tons (1 @, @ 400 t) , enough to steam 2 @, @ 825 nautical miles (5 @, @ 232 km ; 3 @, @ 251 mi) at 10 knots (19 km / h ; 12 mph) .

Originally designed with three masts , Northumberland was fitted with five masts until her 1875 ? 79 refit when two were removed and she was re @-@ rigged as a barque . Northumberland only made 7 knots (13 km / h ; 8 @. @ 1 mph) under sail , mainly because the ship 's propeller could only be disconnected and not hoisted up into the stern of the ship to reduce drag , the worst speed of any ironclad of her era . Admiral George A. Ballard described the Minotaur @-@ class ships as " the dullest performers under canvas of the whole masted fleet of their day , and no ships ever carried so much dress to so little purpose . "

= = = Armament = = =

Unlike her half @-@ sisters , Northumberland was armed with a mix of seven @-@ inch (178 mm) , eight @-@ inch (203 mm) , and nine @-@ inch (229 mm) rifled muzzle @-@ loading guns . All 4 nine @-@ inch and 18 eight @-@ inch were mounted on the main deck while 4 eight @-@ inch guns were fitted on the upper deck as chase guns . Both seven @-@ inch guns were mounted in the stern on the main deck , also as chase guns .

The nine @-@ inch gun was credited with the ability to penetrate 11 @. @ 3 inches (287 mm) of wrought iron armour at the muzzle . The eight @-@ inch gun could penetrate 9 @. @ 6 @-@ inch (244 mm) of armour and the seven @-@ inch gun could penetrate 7 @. @ 7 inches (196 mm) .

Northumberland was partially rearmed in 1875 with an armament of 7 nine @-@ inch guns , 4 on

the main deck , 2 forward chase guns and 1 rear chase gun . Two eight @-@ inch guns replaced the seven @-@ inchers on the main deck at the stern ; the other 18 eight @-@ inch guns remained where they were . In 1886 two six inches (152 mm) breech @-@ loading guns replaced two eight @-@ inch guns . Six quick @-@ firing (QF) 4 @-@ 7 @-@ inch (120 @-@ mm) guns , 10 QF 3 @-@ pounder Hotchkiss guns , and six machine guns were later added .

= = = Armour = = =

Unlike her half @-@ sisters , the entire side of Northumberland 's hull was not covered with wrought iron armour . To compensate for the additional weight of her armament , only her battery was protected above the main deck . The ship was fitted with a complete waterline armour belt that tapered from 4 @-@ 5 inches (114 mm) at the ends to 5 @-@ 5 inches (140 mm) amidships . The armour extended 5 feet 9 inches (1 @-@ 8 m) below the waterline . The sides of the battery were 184 @-@ 5 feet (56 @-@ 2 m) long and it was protected by 5 @-@ 5 @-@ inch armour on all sides , including transverse bulkheads fore and aft of the guns . The two forward chase guns on the upper deck were also protected by armoured bulkheads , but the stern chase guns on that same deck were entirely unprotected . The armour was backed by 10 inches (254 mm) of teak . The ship also had a conning tower protected by 4 @-@ 5 @-@ inch armour plates .

= = Construction and service = =

Northumberland , named after the ceremonial county , was ordered on 2 September 1861 from the Millwall Ironworks . She was laid down on 10 October 1861 at its shipyard in Millwall , London . She was altered while on the building slip after Sir Edward Reed succeeded Isaac Watts as Chief Constructor . Unlike her half @-@ sisters , the ship spent five years on the stocks before she was ready to be launched , partially due to frequent changes in design , although Northumberland was much closer to completion . The additional weight caused her stick for an hour on the slipway before she slid halfway down with her stern only supported by air , threatening to buckle the ship . Efforts by hydraulic jacks and tugboats failed to get her into the water on the next spring tide failed , but the use of pontoons on 17 April 1866 proved successful . Her builders went into bankruptcy while the ship was being launched and the liquidators seized Northumberland as a company asset once she was in the water . Eight months passed before the Admiralty could take possession and begin fitting out the ship . She was commissioned in October 1868 and completed on 8 October for a cost a total of £ 444 @-@ 256 .

The ship 's first posting was to the Channel Fleet , where she remained until 1873 . Her first captain , Roderick Dew , had all of her yards painted black so that she could be visually distinguished from her half @-@ sisters , whose yards were white . During this time she helped her half @-@ sister Agincourt tow a floating drydock from England to Madeira where it would be picked up by Warrior and Black Prince and taken to Bermuda . The ships departed the Nore on 23 June 1869 , loaded down with 500 long tons (510 t) of coal stowed in bags on their gun decks , and transferred the floating dock 11 days later after an uneventful voyage . She was anchored at Funchal , Madeira , on Christmas Day 1872 , when a storm parted her anchor chain and the ship drifted onto the ram bow of the ironclad Hercules . Northumberland was seriously damaged below the waterline , with one compartment flooded , though she was able to steam to Malta for repairs .

While her half @-@ sister Minotaur , normally flagship of the Channel Fleet , was refitting in 1873 ? 75 , Agincourt , normally the flagship of the fleet second @-@ in @-@ command , replaced her as flagship and Northumberland became flagship of the second @-@ in @-@ command until Minotaur 's return to duty . She served as the flagship for Rear Admirals George Hancock and Lord John Hay . Northumberland received her own refit and rearmament from 1875 ? 79 and rejoined the Channel Fleet upon its completion . The ship was paid off in 1885 for another refit and became the flagship of Vice Admirals Sir William Hewett and John Baird , successive commanders of the Channel Fleet , upon her completion in 1887 .

Northumberland was assigned to the 1st Reserve Squadron at the Isle of Portland in 1890 ? 91 and

then at Devonport from 1891 ? 98 . She was hulked in 1898 as a stokers ' training ship at the Nore and renamed Acheron . From 1909 ? 27 the ship served as a coal hulk at Invergordon , renamed C.8 in 1909 and then C.68 in 1926 . The ship was sold in 1927 , but was then resold and renamed as Stedmund for service at Dakar until she was scrapped in 1935 .

= = Relics = =

Two large 1870s half @-@ scale models of the ship are at the Museum of London Docklands .