

= Scorpion @-@ class ironclad =

The two Scorpion class ironclads , HMS Scorpion and HMS Wivern , were ironclad warships ordered by the Confederate States Navy in 1862 and seized in 1863 by the British to prevent their delivery . This would have violated the Foreign Enlistment Act , which forbade British subjects to build or arm any ships for governments at war with governments friendly to Great Britain . The Scorpion @-@ class were masted turret ships , each with two gun turrets that were designed to mount a pair of heavy muzzle @-@ loading guns . They were purchased for service in the Royal Navy in 1864 and served briefly with the Channel Fleet before they became guard ships at Bermuda and Hong Kong . Scorpion was sold in 1903 and sank under tow to be scrapped , while Wivern was sold for scrap in 1922 .

= = Design and description = =

In March 1862 , a contract was placed with Laird & Son Co. by Captain James D. Bulloch , a naval agent for the Confederate States of America , for two double @-@ turreted warships designed for ramming attacks at a cost of £ 93 @, @ 750 each , exclusive of armament and ammunition . They were intended , together with other warships , to break the Federal blockade of Confederate coastal cities and to hold some Northern cities for ransom .

The ships had an length between perpendiculars of 224 feet 6 inches (68 @. @ 4 m) , a beam of 42 feet 4 inches (12 @. @ 9 m) , and a draught of 17 feet (5 @. @ 2 m) at deep load . They displaced 2 @, @ 751 long tons (2 @, @ 795 t) . The hull was divided by 12 watertight bulkheads and the ships had a double bottom beneath the engine and boiler rooms . Their crew consisted of 152 officers and men .

The gun turrets , designed by Captain Coles of the Royal Navy , sat on circular turntables that were built on an iron radial platform with arms that rested on beveled wheels 18 inches (457 mm) in diameter . Each turret required a crew of 18 men to rotate them via a system of rack and pinion gears ; one minute was required for a full 360 ° rotation . They could be rotated from inside the turret as well from outside . In emergencies the turret could be turned by a block and tackle as well as use of handspikes . A leather flap extended around the bottom of the turret and over the gap between the turret and the deck to reduce any water leakage through the gap . Like most contemporary ironclads they were fitted with a forged iron ram .

The ships had 6 feet (1 @. @ 8 m) of freeboard that could be increased by 5 @-@ foot (1 @. @ 5 m) hinged bulwarks abreast the turrets . In service the ships proved to be buoyant and seaworthy although they rolled heavily which meant that their decks were often awash . Their flat bottom and small rudder , however , caused steering problems before the wind . Because of their seaworthiness and powerful guns they have been judged superior to any monitor built by the United States Navy .

= = = Propulsion = = =

The Scorpion @-@ class ships had two horizontal direct acting steam engines , built by Lairds , driving a single three @-@ bladed , 14 @-@ foot (4 @. @ 3 m) propeller . Their engines were powered by four tubular boilers at a working pressure of 20 psi (138 kPa ; 1 kgf / cm²) . The engines produced a total of 1 @, @ 450 indicated horsepower (1 @, @ 080 kW) which gave the ships a maximum speed of 10 @. @ 5 knots (19 @. @ 4 km / h ; 12 @. @ 1 mph) . Wivern reached a maximum speed just over 11 knots (20 km / h ; 13 mph) during her sea trials on 4 October 1865 . The ships carried 336 long tons (341 t) of coal , enough to steam 1 @, @ 210 nautical miles (2 @, @ 240 km ; 1 @, @ 390 mi) at 10 knots (19 km / h ; 12 mph) . The ships were barque @-@ rigged with three masts . Scorpion had conventional shrouds to anchor the masts in place , but Wivern was the first ship to have tripod masts to reduce interference with the firing arcs of the gun turrets . The funnel was made semi @-@ retractable to reduce wind resistance while under sail .

= = = Armament = = =

No ordnance had been ordered by the Confederates before the ships were seized in 1863 , but in British service they mounted a pair of 9 @-@ inch rifled muzzle @-@ loading guns in each turret . The shell of the 9 @-@ inch (229 mm) gun weighed 254 pounds (115 @.@ 2 kg) while the gun itself weighed 12 long tons (12 t) . The gun fired its shell at a muzzle velocity of 1 @,@ 420 ft / s (430 m / s) and was credited with the ability to penetrate a nominal 11 @.@ 3 inches (290 mm) of wrought iron armour at 100 yards (91 m) . The guns could fire both solid shot and explosive shells . According to Parkes , going from full depression to full elevation supposedly took one hour in smooth water and with an even keel !

= = = Armour = = =

The Scorpion @-@ class ships had a complete waterline belt of wrought iron that was 4 @.@ 5 inches (114 mm) thick amidships and thinned to 3 inches (76 mm) at the bow and 2 @.@ 5 inches (64 mm) at the stern . It completely covered the hull from the upper deck to 3 feet 3 inches (0 @.@ 99 m) below the waterline . The armour protection of the polygonal turrets was quite elaborate . The inside of the turret was lined with .5 inches (12 @.@ 7 mm) of iron boiler plate to which T @-@ shaped beams were bolted . The space between the beams was filled with 10 inches (254 mm) of teak . This was covered by an iron lattice .75 inches (19 @.@ 1 mm) thick that was covered in turn by 8 inches (203 mm) of teak . The 5 @.@ 5 @-@ inch (140 mm) iron plates were bolted to the outside using bolts that ran through to the interior iron " skin " . The area around the gun ports was reinforced by 4 @.@ 5 @-@ inch plates to give a total thickness of 10 inches . The turret roof consisted of T @-@ shaped beams covered by 1 @-@ inch (25 mm) iron plates . Holes in the roof were provided for ventilation and for the gun captain to use to aim the turret .

= = Construction = =

In his letter of 29 October 1862 , Navy Secretary Stephen Mallory named yard number 294 as North Carolina and number 295 as Mississippi . In January 1863 the Foreign Secretary , Lord Russell , notified Bulloch , who had purchased the ships in his own name , that the ships would be prevented from sailing if they were doing so to form part of the fleet of a nation currently at war . Bulloch therefore transferred ownership to some French bankers in June 1863 , nominally on behalf of the Egyptian government , with the intention of transferring them to the Confederate flag once they were at sea . The Khedive was attempting to acquire warships , so this was superficially plausible . North Carolina , later HMS Scorpion , was given the cover name of El Toussan and Mississippi , later HMS Wivern , received the name of El Monnassir . Lord Russel , prompted by the protests of the U.S. Ambassador , Charles F. Adams queried the Egyptian government directly and confirmed that this was merely a subterfuge to disguise the true ownership of the vessels . The Admiralty was prompted to send a guard ship , HMS Majestic , to watch over the newly launched El Toussan after Lairds had made a request to begin sea trials in September . The Liverpool Collector of Customs was instructed not to let the ship leave her graving dock under any circumstances and the Surveyor of Customs finally seized the ships on 9 October .

The legality of this seizure was seriously disputed , but the British government had already been somewhat embarrassed by the activities of the Alabama , a ship also built by Laird Son & Co and operated as a commerce raider by the Confederate Navy . In order to overshadow discussions as to the legality of their action , the British government purchased the ships on 8 August 1864 for £ 25 @,@ 000 in excess of the contract price .

= = Service = =

Both ships were assigned to the Channel Fleet upon commissioning in 1865 . Scorpion was refitted in 1867 with a flying bridge that connected the forecastle to the poop , above the tops of the turrets , and her sailing rig was reduced to a fore @-@ and @-@ aft rig . The ship recommissioned in 1868

for another tour with the Channel Fleet . She arrived in Bermuda in November 1869 where she became the local guard ship . In 1873 a proposal was made to remove her poop and forecastle , masts and deck fitting to convert her to a harbour defence monitor with all @-@ around fire , but this was deemed too expensive and the project was abandoned in 1878 . At some point during her service in Bermuda her rigging was removed and she was reduced to simple pole masts . The ship was fitted with searchlights and quick @-@ firing guns in 1890 . Scorpion was sunk as a target in 1901 ; she was raised in 1902 and sold in February 1903 for £ 736 . She sank while under tow to Boston , Massachusetts .

Wivern burst one of her 9 @-@ inch guns in 1867 , but none of the 13 people in the turret was injured . She was given the same sort of refit as her sister ship in Devonport beginning in August 1868 . The ship became the guard ship at Hull from January through October 1870 and was then placed in reserve from 1870 until 1880 . That year she was sent to Hong Kong where she became the harbour defence ship . Wivern became a distilling ship in 1898 and was sold in May 1922 for scrap .