

= Kalamazoo @-@ class monitor =

The Kalamazoo @-@ class monitors were a class of ocean @-@ going ironclad monitors begun during the American Civil War . Unfinished by the end of the war , their construction was suspended in November 1865 and the unseasoned wood of their hulls rotted while they were still on the building stocks . If the four ships had been finished they would have been the most seaworthy monitors in the US Navy . One was scrapped in 1874 while the other three were disposed of a decade later .

= = Design and description = =

John Lenthall , Chief of the Bureau of Construction and Repair , ordered Benjamin F. Delano , naval constructor at New York City , to design a wooden @-@ hulled ironclad that would carry her armament in two gun turrets . The deck was to be 3 feet (0 @.@ 9 m) above the waterline and protected by 3 inches (76 mm) of armor . The ship 's side armor was to be 10 inches (254 mm) thick , backed by 12 ? 15 inches (305 ? 381 mm) of wood ; it was to cover the entire ship 's side , down to a depth three feet below the waterline . It should carry enough coal to steam one week at full power with " sufficient speed to make good use of its ram " . Gideon Welles , Secretary of the Navy , called them enlarged versions of the Miantonomoh @-@ class monitors with greater speed and " adapted to coast service " , meaning more seaworthy .

The Kalamazoo @-@ class ships were 345 feet 5 inches (105 @.@ 3 m) long overall and had a length between perpendiculars of 332 feet 6 inches (101 @.@ 3 m) . They had a beam of 56 feet 8 inches (17 @.@ 27 m) and a draft of 17 feet 6 inches (5 @.@ 3 m) . The ships were designed to displace 5 @,@ 660 long tons (5 @,@ 750 t) and were 3 @,@ 200 tons burthen . They were the largest ships to be built in navy shipyards to date .

Their unseasoned wooden hulls were massively reinforced by iron straps as well as iron stanchions to bear the enormous weight of their armor and guns . They retained the typical monitor overhang introduced by John Ericsson , designer of the Monitor , where the upper part of the hull was 42 inches (1 @,@ 100 mm) wider than the lower part of the hull . The Kalamazoo 's wrought iron side armor consisted of two layers of three @-@ inch plates , backed by 21 inches of wood , six feet in height . The outer layer of armor extended 18 inches (460 mm) further below the waterline . The three @-@ inch deck armor rested on 6 inches (152 mm) of wood and was covered in another three inches of wood .

They were powered by two 2 @-@ cylinder horizontal direct @-@ acting steam engines , each driving one 15 @-@ foot (4 @.@ 6 m) propellers , using steam generated by eight tubular boilers . The engines were rated at 2 @,@ 000 indicated horsepower (1 @,@ 500 kW) and designed to reach a top speed of 10 knots (19 km / h ; 12 mph) . They had a bore of 46 @.@ 5 inches (1 @,@ 181 mm) and a stroke of 50 inches (1 @,@ 270 mm) . Two large funnels were positioned between the turrets to handle the combustion gases from the boilers . The Kalamazoos were intended to carry 500 long tons (510 t) of coal .

The ships ' main armament consisted of four smoothbore , muzzle @-@ loading , 15 @-@ inch (381 mm) Dahlgren guns mounted in two twin @-@ gun turrets . Each gun weighed approximately 43 @,@ 000 pounds (20 @,@ 000 kg) . They could fire a 350 @-@ pound (158 @.@ 8 kg) shell up to a range of 2 @,@ 100 yards (1 @,@ 900 m) at an elevation of + 7 ° . The turrets were protected by 15 inches of armor .

= = Ships = =

= = Construction and fate = =

Construction of the ships began between late 1863 and early 1864 and they were still being built when the war ended in early 1865 . Construction was suspended on all four on 17 November 1865 ; they remained on the stocks . The ships were renamed , usually twice , in 1869 to conform to

several new ship naming conventions . Vice Admiral David D. Porter ordered that Colossus be rebuilt to carry 10 large broadside guns and fitted with iron masts in a ship rig , but this never happened . The unseasoned wood in their hulls quickly began to rot after construction was suspended and they were broken up beginning in 1874 . Unusually , Passaconaway was condemned by an Act of Congress on 5 August 1882 before she was finally broken up in 1884 .