

= Roon @-@ class cruiser =

The Roon class was a pair of armored cruisers built for the German Imperial Navy after the turn of the 20th century . The class comprised Roon and Yorck , which closely resembled the earlier Prinz Adalbert @-@ class ships , but incorporated slight incremental improvements . The ships were easily distinguished from their predecessors by the addition of a fourth funnel . Like all of the armored cruisers built by Germany , they were intended to serve as station ships in Germany 's overseas possessions . The ships did not compare well with their British rivals .

The two ships served with the High Seas Fleet in the reconnaissance squadrons after they joined the fleet in 1905 ? 1906 . At the outbreak of World War I in 1914 , the ships served alongside the more powerful battlecruisers of the I Scouting Group . While returning to port after a raid of the English coast on 16 December 1914 , Yorck struck German mines and sank with heavy loss of life . Roon was disarmed in 1916 and intended to be converted into a seaplane carrier , though this was never carried out . The ship was eventually broken up for scrap in 1921 .

= = Design = =

Design work on Roon and her sister ship Yorck was completed in 1901 . The design for the Roon class can be traced back to the first German armored cruiser , Fürst Bismarck , built between 1896 ? 1900 , and the preceding Victoria Louise class of protected cruisers that came before it . The German armored cruisers were designed for overseas service , specifically to serve as station ships in the German colonies in Africa , Asia , and the Pacific .

Roon and her sister Yorck were improved versions of the preceding Prinz Adalbert class . The two ships were slightly larger and faster than the Prinz Adalbert class and had a slightly different armor layout ; the Roon class ships had thinner armor on the turret faces , and slightly thinner armored decks . They shared many of the same layout characteristics as the contemporary German pre @-@ dreadnought battleships , including a smaller main armament but heavier secondary battery than their foreign equivalents . As a result , they compared unfavorably with their British contemporaries . Taylor describes the ships as " poorly protected and not a successful class in service . "

= = = General characteristics = = =

The ships of the Roon class were 127 @.@ 3 meters (418 ft) long at the waterline and 127 @.@ 8 m (419 ft) overall . They had a beam of 20 @.@ 2 m (66 ft) and a draft of 7 @.@ 76 m (25 @.@ 5 ft) . Roon and Yorck displaced 9 @,@ 533 metric tons (9 @,@ 382 long tons ; 10 @,@ 508 short tons) normally , and 10 @,@ 266 metric tons (10 @,@ 104 long tons ; 11 @,@ 316 short tons) at full load . Their hulls were constructed from transverse and longitudinal steel frames that formed a structure over which the steel hull plates were riveted . The hulls contained 12 watertight compartments and a double bottom that ran for 60 percent of the length of the ship .

Like the preceding Prinz Adalbert @-@ class ships , Roon and Yorck were good sea boats ; when the fuel bunkers were full they had a gentle motion . They also maneuvered well and were responsive to the helm . With the rudder hard over , the ships lost up to 60 percent speed . The ships ' casemates were placed too low , and as a result they were exceedingly wet ; the casemate guns were impossible to use in heavy seas . They had a metacentric height of 1 @.@ 04 m (3 @.@ 4 ft) . The ships ' standard complements numbered some 35 officers and 598 enlisted men . While serving as a squadron flagship the crew was augmented by 13 officers and 62 men , and as a second command ship by 9 officers and 44 sailors .

= = = Propulsion = = =

Roon and Yorck were powered by the same engine system as the preceding class , three 3 @-@ cylinder vertical triple expansion engines , each of which drove one of the ships ' three screws . The

central screw was 4 @. @ 5 m (15 ft) in diameter , and the outer screws were 4 @. @ 8 m (16 ft) . Steam was provided to the engines by 16 boilers built by Düsseldorf @-@ Ratinger Röhrenkesselfabrik (Dürr) . Each boiler had 4 fireboxes apiece for a total of 48 . The propulsion system produced 19 @, @ 000 ihp (14 @, @ 200 kW) , which delivered a top speed of 21 knots (39 km / h) . The ships had four turbo generators , which provided 260 kilowatts at 110 volts . The ships had a single rudder .

== = Armament == =

The ships ' primary armament consisted of four 21 @-@ centimeter (8 @. @ 3 in) SK L / 40 guns mounted in two twin turrets , one fore and one aft . These guns fired a 108 @-@ kilogram (238 lb) armor @-@ piercing shell at a muzzle velocity of 780 meters (2 @, @ 560 ft) per second , for a maximum range of 12 @, @ 300 m (13 @, @ 500 yd) with their original maximum elevation of 16 degrees . The guns were later improved to 30 degrees , which extended the maximum range to 16 @, @ 200 m (17 @, @ 700 yd) .

Secondary armament included ten 15 cm (5 @. @ 9 in) SK L / 40 guns in single turrets and casemates and fourteen 8 @. @ 8 cm SK L / 35 guns , also casemated . The 15 cm guns fired a 40 kg (88 lb) shell at a muzzle velocity of 800 m (2 @, @ 600 ft) per second . The guns could be elevated to 30 degrees , which provided a maximum range of 13 @, @ 900 m (15 @, @ 200 yd) . The 8 @. @ 8 cm guns fired a 7 kg (15 lb) shell at a muzzle velocity of 770 m (2 @, @ 530 ft) per second . These guns had a maximum elevation of 25 degrees and a range of 9 @, @ 100 m (10 @, @ 000 yd) . The ships were also equipped with four 45 cm (18 in) torpedo tubes .

This armament was identical to that on the preceding Prinz Adalbert class , with the exception of ammunition stores . The Roon @-@ class ships carried 380 shells for the main battery , 1 @, @ 600 rounds for the 15 cm guns , and 2 @, @ 100 shells for the 8 @. @ 8 cm guns . The planned conversion for Roon to a seaplane carrier called for six 15 cm L / 45 guns and six 8 @. @ 8 cm Flak guns , with 2 @, @ 400 rounds , though this was never carried out .

== = Armor == =

Roon and Yorck were protected by Krupp cemented steel armor . At the waterline , their armored belt was 100 mm (3 @. @ 9 in) thick amidships where the ships ' vitals were located . This was decreased slightly to 80 mm (3 @. @ 1 in) on either end of the central section of the belt . The belt was backed by 55 mm (2 @. @ 2 in) of teak planking . At the casemate deck the side armor was also 100 mm thick . The armored deck ranged in thickness from 40 ? 60 mm (1 @. @ 6 ? 2 @. @ 4 in) and was connected to the belt by sloped armor that was 40 ? 50 mm (1 @. @ 6 ? 2 @. @ 0 in) thick .

The forward conning tower had 150 mm (5 @. @ 9 in) thick sides and a 30 mm (1 @. @ 2 in) thick roof . The rear conning tower was less well @-@ protected ; its sides were only 80 mm thick and its roof was 20 mm (0 @. @ 79 in) thick . The main battery gun turrets were armored with 150 mm thick steel plates on the sides and 30 mm thick roofs . The 15 cm turrets were protected by 100 mm thick sides and 80 mm thick gun shields .

== = Construction == =

Roon was laid down in 1902 at the Kiel Navy dockyard . She was launched on 27 June 1903 and completed on 5 April 1906 , at the cost of 15 @, @ 345 @, @ 000 marks . Yorck was laid down in February 1903 , at Blohm & Voss shipyard . Yorck was launched on 14 May 1904 and completed on 21 November 1905 at a cost of 16 @, @ 241 @, @ 000 marks . Roon was laid down as Ersatz Kaiser , as a replacement for the old armored frigate Kaiser , which had been renamed Uranus and used as a harbor ship . Yorck was ordered as Ersatz Deutschland to replace Deutschland , the sistership to Kaiser , which had renamed Jupiter and converted into a target ship .

= = Service history = =

= = = SMS Roon = = =

After commissioning into the fleet , Roon was assigned to the I Scouting Group . In 1908 , she served as the flagship for Rear Admiral Jacobsen in the second division . Roon served here until 1912 when she was replaced by the new battlecruiser Moltke .

At the start of World War I , Roon was serving as the flagship of the III Scouting Group . The ship participated in several actions during World War I , including the raid on Scarborough , Hartlepool and Whitby , during which she served in the cruiser screen for the dreadnoughts of the High Seas Fleet . Roon also conducted operations against Russian forces in the Baltic Sea , including bombardments against the Russian positions at Libau in support of the army in May 1915 . The Battle of the Åland Islands took place between Roon and several other German cruisers and Russian forces led by the powerful cruiser Rurik. in July 1915 . In August Roon and Prinz Heinrich bombarded Russian positions in the Baltic and briefly engaged several Russian destroyers .

After 1916 , Roon was disarmed and used as a guard ship and floating barracks in Kiel until the end of the war . Design work commenced in 1916 to convert the ship into a seaplane carrier ; work was planned to last from 1917 to 1918 during a period of 20 months . The ship was struck from the naval register on 25 November 1920 and scrapped the following year at Kiel @-@ Nordmole .

= = = SMS Yorck = = =

Yorck also served in the I Scouting Group with her sister ship , in the second division . In 1908 , the ship won the annual " Kaiser 's Challenge Cups for Prize Firing " for the reconnaissance squadron . In 1911 , the ship came under the command of Franz von Hipper , who would go on to command the I Scouting Group during the war . Hipper held this position aboard Yorck from 1 October 1911 to 26 January 1912 . In early 1912 the ship was decommissioned and her crew was transferred to the new battlecruiser Seydlitz .

The ship had a short career during World War I. At the outbreak of war , Yorck was brought out of the reserve fleet and joined her sistership Roon in the III Scouting Group . After the raid on Scarborough , Hartlepool and Whitby , the ship made a navigational error upon returning to the Jadebusen , and accidentally sailed into a German defensive minefield . The ship sank quickly and only 127 men of her complement of 629 were rescued . The wreck was cleared over several periods between 1929 and the mid @-@ 1980s . The first period of work lasted from 1929 ? 30 ; work commenced briefly in 1965 . The final work on removing the ship began in 1982 .