

= SMS Prinz Heinrich =

SMS Prinz Heinrich was a unique German armored cruiser built at the turn of the 20th century for the Imperial German Navy, named after Kaiser Wilhelm II's younger brother Prince Henry. Prinz Heinrich was built at the Imperial Dockyard in Kiel. She was laid down in 1898 and completed in March 1902, at the cost of 16 @, @ 588 @, @ 000 Marks. Prinz Heinrich's design was a modification of the previous armored cruiser, Fürst Bismarck, and traded a smaller main battery for higher speed and more comprehensive armor protection. The ship set a precedent for subsequent German armored cruisers by concentrating her secondary armament amidships, as opposed to Fürst Bismarck, which spread the secondary armament along the length of the ship.

Prinz Heinrich served with the German fleet for the majority of her career. After the outbreak of World War I in August 1914, the ship participated in the operation against the British coast in December 1914, after which she was transferred to the Baltic Sea. Here, she operated against the Russian navy and was involved in the Battle of the Gulf of Riga in August 1915, where she damaged a Russian destroyer. In 1916, the ship was withdrawn from active duty and was used in several secondary roles in Kiel, including acting as a floating office for naval staff. Prinz Heinrich was ultimately sold in 1920 and broken up for scrap later that year.

= = Design = =

The Second Naval Law in Germany, passed in 1900, envisioned a force of fourteen armored cruisers intended for overseas service in the German colonies. However, the German Navy required cruisers for operations with the fleet as well, and attempted to design ships that could fulfill both roles, primarily due to budget constraints. The first product of the 1900 Naval Law, Prinz Heinrich was an alteration of an earlier vessel, Fürst Bismarck, and was equipped with fewer guns and thinner armor in a trade @-@ off for higher speed and lower cost. The design also set the precedent of concentrating the secondary battery amidships; Fürst Bismarck secondary guns had been spread along the length of the hull. All subsequent armored cruisers were developments of Prinz Heinrich. Prinz Heinrich was laid down in 1898 at the Imperial Dockyard in Kiel. She was launched on 22 March 1900 and completed just under two years later, on 11 March 1902. The new cruiser cost 16 @, @ 588 @, @ 000 Marks.

= = = Dimensions and machinery = = =

Prinz Heinrich was 124 @. @ 9 meters (410 ft) long at the waterline and 126 @. @ 5 m (415 ft) overall. She had a beam of 19 @. @ 6 m (64 ft) and a draft of 7 @. @ 65 m (25 @. @ 1 ft) forward and 8 @. @ 07 m (26 @. @ 5 ft) aft. The ship displaced 8 @, @ 887 metric tons (8 @, @ 747 long tons ; 9 @, @ 796 short tons) as built, and 9 @, @ 806 t (9 @, @ 651 long tons ; 10 @, @ 809 short tons) at full combat load. The hull was constructed with transverse and longitudinal steel frames, and incorporated thirteen watertight compartments and a double bottom that extended for 57 percent of the length of the ship. The German navy considered the ship to be a good sea boat with gentle motion, though she suffered from severe roll. Her transverse metacentric height was .731 m (2 ft 4 @. @ 8 in). Prinz Heinrich was manned by a crew of 35 officers and 532 enlisted men. For the duration of her career as the second command flagship of the Cruiser Division, the standard crew was augmented by an additional nine officers and 44 enlisted men. She carried a number of smaller vessels, including two picket boats, a launch, a pinnace, two cutters, two yawls, and two dinghies.

The ship was propelled by three vertical 4 @-@ cylinder triple expansion engines; the center shaft drove a four @-@ bladed screw 4 @. @ 28 m (14 @. @ 0 ft) in diameter while the two outer shafts drove 4 @. @ 65 @-@ meter (15 @. @ 3 ft) wide four @-@ bladed screws. Fourteen Dürr boilers, produced by Düsseldorf @-@ Ratinger Röhrenkesselfabrik, supplied steam to the engines at pressures up to 15 standard atmospheres (1 @, @ 500 kPa). The propulsion system was rated at 15 @, @ 000 indicated horsepower (11 @, @ 000 kW) and gave the ship a top speed of 20 knots (

37 km / h ; 23 mph) , though on sea trials , Prinz Heinrich 's engines reached 15 @, @ 694 ihp (11 @, @ 703 kW) but a top speed of only 19 @. @ 9 kn (36 @. @ 9 km / h ; 22 @. @ 9 mph) . She was designed to carry 900 t (890 long tons ; 990 short tons) of coal , though additional storage allowed up to 1 @, @ 590 t (1 @, @ 560 long tons ; 1 @, @ 750 short tons) . This enabled a maximum range of 2 @, @ 290 nautical miles (4 @, @ 240 km ; 2 @, @ 640 mi) at a speed of 18 kn (33 km / h ; 21 mph) and 4 @, @ 580 nmi (8 @, @ 480 km ; 5 @, @ 270 mi) at a cruising speed of 10 kn (19 km / h ; 12 mph) .

== = Armor == =

Prinz Heinrich was protected by Krupp armor . Her armor belt was 100 millimeters (3 @. @ 9 in) thick in the central portion of the ship , which protected the ammunition magazines , machinery spaces , and other vital areas of the cruiser . The belt was reduced to 80 mm (3 @. @ 1 in) on either end of the main belt , and the bow and stern were unarmored . The entire length of the belt was backed by equal thicknesses of teak planks . The armored deck was 35 to 40 mm (1 @. @ 4 to 1 @. @ 6 in) thick and was connected to the belt by 50 mm (2 @. @ 0 in) thick sloped armor on the broadside .

The forward conning tower had 150 mm (5 @. @ 9 in) thick sides and a 30 mm (1 @. @ 2 in) thick roof . The aft conning tower was much less thoroughly protected ; it was covered by only 12 mm (0 @. @ 47 in) of steel plating . The main battery gun turrets had 150 mm @- @ thick sides and 30 mm @- @ thick roofs . The 15 cm gun turrets had 100 mm @- @ thick armor , while the casemated weapons were protected by 70 mm (2 @. @ 8 in) gun shields . The casemates themselves were armored with 100 mm worth of steel plating .

== = Armament == =

Prinz Heinrich was armed with a variety of weapons . Her primary armament consisted of two 24 cm (9 @. @ 4 in) SK L / 40 quick @- @ firing guns mounted in single turrets , one on either end of the superstructure . These guns were supplied with 75 rounds each ; they could depress to ? 4 ° and elevate to 30 ° , which enabled a maximum range of 16 @, @ 900 m (18 @, @ 500 yd) . The guns fired a 140 kg (310 lb) round at a muzzle velocity of 835 m (2 @, @ 740 ft) per second . A secondary battery of ten 15 cm (5 @. @ 9 in) SK L / 40 quick @- @ firing guns rounded out her offensive armament . Six of these guns were mounted in amidships casemates on either side of the vessel , and the remaining four were mounted in turrets in the ship 's hull above the casemates . These guns were supplied with 120 rounds each . The shells weighed 40 kg (88 lb) and were fired at a muzzle velocity of 800 m (2 @, @ 600 ft) per second . The guns could elevate to 25 ° for a maximum range of 13 @, @ 700 m (15 @, @ 000 yd) .

The cruiser carried ten 8 @. @ 8 cm (3 @. @ 5 in) SK L / 30 quick @- @ firing guns for defense against torpedo boats . Each of these guns was supplied with 250 shells . The shells weighed 7 kg (15 lb) and were fired at a muzzle velocity of 670 m (2 @, @ 200 ft) per second . This enabled a maximum range of 7 @, @ 300 m (8 @, @ 000 yd) at an elevation of 20 ° . The ship 's gun armament was rounded out by four autocannons , though these were subsequently removed . The ship was also fitted with four 45 cm (18 in) torpedo tubes . One was mounted on the stern in a swivel mount , one was mounted submerged in the bow , and one was placed submerged in the hull on either side abreast of the forward gun turret .

== = Service history == =

Following her commissioning in 1902 , Prinz Heinrich served with the fleet . She was the flagship of the Cruiser Division , along with the protected cruiser Victoria Louise and eight light cruisers . In January 1904 , the cruiser and two passenger ships went to the Norwegian town of Ålesund in the aftermath of a fire that destroyed the town . The ships carried supplies and medical stores to the port and assisted with the relief effort . She was reassigned to the II Subdivision of the Cruiser

Division of the Active Fleet in 1905 , after the arrival of the new armored cruiser Friedrich Carl . The II Subdivision also included the light cruisers Arcona , Hamburg , and Amazone , and was attached to the II Squadron of the Active Fleet . A second subdivision , composed of an armored cruiser and three light cruisers was attached to the I Squadron .

Prinz Heinrich conducted a series of tests with the Miller apparatus , a device used by the US Navy to resupply warships at sea , in February 1907 . The ship engaged in the experiments with the collier Hermann Sauber ; the first test took place on 17 February , and resulted in the crew being able to transfer 56 short tons (51 t) of coal per hour . On the 22nd , another test was undertaken , under harsh weather conditions , and similar results were reached . In 1914 , Prinz Heinrich went into drydock at the Imperial Dockyard in Kiel for modernization . The arrangement of the searchlights was modified , the superstructure deck bulwark was removed , and the masts were modernized . Following the improvements , she returned to the fleet .

= = = World War I = = =

Following the wave of declarations of war between the major European powers at the end of July 1914 , Britain declared war on Germany on 5 August . Prinz Heinrich participated in the second major German offensive in the North Sea , the operation to bombard Hartlepool on 15 ? 16 December 1914 . Prinz Heinrich , along with Roon and a flotilla of torpedo boats , was assigned to the van of the High Seas Fleet , commanded by Admiral Friedrich von Ingenohl . The main fleet was providing distant cover to Rear Admiral Franz von Hipper 's battlecruisers , which were conducting the bombardment . During the night of the 15th , the German battle fleet of some twelve dreadnoughts and eight pre -@-@ dreadnoughts came to within 10 nmi (19 km ; 12 mi) of an isolated squadron of six British battleships . However , skirmishes between the rival destroyer screens in the darkness convinced von Ingenohl that he was faced with the entire Grand Fleet . Under orders from Kaiser Wilhelm II to avoid risking the fleet unnecessarily , von Ingenohl broke off the engagement and turned the battle fleet back toward Germany . After the operation , it was determined that the twelve @-@ year @-@ old Prinz Heinrich had no place in operations against the powerful British Grand Fleet , and she was transferred to the Baltic Sea to operate against the Russian Baltic Fleet .

Rear Admiral Hopman , the commander of the reconnaissance forces in the Baltic , conducted a major assault on Libau , in conjunction with an attempt by the German Army to seize the city . The attack took place on 7 May , and consisted of Prinz Heinrich and the armored cruisers Roon and Prinz Adalbert , the elderly coast defense ship Beowulf , and the light cruisers Augsburg , Thetis , and Lübeck . They were escorted by a number of destroyers , torpedo boats , and minesweepers . The IV Scouting Group of the High Seas Fleet was detached from the North Sea to provide cover for the operation . The bombardment went as planned , though the destroyer V107 struck a mine in Libau 's harbor , which blew off her bow and destroyed the ship . German ground forces were successful in their assault however , and took the city .

On 1 July , the minelayer SMS Albatross , escorted by the cruisers Roon , Augsburg , and Lübeck and seven destroyers , laid a minefield north of Bogskär . While returning to port , the flotilla separated into two sections ; Augsburg , Albatross , and three destroyers made for Rixhöft while the remainder of the unit went to Libau . Augsburg and Albatross were intercepted by a powerful Russian squadron commanded by Rear Admiral Bakhirev , consisting of three armored and two light cruisers . Commodore Johannes von Karpf , the flotilla commander , ordered the slower Albatross to steam for neutral Swedish waters and recalled Roon and Lübeck . Albatross was grounded off Gotland and Augsburg escaped , and the Russian squadron briefly engaged Roon before both sides broke contact . Upon being informed of the situation , Hopman sortied with Prinz Heinrich and Prinz Adalbert to support von Karpf . While en route , the cruisers encountered the British submarine E9 , which scored a hit on Prinz Adalbert . Hopman broke off the operation and returned to port with the damaged cruiser .

German naval forces in the Baltic were reinforced by elements of the High Seas Fleet during the Battle of the Gulf of Riga in August 1915 . The Germans sought to drive out the Russians in the Gulf

of Riga and to lay defensive minefields that would prevent a Russian counterattack . The battleships of the I Battle Squadron were the primary force , though Prinz Heinrich and the rest of the older vessels assigned to the Baltic fleet participated . On 10 August , Prinz Heinrich and Roon bombarded Russian defenses at Zerel , on the southernmost tip of the Sworbe Peninsula on the island of Ösel . Several Russian destroyers were anchored off Zerel , and were caught unawares by the German bombardment . Prinz Heinrich and Roon damaged one of the destroyers during their attack . A combination of tenacious Russian defense and reports of British submarines in the area ? proved by the torpedoing of the battlecruiser Moltke on 19 August ? caused the German navy to break off the operation .

Beginning in 1916 , Prinz Heinrich was removed from front @-@ line service and used as a floating office in Kiel . After she left active duty , the ship had her armament removed . She was subsequently used as a tender , also in Kiel , for the remainder of her service career . She was stricken from the navy list on 25 January 1920 and sold later that year . The ship was ultimately broken up for scrap at Audorf @-@ Rendsburg .