

= Irene @-@ class cruiser =

The Irene class was a class of protected cruisers built by the German Imperial Navy ( Kaiserliche Marine ) in the late 1880s . The class comprised two ships , Irene and Prinzess Wilhelm ; they were the first protected cruisers built by the German Navy . As built , the ships were armed with a main battery of fourteen 15 cm ( 5 @. @ 9 in ) guns and had a top speed of 18 knots ( 33 km / h ; 21 mph ) . They were modernized in 1899 ? 1905 , and their armament was upgraded with new , quick @-@ firing guns .

Both ships served in the East Asia station with the East Asia Squadron ; Prinzess Wilhelm played a major role in the seizure of the Kiautschou Bay concession in November 1897 . Both ships returned to Germany at the turn of the 20th century , and remained in European waters until 1914 , when they were removed from active service . They were reduced to secondary roles then , and continued to serve until the early 1920s , when they were sold for scrap .

= = Design = =

= = = General characteristics = = =

The ships were 98 @. @ 9 m ( 324 ft ) long at the waterline and 103 @. @ 7 meters ( 340 ft ) long overall . They had a beam of 14 @. @ 2 m ( 47 ft ) and a draft of 6 @. @ 74 m ( 22 @. @ 1 ft ) forward . They displaced 4 @, @ 271 metric tons ( 4 @, @ 204 long tons ; 4 @, @ 708 short tons ) at designed displacement and 5 @, @ 027 t ( 4 @, @ 948 long tons ; 5 @, @ 541 short tons ) at full combat load . The hull was constructed with transverse and longitudinal steel frames , and the outer hull consisted of wood planking covered with Muntz copper sheathing to prevent fouling . The stem was made of bronze below and iron above . The hull was divided into 10 watertight compartments and had a double bottom that extended for 49 percent of the length of the hull .

The ships were very good sea boats ; they ran very well before the wind , and were very handy . They lost minimal speed in hard turns and suffered from moderate roll and pitch . In heavy seas , the ships were capable of only half speed , as both suffered from structural weakness in the forecabin . They had a transverse metacentric height of .69 to .72 m ( 2 ft 3 in to 2 ft 4 in ) . The ships had a crew of 28 officers and 337 enlisted men ; after their modernization after the turn of the century , the ships ' crews comprised 17 officers and 357 enlisted men . The ships carried a number of smaller boats , including two picket boats , one pinnace , two cutters , one yawl , and two dinghies . Searchlight platforms were added to the foremast 13 m ( 43 ft ) above the waterline .

= = = Machinery = = =

Irene ' s propulsion system consisted of two horizontal Wolsche 2 @-@ cylinder double @-@ expansion steam engines powered by four coal @-@ fired cylindrical double @-@ boilers . Prinzess Wilhelm ' s engines were produced by AG Germania . Irene was equipped with a pair of three @-@ bladed screws 4 @. @ 5 m ( 15 ft ) in diameter ; Prinzess Wilhelm had slightly larger 4 @. @ 7 m ( 15 ft ) screws with four blades . The ships ' engines were rated at 8 @, @ 000 indicated horsepower ( 6 @, @ 000 kW ) and provided a top speed of 18 kn ( 33 km / h ; 21 mph ) and a range of approximately 2 @, @ 490 nautical miles ( 4 @, @ 610 km ; 2 @, @ 870 mi ) at 9 kn ( 17 km / h ; 10 mph ) . The ships were equipped with a pair of electrical generators that produced 23 kilowatts ( 31 hp ) at 67 volts . Prinzess Wilhelm was later equipped with three generators with a combined output of 33 kW ( 44 hp ) at 110 volts . Steering was controlled by a single rudder .

= = = Armament and armor = = =

The ships were armed with four 15 cm K L / 30 guns in single pedestal mounts , supplied with 400 rounds of ammunition in total . They had a range of 8 @, @ 500 m ( 27 @, @ 900 ft ) . The ships also

carried ten shorter 15 cm K L / 22 guns in single mounts . These guns had a much shorter range , at 5 400 m ( 17 700 ft ) . The gun armament was rounded out by six 3 7 cm revolver cannon . They were also equipped with three 35 cm ( 14 in ) torpedo tubes with eight torpedoes , two launchers were mounted on the deck and the third was in the bow , below the waterline . The ships were modernized in Wilhelmshaven between 1899 and 1905 . The ships ' armament was significantly improved ; the four L / 30 guns were replaced with a new model with an increased range of 10 000 m ( 33 000 ft ) . Eight 10 5 cm SK L / 35 quick firing ( QF ) guns were installed in place of the L / 22 guns , and six 5 cm SK L / 40 QF guns were added .

The ships were protected with compound steel armor . The armored deck was 20 mm ( 0 79 in ) plus 30 mm ( 1 2 in ) thick with 20 mm thick slopes . The coaming was 120 mm ( 4 7 in ) thick on 200 mm ( 7 9 in ) thick teak . The conning tower had 50 mm ( 2 0 in ) thick sides and a 20 mm thick roof . The ships were equipped with cork cofferdams .

= = Service history = =

Irene was the first protected cruiser built by the German navy . She was ordered under the contract name " Ersatz Elisabeth " and was laid down at the AG Vulcan shipyard in Stettin in 1886 . She was launched on 23 July 1887 , after which fitting out work commenced . She was commissioned into the German navy on 25 May 1888 . Prinzess Wilhelm was ordered under the contract name " Ersatz Ariadne " and was laid down at the Germaniawerft shipyard in Kiel in 1886 . She was launched on 22 September 1887 , after which fitting out work commenced . She was commissioned into the German navy on 13 November 1889 .

Both Irene and Prinzess Wilhelm saw extensive service with the German fleet . Irene frequently escorted Kaiser Wilhelm II 's yacht on cruises throughout Europe . In 1894 , Irene was deployed to East Asian waters ; Prinzess Wilhelm joined her the following year . Prinzess Wilhelm was one of three ships involved in the seizure of the naval base Kiaochow Bay in November 1897 , led by Admiral Otto von Diederichs . Irene was in dock for engine maintenance at the time , and so she was not present during the operation . As a result of the seizure , the Cruiser Division was reorganized as the East Asia Squadron . Both ships were present in the Philippines in the immediate aftermath of the Battle of Manila Bay between American and Spanish squadrons during the Spanish ? American War in 1898 . Diederichs hoped to use the crisis as an opportunity to seize another naval base in the region , though this was unsuccessful .

Prinzess Wilhelm returned to Germany in 1899 and was modernized in 1899 ? 1903 . Irene followed her sister back to Germany in 1901 , and was similarly modified in 1903 ? 1905 . Both ships remained in service until early 1914 , when they were retired from front line service and used for secondary duties . Irene was converted into a submarine tender . She served in this capacity until 1921 , when she was sold for scrap and broken up the following year . Prinzess Wilhelm was reduced to a mine hulk in February 1914 and ultimately broken up for scrap in 1922 .