

= Magdeburg @-@ class cruiser =

The Magdeburg class of light cruisers was a group of four ships built for the German Kaiserliche Marine ( Imperial Navy ) . The class comprised SMS Magdeburg , the lead ship , Breslau , Strassburg , and Stralsund . All four ships were laid down in 1910 and were completed by the end of 1912 . They were armed with a main battery of twelve 10 @. @ 5 cm guns , though over the course of their careers , Breslau , Strassburg , and Stralsund were rearmed with more powerful 15 cm guns . They displaced 4 @, @ 570 t ( 4 @, @ 500 long tons ) at full load and were rated at a top speed of 27 @. @ 5 knots ( 50 @. @ 9 km / h ; 31 @. @ 6 mph ) , though all four vessels exceeded that figure on trials .

Magdeburg was used as a torpedo test ship before the outbreak of World War I in August 1914 , after which she was assigned to the Baltic . She conducted a series of raids on Russian positions culminating in a sweep into the Gulf of Finland that resulted in her grounding off the Estonian coast . Russian cruisers seized the stranded ship and captured code books ; they gave one copy to the British Royal Navy , which used it to great advantage . Breslau was assigned to the Mittelmeerdivision with the battlecruiser Goeben in 1912 and remained in the Mediterranean until the outbreak of war . After evading British warships , the two vessels reached Constantinople , where they were transferred to the Ottoman Navy . She operated primarily in the Black Sea against the Russian Navy , but in January 1918 she ventured into the Mediterranean and was mined and sunk after the Battle of Imbros .

Strassburg and Stralsund served with the High Seas Fleet in the North Sea against the British . They saw action at the Battle of Heligoland Bight in August 1914 and served in the reconnaissance screen for the battlecruisers of the I Scouting Group on several bombardments of the British coast in 1914 ? 1915 . Stralsund was also present at the Battle of Dogger Bank , but was not heavily engaged . Strassburg saw action during Operation Albion against the Russians in the Baltic . Both ships were surrendered to the Allies after the end of the war ; Strassburg was ceded to Italy and renamed Taranto ; she served with the Italian Navy until 1943 , when she was scuttled after the Italian surrender . She was raised by the Germans and sunk by Allied bombers twice in 1943 ? 1944 , and finally scrapped in 1946 ? 1947 . Stralsund was given to France and renamed Mulhouse . She served only until 1925 , when she was placed in reserve . She was ultimately broken up in 1935 .

= = Design = =

The design for the ships of the Magdeburg class was prepared in 1908 ? 1909 . The design incorporated a number of innovations , including a new longitudinal frame system in the hull , the development of which delayed construction by three to four years . The hull form was also redesigned to improve efficiency , and a new clipper bow was used instead of the old cruiser ram bow . They were the first German light cruisers to incorporate an armored belt at the waterline ; this increased the strength of the hull and became standard practice in warship construction for decades . The quarterdeck was cut down to provide a location to drop mines . All of these features became standard for subsequent German cruiser designs .

= = = General characteristics and machinery = = =

The ships of the Magdeburg class were 136 meters ( 446 ft ) long at the waterline and 138 @. @ 7 m ( 455 ft ) long overall . They had a beam of 13 @. @ 5 m ( 44 ft ) and a draft of 4 @. @ 4 m ( 14 ft ) forward and 5 @. @ 16 m ( 16 @. @ 9 ft ) aft . They displaced 4 @, @ 535 metric tons ( 4 @, @ 463 long tons ; 4 @, @ 999 short tons ) 4 @, @ 570 t ( 4 @, @ 500 long tons ; 5 @, @ 040 short tons ) at full combat load . The hulls were built with longitudinal steel frames and contained fourteen watertight compartments in Magdeburg , Strassburg , and Stralsund . Breslau 's hull was divided into sixteen watertight compartments . All four vessels had a double bottom that extended for forty @- @ five percent of the length of the hull .

The four vessels each had a crew of 18 officers and 336 enlisted men . They carried a number of

smaller boats , including one picket boat , one barge , one cutter , two yawls , and two dinghies . The German Navy regarded the ships as good sea boats , with slight weather helm and gentle motion in a swell . The cruisers were maneuverable , but were slow going into a turn . Steering was controlled by a single large rudder . They lost speed only slightly in a head sea , but lost up to sixty percent in hard turns . They had a transverse metacentric height of .79 m ( 2 ft 7 in ) .

Their propulsion systems consisted of steam turbines of various types . Each ship had turbines built by different manufacturers to evaluate each design and configuration . Magdeburg had three engines produced by Bergmann , which drove three 2 @. @ 75 @-@ meter ( 9 ft 0 in ) propellers . Breslau was equipped with two pairs of AG Vulcan turbines , which powered four 3 @-@ bladed screws 2 @. @ 47 m ( 8 ft 1 in ) in diameter . Strassburg had a pair of Marine @-@ type turbines with two 3 @. @ 4 m ( 11 ft ) wide propellers . Stralsund initially had three Bergmann turbines with three 2 @. @ 75 m screws , though by the end of the war the center shaft was removed . All four propulsion systems were rated at 25 @, @ 000 shaft horsepower ( 19 @, @ 000 kW ) , but reached significantly higher speeds in service .

The ships ' turbines were powered by sixteen coal @-@ fired Marine @-@ type water @-@ tube boilers , although they were later altered to use fuel oil that was sprayed on the coal to increase its burn rate . These were divided into five boiler rooms on the centerline . These gave the ships a top speed of 27 @. @ 5 knots ( 50 @. @ 9 km / h ; 31 @. @ 6 mph ) , though on speed trials all four ships exceeded this by at least half a knot . The ships carried 1 @, @ 200 tonnes ( 1 @, @ 200 long tons ) of coal , and an additional 106 tonnes ( 104 long tons ) of oil that gave them a range of approximately 5 @, @ 820 nautical miles ( 10 @, @ 780 km ; 6 @, @ 700 mi ) at 12 knots ( 22 km / h ; 14 mph ) . At 25 knots ( 46 km / h ; 29 mph ) , the range fell considerably to 900 nmi ( 1 @, @ 700 km ; 1 @, @ 000 mi ) . Magdeburg , Strassburg , and Stralsund each had four turbo generators with a combined output of 320 kilowatts ( 430 hp ) at 220 Volts ; Breslau only had two generators .

= = = Armament and armor = = =

The four Magdeburg @-@ class ships were armed with twelve 10 @. @ 5 cm SK L / 45 guns in single pedestal mounts . Two were placed side by side forward on the forecastle , eight were located amidships , four on either side , and two were side by side aft . The guns had a maximum elevation of 30 degrees , which allowed them to engage targets out to 12 @, @ 700 m ( 41 @, @ 700 ft ) . They were supplied with 1 @, @ 800 rounds of ammunition , for 150 shells per gun . They were also equipped with a pair of 50 cm ( 19 @. @ 7 in ) torpedo tubes with five torpedoes submerged in the hull on the broadside . The ships could also carry 120 mines .

Over the course of their careers , the ships all had their armament upgraded , with the exception of Magdeburg . In 1916 , two of Breslau 's 10 @. @ 5 cm guns were replaced with 15 cm SK L / 45 guns , which had a range of 17 @, @ 600 m ( 57 @, @ 700 ft ) . The following year , the remaining ten 10 @. @ 5 cm guns were replaced with six 15 cm guns . In 1915 , Strassburg was rearmed with seven 15 cm guns , two 8 @. @ 8 cm ( 3 @. @ 46 in ) SK L / 45 guns , and two deck @-@ mounted 50 cm torpedo tubes . Stralsund was modified similarly , though her submerged torpedo tubes were removed during the refit .

The ships were protected by a waterline armored belt that was 60 mm ( 2 @. @ 4 in ) thick amidships and 18 mm ( 0 @. @ 71 in ) thick on the bow . The stern was unarmored . The deck was covered with up to 60 mm thick armor plate forward , 40 mm ( 1 @. @ 6 in ) thick amidships , and 20 mm ( 0 @. @ 79 in ) thick aft . Sloped armor 40 mm thick connected the deck and belt armor . The conning tower had 100 mm ( 3 @. @ 9 in ) thick sides and a 20 mm thick roof . A rangefinder was added with 30 mm ( 1 @. @ 2 in ) thick steel plating . The main battery guns had 50 mm ( 2 @. @ 0 in ) thick gun shields .

= = Construction = =

Magdeburg was ordered under the contract name " Ersatz Bussard " and was laid down at the AG Weser shipyard in Bremen in 1910 and launched on 13 May 1911 , after which fitting @-@ out work

commenced . She was commissioned into the High Seas Fleet on 20 August 1912 . Breslau was ordered under the contract name " Ersatz Falke " and was laid down at the AG Vulcan shipyard in Stettin in 1910 . At her launching ceremony on 16 May 1911 , she was christened by the mayor of Breslau , the ship 's namesake . After her launching , fitting @-@ out work commenced and lasted until mid @-@ 1912 . She was commissioned into the High Seas Fleet on 20 August 1912 .

Strassburg was ordered under the contract name " Ersatz Condor " and was laid down at the Kaiserliche Werft shipyard in Wilhelmshaven in 1910 and launched on 24 August 1911 , after which fitting @-@ out work commenced . She was commissioned into the High Seas Fleet on 9 October 1912 . Stralsund was ordered under the contract name " Ersatz Cormoran " and was laid down at the AG Weser shipyard in 1910 and launched on 4 November 1911 , after which fitting @-@ out work commenced . She was commissioned into the High Seas Fleet on 10 December 1912 .

= = Service history = =

= = = Magdeburg = = =

Magdeburg was used as a torpedo test ship after her commissioning until the outbreak of World War I in August 1914 , when she was brought to active service and deployed to the Baltic . In the Baltic , Magdeburg fired the first shots of the war against the Russians on 2 August , when she shelled the port of Libau . She participated in a series of bombardments of Russian positions until late August . On the 26th , she participated in a sweep of the entrance to the Gulf of Finland ; while steaming off the Estonian coast , she ran aground off the island of Odenholm and could not be freed . A pair of Russian cruisers appeared and seized the ship . Fifteen crew members were killed in the brief engagement . They recovered three intact German code books , one of which they passed to the British . The ability to decrypt German wireless signals provided the British with the ability to ambush German units on several occasions during the war , including the Battle of Jutland . The Russians partially scrapped Magdeburg while she remained grounded before completely destroying the wreck .

= = = Breslau = = =

Following her commissioning , Breslau and the battlecruiser Goeben were assigned to the Mittelmeerdivision in response to the Balkan Wars . After evading British warships in the Mediterranean to reach Constantinople , Breslau and Goeben were transferred to the Ottoman Empire in August 1914 , to entice the Ottomans to join the Central Powers in World War I. The ships were renamed Midilli and Yavuz Sultan Selim , respectively , and saw extensive service with the Ottoman fleet , primarily in the Black Sea against the Russian Black Sea Fleet . The two ships , along with several other Ottoman vessels , raided Russian ports in October 1914 , prompting a Russian declaration of war .

Midilli was active in laying minefields off the Russian coast , bombarding Russian ports and installations and , because of a shortage of Ottoman merchant ships , transporting troops and supplies to the Black Sea ports supplying Ottoman troops fighting in the Caucasus Campaign . She was lightly damaged several times by Russian ships , but the most serious damage was inflicted by a mine in 1915 , which kept her out of service for half of a year . The ship was mined and sunk in January 1918 during the Battle of Imbros in which Yavuz Sultan Selim was also mined and badly damaged . The majority of her crew were killed in the sinking .

= = = Strassburg = = =

Strassburg spent the first year of her service overseas , after which she was assigned to the reconnaissance forces of the High Seas Fleet . She saw significant action at the Battle of Heligoland Bight in August 1914 and participated in the raid on Scarborough , Hartlepool and Whitby in

December 1914 . By 1916 , the ship was transferred to the Baltic to operate against the Russian Navy . She saw action during Operation Albion in the Gulf of Riga in October 1917 , including screening for the battleships König and Markgraf during the Battle of Moon Sound . She returned to the North Sea for the planned final operation against the British Grand Fleet in the last weeks of the war , and was involved in the mutinies that forced the cancellation of the operation .

The ship served briefly in the new Reichsmarine in 1919 before being transferred to Italy as a war prize . She was formally transferred in July 1920 and renamed Taranto for service in the Italian Navy . In 1936 ? 1937 , she was rebuilt for colonial duties and additional anti @-@ aircraft guns were installed . She saw no significant action during World War II until the Armistice that ended Italy 's participation in the war . She was scuttled by the Italian Navy , captured and raised by the Germans , and sunk by Allied bombers in October 1943 . The Germans raised the ship again , which was sunk a second time by bombers in September 1944 . Taranto was finally broken up for scrap in 1946 ? 1947 .

= = = Stralsund = = =

Stralsund was assigned to the reconnaissance forces of the High Seas Fleet for the majority of her career . She saw significant action in the early years of World War I , including several operations off the British coast and the Battles of Heligoland Bight and Dogger Bank , in August 1914 and November 1915 , respectively . She was not damaged in either action . The ship was in dockyard hands during the Battle of Jutland , and so she missed the engagement . After the end of the war , she served briefly in the Reichsmarine before being surrendered to the Allies . She was ceded to the French Navy , where she served as Mulhouse until 1925 . She was formally stricken in 1933 and broken up for scrap two years later .