

= Braunschweig @-@ class battleship =

The Braunschweig @-@ class battleships were pre @-@ dreadnought battleships of the Kaiserliche Marine (the German Imperial Navy) . The class comprised five ships : Braunschweig , Elsass , Hessen , Preussen , and Lothringen . The ships were an improvement over the preceding Wittelsbach class ; the ships mounted a more powerful main battery , were two knots faster , and had better armor protection .

The five ships all saw active service during World War I , primarily as coast defense ships in the IV Battle Squadron . Hessen was transferred to the II Battle Squadron in 1916 and took part in the Battle of Jutland on 31 May ? 1 June 1916 . All five ships of the class were retained by the Reichsmarine following Germany 's defeat in World War I , and saw further service in a variety of roles . Hessen was eventually rebuilt as a radio @-@ controlled target ship , while Preussen and Lothringen were converted into minesweeper tenders . All of the ships , with the exception of Hessen , were broken up in the 1930s ; Hessen survived until the end of World War II , when she was taken over by the Soviet Navy , for continued use as a target ship .

= = Design = =

= = = General characteristics = = =

The Braunschweig @-@ class ships were 413 ft 3 in long at the waterline , and 419 ft (128 m) overall . The ships had a beam of 73 ft (22 m) , and a draft of 26 ft 7 in (8 @. @ 10 m) . The ships had thirteen watertight compartments and a double bottom for 60 percent of the length of the hull . The ships displaced 13 @, @ 208 tonnes at their designed weight , and 14 @, @ 394 t at a full load .

The ships were described as good sea @-@ boats , but were prone to heavy pitching . The ships were responsive and had a tight turning radius at low speed , but at hard rudder of 12 degrees , the ships lost up to 70 percent speed . The ships had a crew of 35 officers and 708 men normally , and when serving as a squadron flagship , they had an additional 13 officers and 66 men . The ships carried a number of smaller boats aboard , including two picket boats , two launches , a pinnace (later removed) , two cutters , two yawls , and two dinghies .

= = = Propulsion = = =

The ships of the Braunschweig @-@ class were propelled by three shaft triple expansion engines that were rated at 16 @, @ 000 metric horsepower (16 @, @ 000 ihp ; 12 @, @ 000 kW) . The triple expansion engines were powered by eight Marine type boilers and six cylindrical boilers . After 1915 , oil @-@ firing capability was added to supplement the coal @-@ fired boilers . The ships had a single rudder and three screws . The two outer propellers were three @-@ bladed , and 4 @. @ 8 m (5 @. @ 24 yd) in diameter . The center screw was four @-@ bladed and 4 @. @ 5 m (4 @. @ 92 yd) in diameter . The ships ' top speed was rated at 18 knots (33 km / h ; 21 mph) . During trials , however , the engines produced between 16 @, @ 478 and 16 @, @ 980 PS (16 @, @ 253 and 16 @, @ 748 ihp ; 12 @, @ 120 and 12 @, @ 489 kW) , and a top speed between 18 @. @ 2 and 18 @. @ 7 knots (33 @. @ 7 and 34 @. @ 6 km / h ; 20 @. @ 9 and 21 @. @ 5 mph) . The ships of the class could steam 5 @, @ 200 nautical miles (9 @, @ 600 km ; 6 @, @ 000 mi) at a cruising speed of 10 knots (19 km / h ; 12 mph) , with the exception of Hessen . Hessen suffered from unstable steering , which increased fuel consumption and shortened her operational range to 4 @, @ 530 nmi (8 @, @ 390 km) at 10 knots (19 km / h ; 12 mph) . The first two ships ? Braunschweig and Elsass had four generators that produced 230 kW (74 V) , while three following ships ? Hessen , Preussen , and Lothringen had four turbo @-@ generators that provided 260 kW (110 V) .

= = = Armor = = =

The ships were equipped with Krupp armor . The deck armor was 40 mm (1 @. @ 57 in) thick on the horizontal , and ranged between 140 ? 75 ? 140 mm (5 @. @ 51 ? 2 @. @ 95 ? 5 @. @ 51 in) in the sloped deck armor . The main armored belt was 250 mm (9 @. @ 8 in) thick . The forward conning tower had a 50 mm (1 @. @ 97 in) thick roof , while the sides were 300 mm (11 @. @ 8 in) thick . The aft conning tower had a roof protected by 30 mm (1 @. @ 2 in) of armor plating and 140 mm (5 @. @ 51 in) armor on the sides . The ship 's citadel was also protected by 140 mm of armor . The main battery turrets had 50 mm thick roofs and 250 mm sides . The secondary battery turrets were protected by 150 mm (5 @. @ 9 in) of armor , while the casemated guns had gun shields 70 mm (2 @. @ 75 in) thick .

= = = Armament = = =

The ships ' main armament was increased from previous designs , but still weaker than contemporary foreign battleships . The main armament comprised four 28 cm (11 in) SK L / 40 quick @-@ firing guns in twin turrets , increased from four 24 cm (9 @. @ 4 in) guns from previous designs , compared with the 12 in (30 cm) guns used on many foreign ships . The guns could depress down to ? 4 degrees , and elevate to + 30 degrees , which enabled a maximum range of 18 @, @ 800 m (20 @, @ 600 yd) . The guns fired 529 lb shells at a muzzle velocity of 2690 feet per second (820 m / s) The main battery had a total of 340 shells , for 85 shells per gun .

The secondary battery consisted of fourteen 17 cm (6 @. @ 7 in) SK L / 40 quick @-@ firing guns , four of which were mounted in single turrets amidships , with the remaining ten in casemates around the superstructure . The guns fired 141 lb shells at a muzzle velocity of 2789 f / s (850 m / s) . The turret @-@ mounted guns could be elevated to 30 degrees , for a maximum range of 16 @, @ 900 m (18 @, @ 500 yds) , while the casemated guns could only elevate to 22 degrees , and had a correspondingly lower range of 14 @, @ 500 m (15 @, @ 850 yd) . These guns had a total of 1820 shells , for 130 rounds per gun . To transit the Kiel Canal , the three central 17 cm casemated guns had to be withdrawn into their housings , as they were unable to train fully flush with the sides of the ships . With the guns fully emplaced , the ships would have been too wide to fit in the canal .

The ships also had fourteen 8 @. @ 8 cm (3 @. @ 5 in) SK L / 35 quick @-@ firing guns in casemates along the length of the ship . The guns fired 15 @. @ 4 lb shells at a muzzle velocity of 2 @, @ 526 f / t (770 m / s) , and could be elevated to 25 degrees for a maximum range of 9 @, @ 090 m (9 @, @ 940 yd) . They were also armed with six 45 cm (18 in) torpedo tubes , with a total of 16 torpedoes .

= = Construction = =

Braunschweig was laid down at the Germaniawerft shipyard in Kiel in 1901 , was launched on 20 December 1902 , and commissioned into the fleet on 15 October 1904 . Elsass was built at Schichau in Danzig , starting in 1901 . The ship was launched on 26 May 1903 and commissioned on 29 November 1904 . Hessen was also built at Germaniawerft , starting in 1902 . She was launched on 18 September 1903 , and commissioned just over two years later on 19 September 1905 . Preussen was laid down in 1902 at the AG Vulcan shipyard in Stettin , launched on 30 October 1903 , and commissioned into the fleet on 12 July 1905 . Lothringen , the final ship of the class , was laid down at the Schichau dockyards in 1902 . She was launched on 27 May 1904 , and commissioned just under two years later on 18 May 1906 .

= = Service history = =

= = = World War I = = =

At the start of the First World War , the members of the Braunschweig class were assigned to IV Battle Squadron under the command of Vice Admiral Ehrhard Schmidt , and tasked with coastal

defense duties . Braunschweig and Elsass both participated in the early portion of the Battle of the Gulf of Riga . The two ships kept the Russian pre @-@ dreadnought Slava at bay while a Russian minefield was cleared , but the Russian forces put up a strong defense . Vice Admiral Schmidt decided to withdraw his forces when it became apparent that the mine clearing had taken too long , and there wasn 't sufficient daylight left for the minelayer Deutschland to lay a minefield of its own . In 1916 , Hessen was assigned to II Battle Squadron , and participated in the Battle of Jutland on 31 May ? 1 June 1916 . Late in the day on the 31st , Hessen and the other pre @-@ dreadnoughts of the II Battle Squadron briefly engaged Vice Admiral David Beatty 's 1st Battlecruiser Squadron , and in doing so , covered the withdrawal of the battered German battlecruisers under the command of Franz von Hipper .

Starting in 1916 , the ships of the Braunschweig class were withdrawn from active service , primarily because of manpower shortages . Braunschweig was used as a training ship , and on 20 August 1917 , was converted into a barracks ship in Kiel . Elsass was also used as a barracks and training ship in Kiel , having been withdrawn from active service on 25 July 1916 . Hessen was converted into a depot ship in Brunsbüttel in 1917 , while Preussen became a depot ship in Wilhelmshaven that same year . Lothringen was withdrawn from service in 1917 and used as an engineer training ship in Wilhelmshaven . Guns removed from these ships starting in 1916 were used by the Imperial Army in WWI as railway guns .

== = Post @-@ World War I == =

Because all of Germany 's powerful dreadnoughts had either been scuttled in Scapa Flow or ceded to the Allies as war prizes , the Braunschweig @-@ class battleships were recommissioned into the newly reorganized Reichsmarine . In the years following World War I , Braunschweig , Elsass , and Hessen were to be rebuilt as coastal defense ships , although this plan was abandoned . Braunschweig served in the Reichsmarine from 1921 to 1926 , at which point she was withdrawn from active duty . On 31 May 1931 , she was stricken and converted into a hulk at Wilhelmshaven , and eventually scrapped . Elsass saw active duty in the fleet from 1924 until 25 February 1930 , at which point she was removed from active service . On 31 March 1931 , she was stricken , hulked in Wilhelmshaven . On 31 October 1935 , Elsass was sold to Norddeutscher @-@ Lloyd in Bremerhaven , and scrapped in 1936 .

Hessen served in the fleet from 1925 to 12 November 1934 , when she was withdrawn and converted into a target ship . Conversion work lasted from 31 March 1935 to 1 April 1937 , when she was recommissioned as a target . She served in this capacity until 1945 ; at the end of World War II , she was renamed Tsel and ceded to the Soviet Union . The ship was eventually scrapped in the 1960s . Preussen saw active service with the fleet as a minesweeper depot ship from 1919 to 5 April 1929 , when she was stricken from the navy list . The ship was sold for breaking on 25 February 1931 for 216 @, @ 800 Mark , and scrapped in Wilhelmshaven . A 63 m (68 @. @ 9 yd) section of the hull was kept for use as a torpedo target and other explosives . The hull section was bombed and sunk by Allied aircraft in April 1945 . The wreck was eventually raised and scrapped in 1954 . Lothringen was also converted into a minesweeper depot ship , and she served in this capacity from 1922 to 1926 . The ship was stricken on 31 March 1931 , sold for scrapping for 269 @, @ 650 Marks , and broken up by Blohm & Voss in Hamburg .