= Amagi @-@ class battlecruiser =

The Amagi class (??? , Amagi @-@ gata) was a series of four battlecruisers planned for the Imperial Japanese Navy as part of the Eight @-@ eight fleet . The ships were to be named Amagi , Akagi , Atago , and Takao (initially named Ashitaka) , after the mountains Amagi , Akagi , Atago , and Takao . The Amagi design was essentially a lengthened version of the Tosa @-@ class battleship , but with a thinner armored belt and deck and a modified secondary battery arrangement .

Limitations imposed by the 1922 Washington Naval Treaty prevented the class from being completed as designed . However , the treaty had a limited allowance for hulls already under construction to be converted into aircraft carriers . Amagi and Akagi were both intended for conversion , but an earthquake damaged the hull of Amagi so extensively that the ship was scrapped . Akagi was reconstructed as an aircraft carrier and served with distinction as part of the Kido Butai during the Second World War , participating in the Japanese attack on Pearl Harbor before being sunk at the Battle of Midway .

= = Design = =

= = = Dimensions and machinery = = =

The ships had a planned displacement of 41 @,@ 217 tonnes (40 @,@ 566 long tons ; 45 @,@ 434 short tons) and 47 @,@ 000 t (46 @,@ 000 long tons ; 52 @,@ 000 short tons) at a full load . The class design was 250 m (820 ft) long at the waterline , and 251 @.@ 8 m (826 ft) overall . The ships would have had a beam of 30 @.@ 8 m (101 ft) and a draft of 9 @.@ 5 m (31 ft) and would have used four propeller shafts , powered by Gihon turbines . The design staff intended to use turbine engines , which were to be powered by 19 Kampon water @-@ tube boilers , eleven of which were oil @-@ fired , while the other eight were to have mixed oil and coal for fuel . This system was designed to provide 131 @,@ 200 shaft horsepower (97 @,@ 800 kW) for a top speed of 30 knots (56 km / h ; 35 mph) . The planned fuel stores amounted to 3 @,@ 900 tons of oil and 2 @,@ 500 tons of coal . The ships had a planned cruising speed of 14 knots (26 km / h ; 16 mph) , and with full fuel stores , the ships would have had a maximum range of 8 @,@ 000 nautical miles (15 @,@ 000 km ; 9 @,@ 200 mi) .

= = = Armament = = =

The ships were to be equipped with a main battery of ten 41 cm L / 45 guns guns in five twin turrets , although an L / 50 gun tested in 1920 might have been implemented instead . The guns fired 1 @,@ 000 kg (2 @,@ 200 lb) armor @-@ piercing projectiles with a 224 kg (494 lb) propellant charge at 790 m / s (2 @,@ 600 ft / s) , at a rate of fire between 1 @.@ 5 and 2 @.@ 5 rounds per minute . Each gun had 90 rounds and an approximate barrel life of 250 ? 300 shots . The turrets would have been arranged along the centerline : two superfiring turrets fore , and three in line aft of the superstructure . The gun turrets weighed 1 @,@ 004 tons (1 @,@ 020 mt) , and allowed for depression of ? 5 degrees and elevation of 30 degrees .

The secondary battery was to have consisted of sixteen 14 cm L / 50 guns mounted in casemates along the center of the ship . These guns fired 38 kg (84 lb) projectiles and used 10 @.@ 33 ? 10 @.@ 97 kg (22 @.@ 8 ? 24 @.@ 2 lb) of propellant at a muzzle velocity of 850 ? 855 m / s (2 @,@ 790 ? 2 @,@ 810 ft / s) . The guns had a maximum elevation of 25 degrees , which enabled a maximum range of 17 @.@ 5 km (10 @.@ 9 mi) . Four , later increased to six , 12 cm L / 45 anti @-@ aircraft guns were to have been mounted amidships , along with eight 61 cm (24 in) above @-@ water torpedo tubes .

= = = Armor = = =

It was planned that the Amagi class would be protected by a main belt 250 mm (9 @.@ 8 in) thick , sloped at 12 degrees , and a torpedo bulkhead 73 mm (2 @.@ 9 in) thick . The main battery barbettes were designed to have between 230 ? 280 mm (9 @.@ 1 ? 11 @.@ 0 in) of armor plating , and the conning tower would have had armor ranging in thickness from 75 mm (3 @.@ 0 in) to a maximum of 360 mm (14 in) . Deck armor was to have been 95 mm (3 @.@ 7 in) thick .

= = Background = =

Experiences in the Russo @-@ Japanese War convinced naval war planners that more fast capital ships were needed , so on 4 April 1907 , the Imperial Defence Council approved an " Eight @-@ eight " policy . This plan originally called for a fleet of eight battleships and eight armored cruisers that would all be under ten years old (later changed to eight battlecruisers and reduced to eight years old) . However , the advent of the dreadnought battleship crippled this plan at the beginning ; given Japan 's weak and underdeveloped economy and the enormous strain that had been put on it during the Russo @-@ Japanese War (Japan emerged from the war victorious , but bankrupt) , the launch of HMS Dreadnought was a " disaster " for Japan .

In 1907 , Japan was halfway to the eight @-@ eight , with two newly delivered battleships (the Katori class) in the fleet and two more (the Satsuma class) and four armored cruisers authorized or under construction . In addition , three more battleships and four armored cruisers had been authorized , though not funded . However , naval technology was changing ; older battleships , including all of Japan 's battleships in commission or under construction , were quickly rendered obsolete with the commissioning of HMS Dreadnought (hence the terms dreadnought and pre @-@ dreadnought) , and armored cruisers were seemingly useless in the face of the new battlecruisers being laid down by Great Britain and Germany . The Imperial Japanese Navy (IJN) recognized this , and proposed in 1909 that two battlecruisers be ordered from British plans , with one to be built in Great Britain and one to be built at home . These two ships became the Kong? class .

In 1910 , there was still authorization for one battleship and four armored cruisers . This battleship , a more heavily armored version of the Kong? @-@ class battlecruisers , became Japan 's first super @-@ dreadnought , Fus? . With these ships , Japan appeared to be getting closer to the eight @-@ eight goal ; however , these new ships represented a " new level of naval strength " for the IJN , and they made all previous Japanese capital ships obsolete . This meant that any naval planner aiming for an eight @-@ eight fleet would have to call for seven more battleships and four more battlecruisers at a time when Japan was trying to weather a worldwide economic depression .

After proposals from the IJN in 1911 and 1912 for massive shipbuilding programs , the Cabinet compromised down to a " four @-@ four " plan ; under this , three new battleships and no new battlecruisers were authorized . The Navy did not agree , and instead called for an " eight @-@ four " fleet , while the Imperial Defence Council called for the original eight @-@ eight . The Cabinet relented , and by July 1914 , it was decided to aim first for an eight @-@ four fleet , followed by the eight @-@ eight fleet . The eight @-@ four plan was presented to the Diet of Japan in 1915 ; it aimed to have the eight battleships and four battlecruisers by 1923 with the building of two Nagato @-@ class and two Tosa @-@ class battleships . The problem with this was that the old plan intended all of the ships of the eight @-@ eight fleet to be under eight years old ; by the time these new ships were completed , Fus? and the first two Kong? ships would be past their replacement age .

The plan was approved in 1917 , along with funding for two battlecruisers which became the Amagi class . In late 1917 , the Navy proposed to expand the eight @-@ four plan by adding two more battlecruisers ; this was approved , and two more Amagi @-@ class ships were ordered . However , having eight 41 cm (16 in) gun ships (four battleships and four battlecruisers) on order put an enormous financial strain on Japan , which was spending about a third of its national budget on the Navy . The massive size and scale of its building program was rapidly driving up the cost of naval construction and armament .

= = Construction , cancellation , and conversion = =

Akagi was the first ship of the class to be laid down ; construction began on 6 December 1920 at the naval yard in Kure . Amagi followed ten days later at the Yokosuka naval yard . The projected completion dates for the first pair of ships were December and November 1923 , respectively . Atago was laid down in Kobe at the Kawasaki shipyard on 22 November 1921 , and was projected to be finished in December 1924 . Takao , the fourth and final ship of the class , was laid down at the Mitsubishi shipyard in Nagasaki on 19 December 1921 , and was also projected to be completed in December 1924 .

The Washington Naval Treaty , signed in February 1922 , greatly reduced the tonnage allowed for capital ships in the signatory nations . The treaty also instituted a moratorium on new warship construction ; battlecruisers canceled under this included one class each from Japan , the United States , and Great Britain : the Amagi class , the Lexington class and the G3 class , respectively . The treaty did allow for battleship and battlecruiser hulls currently under construction to be converted into aircraft carriers , but only if these new carriers were kept under a 27 @,@ 000 @-@ ton limit . Considering that the Amagi class were designed to displace 47 @,@ 000 t (46 @,@ 000 long tons ; 52 @,@ 000 short tons) at full load in their battlecruiser configuration , this would have been a rather difficult displacement to obtain . However , the Americans also had the same problem when designing a conversion of their Lexington class , so an exception , spearheaded by US Assistant Secretary of the Navy Theodore Roosevelt , Jr . , was added to the treaty that gave the five signatories the option of converting up to two capital ships that were under construction to 33 @,@ 000 @-@ ton aircraft carriers . This resulted in the United States and Japan quickly reordering two ships each . Japan chose Amagi and Akagi , the two ships nearest to completion , for conversion .

The September 1923 Great Kant? earthquake in Tokyo caused significant stress damage to the hull of Amagi . The structure was too heavily damaged to be usable , and conversion work was abandoned . Amagi was stricken from the navy list and sold for scrapping , which began on 14 April 1924 . The other two ships , Atago and Takao , were officially canceled two years later (31 July 1924) and were broken up for scrap in their slipways . The incomplete Tosa @-@ class battleship Kaga , on which work had stopped on 5 February 1922 , was reordered as a carrier to replace Amagi .

= = = Akagi 's career as an aircraft carrier = = =

The conversion of Akagi began on 19 November 1923 , and was completed in March 1927 . However , the strange assortment of flight decks fitted on Akagi ? a main landing deck superimposed over two short take @-@ off decks ? proved unsatisfactory , and the ship was withdrawn from active service in 1935 for modernization . The lower two flight decks were removed , the main deck was lengthened to 250 m (820 ft) , and a third elevator was added . Refitting was completed in 1938 . Akagi supported operations off China in early 1939 and 1940 , and underwent an overhaul in November 1940 .

Akagi served as Vice Admiral Ch?ichi Nagumo 's flagship in the attack on Pearl Harbor on 7 December 1941 . Nagumo 's Kido Butai ? composed of the carriers Akagi , Kaga , Hiry? , S?ry? , Sh?kaku , and Zuikaku , supported by escorts ? launched two waves of airstrikes on the American base at Pearl Harbor in a devastating surprise attack . American losses included four battleships and two destroyers sunk and nearly 200 aircraft destroyed .

On 19 February 1942 , aircraft from Akagi , Hiry? , S?ry? , and Kaga participated in the bombing of Darwin , Australia . On 27 February , their bombers severely damaged the old American carrier USS Langley , which was subsequently scuttled by her escort .

Akagi and the carriers Hiry? and S?ry? were sent in March 1942 with a mixed force of battleships , cruisers , and destroyers to the Indian Ocean to engage the British fleet there and to support planned attacks on Ceylon . In the Easter Sunday Raid on 5 April , aircraft from the carriers struck the British base at Colombo , destroying a number of aircraft and sinking an armed merchant cruiser

and the old destroyer HMS Tenedos in the harbor . The Japanese fleet also spotted the heavy cruisers HMS Dorsetshire and HMS Cornwall at sea ; both ships were sunk in an overwhelming air attack . On 9 April the carriers attacked British installations at Trincomalee , destroying aircraft and sinking the carrier HMS Hermes , the destroyer HMAS Vampire , and the corvette HMS Hollyhock .

= = = Battle of Midway = = =

In late May 1942 , in an effort to draw out and destroy the elusive American carriers , Japanese forces organized attacks on the Aleutian Islands in Alaska and Midway Atoll in the Western Pacific . Nagumo , aboard Akagi , led Kaga , S?ry? , and Hiry? and the support ships of the First Carrier Striking Force to Midway . In the initial attack , Japanese planes neutralized a small force of fighter aircraft and inflicted heavy damage to American installations . Torpedo planes and dive @-@ bombers sent from Midway to harry the Japanese fleet had little effect , but the Japanese attack plan had been deciphered by codebreakers , and the American carriers ' planes were already en route . Torpedo bombers from USS Hornet , USS Enterprise , and USS Yorktown joined the attack in succession , forcing the Japanese carriers to maneuver violently to avoid torpedoes and rendering them unable to launch additional aircraft . American dive @-@ bombers , arriving late after difficulty locating the fleet , soon landed fatal strikes on Akagi , Kaga , and S?ry? . Yorktown , handicapped by hits from Hiry? 's bombers , managed to return to the fight only to take two torpedo hits a couple of hours later . The burning Yorktown was abandoned , but her scouts pinpointed Hiry? 's location , and bombers from Enterprise put Hiry? out of action with four bomb strikes . Japan lost all four carriers of the First Carrier Striking Force at Midway .