= Japanese cruiser Ibuki (1943) =

The Japanese cruiser Ibuki (??) was a heavy cruiser built for the Imperial Japanese Navy (IJN) during World War II . The lead ship of her class , she was converted into a light aircraft carrier before completion . The conversion was delayed and finally stopped in March 1945 in order to concentrate on building small submarines . Ibuki was scrapped in the Sasebo Naval Arsenal beginning in 1946 .

= = Design and description = =

As originally designed the ship had a length of 200 @.@ 6 meters (658 ft 2 in) overall , a beam of 20 @.@ 2 meters (66 ft 3 in) and a draft of 6 @.@ 04 meters (19 ft 10 in) . Ibuki displaced 12 @,@ 220 metric tons (12 @,@ 030 long tons) at standard load and 14 @,@ 828 metric tons (14 @,@ 594 long tons) at (full load) .

She was fitted with four Kampon geared steam turbine sets with a total of 152 @,@ 000 shaft horsepower (113 @,@ 000 kW) , each driving a 3 @.@ 9 @-@ meter (13 ft) propeller . Steam was provided by eight Kampon Ro G? @-@ type three @-@ drum water @-@ tube boilers intended to give the ship a maximum speed of 35 knots (65 km / h ; 40 mph) . Ibuki carried 2 @,@ 163 metric tons (2 @,@ 129 long tons) of fuel oil which gave her an estimated range of 6 @,@ 300 nautical miles (11 @,@ 700 km ; 7 @,@ 200 mi) at 18 knots (33 km / h ; 21 mph) .

= = = Armament = = =

The main armament of the Ibuki class was intended to be ten 50 @-@ caliber 20 cm 3rd Year Type No. 2 guns mounted in twin turrets , three forward and two aft of the superstructure . The first two forward turrets were on the same level , but the third turret could superfire over the first two . The guns could depress to ? 5 ° and had a maximum elevation of + 55 ° and a maximum range of 29 @,@ 400 yd (26 @,@ 900 m) . The secondary armament was to consist of eight 40 @-@ caliber 12 @.@ 7 cm Type 89 anti @-@ aircraft (AA) guns in twin mounts . They had a maximum range of 14 @,@ 800 meters (16 @,@ 200 yd) , and a maximum ceiling of 9 @,@ 400 meters (30 @,@ 800 ft) . The ships were also intended to be equipped with four twin 25 mm Type 96 light AA guns abreast the funnel . They had a maximum range of 7 @,@ 500 meters (8 @,@ 202 yd) , and an effective ceiling of 5 @,@ 500 meters (18 @,@ 000 ft) . The maximum effective rate of fire was only between 110 and 120 rounds per minute due to the frequent need to change the fifteen @-@ round magazines . Two twin 13 @.@ 2 mm Type 93 machine gun mounts were supposed to be mounted on the bridge with 2 @,@ 000 rounds per gun .

The Ibuki @-@ class ships were intended to be armed with four rotating quadruple 61 cm (24 in) Type 92 torpedo tube mounts , two on each broadside . The ship carried 24 Type 93 torpedoes , commonly referred to in post @-@ war literature as the " Long Lance " , 16 in the tubes and eight in reserve . Quick @-@ reloading gear was installed for every mount that allowed the reserve torpedoes to be loaded in three to five minutes in ideal conditions .

Early warning would have been provided by a Type 2 , Mark 2 , Model 1 air search radar mounted at the top of the foremast . A Type 93 passive hydrophone system would have been fitted in the bow . The ships were designed to carry three aircraft on a platform between the funnel and the mainmast . These would have consisted of one three @-@ seat Aichi E13A and two two @-@ seat Yokosuka E14Y floatplanes . They would have been launched by a pair of aircraft catapults , one on each side of the aircraft platform .

= = = Armor = = =

The ship 's waterline armoured belt ran all the way down to the double bottom . It extended from the forward to the rear magazines below the fore and aft turrets . Over the machinery spaces , it was 100 millimeters (3 @.@ 9 in) thick and 140 millimeters (5 @.@ 5 in) thick on the sides of the magazines . The outer ends of the fore and aft machinery compartments was protected by a 105

@-@ millimeter (4 @.@ 1 in) transverse bulkhead . The magazines were protected by fore and aft transverse bulkheads 95 ? 140 millimeters (3 @.@ 7 ? 5 @.@ 5 in) thick .

The thickness of the armored deck ranged from 35 ? 40 millimeters (1 @.@ 4 ? 1 @.@ 6 in) on the flat and 60 millimeters (2 @.@ 4 in) on the slope . The sides of the conning tower were 100 millimeters thick while its roof was 50 millimeters (2 @.@ 0 in) thick . The main gun turrets had 25 millimeters (1 @.@ 0 in) of armor on all sides and on the roof . The barbette armor ranged from 25 to 100 millimeters (1 @.@ 0 to 3 @.@ 9 in) in thickness .

= = = Conversion = = =

Ibuki 's two aft turbine sets , the four aft boilers and the two innermost propeller shafts were removed with their propellers ; the exhaust uptakes for the remaining boilers were trunked together into a downward @-@ curving funnel on the starboard side of the hull . The space made available was used for avgas tanks (133 metric tons (131 long tons) in capacity) , additional fuel oil tanks , as well as bomb and torpedo magazines that had a capacity of 24 bombs and two torpedoes . The ship now could carry 3 @,@ 060 metric tons (3 @,@ 010 long tons) of oil , enough for 7 @,@ 500 nautical miles (13 @,@ 900 km ; 8 @,@ 600 mi) at a speed of 18 knots (33 km / h ; 21 mph) . The reduced power meant that Ibuki 's top speed was only 29 knots (54 km / h ; 33 mph) .

As part of the conversion , the existing superstructure was razed , a new hangar deck was built above the existing upper deck and a full @-@ length 205 @-@ meter (672 ft 7 in) flight deck was added . It had a maximum width of 23 meters (75 ft 6 in) , two 13 @-@ by @-@ 11 @.@ 6 @-@ meter (42 @.@ 7 by 38 @.@ 1 ft) aircraft elevators that serviced the single hangar and a small starboard island structure . The ship was bulged to improve her stability , which increased her beam to a maximum of 21 @.@ 2 meters (69 ft 7 in) below the waterline . Ibuki 's trials displacement increased to 14 @,@ 800 metric tons (14 @,@ 600 long tons) and the additional weight increased her draft to 6 @.@ 31 meters (20 ft 8 in) .

Initially , the ship was to have a very light armament of only 22 triple 25 @-@ millimeter gun mounts , controlled by eight Type 95 fire @-@ control directors , but this was modified in 1944 to substitute four 60 @-@ caliber 8 cm Type 98 dual @-@ purpose guns , mounted in two twin @-@ gun turrets , and four 28 @-@ tube launchers for 12 @-@ centimeter (4 @.@ 7 in) anti @-@ aircraft rockets for six of the triple 25 @-@ millimeter gun mounts and two directors (now Type 4s) . This gave the ship a total of forty @-@ eight 25 mm guns in 16 triple mounts . The Type 98 gun fired a 76 @.@ 2 @-@ millimeter (3 @.@ 0 in) , 5 @.@ 99 @-@ kilogram (13 @.@ 2 lb) projectile . It had a muzzle velocity of 900 ? 920 m / s (3 @,@ 000 ? 3 @,@ 000 ft / s) that gave it a maximum range of 13 @,@ 600 meters (14 @,@ 900 yd) , and a maximum ceiling of 9 @,@ 100 meters (29 @,@ 900 ft) . The entire turret weighed 12 @,@ 500 kilograms (27 @,@ 600 lb) and the guns could fire at a rate of 25 rounds per minute .

At the top of the island , Ibuki was planned to have a 2 @-@ meter (6 ft 7 in) rangefinder and a Type 21 radar . In 1944 , the Type 21 radar was moved to a retractable mount in the flight deck near the bow and a Type 22 surface search and a Type 13 air @-@ search radar were going to be installed on the island . The ship retained the Type 93 hydrophone system .

The ship 's air group was designed to consist of 27 aircraft , 15 Mitsubishi A7M Repp? (Allied codename : " Sam ") fighters and a dozen Aichi B7A Ryusei (" Grace ") dive / torpedo bombers .

= = Construction = =

Ibuki was ordered under the 1941 Rapid Naval Armaments Supplement Programme , and she was laid down at the Kure Naval Arsenal , Kure , on 24 April 1942 ; however , her construction was suspended on 30 June . Construction resumed a month later to allow the ship to be launched and clear her slipway for carrier construction . She was named after Mount Ibuki on 5 April 1943 as per the IJN 's naming convention for first @-@ class cruisers . The ship was launched on 21 May and construction was suspended in July while the IJN decided what to do with her . The navy considered completing Ibuki as a high @-@ speed replenishment oiler , but decided to convert her into a light

aircraft carrier on 25 August . While plans were prepared for the conversion , she was towed to the Sasebo Naval Arsenal , Sasebo , by the submarine tender Jingei 19 ? 21 December .

Completion of the ship was originally scheduled for March 1945 , but it was rescheduled for August because of delays . Work continued until 16 March 1945 , but it was ordered to halt when she was 80 % complete to concentrate on the construction of small submarines needed to defend Japan against an American invasion . She was anchored in Ebisu Bay , near Sasebo , and surrendered there on 2 September along with the rest of the Japanese military . Ibuki was scrapped in Sasebo Naval Arsenal Drydock No. 7 , 22 November 1946 ? 1 August 1947 .