

= Ibuki @-@ class cruiser =

The Ibuki @-@ class (??? , Ibuki @-@ gata) cruisers were the last class of heavy cruisers built for the Imperial Japanese Navy (IJN) . In order to save design time , the ships were essentially repeats of the earlier Mogami class . Begun during World War II , only the lead ship , Ibuki , was launched , but was in the process of being converted into a light aircraft carrier when construction was suspended in 1945 . She was scrapped beginning in 1946 . The unnamed second ship was scrapped less than a month after being laid down in order to clear her slipway for an aircraft carrier .

= = Design and description = =

The design of the Ibuki class was a minor improvement over the last pair of the Mogami class after those ships had been upgraded during the late 1930s . The main improvement was the replacement of the triple torpedo tube mounts in the older ships with quadruple mounts . They cost 60 @, @ 000 @, @ 000 yen each and had a crew of 54 officers and 822 enlisted men .

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

They were 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 that operated at a pressure of 22 kg / cm² (2 @, @ 157 kPa ; 313 psi) and temperature of 300 ° C (572 ° F) . The ships had a designed speed of 35 knots (65 km / h ; 40 mph) . They carried 2 @, @ 163 tonnes (2 @, @ 129 long tons) of fuel oil which gave them an estimated range of 6 @, @ 300 nautical miles (11 @, @ 700 km ; 7 @, @ 200 mi) at 18 knots (33 km / h ; 21 mph) . Electrical power was supplied by three 300 @-@ kilowatt (400 hp) turbo generators and two 200 @-@ kilowatt (270 hp) diesel generators .

= = = 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 , numbered one through five from the bow to the stern . 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 ° . They fired 125 @. @ 85 @-@ kilogram (277 @. @ 5 lb) projectiles at a muzzle velocity of 840 m / s (2 @, @ 800 ft / s) . They had a maximum range of 29 @, @ 400 yd (26 @, @ 900 m) at an elevation of 45 ° and the ship carried 128 rounds per gun . The secondary armament was to consist of eight 40 @-@ caliber 12 @. @ 7 cm Type 89 anti @-@ aircraft (AA) guns in twin mounts . They fired 23 @. @ 45 @-@ kilogram (51 @. @ 7 lb) projectiles at a rate between 8 and 14 rounds per minute at a muzzle velocity of 700 ? 725 m / s (2 @, @ 300 ? 2 @, @ 380 ft / s) ; at 45 ° , this provided 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 fired .25 @-@ kilogram (0 @. @ 55 lb) projectiles at a muzzle velocity of 900 m / s (3 @, @ 000 ft / s) ; at 50 ° , this provided 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 tubes , two on each broadside . The ship carried 24 Type 93 torpedoes , 16 in the tubes and 8 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 . The Type 93 torpedo , fueled by compressed oxygen and widely referred to in post @-@ war literature as the " Long Lance " , had three range / speed settings . It had a range of 20 @,@ 000 meters (22 @,@ 000 yd) at a speed of 48 knots (89 km / h ; 55 mph) , 32 @,@ 000 meters (35 @,@ 000 yd) at 40 knots (74 km / h ; 46 mph) , or 40 @,@ 000 meters (44 @,@ 000 yd) at a speed of 36 knots (67 km / h ; 41 mph) . Before Ibuki was launched , one proposal was made to replace the aircraft and their equipment with five quintuple Type 0 torpedo tube mounts . Two of these would be mounted on each side and the last on the centerline , but nothing was done .

== Fire control , sensors and aircraft ==

Two Type 94 fire @-@ control directors , one atop the bridge and the other abaft the funnel , were going to be fitted to control the main guns . They used range data received from three 8 @-@ meter (26 ft 3 in) coincidence rangefinders . Two of these were to be installed in turrets Nos. 3 and 4 while the primary rangefinder was mounted above the bridge . A pair of Type 94 high @-@ angle directors , one on each side of the bridge , were intended to control the Type 89 guns . Each director was fitted with a 4 @. 5 @-@ meter (14 ft 9 in) rangefinder . The 25 mm guns would have been controlled by two Type 95 directors mounted on the bridge .

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 Kure Type 2 aircraft catapults , one on each side of the aircraft platform . The ships would have carried a total of 122 powder charges for the catapults as well as four 250 @-@ kilogram (550 lb) bombs for the aircraft .

== Armor ==

The ships ' armor scheme was only slightly modified from the Mogami @-@ class cruisers . Their waterline armoured belt extended all the way down to the double bottom . It extended from the forward to the rear magazines below the fore and aft turrets and was angled inwards at the top 20 ° from the vertical to improve its resistance to horizontal shellfire . Over the machinery spaces , it was 100 millimeters (3 @. 9 in) thick at the top and tapered to 30 millimeters (1 @. 2 in) at the bottom . The outer ends of the fore and aft machinery compartments was protected by a 105 @-@ millimeter (4 @. 1 in) transverse bulkhead . On the sides of the magazines , the belt was 140 millimeters (5 @. 5 in) thick and tapered to 30 mm at the bottom . The magazines were protected by fore and aft transverse bulkheads 95 ? 140 millimeters (3 @. 7 ? 5 @. 5 in) thick . The steering gear and the rudder compartments had sides that consisted of 100 @-@ millimeter (3 @. 9 in) plates and their ends were protected by 50 millimeters (2 @. 0 in) of armor .

The deck above the steering gear and rudders was 30 millimeters (1 @. 2 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 . The ammunition hoists for the secondary armament were protected by 75 to 100 millimeters (3 @. 0 to 3 @. 9 in) of armor . The funnel uptakes were provided with 70 to 95 millimeters (2 @. 8 to 3 @. 7 in) of armor . There was no separate anti @-@ torpedo bulkhead as that function was performed by the lower extension of the belt armor .

== Ships ==

The two Ibuki @-@ class cruisers were ordered in November 1941 as part of the IJN 's Rapid Naval

Armaments Supplement Programme (????? , ????????????? Maru Ky? Keikaku , Suishi @-@ Junbi Dai @-@ Ichi Chakusagy? Kenkan Keikaku ?) . Both ships were laid down without names , just as Warships No. 300 and No. 301 , but the former was named Ibuki on 5 April 1943 .

No. 301 was ordered scrapped less than a month after she was laid down in order to clear her slipway for the carrier Amagi which was laid down on 1 October 1942 . After her launch , the construction of Ibuki was suspended in July 1943 while her fate was discussed . A possible conversion to a fast oiler was considered until the Navy decided on 25 August to convert her to a light aircraft carrier at Sasebo Naval Arsenal . Work on the conversion did not begin until the incomplete hull was towed to Sasebo on 21 December . It was originally intended to complete her in March 1945 , but this was extended until August . Construction was suspended on 16 March , when the ship was about 80 % complete , to allow for the construction of small submarines . Ibuki was scrapped at Sasebo from 22 November 1946 to 1 August 1947 .