

Center for International Maritime Security



ASIA-PACIFIC, CAPABILITY ANALYSIS

JAPAN'S IZUMO-CLASS HELICOPTER DESTROYER: AN AIRCRAFT CARRIER IN DISGUISE?

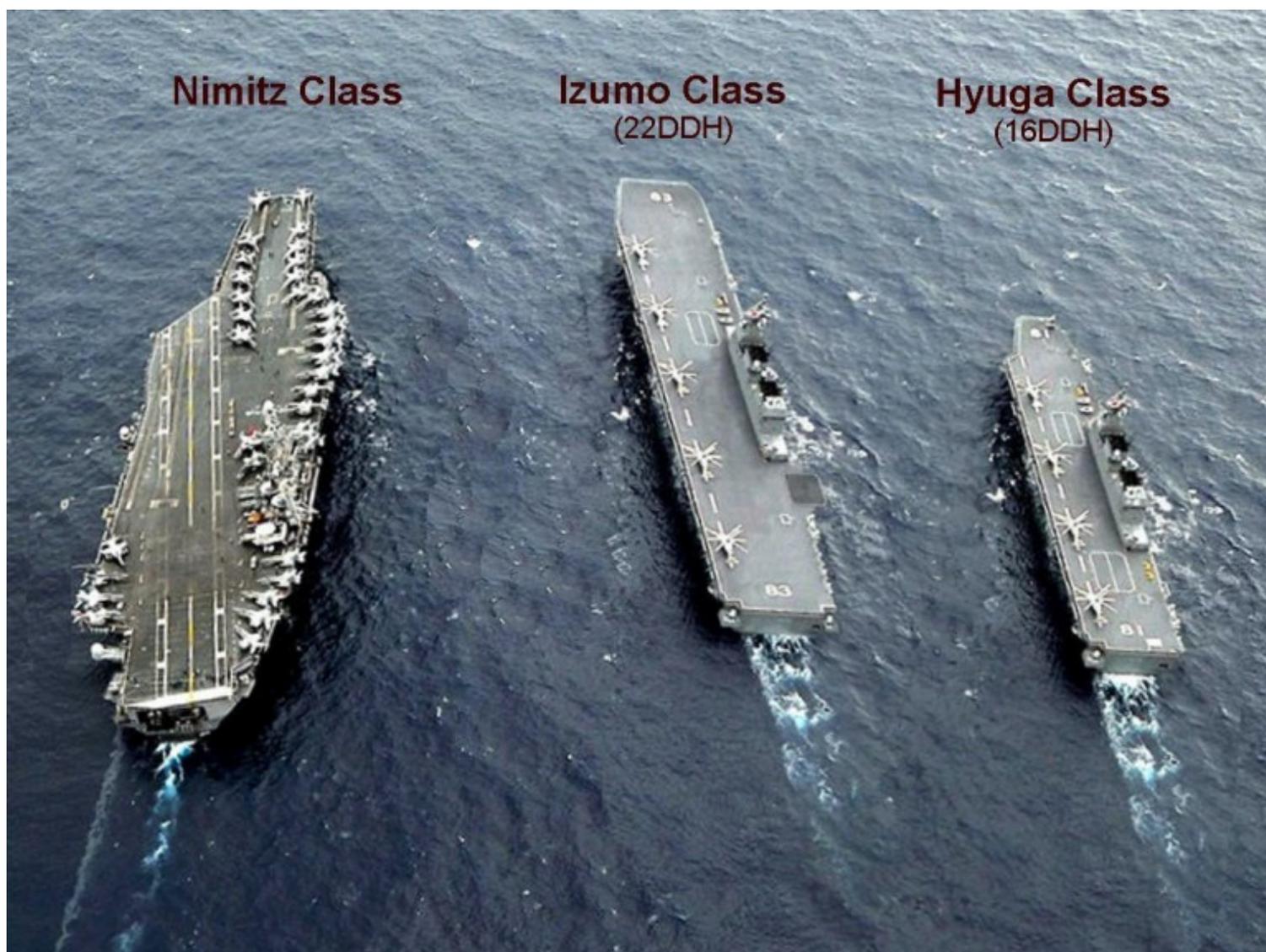
APRIL 11, 2016 | GUEST AUTHOR | 3 COMMENTS

By Matthew Gamble

The Land of the Rising Sun has been quietly strengthening its military capabilities and procuring advanced equipment amid the ongoing debate over whether to amend [Article 9](#) of the country's constitution. Though officially called the Japan Maritime Self-Defense Forces (JMSDF), the Japanese Navy boasts an impressive array of hard-

ware and if the country's ruling party has its way with the constitution, its capability will only get stronger.

To increase the potency of the JMSDF even further, the acquisition of aircraft carriers (CVs) would be a logical next step. Yet, as CVs can best be described as seagoing airbases with significant offensive capabilities, Japan's pacifist constitution prohibits their use in its navy. Destroyers (DDs) on the other hand rely on speed and maneuverability and are easily employed in defensive roles, criteria deemed acceptable under the Japanese Constitution. Therefore, to accommodate this unique political limitation, the Japanese have designated one of their latest vessels as a "helicopter destroyer" (DDH) but with capabilities akin to those of an aircraft carrier.



American Nimitz class supercarrier besides Izumo and Hyuga class vessels of the JMSDF.

Enter the vessel in question: the JS *Izumo* (DDH-183), [commissioned on March 25th, 2015](#). Officially classified as a \$1.2 billion “helicopter destroyer”, this warship is the largest constructed by Japan since the Second World War, and at first glance bears a striking resemblance to a light aircraft carrier. With an impressive length of 248 meters and a beam of 38 meters, the vessel is larger than short take-off and vertical landing (STOVL) carriers operating in the Spanish and Italian navies. Likewise, its fully-loaded displacement of 24,000 tonnes and 7.3 meter draft put the *Izumo* class in a category similar to that of the *Invincible* class carriers commissioned by the Royal Navy. Altogether, the scale of these vessels represents a major advance in Japan’s maritime defense capabilities, significantly increasing the country’s ability to project force.

Equipped with the latest in electronic warfare, fire control, and radar systems, the *Izumo* class has been designed with the battlefield of the 21st century in mind. [According to Janes Defense](#), the *Izumo* class will carry up to 14 helicopters- primarily Japanese-built MCH-101s and SH-60Ks equipped for anti-submarine warfare or search-and-rescue operations. For closer encounters, the *Izumo* is equipped with the Phalanx and SeaRam close-in weapons systems (CIWS), capable of defeating most forms of incoming ordnance.

Furthermore, the *Izumo* class boasts the exceptional capability of supporting amphibious assault operations as the ships have the capacity to embark up to 400 marines and approximately 50 light vehicles. However, unlike the American *Wasp*-class, the *Izumo* is not equipped with a well deck and relies on its compliment of helicopters to provide embarked marines with the ability to rapidly deploy in amphibious operations.



Izumo with helicopters ready on the flight deck.

The *Izumo* will be supplemented by the JS *Kaga* (DDH-184), launched in late-August 2015 and expected to be commissioned sometime in 2017. Named after the Japanese province, the second ship of the *Izumo* class has the dubious honor of sharing the same designation as the infamous IJN *Kaga*- an aircraft carrier that took part in the surprise attack on Pearl Harbor in 1941 and served with the Imperial Japanese Navy until scuttled at the Battle of Midway in 1942. Unsurprisingly, the choice in name has raised eyebrows given the current *Kaga*'s aircraft carrier-like appearance.

Though the *Izumo* and her sister ship *Kaga* lack catapults or a “ski-jump” to assist conventional fixed-wing aircraft (such as the F/A-18) during take-off and arrestor cables for their recovery, the potential for operating STOVL aircraft from these vessels is high. For instance, in addition to greater size, major alterations were made to the design of the flight deck from Japan's previous *Hyuga* class of helicopter destroyers. The new *Izumos* remove obstacles from the flight deck and rearrange equipment that would prevent the launch and recovery of fixed-wing aircraft. The CIWS system mounted on the foredeck of the *Hyuga* class has been moved well to the side, open-

ing up the much needed space necessary for fixed-wing operations. Moreover, the aft vertical launch silo has also been removed, allowing for greater ease of aircraft recovery. By and large, changes such as these are critical for allowing the vessel to operate fixed-wing aircraft.

Should Japanese leaders decide to include a compliment of fixed-wing aircraft on the *Izumo* class, STOVL or vertical take-off and landing (VTOL) aircraft would be necessary as the ship's basic design lacks the size of catapult assisted take-off barrier arrested recovery (CATOBAR) carriers. Though currently slated to be delivered to the country's air force, domestic [production of the Lockheed-Martin F-35A JSF is already underway in Nagoya](#). It is unclear, however, whether Japan will produce or purchase the F-35B- the model of the JSF with the STOVL capability necessary for the aircraft to operate from any *Izumo* class vessel.

To accommodate the JSF, a few key modifications to the class would be necessary.

Thermion coating, [like that used on the *Wasp* class](#), would need to be applied to protect it from the extreme heat created by the F-35's exhaust during vertical landing. Second, a ski-jump similar to those employed on most European carriers would likely be needed to assist the JSF during take-off, though this is not an absolute necessity as [preliminary testing on the *Wasp* class](#) has demonstrated. Moreover, since [Japan has ordered the V-22 Osprey](#), its addition to the ship's complement is likely. Should a complement of F-35's and V-22's be added to the *Izumo* and *Kaga*, Japan would boast an increased maritime strike capability, signaling Japan's increasing military power to its rivals.



A F-35B practices vertical take off and landing.

Overall, the capabilities of the new *Izumo* class "helicopter destroyers" represent a step up for the JMSDF. Though in their current configuration the vessels are not capable of fielding conventional fixed-wing aircraft, with minor adjustments and a

compliment of STOVL aircraft, the *Izumo* class would boast similar capabilities to light aircraft carriers currently serving around the world.

Given this potential, simply calling these ships “helicopter destroyers” could be construed as misleading, or even deceptive. Therefore, we can surmise that the classification is largely for political purposes, as the inherently offensive capability of aircraft carriers would run counter to the values espoused in Article 9 of the Japanese Constitution. Whether the JMSDF decides to further develop the capability of these ships has yet to be seen; however, the potential is there and serves as a warning to China and the DPRK that Japan is indeed a maritime power to be reckoned with.

Matthew Gamble is an International Relations student at St. Thomas University, Fredericton, New Brunswick, Canada. His interests primarily focus on the foreign policy of Eurasian states, and new developments in warfighting capability.

SHARE THIS:

 Email
  Tumblr
  Print
  Facebook 140
  LinkedIn 15
  G+ Google
  Twitter
  Reddit

 Pinterest 2

LIKE THIS:

 Like

Be the first to like this.

Related:

[Introducing the Izumo](#)
 August 6, 2013
 In "Capability Analysis"

[Japan's Izumo Helicopter Carrier Commissioned](#)
 April 2, 2015
 In "Asia-Pacific"

[More Than Meets the Eye in Asian Naval Race](#)
 August 29, 2013
 In "Capability Analysis"

 AIRCRAFT CARRIER
  AMPHIB
  DESTROYERS
  FEATURED
  IZUMO
  JAPAN
  JMSDF

3 THOUGHTS ON “JAPAN’S IZUMO-CLASS HELICOPTER DESTROYER: AN AIRCRAFT CARRIER IN DISGUISE?”



Fernando Cabo

APRIL 11, 2016 AT 6:25 AM

Thanks a lot for the post.

The case bears quite a resemblance to the “Aviation Cruiser” fake designation given by the Soviets&Russians to their Kiev+Gorshkov/Vikramaditya+Kutnetzov classes, as to allow them to comply with the international treaties that regulate the crossing of the Bosphorus strait and entering into the Black Sea.

Even some of the points raised in the post recall issues the Soviets had to face (such as the heat of potential VTOL operations on the deck). Funny that the F-35 based the development of its power-plant and other features on the Yak-141 (!!)

However, these Japanese vessels are some 30 meters shorter and half the size in displacement when compared to the Kievs. Being true that the forward part of the Kievs' hull was devoted to other weapon systems (a significant change occurred in this regard took place when Baku/Gorshkov was converted into INS Vikramaditya, as this space, which was cramped and limiting in the Soviet ships, was badly needed to accommodate more/bigger aircraft and optimize hangar operations,

Comparison with INS Vikramaditya in terms of size, capabilities and most importantly, air wing, can thus be very illustrative, moreover when both ships will face similar Theater of Operations and (who knows...) even potential adversaries.



CharleyA

APRIL 11, 2016 AT 8:09 AM

Has the Izumo's under deck structure been strengthened to accommodate the additional thermal, mechanical and acoustic stresses imparted by F-35B ops? Further mods need to be performed to support sustainment of the aircraft while underway. The brand new America class LHA-6 had to be refitted to support persistent operations, which cost over \$100M. Similar modifications are needed for the Wasp class. It's not simply a matter of enough open deck space.



Valerie Taylor

APRIL 11, 2016 AT 10:53 AM

It mentions the thermion coating