

JHSV PROGRAM hull 061

As a prototype vessel in the Joint High Speed Vessel (JHSV) program Swift's high speed and shallow draft demonstrate the craft as an ideal platform for the delivery of relief supplies and support of other platforms operating in the area.

Just as Swift performs today, the JHSV will be capable of transporting personnel, equipment and supplies over operational distances in support of manoeuvre and sustainment operations. It will be able to transport Army and Marine Corps company-sized units with their vehicles, or reconfigure to become a troop transport for an infantry battalion. This will enable units to transit operational distances while maintaining unit integrity, reducing the need for conducting RSO&I operations following offload.



Until such time that JHSV is online, HSV 2 Swift is available and operational now as a pre-cursor to the new vessels.

JHSV

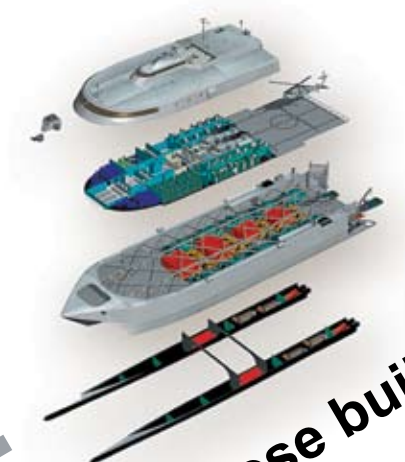
- Capable of transporting 600 short tons over 1200 nautical miles at an average speed of 35 knots or greater, in Sea State 3 (SS3).
- NAVSEA approved flight deck for helicopter operations.
- Helicopter Control Station to enable monitoring and control of air vehicle operations during all pre-flight, launch and recovery evolutions and during flight operations within visual range of the vessel.
- Three Decks: Mission, Flight and Accommodation.
- Troop & Crew accommodation: 150 in berthing / 312 in airline seating.
- Off-load ramp allowing vehicles to quickly drive off the ship.
- Shallow draught (under 15 feet) enabling operation in shallow waters.
- C4I space
- RIB/small craft launch & recovery ramp.

HSV 2 Swift

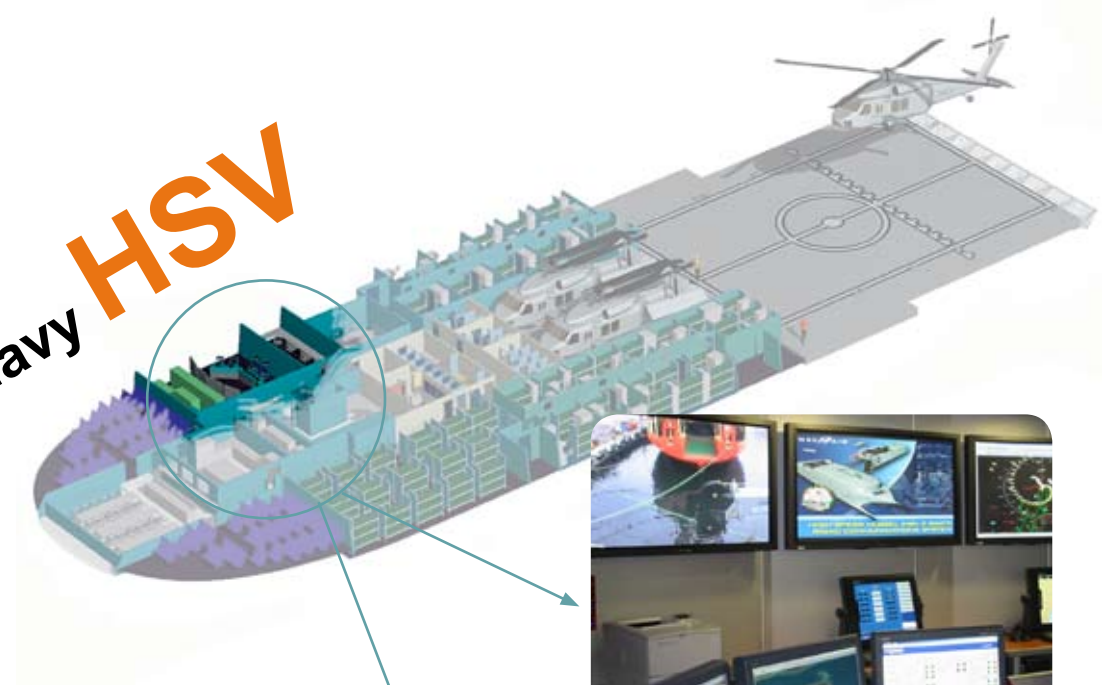
- Capable of transporting 500 short tons over a minimum of 1100 nautical miles at 35 knots or greater, in Sea State 3 (SS3).
- NAVSEA approved flight deck for helicopter operations.
- Helicopter Control Station to enable monitoring and control of air vehicle operations during all pre-flight, launch and recovery evolutions and during flight operations within visual range of the vessel.
- Three Decks: Mission, Flight and Accommodation.
- Troop & Crew accommodation: 107 in berthing / 250 in airline seating.
- Off-load ramp allowing vehicles to quickly drive off the ship.
- Shallow draught (under 15 feet) enabling operation in shallow waters.
- C4I space
- Crane (20tonne capacity) for RIB/small craft launch & recovery

HSV 2 Swift meets much of the criteria required by JHSV and in so doing delivers to users in the Department of the Navy and Department of the Army a continuing ability to effect a seamless transition to the next exciting stage of military development.

HSV 2 Swift



- purpose built Navy HSV



C4ISR

HSV 2 Swift incorporates a Command and Control (C2) facility designed to support an operational Mine Countermeasures Squadron Staff (MCMRON) in the conduct of operational mine countermeasures operations for the US Navy.

A secure multi-compartment space has been fitted including an equipment room on the mission bay to house high heat producing systems and to facilitate the mission bay configuration for 5 independent mission modules with full connectivity to the command centre. The main deck compartment is subdivided into four sections. There is the manned equipment space, a Combat Information Centre (CIC), a Mission planning and post mission analysis room, and a conferencing facility to be used by the embarked commander.

The C4ISR planning space has eight workstations to support planning, mission execution, and analysis of planned Naval experiments. The CIC has seven workstations with nine tactical displays currently

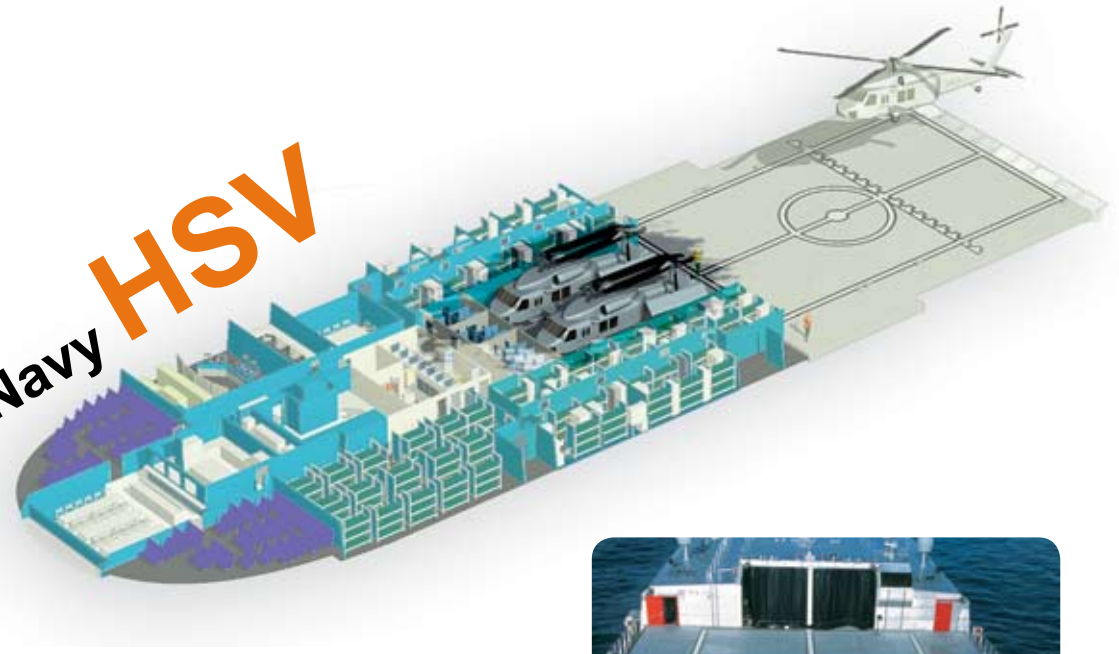
installed to support a Naval Commander in the execution of an operation or exercise. Each of the displays in CIC, and five of the displays in Planning can be switched to one of four 50-inch (127cm) large screen displays, located within CIC, to allow for the Tactical Action Officer (TAO) and embarked commander to maintain cognisance of the critical aspects of an ongoing mission. The last of the four sections in the Upper C4ISR space is a conference room with full briefing capabilities including the ability to display (using the overhead projector) one of the many tactical displays from CIC.

The C2 suite provides military and commercial satellite communication for both data and voice requirements. Additionally, there are transceivers for HF, UHF, and VHF secure military communication using a state-of-the-art 'all digital' switch for patching circuits to what appear as traditional Navy 'Red Phones'. These first of a kind tactical phones combine the added functions of a channel selector and amplified speakers into a single unit.



"Unlike Joint Venture, Swift from the beginning has been a Navy project. The spaces, equipment and everything else we needed were incorporated into the initial ship design. This ship is more adaptable, more capable and definitely more comfortable."
Lt. Cmdr. Daniel Harris, Swift, Executive Officer.

HSV 2S SWIFT - purpose built Navy HSV HSV



Helicopter Night Operations

The helicopter deck is designed for supporting operations of MH-60S Sea Hawk, CH-46 Sea Knight, UH-1 Iroquois and AH-1 Cobra helicopters.

A helicopter deck lighting system, compliant with NAVAIR requirements for day and night operations under instrument metrological conditions. Supplied by Raytheon the system provides the pilot with improved flight deck illumination, depth perception cues and obstruction definition. The system comprises deck lighting including overhead maintenance floodlights, line up lights, deck edge/perimeter lights, helo storage bulkhead wash floodlights and deck surface floodlights, as well as a Homing Beacon located high on a mast above the deck.

The lighting system includes provision for operational compatibility with night vision devices when required. The system also includes a Wave Off system, used to indicate to the pilot to abort the landing, and a Deck Status light system, used to control helicopter operations through a three light (red, amber, green) status system.

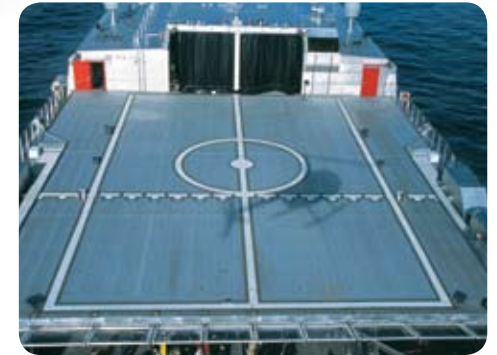
All systems are controlled through a number of control panels located in the Helicopter Control Station where the Helicopter Control Officer has a full, uninterrupted view of the landing area.

A Stabilised Glide Slope Indicator provides well-defined visual cues identifying the optimum glide path through the use of an optical device projecting three beams of coloured light to show the pilot of an approaching helicopter the correct glide path to the flight deck. The system is electro/hydraulically stabilised to keep the lamp and lens assembly fixed against the pitch and roll of the ship.

Helo Shelter

Swift features a helicopter shelter located forward of the main helo flight deck, in the centre of the vessel. The shelter provides storage for two helicopters, MH-605 or equivalent. Rotors are folded back to allow the helos to be positioned close by, side to side.

The shelter / garage space is enclosed on three sides and features a mobile weather curtain across the open rear through which access is gained to the flight deck. The shelter is a special category rated space with 60 minute fire.



protection requirement. AFFF water/foam drenchers provide extinguishing capability in the event of a fire within the shelter. The interior walls feature a composite structural fire protection product.

HSV 2S SWIFT - purpose built Navy HSV

Helo Control Station

Swift is the first high speed vessel fitted with a flight deck meeting the requirements of Air Capable Ship Aviation Facilities Bulletin 1H for Level I Class 2A for MH-60S, CH-46, UH-1 and AH-1 helicopters.

An integral part of this type of operation is a control station where the helo control officer can see the whole of the flight deck at all times from his work station. To achieve this Incat placed the Helo Control Station (HCS) at the aft end of the superstructure immediately outboard of the helo storage area. The HCS was recessed into the roofline of the superstructure to minimise the overall height while maximising the internal volume of the space.

The aft and outboard face of the HCS has large tinted windows fitted with wipers and washers. These windows



are sized to maximise the control officer's view of incoming/outgoing aircraft on landing/take off.

Instrumentation and controls at the control officer's fingertips include:

- Directional lighting and surface lighting of the helo deck.
- Internal communication between the HCS, wheelhouse, fire fighting stations and fuel pumping stations.
- External communications with operating aircraft.
- Controls for alarms and PA systems.

Special emphasis was placed on the position, lighting and direction of the instrumentation to ensure the HCS was compatible with NVD night operations on the helo deck. The result being a highly practical and ergonomic working platform for the personnel responsible for flight operations on Swift.



"The cargo was only touched twice. Normally we'd have to load a truck with the cargo, offload it at the airport, load it back onto an aircraft, fly it to its destination, offload it, and move it by truck to the ship, where it's delivered to the ship and finally loaded aboard. Instead of all that, Swift can do the same job, without stressing our intra-theater aircraft."

Cmdr. Rob Morrison, HSV 2 Swift Commanding Officer.

HSV 2 SMIFF - purpose built Navy HSV

Berthing

- Permanent Berthing: for 107 pax (40 assigned to crew, 3 to technical reps)
- Modular Berthing: 87 racks (temporary racks replace 122 seats)

Galley

- Designed to feed 100 pax A-rations for 10 days
- Capability to feed 250 pax for extended periods using UGRs

Seating

- Reclining business class airline style
 - Permanent seats: 128,
 - Temporary seats: 122 - replaces 87 racks)
 - Seating area equipped with AV system

Medical Space

- Operating table and refrigerator for meds
- Separate head w/ shower, basin and toilet

