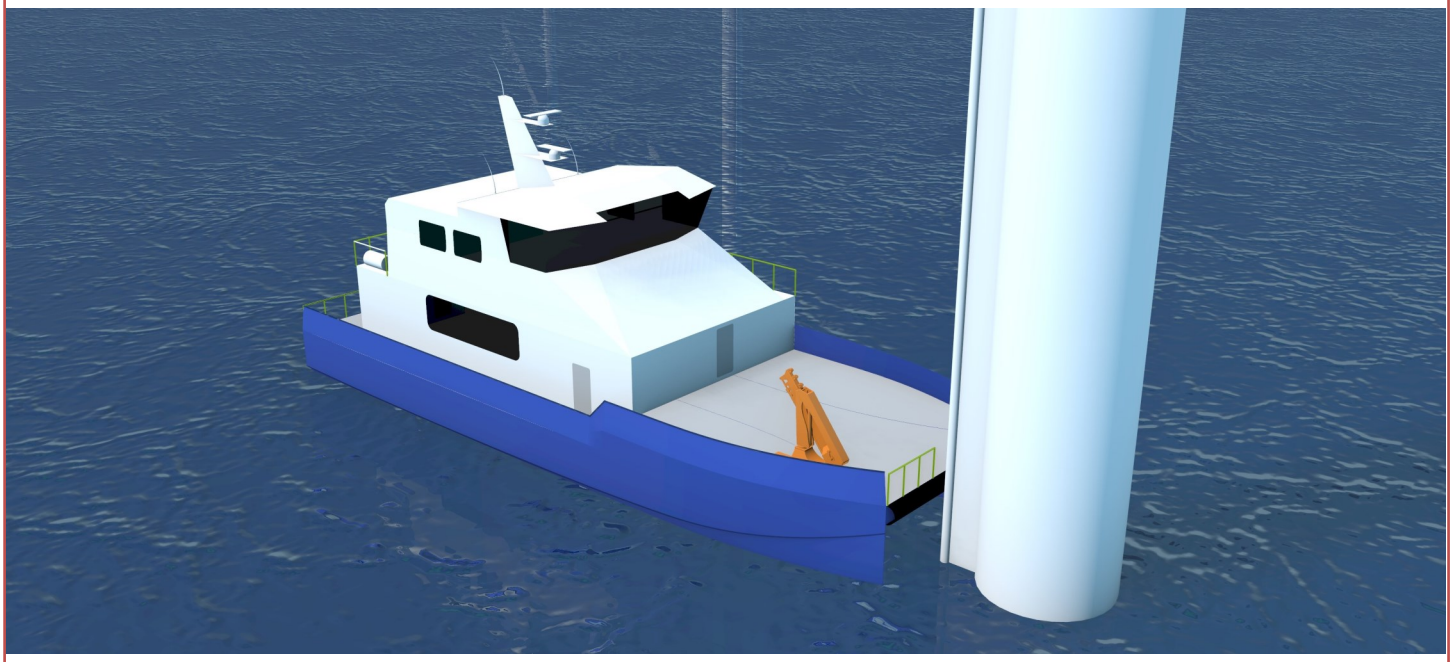
RGBD Class High-Speed CTV

Hybrid-Electric Crew Transfer Vessel



Purpose

This crew transfer vessel (CTV) is designed specifically for meeting the demands of the growing American Offshore Wind Industry. As of May 2023, the U.S. Department of Energy expects new construction of up to 50 MW of generating capacity to be installed on the U.S. East Coast.

Mission

The CTV's mission is to deliver technicians, equipment, and components to offshore wind turbines. The RGBD CTV completes its mission while reducing emissions and underwater radiated noise.

Main Particulars

L.O.A	91.6 ft
Beam (overall)	33.0 ft
Beam (per hull)	11.5 ft
Displacement	153 LT (Full Load)
Draft	5.5 ft

Performance

Max Speed	25 kts
Cruise Speed	18 kts

Capacities

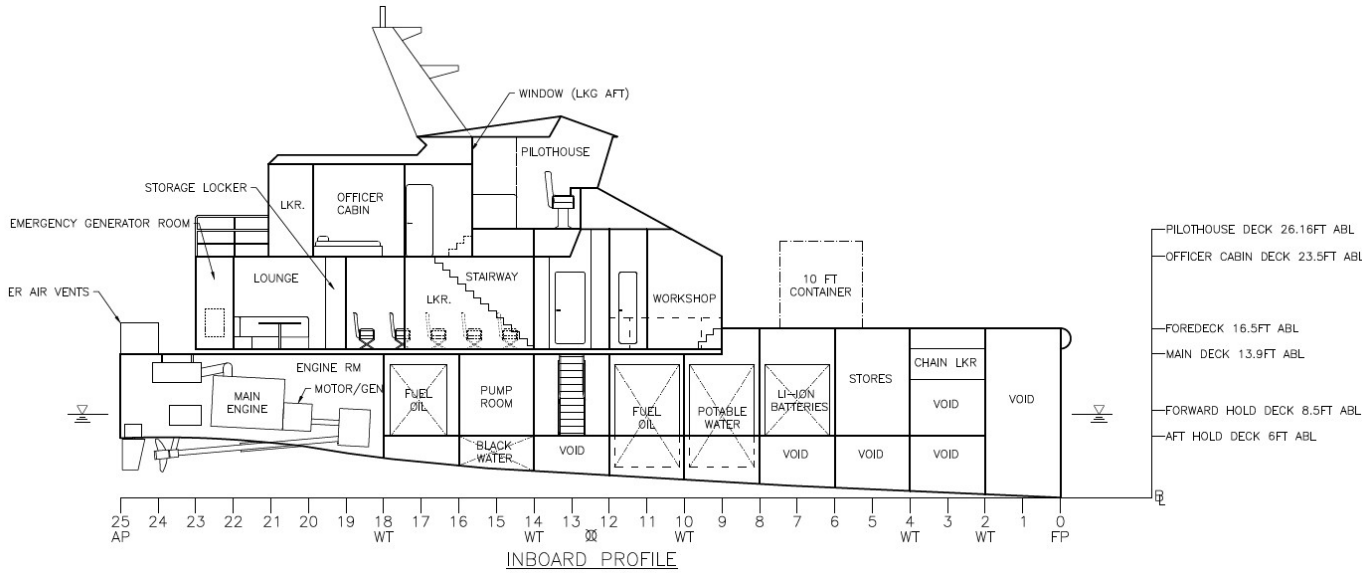
Technicians	30 persons
Complement	6 persons
Cargo	20 LT



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ClassNK

Designed to ClassNK



INBOARD PROFILE

Features

Hybrid Electric Drivetrain

The motor/generators can be used to propel the vessel either independently or in parallel with the main diesel engines. During transit at high speed, the motor/generators take power from the main engines to charge the battery banks. The result is reduced fuel consumption, CO_2 emissions, engine wear, and underwater radiated noise.

Technician Workshop

The RGBD CTV includes a 150 ft^2 workshop where crew and technicians can service vessel and wind turbine components. This space can also be repurposed depending on the customer's needs.

Active Bow Fendering System

The active bow fendering system allows the CTV to interface with wind turbines and other vessels in conditions up to Beaufort Sea State 4.

Large 950 ft^2 Foredeck

The spacious foredeck easily accommodates two 10 ft containers without impacting crane or crew transfer operations.

Deep Axe Bow

The wave piercing axe bow is designed to reduce pitching accelerations in heavy weather — resulting in a more comfortable ride for crew and technicians.

Propulsion

Main Engine	2x Caterpillar C32 (1450 hp ea.)
Electric Motor/Generator	2x Transfluid HM2000 (~ 400 hp ea.)
Propeller	2x 40 in Diameter Controllable Pitch Propeller
Bow Thruster	Sleipner SH1000 Ø513 BA80 (1000 kg Thrust)

Electrical

Li-ion Battery Bank	1.32 MW-hr Cap.
Emergency Generator	Caterpillar C2.2 (25 kVA)
Shaft Generator	(See Propulsion Information)

RGBD

The Team



Rayne Duff

- **Hometown**: Virgin Islands
- **Work Experience**: Elliot Bay Design Group, Snow Boatbuilding, Military Sea Lift Command, New England Boat Works
- **Recreation**: Dinghy and Offshore Sailing
- **Career Plans**: Naval Architecture in the Pacific Northwest



Gunnar Nee

- **Hometown**: Cohasset, MA
- **Work Experience**: Gilbert Associates, Stolt Tankers, GD Electric Boat
- **Recreation**: Offshore Sailing
- **Career Plans**: Naval Architecture



David Sir

- **Hometown**: Torrance, CA
- **Work Experience**: Metal Shark Croatia, Military Sealift Command, GD NASSCO
- **Recreation**: Surfing
- **Career Plans**: Naval Architecture and Master's Degree



Burke Kanemasu

- **Hometown**: San Diego, CA
- **Work Experience**: Impact Naval Architects, Aurora Marine Design, Chevron Shipping, Westport Yachts
- **Recreation**: Sailing and Surfing
- **Career Plans**: Naval Architecture or Law Degree