

'Expeditions IV'

Catamaran passenger ferry for Hawaii



When Steve Knight, CEO of the Maui, Hawaii, based Expeditions passenger ferry service and tour group, was asked what sold their company on their new Teknicraft catamaran, he replied in no uncertain terms. "The hull design is the feature," he said.

Indeed, it is the unique hull, designed by Nic de Waal of New Zealand, that gives the Teknicraft catamaran its excellent sea-keeping ability, high fuel efficiency, low wake wash, and a comfortable ride for passengers – even in inclement weather. The new 19.7 metre long by 7.14 metre beam 'Expeditions IV' Teknicraft catamaran, which will serve as an inter-island 149 passenger ferry across the Auau Channel between Maui and Lanai, is just what the folks at Expeditions were looking for.

"We experienced the first Teknicraft ride," said Knight, "with Alex Brodie's boat down in Ventura, California." Last autumn, Matt Mullett, CEO of All American Marine, and his partner, Pat Pitsch, flew down and went out for the day on the Island Packer's Islander Teknicraft catamaran with Knight and Bill Caldwell, Expeditions' general manager, to test the design.

"Steve and Bill were looking particularly at how a Teknicraft vessel handles in following seas," said Mullett. The Channel Islands' seas, where wind chop can reach 4-6 feet, was the perfect place to see the Teknicraft's ability to handle a range of conditions, as it is in rough seas that the hull design stands out. Its wedge-shaped wave piercer helps slice through water, and the high tunnel between the sponsors allows wind waves to travel freely down the centre. Horizontal steps along the inside of this tunnel also break up solid water into a spray, creating a high-density medium that cushions the passengers' ride.

"The stability and control in the way it handled was what we were looking for," said Knight. "That's when we really decided on going with the Teknicraft hull; we actually made the decision that day."

"Because of the design," added Knight, "consequently you get superb fuel economy. Our present vessel is burning about 2,800 litres of fuel a day on five round trips to Lanai.

That's approximately 190 litres an hour. With our new Teknicraft design, we'll be burning approximately 95 litres per hour doing more. We can actually put more people on the boat than we could with our present vessel, and we can maintain a more consistent cruising speed.

The 'Expeditions IV' is driven by a pair of Detroit Series 60 engines, each drawing from two 1,741 litre fuel tanks and delivering 552kW at 2,300rpm. Twin Disc MGXS 114-A Quickshift gears with a 2.5:1 ratio turn the AQ22 shaft and 910mm by 990mm five-blade propellers for a maximum speed of 28 knots (lightship) and a cruising speed of 22 knots at 84 per cent power (full load).

Knight and Caldwell had very specific ideas about what they wanted in the 'Expeditions IV'. "They were great working with us. We were happy with All American right from the beginning," said Knight, who visited the Washington based shipyard that holds exclusive North American rights to build the Teknicraft design at least monthly to offer his direction on the custom work. As a result of his and Caldwell's input, said Knight, "We were able to achieve a boat that is exactly what we wanted."

"It was a pleasure working on this project with two great guys who brought a wealth of knowledge to the planning process," said Mullett. "This is the first vessel that we built from start to finish in our new 2,140m² production facility. The overhead cranes gave us the ability to construct the cabin separate from the hull, which shaved two months off our typical production timeline."

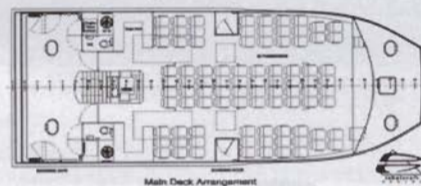
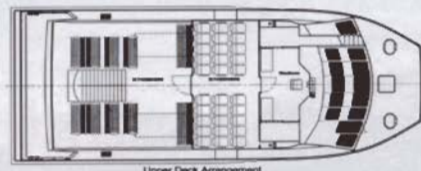
With the Teknicraft design, said Knight, "We've got increased passenger capacity, fantastic fuel savings, and a better speed range."

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Power comes from twin Detroit diesels



'Expeditions IV'

SPECIFICATIONS

Type of vessel:	Catamaran passenger ferry
In survey to:	USCG Subchapter T
Owner:	Hone Heke Corp.
Operator:	Expeditions, USA
Designer:	Teknicraft Design, New Zealand
Builder:	All American Marine, USA
Construction material:	Aluminium
Length overall:	19.71 metres
Length waterline:	17.98 metres
Beam:	7.14 metres
Draught:	1.73 metres
Tonnages:	39NRT, 31DWT
Main engines:	2 x Detroit Diesel Series 60, each 552kW at 2,300rpm
Gearboxes:	Twin Disc MGXS114-A Quickshift, 2.5:1
Propulsion:	5-blade propeller, 910mm by 990mm
Maximum speed:	28 knots
Cruising speed:	22 knots
Generators:	2 x Kohler 20EOZ, each 24kW
Radar:	Furuno
Sounder:	Furuno
Radio:	Icom
Autopilot:	Simrad
Seating:	Beurteaux
Paints/coatings:	Awlgrip
Capstan/windlass:	Maxwell WVC2200
Fuel capacity:	3,483 litres
Freshwater capacity:	416 litres
Passengers:	149
Crew:	3