

'Tusa 5'

By MIKE BROWN

Impressive Barrier Reef dive boat from New Wave Catamarans

New Wave catamarans, of Morningside on the Brisbane River, has been in business for less than five years but has already built a considerable reputation.

Eight sizeable vessels have been delivered complete, plus three kits for 28-metre vessels to Hong Kong, and the healthy state of their order book would be the envy of many other yards.

The latest delivery is a 24-metre aluminium dive boat, 'Tusa 5', to be based in Cairns. Resembling a fast ferry more than a traditional dive boat, it combines exceptional space and comfort with vastly improved economics over its predecessors.

Previously, the owners operated two FRP monohulls, with combined passenger numbers similar to 'Tusa 5's' 65 persons. The owners had two main reasons for replacing them with a single catamaran: running costs, and the irritation of seeing catamarans passing them when the weather piped up.

'Tusa 5' has the same fuel burn as the larger monohull. Designer Paul Birgan modestly accepts part of the credit for creating a slippery hull (whose properties have been proven by nine near sisters) but praises the economy of the twin 496kW MTU Series 60 main engines. At the operating speed of 21 knots (full load maximum is 27 knots, which exceeded contract by two knots), each engine consumes 80 litres per hour.

With a measured length under 24 metres, and power under 500kW per motor, under Australian rules the vessel may be captained by the holder of quite modest qualifications.

The ability to maintain speed with comfort is a basic marketing tool: 'Tusa 5's' owners guarantee dives at each of three Great Barrier Reef sites during the day. This vessel is able to maintain 75-minute transit times to the first dive site.

Slick handling of 65 divers and snorkellers is also vital in time-saving, and New Wave facilitated this with a custom hydraulic platform at the transom. The main platform lowers, followed by the hydraulic stairs once the platform is locked in place. Water entry and exit for the divers is easy and fast. Once the divers are back on board, the tender is stowed on the platform and raised. No davit is needed.

'Tusa 5' is surveyed for 100 passengers, so there is abundant space for the normal complement. 22 of the seats are on the after deck, but all shaded by hardtop. Within the air-conditioned main deck structure the seating includes a sunken lounge forward, and space is left over for self-serve hot food facilities from a BAIN MARIE. Next deck up is a VIP lounge, something unusual in Australian vessels, with open deck aft.

To cope with the air demands of 65 divers, with three dives each, 'Tusa 5' is fitted with a comprehensive cylinder re-charging system. The massive compressor output supplies air to 60 tanks at a time.

Vessel size is a selling point for Great Barrier Reef dive trips, with many of the potential customers being very infrequent sea goers who can see safety and steadiness in a larger vessel. Although length limited for manning reasons, 'Tusa 5' has a massive presence on the water.

Ugly vessels tend to be less popular, and 'Tusa 5' has a great advantage here. Despite the large quantities of enclosed space, Paul Birgan has created a striking and well-scaled profile.

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'Tusa 5'	
SPECIFICATIONS	
Type of vessel:	Catamaran ferry, dive boat
Class:	USL 1C
Home port:	Cairns, Australia
Operator:	Tusa Dive, Australia
Designer:	Sea Speed Design, Australia
CAD software:	Maxsurf
Builder:	New Wave Cats, Australia
Construction material:	Aluminium
Length overall:	24.5 metres
Length waterline:	23.1 metres
Length bp:	23.4 metres
Beam:	7.66 metres
Draught:	1.75 metres
Depth:	2.5 metres
Displacement:	50 tonnes
Tonnage:	110GRT
Main engines:	2 x MTU 496kW series 60
Gearboxes:	2 x Twin Disc 5224A
Propulsion:	Rogers and Lough propellers
Generator:	Cummins 4BT 3.9 litre 60kV
Steering system:	TMQ electric hydraulic
Maximum speed:	27 knots
Cruising speed:	24 knots
Hydraulic equipment:	TMQ/NWC
Electronics supplied by:	TMQ
Depth sounder:	JRC FF50
Radio:	Icom
Autopilot:	TMQ AP55
Compass:	100mm with card
GPS:	Lorenz Magnum pro
Plotters:	Lorenz Magnum pro
Capstan/Windlass:	Muir 3500
Paints/coatings:	Jotun
Safety equipment:	SAM Alan
Liferafts:	4 x RFD 25-person
Hold capacity:	Light stores
Fuel capacity:	2 x 1750 litres
Fuel consumption:	150l/hr
Freshwater capacity:	2 x 1,000 litres
Crew:	5 persons
Passengers:	95 divers

