Two Kirby Naiads for WA Sea Rescue

By MIKE BROWN

Sea Rescue groups in Western Australia have, for the most part, used conventional, usually aluminium hulled, vessels for rescue and towing work. In the past couple of years there has been a strong trend towards rigid inflatables due partly to duty of care concerns, and, probably, mostly to wanting the best vessel for extreme conditions.

Kirby Marine's Naiads have been the favoured vessels, with deliveries made to the groups at Albany, Broome, Margaret River, Naturaliste and Denmark, plus the latest pair for Bremer Bay and Walpole. With the exception of Broome, all these locations face the Southern Ocean and are subject to extremes of weather and sea. Walpole features a nightmare bar crossing.

The duty of care was in the forefront of the WA Fisheries Department's decision to order Naiads for their inshore patrols. Having people afloat all day in small craft could lead to long-term damage to backs and knees, quite apart from the risk of damage in occasional severe conditions. Sea Rescue's concerns were similar, in their case putting volunteers at risk and more frequently in extreme conditions.

As Kirby Marine's Rob Kirby himself says, "It's all about reducing accelerations and decelerations, and for that you need deadrise. You just can't achieve it with a small conventional hull and still have acceptable stability." The aluminium hulls of the 8.5-metre Naiads for Bremer Bay and Walpole have the extreme deadrise of 27 degrees at the transom, and very sharp and shapely bows. And, of course, the inflatable collar that restores the stability and adds enormous reserve buoyancy.

The hull bottoms have the two steps that have featured in recent Naiads. Tiny compared with those on classic speedboats, they reduce wetted surface area at speed and ease propeller loads. Twin 168kW Yamaha four-strokes power the boats and, considering their weights of 2.4 tonnes, the top speed of over 49 knots suggests assistance from the steps.

The 600-litre fuel capacity gives a range of 275 nautical miles at 33 knots, an astonishing cruising speed for a relatively leisurely 4,000rpm.

Layout of the Naiad is cuddy cabin, leaving the major share of length to the cockpit. This is sheltered by a fabric awning spread over a permanent framework, chosen over a hardtop for weight saving reasons. Although no compromises were made in the vessel's massive structural strength, overall weight was a consideration. One aim was to keep trailing weight within the capabilities of an ordinary four-wheel drive for deployment to emergency launching sites.

A conspicuous feature of the cockpit is the heavy-duty towing post. The towing task was one reason beyond pure speed for selecting the generous power. To protect the Yamahas from fouling ropes or from impact damage, a heavyweight cage has been built around them.

The driving position shares the cockpit awning and gains extra protection from wrap-around glass and plate work carried high. A pair of standard Naiad seats face the windscreen. These are a cross between the traditional rigid-inflatable motor bike style and conventional boat seats, giving good security sitting or standing.

Rob Kirby makes the interesting point that the Naiad's limiting factor is its occupants' endurance rather than the vessel itself – which he is confident is close to unbreakable. With this in mind, future vessels may be offered with the world's most effective suspension seats sourced from Sweden. One current crew comfort is a fatigue membrane installed under the cockpit carpet.

Electronics have been simplified from earlier SAR Naiads, which among other features duplicated many functions for coxswain and navigator. Instead, a single screen, enlarged to 305mm, is centrally mounted. This displays the functions of the Raymarine sounder, chart plotter and GPS. The operational truth is that the coxswain's driving work load meant he or she made little use of the previous exclusive display.

A practical electronic touch allows the three radios to be routed through the PA system, ensuring calls are not drowned by motor noise. There is remarkably little noise from the hulls, due to solidity of structure and the foam filling that has been added. Kirby's reason was less sound insulation than an extra margin of safety – making the vessel its own life raft.

Tailoring of the boats' detail included enlarging the cable lockers to take 200 metres of cable – a need of these boats' operating areas. Both boats also have twin side boarding ladders, cunningly folding up to merge with the gantry structure.

Not a part of the vessels, but unquestionably part of the total systems, are the trailers. Massive, like the vessels themselves, they too are built by Kirby. They feature the auto lock and unlock system Kirby developed for abalone boats operating from surf beaches: once the trailer is backed into place the coxswain controls the whole operation. Speed is everything for beach launch and recovery, and this trailer gives it.

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"Rescue boat"

SPECIFICATIONS

Type of vessel:	Rescue boat
Owner:	WA Fisheries Dept
Builder:	Kirby Marine, Western Australia
Length overall:	8.5 metres
Beam:	3.0 metres
Main engine:	2 x 168kW Yamaha 4-stroke
Gearbox:	4.5:1 reduction
Maximum speed:	49 knots
Cruising speed:	33 knots
Fuel capacity:	600 litres
Range:	275 nautical miles