



ROBUST VESSEL boosts marine science

BY LINDSAY WRIGHT

The *Ikatere's* speed and manoeuvrability mean scientists on board spend less time in transit and more on gathering research.



The command and control station

The marketing adage “under-promise, over-deliver” proved very true when the National Institute of Water and Atmospheric Research, or NIWA, took delivery of their inshore research vessel *Ikatere* from the boatbuilder, Q-West.

“She gets up and goes, all right,” said Q-West’s managing director, Colin Mitchell. “The design brief was for a service speed of 25 knots, but she was doing 27-28 knots on trials and they had 36 knots out of her at one stage.”

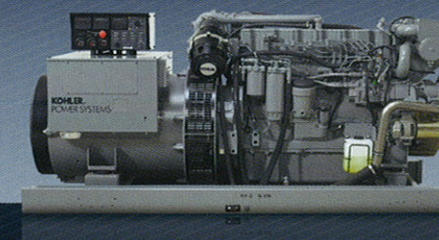
The catamaran also fulfills the design brief of being highly manoeuvrable, capable of working in inlets and shoal waters – or anywhere else within coastal survey limits – and supporting the research and data recording requirements of up to 15 different scientific disciplines.

Teknicraft designed a 13.9m vessel with their signature asymmetrical hulls and a fixed foil between them to provide lift.

Following her trials, *Ikatere* (“swift fish”) was delivered to her Wellington base, then steamed to the Bay of Islands so scientists could begin taking water quality samples.

KOHLER®

Built to thrive in the most rugged conditions.



Presenting KOHLER® commercial marine generators.

Meet ABS, DNV, Lloyd's BV, GOST and CE classifications

Easy to install with external connection points

Wide range of output levels from 40 to 500 kW

Paralleling and PTO options available

NZ Dealers

Opua, Whangarei, Auckland Westhaven, Tauranga, Wellington, Kaikoura, Invercargill

TRANSDIESEL®

Rotorua Ph +64 7 345 6657
Auckland Ph +64 9 277 8857
Westhaven Ph +64 9 379 0260
Christchurch Ph +64 3 349 8738

www.transdiesel.com

e-mail: Kohlermarine@transdiesel.co.nz

Kohlerpower.com.sg



TRANSDIESEL®

IRON MEN

RELIABLE HIGH PERFORMERS FOR WORK BOATS

MARINE DIESEL ENGINES



ROBUST / RELIABLE / PROFITABLE

SPARES // SALES // SERVICE

Rotorua	07 345 6657
Auckland	09 277 8857
Christchurch	03 349 8738
Orams Marine	09 379 0260

www.transdiesel.com



So-Pac marine

QUALITY MARINE PRODUCTS FROM AROUND THE WORLD

Visit www.sopac.co.nz to view
our 2010 catalogue online

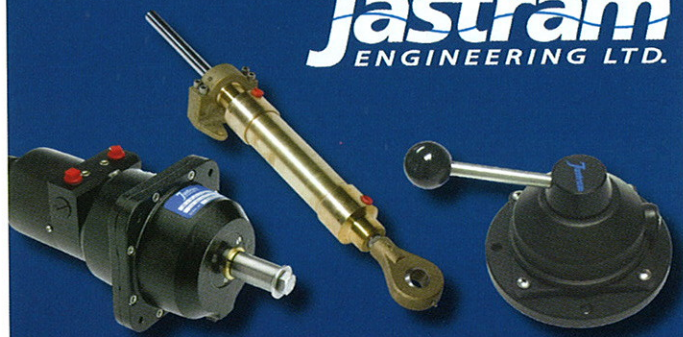


WESMAR

THRUSTERS TO 700HP
AND STABILIZERS TO
30sq ft

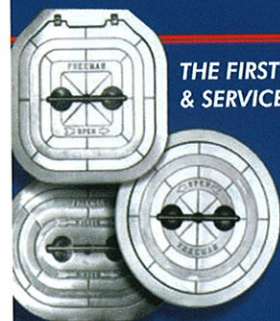


Jastram ENGINEERING LTD.



COMMERCIALY RATED STEERING
SYSTEMS

THE FIRST NAME IN PERFORMANCE, EXPERIENCE
& SERVICE FOR WATERTIGHT DECK HATCHES...



FREEMAN MARINE EQUIPMENT, INC.

VIPS75

8-10 Volkner Pl, Albany, North Harbour
Ph: 09 448 5900 | Fax: 09 448 5911
info@sopac.co.nz | www.sopac.co.nz



Heavy weather is no obstacle



The flybridge has easy access

The name *Ikatere* has an illustrious history in New Zealand marine research. It was the name of the first research vessel built for the New Zealand Marine Department, a 19.3m kauri planked inshore trawler which is still around today as a pleasure boat in Napier.

The new *Ikatere's* hull is plated on the bottom with 5mm 5083 marine grade alloy supplied by Ulrich Aluminium. Two Cummins QSC 8.3-500 engines producing 372kW at 2600rpm and driving Hamilton 322 jet units provide the get up and go.

Due to the asymmetric shape of the hulls, which prevent using a straight shaft to drive the jet units, two offset 1.5m intermediate shafts use a universal joint and Vulkan flexible coupling. The engines are under the floor just aft of the deckhouse, and Seaworth vents mounted inside the bulwarks make sure they get plenty of air without any salt spray getting below.

Two 1000 litre tanks integral to the hull are located just for'ard of the engineroom in a dedicated tank room, which also holds a 300 litre polyethylene freshwater tank.

Down in the engine space, an 11kVa Onan genset supplies power for an AC hydraulic pump to supply quick-release hydraulic connections fitted fore and aft. Any hydraulic gear, such as pumps and winches, can be carried to where it is needed on board.

The *Ikatere* was designed and built to be as versatile as possible. Extra cable trays inside are all accessible so scientists can plug in their computers and monitors and set up other equipment. "Everything just comes apart



The gallows in action



Galley and saloon

so they can adapt it to whatever they want," Colin said.

On the deck, *Ikatere* has a moon pool, a tube welded through the boat from deck level to the hull to allow transducers to be deployed quickly and easily.

The moon pool exits just aft of the foil on the bottom and a yacht mast section is fixed from the aft side of the deckhouse down the for'ard side of the pool so gear can be lowered using a rope tackle. An A frame is mounted on the stern for deploying sample nets or other gear and an hydraulic winch looks after all the heavy lifting.

Ikatere was built to coastal survey and is operated by a skipper and one crew, but can accommodate up to 10 people within restricted coastal limits. The interior is fitted out in light and flexible Ayres panels, which have become a Q-West standard.

The panels use an aluminium honeycomb core with a paint finish bonded to the outsides and can be moulded to fit neatly around corners with a tidy radius. The panels and big Seamac windows give the interior a spacious and airy feel with good all-round visibility.

Inside the aft door is a small external laboratory with a galley to starboard and dinette to port, which converts into a bed. There are four more berths in the foc'sle, accessed down a few steps from the for'ard end of the wheelhouse and access to the tank room under the stairs.

Safety equipment includes an RFD Pacific six-man liferaft, flares and immersion suits.

The helmstation is for'ard in the wheelhouse. Blue Arrow controls provide a seamless flow of orders from the skipper to the steering gear and engine/jet ▶

... the future of marine lighting

Hella marine

Vision and Innovation

'Fit & Forget' LED technology for commercial vessels.
Manufactured in New Zealand and proven worldwide.
Power Saving, Ultra Durable and Ultra Safe.

www.hellamarine.com



LED Navigation Lamps
LED Deck Floodlighting
LED Engine Room Lighting
LED Interior Lamps
LED Courtesy Lamps

Ultra low power consumption
Completely sealed
Impact and vibration resistant
Pre-wired with marine cable
UV and corrosion resistant
Internationally certified

VPW/B11



www.hellamarine.com
info@hellamarine.com
+64 9 577 0000

Hella marine
Vision and Innovation



Sea Recovery
REVERSE OSMOSIS DESALINATORS®

Water water everywhere...



**and every drop you can drink,
shower, make ice, wash,
hose down and never run out**

Cruise where you want, when you want, without a fresh water worry in the world. Sea Recovery manufacture water makers for all types and sizes of vessels guaranteeing fresh, safe, crystal clear water 24/7.


LIGHTHOUSE
MARINE EQUIPMENT
always on the look out

tel: 09 448 2761 fax: 09 448 2764

email: sales@lhmarine.co.nz
web: www.lhmarine.co.nz

Address: 3C Henry Rose Place,
Albany, Auckland, New Zealand.

VIP:567



The hull bunks



The galley

units. Another set of Blue Arrow controls is fitted to the flybridge along with a davit and manual winch for deploying and retrieving the *Ikateri*'s small tender.

NIWA's requirements for the electronics resulted in a comprehensive suite of high quality, stand-alone navigation equipment, including a Koden MDC-2240 12in colour LCD display, a 48 mile radar with chart overlay and ATA/ARPA target tracking for up to 50 targets, a Koden CVS 842 10.4in LCD, a 1kW 50/200 kHz dual-frequency sounder and a Koden CVS 833C 8in dual-frequency 50/200 kHz sounder on the flybridge.

For positional and heading information the vessel is fitted with a Koden KGC-1 GPS compass. This is connected to all the Koden equipment as well as the Nav Cruiser Pro computer-based plotting system, the Standard VHF and the ComNav Commander autopilot system.

The ComNav Commander has been integrated into the Hamilton Blue Arrow system, enabling full steering control using heading information from the Koden KGC-1 GPS compass, the Comnav Fluxgate compass as well as waypoint information from the Nav Cruiser Pro navigation package. This enables the *Ikateri* to maintain an accurate course and allows the crew to run predetermined lines during research work.

For communication the vessel has a standard Horizon GX 1500S marine VHF with remote control from the flybridge, a Codan 8528S single side-band radio and an OceanCell cellphone.

With a backlog of research projects to support, *Ikateri* will be hard at work for some time to come, and is likely to turn up at a coastline near you.

specs

Length	13.9m
Beam	4.85m
Draft	700mm
Engines	2 x Cummins 8.3-500
Power	372kW (500hp) at 2600rpm
Drive	2 x Hamilton 322 jet units
Construction	5083 grade marine alloy
Electronics	Koden supplied by Cetronics NZ
Designer	Teknicraft Design
Builder	Q-West Boat Builders