HamiltonJet in the News

Q3 2010

New Loodswezen boats on the way from Seattle (HM651)

15 Jul 2010

The three new pilot boats meet the stringent emission regulations set by the authorities of the Port of Rotterdam. Photo: Jennifer Rose

A further link between USA boatbuilders Kvichak Marine Industries and Europe has been solidified with delivery underway of three all weather fast pilot boats.

The vessels have been designed by Camarc Design Ltd of the UK for the Dutch Pilotage Organization, Loodswezen.

P/V Aquila, P/V Draco and P/V Orion have left Seattle on board a cargo ship and are due to arrive in Rotterdam by the end of this month. The vessels will be in full operation in the ports along the Dutch coast after crew member training.

The environmentally friendly craft meet the stringent emission regulations set by the authorities of the Port of Rotterdam. Twin Tier II compliant Caterpillar ACERT C32 engines power each boat, coupled to ZF 3050 marine gears driving Hamilton 651 water jets. This combination allows for excellent maneuverability and a top speed of 28.5 knots fully loaded. The fuel capacity is for 1,200 gallons.

Each boat is equipped with an exhaust after treatment system comprising a Selective Catalytic Reduction system (SCR) and a diesel particulate filter system (DPF). The emissions reduction technology is provided by Hug Engineering in Switzerland and supplied and serviced through Soottech in the Netherlands.

The SCR system injects a urea based mixture downstream of the engine exhaust outlets into the dry exhaust piping. With the aid of a catalyst the urea combines with nitrogen oxide (NOx) emissions and reduces them into nitrogen gas and water. The DPF collects the unburnt soot and with the addition of another catalyst takes the carbon monoxide (CO), hydrocarbons (HC), and particulate soot and converts these into carbon dioxide and water. Normal running exhaust temperatures are high enough to achieve an almost complete burn of these captured soot particles. The

emission performance will have a reduction of 98% of particulate matter and a 60% reduction of NOx, fulfilling all new requirements by IMO and EU guidelines.

The 22.8m LOA vessels feature a beam of 5.8m and a draft of 1.1m. The removable and floating wheelhouse provides seating for three crew and 12 pilots. There is a rescue platform and Pop-Safe fendering

http://www.maritimejournal.com/features/vessel-build-and-maintenance/ship-and-boatbuilding/ew-loodswezen-boats-on-the-way-from-seattle

Two warships commissioned into Indian Navy fleet (HM811)

Wednesday, June 30, 2010

Two warships commissioned into Navy fleet

BY: PTI

Giving a boost to Navy's defence capabilities, two state-of-the-art high-speed warships, INS Cankarso and INS Kondul, were commissioned here on Tuesday into the naval fleet.

Andhra Pradesh Governor E.S.L. Narasimhan commissioned the ships in the presence of Commanding-in-Chief of Eastern Naval Command Vice Admiral Anup Singh and other senior Naval officials.

The indigenously-built ships use water jet propulsion technology and can achieve speeds in excess of 35 knots. They will be based in Goa and tasked with the role of detecting, locating and destroying small, fast-moving enemy surface craft engaged in covert operations, a Navy spokesman said.

INS Cankarso and INS Kondul are fitted with 30-mm CRN-91 gun built by Ordnance Factory, Medak, and Igla missiles and set of machine guns ranging from light to heavy. "These features are an improvement over the previous fast attack craft (FAC) ships," the spokesman said.

These two ships are the first lot of the ten similar ships that the Navy proposed to induct in its fleet. They belong to the Car Nicobar class V and VI in the FAC series.

"In addition to their primary role, the ships will be tasked with the role of policing, anti-smuggling and fisheries protection in India's coastal waters. In the long run, these ships could help in ensuring stability in India's maritime zones of responsibility," the spokesman said.

INS Cankarso is named after an island near Goa while INS Kondul derives its name from an island near Nicobar.

Kolkata-based Garden Reach Ship Builders and Engineers, headed by Rear-Admiral (Retd) K C Shekar, built these ships in two years.

Water jet technology has rapidly gained acceptance as the leading means of propulsion for all types of high-speed marine craft, including ferries, work boats, patrol crafts and pleasure boats.

Recent advances in water jet technology have put them ahead of conventional propulsion systems in high-speed performance and reliability, the Navy spokesman said.

INS Cankarso is commanded by Arun Bahuguna and INS Kondul by Shashidhar R. Patil. The two ships that have 45 sailors and four officers on board, are equipped with a reverse-osmosis technology drinking water plant and sewerage treatment plant.

http://indiandefencedirectory.blogspot.com/2010/06/two-warships-commissioned-into-navy.html

Incat Crowther designs mega FSV (HT900)

June 29, 2010

Incat Crowther is assisting Gulf Craft, Patterson, La. with the design of a 225 ft LOA aluminum monohull DP-2 fast supply vessel.

The vessel will be operated by Gulf Offshore Logistics LLC, which in January announced plans to build an additional eight deepwater offshore support vessels - four large DP-2 fast supply vessels at Gulf Craf and four 300 ft class DP2 diesel electric platform supply vessels from Thoma-Sea Builders LLC in Lockport, La.

Incat Crowther's offices in the U.S. and Australia will be supporting Gulf Craft with an extensive design package. This includes hull form optimization, U.S. tonnage compliance, full structural design with finite element analysis, as well as systems design including electrical and piping, and stability analysis. Incat Crowther will also provide consulting services to assist Gulf Craft's production staff with the procurement and integration of various vendor-supplied systems.

Gulf Craft has had significant input into the design of the vessel, including the development of the outboard profile and general arrangement, and also the specification, selection and arrangement of the vessel's equipment.

The design provides a 4,380 square feet (407 sq.m) cargo deck - set to be the largest ever on a Fast Supply Vessel. The deck is nearly 150 feet long and is designed to carry 500 long tons of deck cargo.

Forward of the cargo deck is the two-deck superstructure. On the upper deck is the wheelhouse, featuring both a forward control station and an aft-facing DP station with 360-degree visibility.

Gulf Offshore Logistics places a high value on operational safety, and this has been taken into account with the layout of the upper deck.

The main deck cabin features 84 business class seats, a toilet and luggage bins, as well as stairs down to the crew accommodations below decks. These feature a spacious galley and mess area, laundry and toilet facilities and berths for 8 crew members.

Forward of the crew accommodations is the thruster room, housing 3 Thrustmaster TT200ML tunnel thrusters.

Aft of the crew accommodations are the ship's tank spaces, including fuel and water for both the ship's operation and cargo.

The vessel has capacity for 51,320 gallons (194 000 liters) of cargo fuel oil, and 66,290 gallons (251,000 liters) of cargo fresh water.

The combination of this liquid cargo with the deck cargo gives the vessel a maximum deadweight of nearly 600 long tons.

An electrical room is situated amidships, with three Caterpillar C9 gensets and the vessel's main switchboard.

The vessel will be powered by 4 Caterpillar 3516C engines, each rated at 3004bhp @ 1800rpm. Each engine will drive a Hamilton HT-900 water jet, giving the vessel a top speed in excess of 35 knots, and a service speed of 25 knots while carrying 250 long tons of deadweight.

Delivery is set for 2012,.

PRINCIPAL DIMENSIONS

Length Overall 225 ft/ 68.58 m

Length Waterline 200 ft 4 in/ 61.06 m

Beam Overall 36 ft/ 10.97 m

Draft (Hull) 6 ft 10 in/ 2.08 m

Depth 14 ft 2 in/ 4.32 m

Construction Marine grade aluminum

U.S. Army Orders Fireboat from Gladding-Hearn (HM651)

Tuesday, July 27, 2010, 12:47 AM

Photo courtesy Gladding-Hearn

On the heels of a 12-boat order for the U.S. Navy, Gladding-Hearn Shipbuilding, Duclos Corporation, has received an order from the U.S. Army for a new high-speed fireboat. Delivery is scheduled for 2011. The all-aluminum vessel, designed jointly by the Somerset, Mass., shipyard and C. Raymond Hunt Associates,

measures 75.8 ft overall, with a 20.6-ft beam and a shallow 4.2-ft draft. Designed to meet the Army's primary mission of fire protection for its munitions terminal in Sunny Point, North Carolina, the vessel will also aid local cities and towns. Its pilot boat pedigree offers additional capacity in offshore fire and rescue operations.

Twin Caterpillar C-32 diesel engines, each producing 1,600 Bhp at 2,300 rpm, will turn a pair of Hamilton HM-651 waterjets through Twin Disc MGX-6599 SC gear boxes. The fireboat will have a top speed of 25 knots.

Hamilton Jet's Marine Electronic Control System (MECS) will control the waterjets, engines and gears at the wheelhouse console and an exterior control station on the aft deck. While the jets allow for operating in shallow water, the three-access joystick control "will give the boat superior maneuverability in close quarters," explained Peter Duclos, the shipyard president.

The vessel's fire-fighting system consists of two pumps, each powered by a dedicated Caterpillar C-9, 503 Bhp diesel engine. Separating the pumps from the main engines maintains the boat's full firefighting capacity as well as its full propulsion in maneuvering around a moving ship, while still overcoming the fire monitor reaction forces.

At peak output, the pumps will supply 7,500 gpm of water at 150 psi to the five rotating monitors and eight hydrants on deck. Two manually-operated monitors, each discharging 1,250 gpm, will be installed on the foredeck, along with a reel of 200 feet of rigid forestry hose. Two 2,500 gpm manual monitors will be mounted on the aft deck. A 5,000 gpm monitor atop the pilothouse will be remotely operated from helm station and viewed through two roof windows. For petro-chemical fires, a 1,200 gpm foam system, with two 200 gal. tanks of foam concentrate, will supply the monitors and the hose outlets on the foredeck as well.

A Palfinger knuckle-boom crane will be installed aft of the pilothouse on the bridge deck. Recessed steps, built into the transom, will lead to a rescue platform.

The raised pilothouse on a flush deck provides 360 degree visibility. The main deck salon, with a wide door from the aft deck, will double as an office and Advanced Life-Support medical station. Below the main deck are a forecastle with a galley and dinette, head, separate shower, and four berths. An 86,000 Btu seawater-cooled air conditioning system will cool the vessel's interior.

For more information, contact Gladding-Hearn Shipbuilding, Duclos Corporation, PO Box 300, Somerset, MA 02726.

http://www.marinelink.com/news/gladdinghearn-fireboat335034.aspx

HamiltonJet Launches HT810 Model

Friday, June 18, 2010

Final assembly of the new HT810 waterjet at HamiltonJet's factory in Christchurch New Zealand. Photo courtesy HamiltonJet Waterjet manufacturer HamiltonJet has completed assembly of the second model in its new HT series – the HT810. This model follows on from the success of the HT1000, launched in 2009, and partially bridges the gap between the popular HM811 model and the larger HT1000. The HT810 incorporates a number of design improvements from previous models.

HamiltonJet Technical Manager Phil Rae said the company's designers learned a lot from the HT1000 project, using this knowledge to refine the HT810 to make it easier to both manufacture and service in the field.

"Through the development of the HT series we have been able to advance several new features of our waterjets, including one-piece casting of large impellers, compact and efficient reverse duct designs and improved servicing features" said

Rae. "Many of these design elements are now flowing down to our other waterjet models."

Not only does the HT810 mixed flow pump offer both improved efficiency and cavitation performance, with its new reverse duct design it has a reduced transom footprint for a jet of its size, enabling reduced jet centers required in narrow hulls or multi-jet installations. The HT810 is also supplied with a factory-built transition duct, eliminating the requirement for this to be fabricated by the boat builder and ensuring accurate geometry for the intake flow. As with all HamiltonJet waterjets, thrust forces are transferred to the transition duct and hull bottom rather than the transom, reducing the requirement for additional transom strengthening.

The HT810 also continues the long tradition of HamiltonJet innovation through several new design features. One such feature is a new arrangement for the positioning and attachment of sacrificial anodes to prevent corrosion. Utilising a cartridge system all main internal anodes are able to be inspected and replaced without having to disassemble the jet unit. This simplifies maintenance of the waterjet and reduces vessel downtime. Another new feature is the integrated tailpipe and steering nozzle housing, eliminating a bolted flange and reducing the overall length of the jet. The transom flange utilizes a compression seal that simplifies installation alignment and sealing.

The first pair of HT810s will be installed in a 34m vessel in Taiwan, powered by MTU 16V4000 M90 engines and be capable of over 30 knots.

HamiltonJet is also nearing completion of the HT model range with the first HT900 waterjets currently being manufactured. These are scheduled to be assembled in June and shipped to the Gulf of Mexico for a new crewboat project.
http://www.marinelink.com/news/hamiltonjet-launches334615.aspx

China's First Wave-piercing Catamaran Serves EXPO (HM811)

Source: www.zgjtb.com
Updated: 2010-5-12

"HAI XUN 106", China's first wave-piercing catamaran began its service in Yangshan Maritime Department of Shanghai MSA on May 10. It will undertake the waterway security task for EXPO in the core control waters of the Huangpu River and in the pre-control areas in Yangshan Deep-water Port, such as maritime patrol, maintaining navigational order, water traffic control and marine emergency response.

"HAI XUN 106" is 49m long, 13.8m wide and can resist wind of 11 class. It has the highest speed of 34 knots and can sail for 700 nautical miles at the speed of 20 knots.

Adopted the type of wave-piercing catamaran, the ship is made of corrosion resistant aluminum alloys, with half weight of the ordinary steel-made ship but better hardness and corrosion resistance. Its power engine system includes 4 "MTU12V4000M70" high speed diesel engines and 4 "Hamilton 811" pumps which have been applied in China for the first time.

"HAI XUN 106" is equipped with a rescue boat which can weather all types of sea conditions and can be released with hydraulic system when its mother ship is navigating or there is no lighting at night, offering help to people in distress at sea in the shortest time.

http://en.msa.gov.cn/msa/features/root/10/1271741447437/1271741587405/1274166612070

Incat Unveils 28m Wave Piercing Catamaran (HM651)

Incat unveils 28-metre wave-piercing catamaran PDF PRINT E-MAIL

Tuesday, 10 August 2010 08:35

Australian naval architect Incat Crowther have been contracted to design a 28-metre wave-piercing catamaran crew boat to support offshore oil and gas operations.

Developed in conjunction with Topaz Shipbuilding for a large petroleum firm, the vessel features a new layout.

The vessel balances a restriction on beam with the requirement to locate an oil spill recovery container transversely on the aft deck. The solution was to have upright topsides aft, like a traditional catamaran.

The operators also required a mono-hull-shaped bow that interfaced cleanly with the rig structure, while being well clear in all other areas to avoid risk of collisions and injuries. The vessel's outer hull bows have been configured so that they do not extend beyond the outline of the foredeck, therefore eliminating the risk of damage to the forepeaks or having them hang up on the rig structure.

The vessel features a large aft-deck with container mounts, Effer deck crane and more than 50 square-metres of usable deck space.

Passenger access is via side gates at the forward end of the cargo deck. This transverse passenger thoroughfare is protected from the cargo space by large cargo barriers, allowing passengers and cargo to be loaded concurrently.

The vessel will be powered by a pair of Caterpillar C32 Acert engines, each producing 1193kW at 2100rpm. These engines will drive Hamilton HM651 waterjets. The vessel's service speed will be 28 knots, with a maximum speed of 30 knots.

The port main engine will turn a FFS 250 x 350HD FiFi pump that feeds a foredeck mounted fire monitor. A second vessel with a higher capacity is also under construction at Topaz Shipbuilding.

http://www.bairdmaritime.com/index.php?option=com_content&view=article&id=7551&Itemid=62

Galtex Pilots Third Boat From Gladding-Hearn (HM651)

Wednesday, August 25, 2010, 2:31 AM

Photo courtesy Gladding-Hearn

Galveston-Texas City pilots have taken delivery of its third pilot boat, a new sister-ship to the 30 knot, 70-ft launch, built by Gladding-Hearn Shipbuilding, Duclos Corporation, less than four years ago. Designed by C. Raymond Hunt Associates, the all-aluminum vessel measures 70 ft over-all, with a 21-ft beam and a shallow three ft nine inch draft. The new launch is powered by twin Cummins QSK38-M diesel engines, each producing a conservative 1300 bhp at 1800 rpm and connected to a Hamilton HM 571 waterjet through a remote-mounted Reinjtes WVS 430/1 gearbox. Equipped with Gladding-Hearn's proprietary hydraulically adjustable, interceptor-type, trim-control system, the vessel's top speed is 30 knots.

Hamilton Jet's Marine Electronic Control System (MECS) monitor the waterjets, engines and gears from the primary station in the wheelhouse and a hand-held remote, aft at the rescue station. Outside, the launch is equipped with wide side decks, inverted front windows, and port and starboard boarding platforms. Recessed steps, built into the transom, lead to a rescue platform. A pipe davit, equipped with a Rescue Sling is located alongside the aft control station for pilot rescue operations.

Interior accommodations feature HVAC, nine Llebroc recliners, cushioned settee and berth, dinette, and enclosed head. The galley has a refrigerator, microwave, stainless steel sink, and hanging lockers and drawers. Sound level in the wheelhouse is about 78 decibels.

Specifications:
Hull type All-aluminum Deep-V monohull
Length 70'
Beam 21'
Draft 3.9'

Date launched June 2010
Date delivered July 2010

Coast Guard certification Coastwise

Propulsion equipment:
Main engines (2) Cummins QSK38-M diesel engines, each rated at 1300 Bhp at 1800 rpm
Gears Reinjtes WVS 430/1
Waterjets (2) Hamilton HM 571
Engine controls Hamilton Jet Marine Electronic Control System

Other Equipment:

Gensets 21kW, 120V/240V, 1 PH AC
Sewage system (1) Vacuflush toilet System

Electronics:
Supplier MacDougals Cape Cod Marine, Falmouth, MA
Radar Furuno FR-2117 Black Box Radar system.
VHF (2) Quantum GX 5000
GPS Furuno GP-37

Depth sounder Furuno RD 30
Compass Ritchie SS-1002

Capacities:
Fuel 1,700 gal
Fresh water 50 gal
Crew size 2

Speed (loaded) 30 knots

HVAC Four Marine Air reverse-cycle A/C units

Other systems of importance:
Gladding-Hearn's proprietary hydraulically adjustable, interceptor-type, trim-control system

www.gladding-hearn.com

http://www.marinelink.com/news/gladdinghearn-pilots335330.aspx

FDNY 3,000 hp Fast Responder From Safe (HJ403)

FDNY ALSO GETS NEW 3,000-HP FAST-RESPONDER FROM SAFE

It's long, low and packed with power for both propulsion and pumping. It's the new 64'x17' (with collar) fast-response fireboat designed and built by **Safe Boats International**, Port Orchard, Wash., for the Fire Department City of New York.

"We had originally specified 35-knot speed," said Lt. Brian Coughlin, FDNY's project manager for the *Bravest*, "but during sea trials in July, we got 47.6 knots."

Early on, the design called for smaller twin engines. But the need for speed bumped the power to triple engines — **Caterpillar** C-18s rated at 1,000 hp at 2,300 rpm each driving three **HamiltonJet** HJ 403 waterjets. Maximum draft is 39".

The added speed will be a big help in covering all the territory that FDNY is responsible for. In particular, according to Coughlin, the city wanted a faster boat to respond to emergencies at "target hazards," which include the city's bridges and airports.

The new 64-footer will help fill the gap between the new 140-footers built at **Eastern Shipbuilding Group** and a small fleet of 27-footers FDNY also got from Safe Boats. "Those boats can get on station very fast," said Coughlin, "but they have very limited firefighting capacity, only about 750 gallons per minute. So we use them predominantly for water rescue.

"The boat that we're building now at Safe is the workhorse. It's in between the big boats and these smaller boats. It doesn't have the pumping capabilities of the 140-foot fireboats, but it was designed to pump 6,000 gallons per minute, which we're actually exceeding. It's also the first fireboat we have that has a Purple-K system."

Purple-K is a dry chemical fire suppression agent that is especially effective against flammable liquid fires. The new boat carries 100 lbs. of the chemical. The *Bravest* is also equipped with a 200-gal. foam tank.

Two 3,000-gpm **Hale** fire pumps supply the four monitors, four handline manifolds and one large shore connection. The main roof-mounted 5,000-gpm monitor was supplied by **FFS**. The three 2,000-gpm monitors are from **Elkhart Brass**.

A dedicated 770-hp **Iveco** diesel powers one of the fire pumps and the other is powered by the center C-18, which can be clutched into either the pump or its waterjet.

A stern tow post and push knees on the bow will allow the new boat to move disabled vessels or those in its way during emergencies. The push knees also support a boarding ladder for getting on and off the beach or other boats, such as ferries operated by **Staten Island Ferry**.

— *Bruce Buls*

The *Bravest*, a new 64-footer from Safe Boats International will fill the gap between the new big fireboats and smaller rescue craft.

Fire Department City of New York Marine Division

MetalCraft Marine Delivers FireStorm70 (HJ403)

Wednesday, September 29, 2010, 10:43 AM

Photo courtesy MetalCraft Marine Inc.

MetalCraft Marine of Kingston, Ontario & Clayton, New York recently delivered a new CBRNE FireStorm 70 to Jacksonville Fire/Rescue, Fla. The $4.7m dollar vessel

was purchased with a 2008 Port Security Grant.

Speed 41 knots fully loaded
Length, o.a. 70-ft, flush deck
Beam, o.a 22.8 ft
Draft 42 inces
Pumps 4x Hale 8 FKF pumps producing over 14,000 GPM @150 psi.
Monitors 1x Remote Stang, 2 x remote Elkhart and 2 x manual Elkhart's
Engine Quad Caterpillar C18 @ 1015 HP
Jets Quad Hamilton HJ403
http://www.marinelink.com/news/metalcraft-firestorm335676.aspx

Kurrowera 1 – BITS Ferry (HJ364 blueARROW)

Aluminium Boats Australia (ABA) has delivered its latest ferry; a 24-metre Eco-Jet commuter catamaran designed by Sydney-based One2three Naval Architects.

The 'Kurrowera I' is the third of four vessels built for Bay Islands Transit Systems (BITS) services in Queensland's Moreton Bay Marine Park.

The first of the four new ABA fast waterbuses for the Southern Moreton Bay Islands, the 'Jumpinpin', entered service in May 2009, being joined by the second, the 'Perulpa', last September.

Custom designed and built for Moreton Bay's environmentally sensitive waters, with particular attention to protecting dugongs and turtles in the shallows of the southern part of the bay, the ABA sisters deliver an optimum solution for any area where there are shallow waters and an environment at risk.

Director of Transit Systems, owner of the BITS ferry service, Graham Leishman said, "The ferries have been designed to move at speed but in a way that simply pushes a turtle or dugong to one side rather than harming it," he said.

The waterbuses offer large carrying capacity; up to 200 passengers on short trips, while delivering low fuel consumption. Aluminium Boats Australia Director Roy Whitewood commented, "They are remarkably easy on the fuel because weight has been kept to an absolute minimum."

Like her sisters, the 'Kurrowera I' is powered by two Scania DI12 59M diesel engines, each rated 331kW at 100 percent MCR. Delivering swift acceleration they quickly work up to a service speed of 22 knots and in a notable first they are the first vessels to meet stringent requirements permitting them to run within their operational corridor inside the Moreton Bay Marine Park at maximum speed.

Via Twin Disc MG 5114 SC gearboxes, engine power is converted to propulsion thrust through two HamiltonJet HJ 364 waterjets. Jet control is enhanced by the HamiltonJet blueARROW electronic control system. With the intuitive control provided by the MouseBoat manoeuvring controller, blue ARROW reduces the learning curve for masters and makes docking simple, fast and accurate.

As always at ABA, operational experience delivers improvements to new vessels and several enhancements have been adopted on the 'Kurrowera I'. A new, second generation, hull shape from the drawing boards of One2three Design has provided enhanced fuel efficiency and, indeed, with the same, power the 'Kurrowera I' is faster than her earlier sisters by approximately 1.5 knots.

From a passenger point of view, the craft is instantly distinguishable from her sisters thanks to her enhanced external styling, larger boarding access ways, increased headroom in the fully composite cabin and larger windows creating an impressive sense of light and space.

Operating on an intensive daily schedule servicing all islands in the Southern Moreton Bay group, the waterbuses have been well received by their passengers and crews alike. The fourth vessel, currently under construction, is scheduled for delivery in June.

For further information contact:
Aluminium Boats Australia, Queensland
PH: (07) 3393 6909, FX: (07) 3393 4620,
Email: info@allyboats.com.au,
Web: www.allyboats.com.au

'Kurrowera I'

SPECIFICATIONS

Type of vessel:	Passenger ferry
In survey to:	USL 1E
Home port:	Brisbane, Queensland
Owner/operator:	Bay Island Transit, Queensland
Designer:	One2three Naval Architects
Builder:	Aluminium Boats Australia, Queensland
Construction material:	Aluminium
Length:	23.98 metres
Beam moulded:	6.24 metres
Draught (loaded):	0.80 metres
Main engines:	2 x Scania DI12 59M diesel engines, each 331kW at 1,800rpm
Gearboxes:	Twin Disc Quick Shaft MGX 6599 SC, 2.45:1.
Propulsion:	2 x Hamilton HJ 364 waterjets, each 331kW
Speed:	30 knots
Service speed:	22 knots
Range:	216nm
Fuel:	2 x 1,000 litres
Passengers:	200

HamiltonJet Overview

Buoyant times for New Zealand's HamiltonJet

'Kawau Rescue' is a 10.2-metre Naiad RIB built by Blue Water Boats and propelled by twin HamiltonJet HJ274 waterjets

The commercial waterjet market in New Zealand continues to strengthen, with HamiltonJet involved in a growing number of varied projects through 2010 and beyond.

While the company has longstanding relationships with some eco-tourism, fishing and rescue organisations, new builds in these sectors and others are increasingly specifying waterjet propulsion for the advantages it offers.

One of the main growth sectors is larger New Zealand Coastguard vessels. Following the successes of waterjet-propelled rescue vessels in Kaikoura, Pauanui and Sumner, many other units are opting for waterjets in their new offshore rescue craft. Tauranga, Hawkes Bay, Bay of Islands and Piha have commissioned new jet boats in recent years, and already in 2010 Kawau and Waiheke Island units north of Auckland have taken delivery of near identical 10.2-metre Naiad RIBs, built by Blue Water Boats and powered with Yanmar engines and twin HamiltonJet HJ274 waterjets.

Sumner Lifeboats in Christchurch is scheduled to commission its new 14-metre offshore rescue boat shortly, a Tim Barnet design built by Altech and featuring Mega Tech engines and twin HJ322 waterjets with blue ARROW electronic controls. A number of other Coastguard units are watching these new boats with interest as they begin planning for their next vessels.

Whale Watch Kaikoura has begun its boat renewal program with the completion of 'Wawahia'. This is the first of five planned boats to be designed by Teknicraft, built by Q-West and propelled with HJ403 waterjets and Volvo engines. For the first time these boats include HamiltonJet's blue ARROW electronic controls.

Ferry services in Auckland continue to grow in popularity with new waterjet-propelled vessels being planned. Police boat 'Deodar III' (twin HJ403 waterjets) has been proving its worth in Auckland Harbour, and now a sister vessel is being built for the Wellington Police. In the fishing sector, Profab Boats has recently launched its first jet boat, propelled by twin HJ403s with blue ARROW controls.

For further information contact:
HamiltonJet, New Zealand.
Web: www.hamjet.co.nz

Damen DFF3810 catamarans arrive in Hong Kong (HM571)

Damen DFF 3810 catamarans arrive in Hong Kong

Damen Shipyards Singapore has delivered two DFF 3810 catamarans, *Delta 1* and *Delta 2*, to Hong Kong North West Shipping. According to Damen, "The fledgling Hong Kong firm is due to start up its first ever service by the end of the year."

Hong Kong North West Shipping has been attempting to introduce a route between Tuen Mun, in Hong Kong's New Territories, and Macau for several years but the operation of the service has yet to be approved by Macau's Maritime Administration.

The two Damen DFF 3810s have also had a long gestation period. Construction of the hulls, which were built for stock, was contracted to Afai Ships' Panyu yard in China's Guangdong Province. They were delivered to Damen's Singapore yard in 2003 and transferred to the production line towards the end of 2007 for fitting out for Hong Kong North West Shipping.

The completed vessels were launched in May 2008. However, a final contract with Hong Kong North West Shipping was not signed until March this year. *Delta 1* and *Delta 2* were delivered on June 18 and a captain and engineers from Damen are currently training crews in Hong Kong.

Damen DFF 3810 catamaran Delta 1 *operating in Hong Kong waters*

Main engines

Four MTU 10V 2000 M72 diesels rated at 900 kW at 2,250 rpm each power a Hamilton HM 571 waterjet via a Reintjes VLJ 430 gearbox.

Damen regional sales director Henk van Herwijnen reports, "Hong Kong North West Shipping chose the Damen Fast Ferry 3810 because it has very economical fuel consumption in combination with a fast speed. This vessel offers half the fuel consumption of other passenger vessels travelling between Hong Kong and Macau.

"Although most of these ferries travel at around 40-45 knots, they also burn terrific amounts of fuel. The Damen fast ferry operates at around 33 knots but it can still do the journey in less than an hour, making the vessel a very economical option."

The fastest scheduled trip time on the existing, longer, Hong Kong Central-Macau and Tsim Sha Shui-Macau routes is 55 minutes.

Passenger saloons

The DFF 3810 catamarans are each fitted out for a total of 270 passengers. The main deck saloon has 216 seats, a kiosk midships and four toilets aft. On the upper deck, a 'business class' saloon is fitted out with 46 seats, a forward kiosk and two toilets aft. There are also four-seat VIP rooms to port and starboard at the front of the saloon.

Wheelhouse

The wheelhouse has four crew positions. Equipment includes Furuno FR-2117 radar, GP 150 gps, FM 8800S radios, Inmarsat C transceiver and VR-300 voyage data recorder and Current Night Navigator 8540 night vision system.

HKNWS

Hong Kong North West Shipping, or Hong Kong North West Express as the company was previously known, has been operating Hong Kong's Tuen Mun cross-boundary terminal for the past four years. However, with the company having so far failed to get a licence for a Macau service, use of the terminal has been very limited.

A Chinese company operated services between Zhuhai and Tuen Mun from November 2006 until October 2007 and another Chinese company has operated between Shenzhen Shekou and Tuen Mun since June 2007.

Hong Kong North West Shipping's license to operate the Tuen Mun terminal expires on December 26 this year and the Hong Kong government has recently issued a new tenancy tender.

In an accompanying briefing paper, the Legislative Council's Transport Panel notes, "In December 2003, the Government concluded a tenancy agreement with Hong Kong North West Express for the company to operate cross-boundary ferry services for a term of seven years. Tuen Mun Ferry Terminal did not come into operation until November 2006 after completion of the requisite modification works conducted and financed by HKNWE.

"Unable to obtain the necessary approval from the Macau authorities, HKNWE has not been able to operate any service between Hong Kong and Macau. At present it only provides one daily return service between Hong Kong and Shekou.

"The Tuen Mun District Council is not satisfied with the performance of HKNWE so far. It remains keen to have direct cross-boundary passenger ferry services operating from Tuen Mun to serve West New Territories and has asked for a major improvement of the situation with the introduction of a new operator in place of HKNWE upon the expiry of the current tenancy agreement.

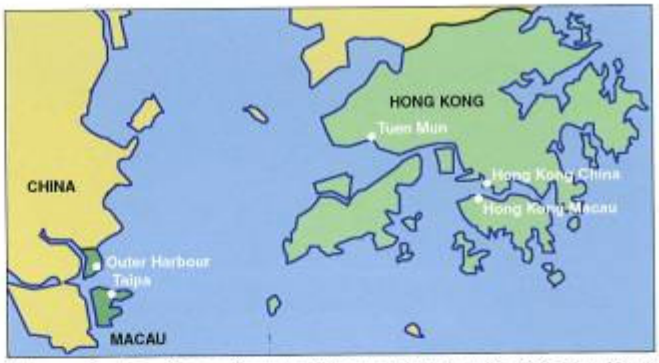
"Given the views of the local community, the introduction of cross-boundary ferry services from Tuen Mun since 2003 and the checkered history of the existing services, it is clear that we need to provide the arrangement to facilitate the continuation of the cross-boundary ferry services and seek to improve them in this process.

"The Administration has therefore decided to conduct an open tender exercise to invite bids to operate such services. The new tenancy agreement will be for a period of seven years. This is in line with the arrangement under the current tenancy with HKNWE and has the merit of allowing about a one-year overlap with the operating of the Hong Kong-Zhuhai-Macau Bridge and Tuen Mun-Chek Lap Kok Link, as well as providing a reasonable business case for revenue generation.

"Unlike the existing tenancy agreement, the successful bidder will be required to operate a minimum of 14 round trips between Tuen Mun and Macau every week. Subject to capacity availability and approval from relevant Pearl River Delta port authorities, the operator may at its option roll out services to cover the PRD.

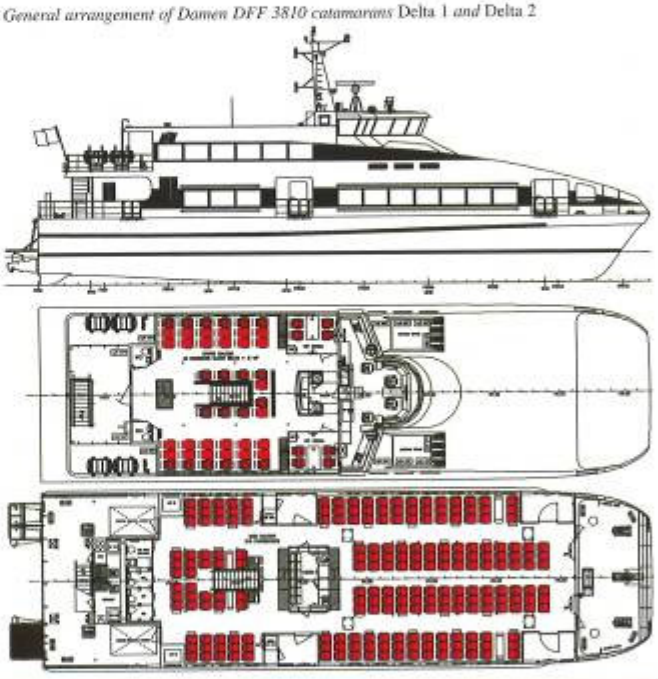
"The operator will be required to commence ferry services between Tuen Mun and Macau within three months from the commencement of the tenancy agreement. A mechanism will be put in place to require the operator to comply with the approved schedule of services. Provisions will be included in the tenancy agreement to expressly empower the Government to forfeit the tenancy in case of contravention of the service requirements.

"A tenancy agreement may be signed before the end of 2010. Assuming all formalities required for operating cross-boundary passenger ferry services to Macau can be completed smoothly, we expect that the Hong Kong-Macau service at Tuen Mun Ferry Terminal will be commenced by the second quarter of 2011."



The route from Tuen Mun to Macau is shorter than those from the Hong Kong Macau Terminal in Central or the Hong Kong China Terminal in Tsim Sha Shui

General arrangement of Damen DFF 3810 catamarans Delta 1 *and* Delta 2



Damen DFF 3810 catamarans *Delta 1* and *Delta 2*

Length overall	37.6m	- Lube oil	200 litres	Main engines	4 x MTU
Length pp	33.0m	- Bilge	500 litres		10V 2000 M72
Beam overall	10.1m	- Sullage	1,500 litres		900 kW at 2,250 rpm
Depth moulded	4.1m	Speed		Auxiliary power	2 x Caterpillar
Draught		- 22 dwt	34.5 knots		C4.4
- Hull	1.7m	Passengers			86 kW
Gross tonnage	459 gt	- Main saloon	216	Waterjets	4 x Hamilton HM 571
Deadweight	45 tonnes	- Upper saloon	46	Classification	Det Norske Veritas
Capacities		- VIP cabins	8		+ 1A1 HSLC
- Fuel	10,000 litres	- Total	270		R3 (HKG)
- Fresh water	1,500 litres	Crew	10		Passenger E0

Alnmaritec Oil Spill Vessels (HJ322)

Timely delivery of oil spill response vessels

UK yard, Alnmaritec Limited, is gaining recognition in the oil spill response/ pollution control vessel market with the recent delivery of two newbuilds for China and Barbados. Clearly ahead of the game, Alnmaritec is joining this booming sector of the market.

The shipyard is already recognised as one of the UK's leading specialist small craft builders and has tested the water with the two newbuilds – *Responder 1* and *Shi Hua Gang Yi Hao*.

The most recent delivery was a boom deployment and spill response boat, which was delivered to the Barbados National Terminal Company Ltd, for operation on its oil export facility at Oistins Bay on the south coast of the island.

The new vessel *Responder 1* is based upon the successful Wave Worker-class from Alnmaritec and the vessel is a 12m loa by 5.3m beam displacement catamaran design, providing a very stable and seaworthy platform. Responder 1 is powered by twin 150bhp Cummins diesel main engines driving conventional fixed-pitch propellers which give her a top speed of 12kts. She is equipped with an air-conditioned wheelhouse, small WC, a 5tonne hydraulic deck crane, fresh water wash facilities and of course a range of oil spill equipment. This includes diesel-powered dispersant spray pumps and extendable spray arms as well as a hydraulically powered boom reel with 1400ft of oil containment boom – which can be deployed and recovered over a stern roller system making her an extremely versatile vessel.

The delivery follows the completion of a high-speed pollution response boat earlier in the year, which is currently operated by PetroChina on a refinery in Dalian, eastern China.

Shi Hua Gang Yi Hao is a 14m loa by 5m beam aluminium asymmetric catamaran, one of the already established Wave Provider-class fitted with twin Volvo D9 425bhp engines and Hamilton 322 waterjets giving her a maximum speed of more than 21kts with impressive manoeuvrability. *Shi Hua Gang Yi Hao* carries three crew and eight passengers within the wheelhouse, which also contains a WC and externally

Shi Hua Gang Yi Hao a 14m oil response catamaran, built by Alnmaritec for PetroChina (Credit: Alnmaritec Ltd).

she has a large working deck serviced by a 6.5tonne hydraulic crane. She is also fitted with a roll over stern and removable tow post for boom handling operations. The vessel carries a range of oil spill recovery equipment including dispersant spray arms, hydraulically powered oil recovery skimmer and pump, steam cleaning equipment and oil storage bladder.

Commenting on both vessels, managing director of Alnmaritec, Chris Millman, said: "This has been a very fast growing market sector for us and in addition to these recent deliveries we have two more oil spill response vessels at present under construction in one of our yards and a number of others under negotiation. We are delighted to have Alnmaritec boats operating in such diverse locations as Barbados and China and especially for such prestigious clients. We hope that these boats will serve our customers well and that this success will provide a further springboard for us into this market sector and into these regions." *SBI*

Responder 1 a 12m oil response catamaran, built by Alnmaritec for Barbados National Terminal Company Ltd (Credit: Alnmaritec Ltd).

Sumner Lifeboat – "blueARROW Rescue" (HJ322)

SUMNER LIFEBOAT
IN KEEPING WITH TRADITIONS

BY KEITH INGRAM

The significance of maritime search and rescue at Sumner, a seaside suburb of Christchurch, dates back to the 1840s, making this an important date alongside the signing of the Treaty of Waitangi for our southerners. The little Port Cooper whaling station on Banks Peninsula also had a lifeboat during its tenure until whaling ceased.

In 1867, Joseph Day was appointed signalman and later pilot at Sumner for the Lyttelton Harbour Board, which was then responsible for ships crossing the Sumner bar at the mouth of the Avon Heathcote estuary. In keeping with maritime tradition, Day used his pilot boat and sometimes a scratch volunteer crew of locals to save lives when the occasion arose.

He is credited with personally saving 25 lives, including a crewmember who almost certainly would have died but for Day's fearlessness when a lifeboat capsized crossing the bar in 1875.

In the 1890s, the Lyttelton Harbour Board recognised that maritime rescues would be an ongoing obligation, so in 1898 it imported a lifeboat from England. Christened the Rescue, this boat was originally berthed underneath Cave Rock and later on the end of the Sumner Pier. Day was in command and she was crewed by volunteers from the Sumner village.

The Sumner Lifeboat rescue service dates its inception from the arrival of Rescue and celebrated its centenary in 1998. It is widely accepted that the Sumner Lifeboat Institution is the oldest organised voluntary maritime search and rescue organisation in New Zealand.

In 2002 Sumner Lifeboat introduced a management plan for the period to 2012, which called for the modernisation of all the institution's assets. It was decided that the inshore vessel would be replaced and the buildings upgraded as stage one of the project.

Hamilton Jet Rescue, designed by Richard McBride, was built by CWF Hamilton to replace the Caroline Nicholson, a Naiad that had served Sumner for 15 years. This step was significant in further cementing Hamilton's relationship with the lifeboat service and the people of Sumner. Alongside this project the buildings were upgraded and expanded to meet future operations.

Stage one was completed in late 2005. Hamilton Jet Rescue met all expectations of a well-found rescue craft and has proven to be a very robust vessel for inshore search and rescue.

Planning then focused on replacing the Thames class vessel moored at Lyttelton, as it was important to be able to provide a backup pilot vessel for the port of Lyttelton. The organisation's wish to return all of their operations back to the lifeboat station meant they would be looking for a slipway-launched vessel.

As in the past the Sumner executives at first made inquires for a suitable vessel that might be available second-hand offshore in the United Kingdom or Canada. Nothing suitable was found to be available in an acceptable condition that would meet New Zealand safe ship management requirements without the risk of spending a lot of good money after bad.


Senior master Paul Lawson at the helm


A clean, functional internal layout


Helmstation to port


Tactical comms to starboard

They also inquired as to what vessel plans might be available from overseas and the cost of building such a vessel. It soon became apparent they should look to local designers and seek advice from respected industry associates.

Long-time supporters CWF Hamilton put the Sumner executives in contact with Rob Gendal of Lyttelton Engineering and designer Tim Barnett. From those meetings they approached key suppliers in Christchurch to see if they would be interested in supporting the project. All were supportive and helped with the planning.

Because of building constraints of the existing boat shed, any future design of a rescue vessel had to be able to fit inside the building and be launched from the existing ramp. The boat would also need to meet the demands of launching into and getting out through the surf at Sumner.

A new cradle would be required to keep her as low as possible to preserve the restricted height in the doorway. Stark Brothers donated the new cradle in memory of the late Frank Stark, a very generous gift. Stark Brothers has supported Sumner Lifeboat for a long time, offering valued help and advice over the years from ship repairs to maritime operations for this mainly volunteer organisation.

After much to-ing and fro-ing, Tim Barnett developed a design and construction drawings that would work. This vessel not only had to be suitable for rescue work and working with rescue helicopters and aerial hoisting, she also needed to be available ▶

The clear for'ard deck is suitable for pilot transfers

as the port's back-up pilot boat.

The contract to build was let to Altec Boats in Christchurch in two parts, hull construction and then vessel fit-out.

The decision to fit twin-engine Hamilton water jets was not questioned, and she was to be powered by twin Megatech MB926PE electronically controlled marine engines based on the


The Hamilton blue ARROW box and jet unit

Mercedes 0M926 series diesel from TransDiesel.

These engines were purchased purely on being the best available within the budget constraints of the contract. With an in-line six-cylinder configuration and 7.2 litre capacity, rated at 500hp at 2800rpm, these engines provide continuous power through ZF gearboxes driving Hamilton HJ322 water jets with their blue ARROW electronic control system.

Construction is of Sealium marine alloy with 6mm hull bottom and chines and 4mm sides and cabin structure. To maintain full head height in the main cabin the cabin sole has been lowered with a sill at the door before the step down. The interior is finished in soft, dark shades of paint and Frontrunner fabric.

For'ard, a vee-berth with stowage beneath is a comfortable rest area for survivors, passengers or crew. The main cabin is open and airy with the main helm station to port, interestingly.

But clearly the blue ARROW control system remains prominent. Both throttles and reverse ducts are on separate levers to give the skipper flexibility to apply higher revs when operating at low boat speeds using the reverse ducts to control ahead or astern thrust or when they are balanced to hold the vessel on station.

This provides very quick helm response when operating in surf or large sea states when the skipper doesn't necessarily want high boat speed but does need the boat to react instantly to the helm.

Alternatively, the skipper can switch control to the ▶


The engine room

MouseBoat docking controller, which is ideal when operating around other vessels or in confined spaces. The MouseBoat controls steering and reverse duct positions on both jet units so the Hamilton Jet Rescue "mimics" movement of the hand piece.

For example, if the MouseBoat is moved sideways, the computer software within the blue ARROW system interprets the signal and positions the water jets' steering nozzles and reverse ducts so the vessel will move sideways.

With twin water jet propulsion, a skilled operator can do the manoeuvre with the throttle and reverse levers, but the MouseBoat means anyone driving the vessel can perform such feats with ease. What's more, operating the MouseBoat is very intuitive, so a skipper under pressure can safely control the vessel without having the added stress of thinking about what combination of levers and helm is needed to complete the maneuver safely.

Opposite the helm is the navigation/comms position with a full suite of electronics supplied and installed by Ocean Electronics. This includes two VHF radios, an HF SSB radio, two 15in Furuno NAVnet plotters, a sounder and a radar with CMap displays. The Hamilton Jet Rescue is fitted with a Furuno autopilot and a truckload of other safety and rescue equipment. Four KAB sprung-loaded crew seats are fitted in the main cabin along with safety harnesses.

She carries two 2000 litre fuel tanks and a 150 litre potable water tank. There is a small but functional galley and an equally functional head for when the crew need to clear lower deck at sea.

This rescue craft has been set up for extended times at sea and is capable of staying on station in search areas for lengthy periods of time. She has been designed to work with search and rescue aircraft and has a helo winch platform at the stern, which extends past the jet units, giving added protection and doubling as a large, low boarding platform for transferring survivors or personnel.

Hamilton Jet Rescue is painted in full rescue colours. A fold-down mast for the shed, the clip-on safety track, the clear foredeck and central grab rails are giveaway signs of her other duty as a pilot boat. Two easily deployed life rafts are stowed on the cabin top.

For anyone leaving the safe confines of the fenced aft deck area to go for'ard, even when clipped on to a safety car, there is a comforting toe rail around the side deck.

Both engines are positioned under the aft deck area. The intakes and exhaust are built into the rear of the deckhouse and are protected by large Seaworth Defence ventilator grills. These not only keep out the wet but also allow air to flow easily in and out of the machinery space. Centrally mounted aft above the transom is the aft capstan and a large, robust towing post.

The standard of workmanship carried out by Altec Boats and the pro-active relationship developed between the builder, sub-contractors and Sumner Lifeboat is reported as being outstanding. While this project was not without its challenges, the boys are happy.

Sea trials conducted as this issue went to press have shown that the Hamilton Jet Rescue meets the design speeds, achieving 39.8 knots at 2600rpm at 85 percent power. That's not bad. She handles well in the limited sea conditions experienced so far, with further sea trials to be conducted and a full survey to be completed. Her crew have found she handles very well in a following sea, and using the blue AROW controls makes it very easy to put her on the cradle, even with a two metre swell running at Sumner.

In summing up, this is the latest rescue craft to enter service on our coast. Clearly, the requirements of the Sumner Lifeboat Institution are different from most Coastguard units. They operate from a lifeboat shed and ramp off a surf beach with an extensive SAR area.

They are fortunate to be able to supply the back-up pilot boat for the Port of Lyttelton, so multiple tasks are demanded of her. She is well thought out, the finish of workmanship is great and she will remain a credit to the community she serves.

SPECIFICATIONS

Length	12.45m
Beam	3.75m
Draft	600mm
Displacement	11 tonnes approx
Power	2 x Megatech MB926PE marine diesels
Propulsion	2 x Hamilton Jet HJ322 water jets
Service speed	35 knots
Designer	Tim Barnett
Builder	Altec Boats
Insured value	$1.4 million