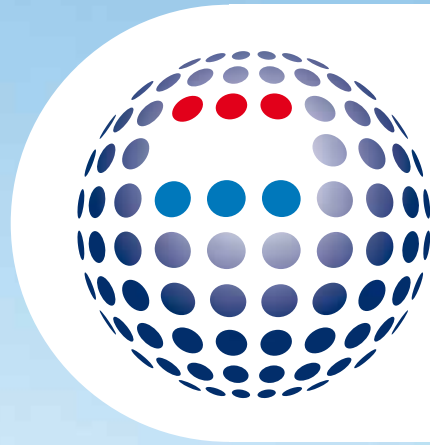


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Magazine

Vessels highlighted

Lyra
Kamaxitha
Lottie Holly

The vision of

Harold Linssen

Managing Director Keppel Verolme

Special

Offshore &
Offshore Energy 2013





Photo by Flying Focus, Bussum, the Netherlands

On 28 June Maaskant Shipyards took delivery of the hull of the *Lottie Holly*, a 26 metre in length mussel dredger. Built by VDS Staal en Machinebouw, the hull was launched on Thursday, 27 June this year. Built for Myti Mussels of Bangor, Wales, *Lottie Holly*, yard number 611, is due for delivery 28 September in Yerseke. *Lottie Holly* is the latest product of a long and happy association between the shipyard and this customer, in 15 years of cooperation, since 1998 they have built a total of four vessels.

Maaskant Shipyards, located in Stellendam, has been supporting the mussel and shrimp industries for some 60 years since its formation. In 1984 Maaskant Shipyards became an independent subsidiary of the Damen Group. Specialising initially in fishing vessels, Maaskant has become very experienced in highly customised 'one off' purpose designed projects. These projects range from tugs to offshore vessels, research vessels and tank barges. Not confined to new building works alone, Maaskant conducts many conversions and refits and has three floating docks to accommodate repair and maintenance work. The shipyard has been agent for Caterpillar for 15 years and even has an arrangement with one of their customers,

whereby they always have a reconditioned engine waiting, so that maintenance down time can be kept to minimum on a 'service exchange' type basis. The company is also renowned for their winch design and manufacturing activities.

Maaskant has had a long association with VDS Steel and so it was quite natural that they should be selected to build the hull. Having built for Maaskant previously, they are competitive cost-wise with Polish builders and have the advantage of being 'on the doorstep'.

Myti Mussels

Myti Mussels is owned and operated by Valerie and Kim Mould and part of a collaboration of

LOTTIE HOLLY

PRETTY IN PINK

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Builder

Maaskant Shipyards BV, Stellendam, the Netherlands

Owner

Myti Mussels Ltd, Bangor, Wales, United Kingdom

Principal particulars

Length oa	26.92 m
Length reg	23.95 m
Length bpp	24.24 m
Beam mld	10.00 m
Depth mld	2.65 m
Draught	1.00 m
Speed, maximum	8 kn

Complement

Crew 4 persons

Tank capacities

Fuel oil	18 m ³
Fresh water	3 m ³
Ballast water	10 m ³
Sewage	0.4 m ³



four fishing businesses located in North Wales. The official name of the association is the Bangor Mussel Producers Limited. Mr. Mould graduated from Bangor University in 1973 with a degree in Marine Biology and after working for some time in the shellfish industry he established Myti Mussels in 1982. Trading initially in cleaning and preparing harvested mussels before distributing them, Myti expanded into mussel farming. In 1991 they built their first vessel *Bonnie & Kelly* in Wales. *Bonnie & Kelly* was lengthened in 1997 by seven metres from 16.5 to 23.5 metres in response to increased demand. In 1998 a second vessel, *Mytilus* was built; this was a 'state-of-the-art' 24 metre boat, that enabled the use of advanced farming techniques. In 2003, the

much larger *Valente* was built with a length of 43 metres and in 2004 the *Lôlipop* was built and added to the fleet. *Lôlipop* was sold under the name Den Breeën (YE-117) in 2012 to make way for *Lottie Holly*.

A family affair

Lottie Holly, fisheries number BS-12, is truly a family affair: this 26.92 metre mussel dredger is named after the owner's granddaughter, who will preside at the naming ceremony. It is painted in the strikingly favourite colour of the owner's lady wife. Developed to Lloyd's classification, she carries the class notation 100 A1 fishing vessel MCH. Built in a combination of steel and aluminium she weighs 187 gross tons.

Whilst officially listed as a mussel dredger, she is in reality a multi role vessel, capable of both harvesting the mussels from the company's fishing grounds in the Menai Strait in North Wales, as well as collecting and seeding seeds. To collect wild seed mussels to populate their own sites, the dredger will go further offshore, to the Irish Sea, and then returning to transplant them into sheltered lays in the farming areas. The seeding trips are farther off shore entailing a six-hour, each way, return trip and this is the occasion when the sleeping accommodation will be used. To prevent the risk of handling, the mussel seed is dumped overboard by means of four large overboard valves. The valves are located two to port and two to starboard just



In addition to the usual controls on the bridge, also controls for all relevant fishing equipment



Propulsion is provided by two Caterpillar C-18TA diesel engines with Reintjes reduction gearboxes

below the water line; when opened they allow the hold to empty using gravity alone with just a little help from a water jet to flush the final remains from the hold. When, after growing and fattening for up to three years, the mussels are ready for harvesting, this is accomplished by means of beam towed nets. If the mussels are taken from an area of clean seabed, they are put straight into the hold or large bags specially made for the purpose. If the mussels are taken from a sandy area, they are first released into two large stainless steel sinks, where they are washed by a circular motion created by a strategically placed nozzle. From there they are transported inboard on two transverse conveyor belts, during which time they are given a 'good shower', this is the actual cleaning phase. The two belts dump

the mussels into a single centreline conveyor belt with takes them to the hold via distribution channels.

The philosophy

Lottie Holly has an unusual length to breadth ratio, being relatively wide for her length. The main reason for this is the fact that the classification rules are more straightforward for vessels under 24 metres in registered length. However, the storage capacity in the hold of the vessel had to be realised and this could only be achieved by increasing the beam. Another 'knock on' was that the owner preferred only one fishing beam on each side, when most mussel fishers are equipped with two on each side. Once again the capacity requirements had to be met and so the dredges are

wider than would normally be the case. Finally, *Lottie Holly* had to be easy to manoeuvre and of shallow draft, because she will be operating out of small tidal harbours in North Wales.

To return to the outfit of the vessel, *Lottie Holly* has two times two berth cabins for overnight accommodation, a small galley and shower toilet space. Whilst relatively unsophisticated they are nonetheless very comfortable for the relatively few times a year they will be used during the seeding phase of the farming process.

Engineering details

Propulsion is provided by two Caterpillar C-18TA diesel engines, rated at 335 kW each, through Reintjes reduction gearboxes to fixed

If the mussels are taken from a sandy area, they are first released into basins, where they are washed



pitch five bladed propellers via a propeller shaft and Vulcan coupling. The propellers are fitted within nozzles for improved efficiency. The propeller shaft bearings are grease-lubricated by means of a dedicated pump.

Lottie Holly has two generators; the main generator has a capacity of 515 kVA and is located in the engine room, whilst a harbour generator set of 30.5 kVA capacity is located in the technical space in the fore end of the ship. Both units have Caterpillar prime movers, in the case of the main generator this is a C-18TA unit and whilst the harbour set is equipped with a C2.2 unit. In reality, the main set is only required during fishing activities and thus would run light at other times. To prevent excessive wear on this engine, the harbour set is used when travelling to and from the fishing grounds. The two generators are complimented by a 32A shore power facility when alongside in harbour, all of which handle 400v three phase power.

The steering gear consists of four rudders, controlled hydraulically using rams and tie bars. Two separate steering systems powered by two engine driven pumps, provide dual redundancy, these can be controlled manually or by autopilot. For added manoeuvrability, *Lottie Holly* has been equipped with a Schottel bow thruster of the tunnel type. This fixed pitch device has a three bladed propeller and is rated at 110 kW. To

achieve speed and thus thrust control a variable frequency converter controls the speed of the electric motor from stationary to 1,400 rpm.

Deck gear includes a Maaskant electric anchor winch located in the bow, twin bollards forward and aft on each side, and a single bollard just forward to the wheelhouse. In addition to its anchor duties, this 7.5 kW two-speed winch is also capable of lowering the fore mast for maintenance purposes. Topping the derricks is achieved with a separate winch below main deck.

Fishing equipment

The main winch, used for fishing, is located below deck forward of the hold. This is another product of the Maaskant stable; this time it is a M120MP 2x2 device powered by a 130 kW electric motor capable of providing up to 3.5 ton pull and running at a speed of 145 metre per minute. It comprises of two fishing and two tipping drums. The fishing drums are used for lifting and lowering the nets and outriggers, whilst the tipping drums are used for the catch to be loaded into the hold or bag as the case may be. For emptying, the nets need to be turned upside-down; this is done with the tipping wire hooked onto the bottom of the dredge and lifting it while slightly releasing the fishing wire.

To complement the deck and fishing winches, *Lottie Holly* is equipped with a knuckle boom

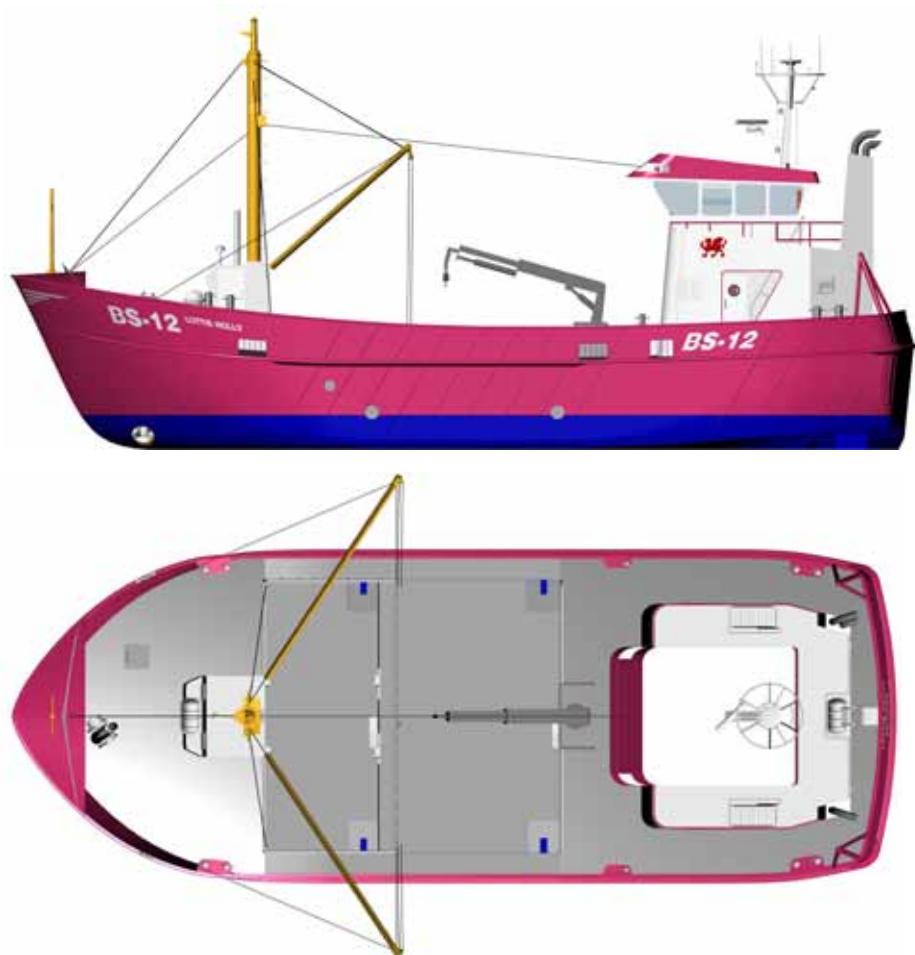
crane supplied by Double D marine equipment. The crane is electro-hydraulic, employing a 30 kW motor, with a lifting capacity of 1,600 kg at nine metres outreach (the maximum) or 2,150 kg at seven metres outreach and can be remotely controlled. This crane is primarily used for transporting the 'Big Bags' within the hold.

Compressed air is required for the mussel-fishing winch control, the ships whistle and hand tools. This is provided by a 7.5 kW main air compressor with a 250 litre reservoir and a 4 kW emergency unit, both of which are located in the technical space in the forward part of the vessel. Fire fighting facilities are provided by three NOVEC bottles located in the engine room, with the releases on the main deck adjacent to the engine room exit.

On the bridge, in addition to the usual controls for propulsion, steering, power generation and other system monitoring as per class Society requirements, there are also controls for the fishing winch, the fishing conveyor belts, mussel washing heads and the hold discharge valves.

Lottie Holly, the well-equipped latest addition to the Myti Mussels fleet, will doubtlessly turn heads wherever she goes.

Tom Oomkens & Andrew Rudgley



Subcontractors and suppliers of equipment fitted on board the *Lottie Holly* - YN 611

Ambi, Lelystad	: grease pumps
Anko Piping, Dordrecht	: piping system
Bakker Machinefabriek, W, Yerseke	: fish and mussel washer
Blokland non-ferro, Sliedrecht	: box coolers and exhaust silencers
Bruce Roberts Europe, Hendrik-Ido-Ambacht	: design
Damen Anchor & Chain Factory (AFK), Schiedam	: anchor
Damen Marine Components, Hardinxveld-Giessendam	: nozzles and chain stopper
Delta-Isolatief, Stellendam	: insulation exhaust
Desmi, Utrecht	: pumps and hydrophore
Doedijns Hydraulics, Waddinxveen	: hydraulic systems
Double D marine equipment, Waalwijk	: Heila deck crane
Dromec, Rhenen	: fishing/outrigger and tipping winch
VDS-Vlissingen, Nieuwdorp	: steel hull
E&K Electronics, Yerseke	: electrical installation
Econosto Nederland, Rotterdam	: valves and fittings
Gebr. Bèlje, Oosterland	: central heating and sanitary equipment
Heinen & Hopman Engineering, Spakenburg	: aircro system
Hoenderop, P, Ridderkerk	: pilot chair
IJtama, Scheepstimmerbedrijf, Stellendam	: carpentry work and consoles
Integron Marine Systems, Zwijndrecht	: propulsion control system
International Paint, Rhoon	: coating system for the hull and outfitting
Lankhorst Taselaar, Lelystad	: Freeman hatches
Leroy-Somer, Soesterberg	: generator set - alternator
Lloyd's Register EMEA Marine, Rotterdam	: classification
Maaskant Shipyards, Stellendam	: mooring and anchor winches
Minimax Brandbeveiliging, Almere	: fixed fiti installation engine room
Nijhuis Pompen, Winterswijk	: flushing pumps
Peijl Groep, Van der, Goes	: air compressors; air dryer and hd cleaner
Pon Power, Papendrecht	: Caterpillar diesel engine; Leroy-Somer generator set - alternator
Prohand, Bergschenhoek	: anchor chain
Redert, Piet, Stellendam	: rigging
Reintjes Benelux, Antwerp, Belgium	: reduction gearboxes
Robbins Marine Electronics, UK	: navigation and nautical equipment
Rubber Design, Heerjansdam	: flexible couplings
Rucon, Harderwijk	: ventilation system engine room
Schavicaast, Stellendam	: paint work
Schottel Nederland, Zoetermeer	: bow thruster
Smits Neuchâtel, Utrecht	: flooring
Trinox, Hardinxveld Giessendam	: GRP WT portholes, windows and doors
Voorden, Van, Zaltbommel	: fixed pitch propellers
Winel, Assen	: steel WT doors
Winteb, Winschoten	: air pipe heads and de-aerators