CONOSHIP NEWS

Periodical Newsletter - 2012 | 1

"Thinking towards new opportunities"

CONOSHIP INTERNATIONAL

A VERY PROSPEROUS 2012!

In this edition of our re-styled Newsletter, you will find many examples of our renewed commitment to creativity and innovation, as we develop new ideas and practical solutions to help customers tap new opportunities in today's challenging economic situation.

A recent case in point is the conversion of a multipurpose cargo vessel (built by Barkmeijer in 1998) into a versatile, self-unloading Trailing Suction Hopper Dredger (TSHD), to embark on a fresh and successful commercial career under new owner ABEKO Marine BV. The 4500m^3 TSHD 'Shoalway' (delivered by Intervak in 2010) demonstrated a high level of efficiency during her first year of service under the ownership of Boskalis, leading to a new series of near-repeat vessels for this owner. The design of the new TSHD's is slightly modified and further optimised by Conoship in cooperation with D.W. den Herder Maritiem BV.

Another illustration of this creative spirit is a project to raise an existing vessel's deadweight by increasing the maximum allowable draught through skilful modifications on the main deck.

Conoship's research and development endeavours are being brought to bear on the final product, as they are introduced into new designs of vessels and new solutions for owners. In this context, two remarkable projects currently at the construction stage in Conoship member shipyards are the Pilot Station Vessel (PSV) class in hand by Barkmeijer Shipyards, and the shallow-draught ice breaking vessel at Royal Niestern Sander.

The development of the Cono-Sea-Bow (in collaboration with MARIN and Delft University of Technology) and innovative, high propulsive-efficiency aft-ship hull forms have led to new designs offering a very high deadweight-to-fuel cost ratio. An additional, associated advantage is the lower exhaust emission per ton-mile of such designs. This is set to be further improved through the use of LNG as bunker fuel, and for which a design is under development at Conoship as part of a national R&D project.

Global Seatrade, the subsidiary of the Urk-based Hartman Marine Group, has recently commissioned MV 'Atlantic', the fourth example of the fleet's award-winning, exceptionally fast series of heavy-load/project cargo vessels. Furthermore, construction work has been implemented on a new generation of project cargo carriers of an innovative design, developed by Conoship in close collaboration with Global Seatrade.

'Thinking towards new opportunities'
To ensure future success, shipyards and shipowners must orientate to 'Thinking towards new opportunities'. At Conoship, we would like to be a partner in your 'thinking process', and support you in exploring new possibilities and devising new solutions. We have a track record of proven, innovative designs, and we are continuing to innovate so that you can realise fresh opportunities in existing or new markets.

Renewal and innovation are the main themes in this Newsletter. In fact, renewal is already expressed in the revised layout and nature of the content. A similar restyling has been effected at our website www.conoship.com, to provide an improved medium for news, developments and Conoship project updates from around the world.

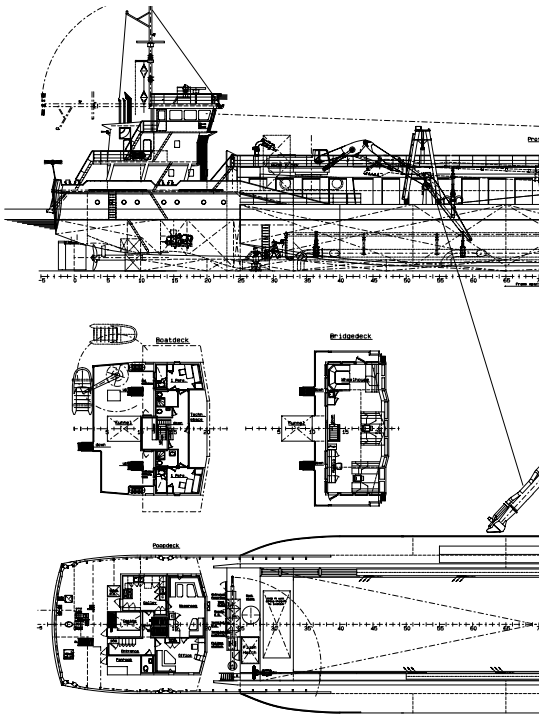
We hope that the information presented will be a source of inspiration to all those who are seeking profitable, new or alternative opportunities, and enhanced fleet capabilities as regards both new designs and existing vessels.

We wish you good luck in meeting the coming challenges.

Best regards,
Guus van der Bles
Leo van Ingen

Photo cover: *8300TDW MPP vessel 'Marietje Andrea'*
Photo: *Flying Focus*
Yard: *Barkmeijer Stroobos BV, Stroobos, The Netherlands*
Owner: *Rederij Danser van Gent, Delfzijl, The Netherlands*

'Contender'
creating a versatile dredger out of a



3200 dwt General Cargo Vessel

Design description: 2100m³ Trailing Suction Hopper Dredger
Vessel name: TSDH 'Contender'
Owner: ABEKO Marine BV, Beverwijk, The Netherlands
Builder: Neptune Marine Services BV, Hardinxveld-Giesendam, The Netherlands

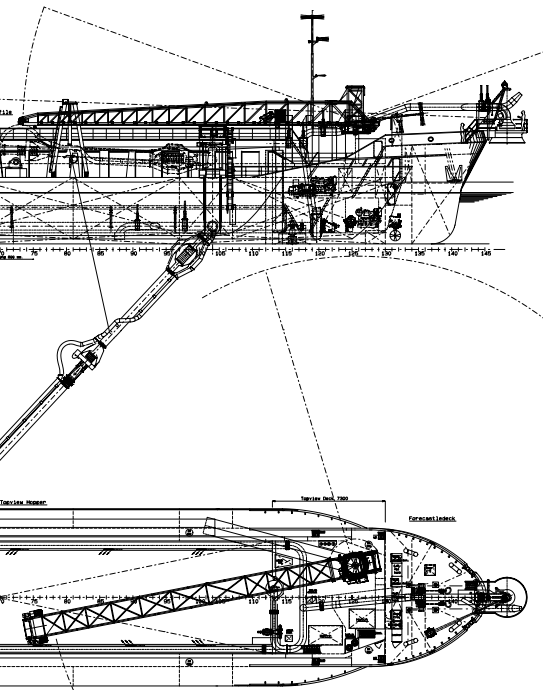
ABEKO Marine received new requests for dredging and land reclamation projects, for which the company had to expand the fleet on the short term with a new trailing suction hopper dredger. Suitable second hand dredgers were not available which made the company decide for the conversion of the MV 'Sirocco', a general cargo vessel built by Barkmeijer Shipyards, into a state-of-the-art Trailing Suction Hopper Dredger.

The design of the conversion of this former 3200-tdw vessel is executed by Conoship International in close cooperation with Barkmeijer Shipyards, Royal Niestern Sander and DredgeCon.

The Conoship's activities comprised the re-design of the General Arrangement of the vessel to a dredger, hullform modifications and watertight integrity. To obtain more deadweight and to improve vessel stability, two sponsoons were fitted to the full midship length of the hull, enlarging the breadth from 12.50m to 16.00m. The cargo hold is redesigned into a hopper with bottom doors. Discharging can also take place through a rainbowing system on the bow or to a floating pipeline through a bow coupling. Dry sand can also be discharged by an excavator that moves over the hopper area and transports the sand or gravel onto conveyor belts along the hopper to the shore conveyor. Desalination and drying of sand and gravel is being done on board during the transits from the dredging area to the discharge port.

In the forward part of the original cargo hold a new engine- & pump room was designed, containing the dredge pump, jet pumps and two 400 kW azimuth thrusters. In the aft part of the original cargo hold another engine room is created with a second pair of 400 kW azimuth thrusters. Especially the additional four thrusters will give the vessel good manoeuvrability during operations in narrow harbour spaces. The wheelhouse is elevated increasing the clear view on ship and environment during dredging operations.

This conversion proves the feasibility of creating a multi purpose Trailing Suction Hopper Dredger within a limited time span, based on a second hand general cargo vessel of good Conoship quality.



PRINCIPAL PARTICULARS

Length over all	87.99	m
Length between p.p.	83.78	m
Breadth moulded	16.00	m
Depth	6.00	m
Draught (summer)	4.72	m
Deadweight (T= 4.72)	3423	ton
Dredging draught	5.58	m
Deadweight (T= 5.58)	4486	ton
Speed (service)	10	kn

EQUIPMENT

Main engine (total output)	999	kW
4 x thruster, each	400	kW
Bow thruster	200	kW

DREDGING PARTICULARS

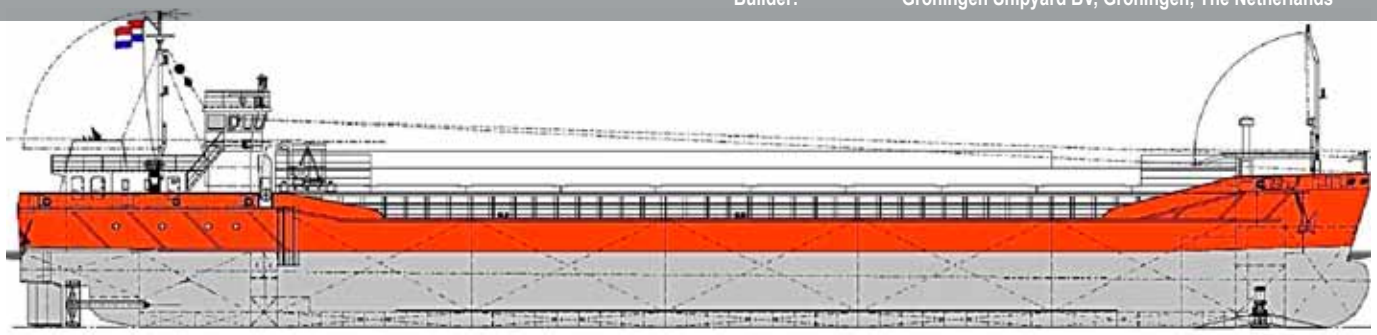
Diameter of dragarm	700	mm
Max. dredge depth	30	m
Sand pump output	850	kW
2x Jet pump output each	447	kW
Hopper capacity	2127	m^3
Density of hopper load	1.0 – 2.2	t/m^3

CAPACITIES

Gasoil	285	m^3
Potable water	58	m^3
Ballast water	140	m^3

‘Lady Anna’ first of a new generation of Sea-River Trader vessels

Design description: 3700 TDW Sea–River Trader
Vessel name: MV ‘Lady Anna’
Owner: Wijnne & Barends’ cargadoors- en agentuurkantoren BV, Delfzijl, The Netherlands
Builder: Groningen Shipyard BV, Groningen, The Netherlands



On Friday 21st of October Groningen Shipyard successfully launched MV ‘Lady Anna’. This vessel is the first of a series of 3700-tdw vessels for Wijnne Barends.

The outset of this design dates from almost three years ago, when Wijnne Barends and Conoship International started with the first development for a new successful generation of Sea-River vessels in a modified economic environment. The design is focused on hydrodynamic aspects combined with limited installed propulsion power and a versatile hold. The generated concept design turned out to be feasible and attractive and with this a basis for design was created.

Last year’s R&D projects at Conoship International focused on hydrodynamic aspects and optimization of hull forms. Based on extensive Computer Fluid Dynamic calculations (CFD), new knowledge was gained on innovative wave-reducing bow forms and on improving propulsive efficiency by aft body design. Optimization of combinations of propeller-design and high efficiency nozzles, integrated in optimized aft ship forms, were showing promising results to reduce fuel consumption without sacrificing deadweight and speed.

Elaboration of the Wijnne Barends design in the contract phase has been done in collaboration with Groot Ship Design for Groningen Shipyard, where Conoship International focused on the optimization of speed–power and hull lines. These combined achievements resulted in an innovative and high payload vessel with a low fuel consumption. MV ‘Lady Anna’ will sail the coastal waters of Europe, the Trollhättan Canal and the rivers Rhine and Seine. This vessel is believed to have the lowest possible fuel consumption and the highest possible speed considering the required deadweight and installed engine power. The MV ‘Lady Anna’ will be followed by five more identical vessels.

PRINCIPAL PARTICULARS		
Length over all	88.00	m
Length between p.p.	84.98	m
Breadth moulded	13.35	m
Depth	7.05	m
Draught (river)	3.40	m
Deadweight (river)	2070	ton
Draught (design)	4.30	m
Deadweight (design)	3000	ton
Draught (scantling)	4.90	m
Deadweight (scantling)	3700	ton
Gross tonnage	2570	
Speed (service)	10	kn
EQUIPMENT		
Main engine	749	kW
Bow thruster	265	kW
HOLD PARTICULARS		
Hold dim.	62.30 x 10.80 x 7.73	m
Cargo hold capacity	181000	cb.ft.
Tank top load	15	t/m^2
CAPACITIES		
Gasoil	90	m^3
Potable water	35	m^3
Ballast water	1950	m^3

Draught increase
improvements for existing ships

The current economical situation puts a vast pressure on shipowners. Charter rates have been decreased significantly and the value of existing vessels is heavily under pressure. Moreover, stringent environmental rules and regulations confine the ‘playing field’ for transportation at sea.

In general, today’s shipping market benefits from vessels with a low fuel consumption and a high deadweight. For the long term, this means new and sophisticated development strategies for new vessel designs. For the short term, improvement of existing vessels could be an opportunity, for example by increasing deadweight. Conoship is involved in a number of projects on lengthening or deepening of existing vessels. In some cases deadweight can be increased by minor adjustments. Modification of high hatch-coamings, fitting an additional stringer and a walkway alongside the topside of the coaming, may lead to a reduction in required freeboard. The feasibility of an increased draught and corresponding deadweight increase is amongst others depending on new freeboard calculations, checking and re-submitting of all stability files at the increased draught (intact and damage) and a check of constructional aspects by class.

We do not pretend that ‘draught increase’ gives the solution for today’s critical circumstances, but it may alleviate the current pressure by gaining maximum possible deadweight. The deepening of vessels is subject to several naval architectural aspects and must be checked carefully. Please feel free to ask for a quotation for an initial feasibility check of draught increase of your vessel.

'Marietje Deborah' a new 'high deadweight / low fuel' multi-purpose vessel

Design description: 8300 TDW Multi Purpose Vessel
Vessel name: MV 'Marietje Deborah'
Owner: Rederij Danser van Gent, Delfzijl, The Netherlands
Builder: Barkmeijer Stroobos BV, Stroobos, The Netherlands

After successful sea trials in July, the MV 'Marietje Deborah' was delivered to her owners, the Dutch shipping company Danser van Gent. She is the third vessel in a series of four dry-cargo vessels built by Barkmeijer Shipyards.

The design of the ship is the result of joint efforts of the Danser family, Wagenborg Shipping, Barkmeijer Shipyards and Conoship International. The vessel will primarily operate in the Baltic Region and the Great Lakes and is consequently designed for sailing in heavy ice conditions (Finnish-Swedish 1A). She is also designed and equipped for navigation on the Great Lakes and the St. Lawrence Seaway.

The hull form is characterized by slender lines at the waterline level and a flaired bow section. The form is optimized with CFD-calculations with a focus on best open water performance. Consideration of performance in ice conditions was the second step. Optimization of aft ship hull lines in combination with a high efficiency nozzle resulted in both a good speed with relative low fuel consumption in open water and a good performance in ice.

MV ´Marietje Deborah´ is following the first two vessels in the series: MV ´Marietje Andrea´ and MV ´Marietje Marsilla´. The fourth vessel will be delivered in 2014.

PRINCIPAL PARTICULARS

Length over all	126.13	m
Length between p.p.	123.17	m
Breadth mld.	15.20	m
Depth	9.50	m
Draught	6.98	m
Deadweight	8300	ton
Gross tonnage	5418	
Speed (service)	14	kn

EQUIPMENT

Main engine	3060	kW
Shaft generator	450	ekW
Auxiliary engine	255	ekW
Bow thruster	400	kW

HOLD PARTICULARS

Hold dim. I	20.70 X 12.80 x 9.40	m
Hold dim. II	68.46 X 12.80 x 8.40	m
Cargo hold capacity	345000	cb.ft.
Tank top load	15	t/m^2
Container capacity (total)	303	TEU

CAPACITIES

HFO	500	m^3
MDO	85	m^3
Potable water	50	m^3
Ballast water	3640	m^3

Recent delivery 'Hestia'

Design description: Bijlsma Trader 3250
Vessel name: MV 'Hestia'
Owner: C.V. Scheepvaartonderneming Hestia, Ten Boer, The Netherlands
Builder: Veka Bijlsma BV, Lemmer, The Netherlands

PRINCIPAL PARTICULARS

Length over all	88.97	m
Length between p.p.	84.99	m
Breadth moulded	11.80	m
Depth	6.90	m
Draught	5.05	m
Deadweight	3250	ton
Gross tonnage	2281	
Speed (service)	11	kn
Main engine	1440	kW

CAPACITIES

Hold dim.	63.05 x 9.60 x 7.48	m
Cargo hold capacity	158985	cb.ft.
Tank top load	20	t/m^2
HFO	225	m^3
Ballast water	1282	m^3

'Atlantic' delivered: Series of awarded Hartman Trader 18 completed

Design description: 3650 TDW Heavy Lift Vessel.
Vessel name: MV 'Atlantic'
Owner: Global Seatrade BV, Urk, The Netherlands
Builder: Hartman Marine Shipbuilding BV, Urk, The Netherlands

With the delivery of the MV 'Atlantic' to Global Seatrade the last vessel out of a series of four came into service in November 2011. Her predecessors out of this Hartman Trader 18 series are MV 's 'Deo Volente', 'Eendracht' and 'Pacific Dawn' respectively. This prestigious design is the result of joint efforts of Hartman Marine and Conoship International and has been awarded with the "Schip van het jaar prijs" (Ship of the year award) in 2007.

The sister vessels already have sound track records and the results prove that this versatile design with high autonomy and flexibility has a high earning capacity, even in today's markets. Amongst others, two main design characteristics contributed to this unique position.

The first is a slender hullform which guarantees a high service speed of 18 knots with a low fuel consumption. The other striking feature is her big cargo load and discharge flexibility.

Two heavy cargo cranes enable the vessel to handle cargo elements up to 240 tons autonomously.

For MV 'Atlantic' the gained experience with the sister vessels resulted in a further optimized design. Additional enlargement of cargo deck space is created by a reinforced deck at the level of the top of the hatchcovers at portside as well as in the forward region of the vessel. Also a stern thruster is installed to improve vessel's manoeuvrability.

PRINCIPAL PARTICULARS

Length over all	115.20	m
Length between p.p.	98.20	m
Breadth moulded	15.60	m
Depth	7.40	m
Draught	5.81	m
Deadweight	3650	ton
Gross tonnage	2999	
Main engine	3680	kW
Speed (service)	18	kn

HOLD PARTICULARS

Hold dimensions		
Upper Hold	63.50 x 11.50 x 8.17	m
Lower Hold	31.50 x 11.00 x 3.50	m
Cargo hold capacity	155265	cb.ft.
Gearing	2x120mt at 16	m
Tank top load	15	t/m^2
Container capacity (total)	236	TEU

CAPACITIES

HFO	408	m^3
Gasoil	85	m^3
Ballast water	2533	m^3

Recent delivery 'Ennio Marnix'

Design description: Bijlsma Trader 4500
Vessel name: MV 'Ennio Marnix'
Owner: Scheepvaartbedrijf G. de Jonge, Emmercompascuum, The Netherlands
Builder: Veka Bijlsma BV, Lemmer, The Netherlands

PRINCIPAL PARTICULARS

Length over all	89.95	m
Length between p.p.	84.98	m
Breadth moulded	14.40	m
Depth	7.35	m
Draught	5.83	m
Deadweight	4530	ton
Gross tonnage	2999	
Speed (service)	12.5	kn
Main engine	1860	kW

CAPACITIES

Hold dim.	63.00 X 11.70 x 8.40	m
Cargo hold capacity	214000	cb.ft.
Tank top load	15	t/m^2
HFO	430	m^3
Ballast water	1800	m^3

‘Lady Helene’
exceptional ice performance

Design description: 4200 TDW Multi Purpose Vessel
Vessel name: MV ‘Lady Helene’
Owner: Wijnne Barends’ cargadoors- en agentuurkantoren BV, Delfzijl, The Netherlands
Builder: Wenling Hexing Shipyard Ltd., Zhejiang, China

PRINCIPAL PARTICULARS		
Length over all	98.20	m
Length between p.p.	95.30	m
Breadth moulded	13.40	m
Depth	7.80	m
Draught	5.60	m
Deadweight	4200	ton
Gross tonnage	2995	
Speed (service)	13.5	kn
Ice Class	1A	

EQUIPMENT		
Main engine	2642	kW
Shaft generator	315	kW
Auxiliary engines (2x)	140	kW
Bow thruster	250	kW

HOLD PARTICULARS		
Hold dim.	65.10 x 11.20 x 8.34	m
Cargo hold capacity	206500	cb.ft.
Tank top load	15	t/m^2
Container capacity (total)	60	TEU

Dutch based shipowner Wijnne Barends extended its fleet by two 4200 tdw multi purpose vessels last year. MV ‘Lady Helene’ was delivered by Chinese shipbuilder Wenling Hexing mid April 2011, three months later followed by sister vessel ‘Lady Hester’. These vessels are a lengthened version of the previous delivered 3500 tdw-series. Reference is made to Conoship Newsletter 2009/2, MV ‘Banier’.

A strong focus during the design of the hullform of these vessels is the operability and performance in Baltic Sea and White Sea regions. Besides extensive CFD-calculations, model tests in ice were executed. The tests in ice conditions were completed with an icebreaker close tow simulation. During operations in the frozen Baltic area in the winter of 2010/2011, the design proved her capabilities in ice conditions. The vessel maintained significant more speed in ice compared with vessels of same tonnage and ice class.

CAPACITIES		
HFO	220	m^3
Gasoil	47	m^3
Potable water	38	m^3
Ballast water	1850	m^3

Pilot Station Vessel ‘Polaris’ succesfully launched

Design description: Pilot Station Vessel
Vessel name: MV ‘Polaris’
Owner: Dutch Pilot Organization, Hoek van Holland, The Netherlands
Builder: Barkmeijer Stroobos BV, Stroobos, The Netherlands

On 18th November 2011 Conoship’s member shipyard Barkmeijer successfully launched the MV ‘Polaris’. This is the first of a series of three Pilot Station Vessels ordered by the Dutch Pilot Organization.

This design is the result of close cooperation between the Dutch Pilot Organisation, Barkmeijer Shipyards and Conoship International, supported by sea keeping and propulsion specialists. The hullform is specifically designed to meet the operational needs of the Pilot Organization and their operational criteria on motional behavior in harsh weather conditions. It is optimized in view of sea keeping capabilities. The new vessels will be able to provide their services up to a significant wave height of 3.50 m. This achievement illustrates Conoship’s and Barkemeijer’s strength in the development of specialized and complex ships such as Hydrographic Research Vessels, Emergency Response and Rescue Vessels, Oil Spill response vessels and Trailing Suction Hopper Dredgers.

Conoship: the designer and matchmaker for the international maritime industry

Design and Engineering
Conoship International provides design, engineering and consultancy services for the maritime industry. Conoship designs are renown throughout the world. Each design is customized based on the client's demand in order to achieve an optimum technical and economical solution, enabled by the most innovative ship design tools and shipbuilding techniques.

Matchmakership
Furthermore, Conoship International acts as a match maker finding unique shipyards for unique owners and vice versa. We bring owners and yards together. We are able to carry out and support projects from feasibility studies until delivery of the vessel.

Our wide range of services for shipyards, shipowners and brokers include:

- Conceptual ship design
- Basic ship design
- Class approval design
- Conversion design
- Market and marketing studies
- Ship design and shipbuilding project management
- Feasibility studies
- Contract Management
- Brokerage of newbuildings and secondhand tonnage
- Shipyard assessments
- Shipyard design and development

Please contact us to find out more about our services, to discuss your ideas and to see whether we can be of any assistance to you.

The member shipyards of Conoship International B.V.

Barkmeijer Shipyards, The Netherlands
Bodewes Shipyards, The Netherlands
Royal Niestern Sander, The Netherlands

Business Partners

Futuristic India Group, India
SEDS, Smart Engineering and Design Solutions Ltd., India
Algoship Brokers Ltd., Bahama's

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