AUSTRALIA SPECIAL
DAMEN’S TWO EXECUTIVE BOARD MEMBERS TALK ABOUT 2012 & 2013

DUTCH DESIGN
WHAT HAVE A CAR- AND SHIP DESIGNER IN COMMON?
Dear Reader,

As our company is experiencing a period of growth – that is, more people, knowledge and shipyards to handle a record order intake – Damen strives to put its growing resources into better ships and services. Two important questions are continuously addressed: ‘How to reduce the Total Cost of Ownership?’ and: ‘How to make sure a client makes the most of his vessel, both as to reliability and revenue?’.

Meanwhile, we are and remain a family business and our culture of no-nonsense shipbuilding and equally valuing each and every client, large or small, continues to be an integral part of the way we do business.

To show you what these developments mean and make you part of it, I would like to introduce our new corporate magazine to you. This first edition (DAMEN #1) shows, straight and simple, what we have been up to in the past few months when it comes to deliveries, R&D and other business developments. It also aims to give a more personal insight into ‘who we are’ as well as what we do besides designing and building ships.

I hope you take some time to glance through these pages and, like with our vessels, we appreciate any comments you might have.

Kommer Damen
DAMEN MAGAZINE

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INTERACT WITH DAMEN VESSELS:

look out for the Layar logo!

As readers will see, this is no ordinary shipyard customer magazine.
Damen is keen to go the extra mile to show what our vessels can do. When you see the Layar logo all you need is a smart phone or tablet to bring the photos to life!

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128 Damen Shipyards Group portfolio
By the time you receive this magazine, a new and exciting year is underway for Damen. A healthy orderbook and many promising new projects accompany us into 2013. Against the backdrop of another European economic downturn I am happy to report a profitable 2012 for Damen. In fact over the past five years Damen has been able to maintain its turnover and profitability at constant levels.

The fact that Damen’s activities are well-spread, both geographically and as to products offered, helps to secure the stability of the Group. A good example is the order for Australia’s DMS who entrusted Damen with a multiple ship order for tugs, bunker barges and two complex support vessels for the Royal Australian Navy. These vessels will be built at various Damen yards in Asia.

Damen is currently upgrading its yard capabilities around the world. New shipyards are to be completed this year in Vietnam, as well as Sharjah (UAE). In the past year Damen took over ship repair and conversion yards in Sweden, France and the Netherlands to strengthen Damen’s European ship repair and conversion network, so that we may offer our customers repair services in the main ports of Northern Europe.

As to new building, Damen will continue to expand in niche markets. The energy and security markets will continue to be strong pillars for future growth.

The world of shipbuilding will be under pressure for the next years. This means we have to double our efforts to deliver quality vessels with top service at a competitive cost price and with even shorter delivery times. Fortunately more than 7,000 Damen employees are committed to pursuing these goals and serving our customers.

In the meantime Health, Safety and the Environment will remain high on the agenda for Damen. Fuel consumption is not only an environmental issue, it is also a serious cost element affecting ship operation. Damen Research will strive for better, and more fuel efficient vessels, working in close cooperation with universities and research institutes.

Last but not least, we would like to thank our employees, subcontractors and suppliers to have built the best vessels for all our valued customers.

RENÉ H. BERKVENS, CEO
FROM AROUND THE WORLD:

NEW OFFICE IN NORWAY

BUILDING IN BRAZIL

DAMEN YARD
SHIPREPAIR YARD
PARTNER YARD
BUSINESS COOPERATION
A global competitor, Australia has one of the fastest growing economies in the world and has enjoyed unprecedented growth for the past two decades. The Australia Special highlights Damen’s success in this land of opportunity as it celebrates the sale of its 57th vessel there.

SEE PAGE 40
KOTUG chooses powerful and compact Damen ATD 2412

COMPACT, ROBUST & EXTREMELY STRONG

IDEAL FOR BUSY PORTS

FAST GROWING TOWAGE COMPANY ‘KOTUG INTERNATIONAL’ HAS STRENGTHENED ITS TUG FLEET IN GERMANY WITH THE ADDITION OF THE POWERFUL AND EXTREMELY MANOEUVRABLE DAMEN AZIMUTH TRACTOR DRIVE TUGS (ATD) 2412 TWIN-FIN VESSELS.
Named ‘ZP Bulldog’ and ‘ZP Boxer’, the pair were urgently required and had to be supplied at very short notice due to KOTUG’s growth in the ports of Hamburg, Bremerhaven and Wilhelmshaven.

ZP Bulldog and ZP Boxer are now in service in the port of Hamburg, where agility and a high bollard pull are of paramount importance.

Fast delivery and quality were key factors in KOTUG choosing Damen. This order followed a successful contract in March 2012, when Damen had to deliver three ASD Tug 2810 shiphandling tugs - ‘SD Ranger’, ‘SD Rebel’ and ‘SD Rover’ – very quickly.

With its roots dating back more than 100 years, KOTUG has been operating azimuthing tractor tugs for more than two decades and the Dutch company is the inventor of the unique “Rotor Tug”. Headquartered in Rotterdam, KOTUG is well placed to appreciate the handling qualities and performance of the 2412 twin-fin vessels.

The Damen ATD Tug 2412 is an extremely compact, highly manoeuvrable, tractor tug with two azimuthing propulsion units forward and the towing winch aft. The vessels have a length of 24.74 m and maximum beam of just 12.63 m.

Considerable research and development went into the final hull form. Unlike previous tractor tugs, the vessel has two fins aft in place of the usual skeg. Damen Research created an entirely new twin-fin concept. The fins are positioned in line with the propulsion units - one on either side - and give the tug excellent course stability without impairing its exceptional manoeuvrability and precise control.

Coen Boudesteijn, Product Director of the Tug Department at Damen, explains that Damen’s design philosophy for the ATD 2412 twin-fin and the highly successful ASD Tug 2411 has been to produce an extremely compact, “state-of-the-art” harbour tug capable of exerting its maximum towing force exactly where it is required during shiphandling operations. Both designs are equipped to operate in the push-pull mode and can change position during the towing operation safely, quickly and precisely.

“For such powerful tugs they are truly compact, giving them the ability to work in close proximity to modern ships with a flared bow and stern and to operate in confined spaces,” he emphasises.

ZP Bulldog and ZP Boxer are extremely powerful tugs for their small size. Two Caterpillar 3516C TA HD/D diesels generate a total of 5600 bhp at 1600 rev/min.

Unique performance levels were achieved during their extensive testing programme in Rotterdam. Unprecedented results were recorded where a bollard pull of 70 tonnes was achieved!

The tugs recorded a maximum free running speed ahead of 12.5 knots and 11.9 knots astern and they can go from full ahead to full astern within a ship’s length. A full 360-degree turn is achieved in 10 seconds and the tugs accelerate from 0 to 12.5 knots in record time. “With their spectacular agility and bollard pull the tugs are ideally suited to handling large ships in the confined waterways of Hamburg and similar busy ports!”

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“For such powerful tugs they are truly compact, giving them the ability to work in close proximity to modern ships with a flared bow and stern and to operate in confined spaces. And they are also specifically designed to offer excellent overhead clearance,” he emphasises.
MAARTEN JONGEN
MANAGING DIRECTOR OF DAMEN SHIPYARDS SINGAPORE
"My job in Singapore is a fantastic opportunity and something I’d long been hoping for. Owing to circumstances, it all went more quickly than I’d expected. There was about a two-month gap between my decision to go abroad and my actual departure. My wife Mirthe and I have been here almost a year now. It’s a huge step to emigrate and it takes a lot of preparation, but it’s also liberating. It turns out that we really didn’t need all the possessions that we’d acquired down through the years. In the end, we left with only five full suitcases. The culture shock was not too bad. I’d already spent more than 150 days a year in Singapore and environs as the Regional Sales Director Asia Pacific, my previous position. It was very intense but fun too, and I learned a lot.

"My job now is very different. Instead of hitting the road as a sales manager, I am responsible for everyday affairs at a production location that employs about 300 people. We build about 20 ships a year here and carry out approximately 100 repair jobs. The fun thing about working in this yard is that I have a very small, close-knit team on the one hand but still belong to the "bigger" Damen family on the other. The employees here are every bit as committed to the company as my colleagues back in Gorinchem.

"And my relationship with my colleagues here in Singapore is just as pleasant, although it has taken more effort than we expected to build up a social network. But we were warned about that. All in all, it’s been an exciting year, both personally and professionally, full of challenges and new experiences – and it’s left me with very fond memories."
STRONG DEMAND FOR PONTOONS & BARGES CONTINUES UNABATED

With demand for pontoons and barges so strong, Damen is building more types for stock to ensure fast delivery times. And in addition the Pontoons & Barges Department introduced a brand new concept in 2012, the Damen Transshipment Barge, which has been developed together with leading crane manufacturer Liebherr.

Only recently a large shipment of pontoons and barges arrived in the Port of Rotterdam on a journey from China where they had been built by Damen’s specialist partner yards. And already on the 50-day journey, many were sold before they had docked in the Dutch port!

Arno van Boheemen, Design & Proposal Manager from Damen’s Pontoons & Barges department, says: “By transporting several in one heavy lift transport from our range, we keep costs to a minimum and this enables us to provide customers with a good price.”

Sixteen were brought into the Netherlands comprising:

1. Stan Pontoon 12032
2. Stan Pontoon 9127
3. Stan Pontoon 7524
4. Stan Pontoons 8916 ICE
5. Stan Pontoons 6316
6. Stan Pontoons 4113
7. Stan Pontoons 6511
8. Transshipment Barge 6324

OFFSHORE WIND ACCOMMODATION BARGE
unrivalled seakeeping

When it comes to the new Offshore Wind Accommodation Barges, Damen has again invested a lot in Research & Development to ensure that the barges offer the very best seakeeping ability possible. Currently, the standard is 71 m x 20 m, which accommodates 60 to 120 people, depending on customer requirements.

Mr Van Boheemen comments: “They have very good seakeeping behaviour in both Baltic and North Sea conditions. Damen Research investigations have proven that these barges perform much better than conventional offshore vessels in helping to avoid seasickness and to give a comfortable hotel service for the technicians on board. They provide a very stable platform.”

In Dynamic Positioning operation the barge also has much more economical fuel consumption, he emphasises. “For offshore wind farms, where speed is not such an important factor and where crew comfort is vital, these barges offer a better solution when compared to a vessel.”

The barge can be deployed with an access system and a tender boat of the customer’s choice.
Strong demand for pontoons & barges continues unabated

Innovation in the Damen P&B department continues as it adds to the already wide-ranging portfolio. In 2012 the Damen Transshipment Barge and an Accommodation Barge, specifically for the rapidly expanding offshore wind industry, have been developed.

The Damen Transshipment Barge has been designed for working from ship-to-ship, ship-to-barge or from ship-to-quay and it can handle either dry bulk or containers. This newly designed vessel is extremely flexible and fuel efficient, with a shallow draught. Fitted with a Liebherr CBG 350, the crane has a maximum lifting capacity of 35 tonnes in grab operation and an outreach of 36 m. Given its stability, the Damen Transshipment Barge can handle a turnover of up to 30,000 tonnes a day. Able to handle capesize vessels, the barge has a 750 m², unobstructed wooden deck. This new barge is also being built for stock and will be available in 2013.

Undoubtedly, Damen’s well-known Stan Pontoon range forms the foundation of the P&B Department. Damen Stan Pontoons are Lloyds Classified for worldwide use and are prepared in such a way that they can be built up with additional equipment such as ballast pumps, winches with anchors, spuds, generating sets, navigation lights, fender systems and emergency anchors. All of the pontoons have a hull shape that facilitates excellent seakeeping behaviour and one or two skegs.

2012 proved a successful year for P&B. Some highlights include an order from Al Saad Engineering of Saudi Arabia for a Stan Pontoon 5224, which has a wooden deck and is going to be fitted with a Liebherr crawler crane.

And additionally a Crane Barge, measuring 80x25 m, with a 6,400 tonne-metre capacity crane (400 tonnes at 16 m outreach), is going to be tailor-made for a giant LNG Project, taking place in Western Australia. This order was placed by BAM International.

Largest pontoon ever built

This Crane Barge, ordered by leading construction group BAM, will be deployed on the project and then it will be followed by yet another Damen vessel - the largest pontoon ever built by Damen.

The huge 140 m x 40 m “Module Offloading Facility Transition Pontoon” (MOFTP) is being built on behalf of ALE, one of the largest specialist transport lifting companies in the world and AG&P International Holdings Limited.

The MOFTP has a depth of 12 m and has the ability to rise and fall to compensate for the 8 m tidal difference in Darwin by using air compression and water ballasting. This unique pontoon has ballast water tanks with a capacity of 37,000 m³. It will be used to handle transition pieces and modules coming from Asia.

Furthermore, an order has been placed for a Stan Lander 5915, which is due to be deployed in Gabon by Smit Lamnalco.

Building for stock

“Because Damen strategically builds for stock, this enables us to deliver many of our P&B products in just one month.”

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“So you actually make the entire car in this plant?” Damen designer Lucas Zaat (r) has trouble believing that Dutch car manufacturer Donkervoort builds its racing cars out of engine parts, steel tubes, carbon fibre matting and countless nuts and bolts – and that all the work is done by hand by a team of scarcely 20 craftsmen, one of whom is designer Jordi Wiersma (l).

Lucas is Design & Proposal Manager at Damen, the global market leader in shipbuilding, with branches in 37 countries and more than 7,000 employees. “Of course, it is a highly complex matter to design and build ships in general, and especially offshore ships. Even so, I am envious of Donkervoort’s knowledge capital. The cars are developed by a small team.”
Donkervoort is certainly no run-of-the-mill car manufacturer. Its exclusive sports cars are renowned for their phenomenal performance. The powerful engine and lightweight body deliver a pure driving experience. That feeling is enhanced by the fact that Donkervoort models do not have ABS, power steering or other electronic driving aids. “Our cars are no-nonsense vehicles. Everything is geared to delivering a top performance,” says Donkervoort designer Jordi Wiersma. “I think the same is true of Damen.”

“That’s absolutely correct,” confirms Lucas. “Our work is also judged on functional criteria such as power, speed, manoeuvrability, capacity and stability. Every new design starts with a list of technical criteria that the ship has to meet. The list can run to a few hundred sheets of paper.”

“Let’s not forget the safety and environmental requirements, which are perhaps even stricter,” adds Jordi. “That’s why we’re launching the GTO, a new car that complies with the strictest standards and will replace all previous models.”

BEAUTY AND EMOTION
The two designers start their conversation by exploring differences in their work. Are cars tested in wind tunnels? Lucas asks. “No, too expensive” is the answer. Is the carbon fibre that makes up much of the Donkervoort body sufficiently fireproof? “Of course. The fire safety rules are sacred.” But it soon transpires that both regard the design as more than the sum of functionality plus regulations. The conversation quickly moves on to beauty and feeling – to “evoking emotions”.

“A Donkervoort is more than a means of transport,” says Jordi. “Our buyers aren’t looking for a new car – they’re looking for a unique experience. They want the old-fashioned pleasure of driving, to feel the steering wheel pull in a curve, to be pushed back into their seat when they accelerate. In order to give them that, our cars have to be powerful and lightweight. But we can also give them the same sensation with our design. Our cars ride very low so that they hug the ground. At the front end, the Donkervoort resembles a predator in the wild. You can feel the same untamed power behind the wheel.”

FUNCTIONALITY VERSUS DESIGN
“The design gives the car a unique look that’s immediately identifiable,” notes Lucas. “People can spot a Donkervoort from a distance by the way the tyres stand out from the body. We want to do the same with our ships. Our latest model, the AHTS – Damen’s first fully customised deepwater Anchor Handling Tug Supplier for the offshore industry – has a strikingly high prow and a stern as straight as an arrow…” “Those freestanding tyres are mainly meant to reduce the weight!” Jordi interrupts. “But it also gives the car a classic look, and that fits in with our philosophy of delivering an authentic driving experience.”

“Well, our unique, straight prow is also a functional feature,” says Lucas. “The ship has a longer waterline and that’s why it performs optimally at different draughts. The chine also considerably reduces the impact of waves slamming against the sides. But it’s the design team that has to drive innovation. As a rule, technical engineers aren’t inclined to push the boundaries. They stick with what they know. Designers, on the other hand, always want to use their experience and insights to try out new things, and what’s important then is to strike the right balance between innovation and ‘proven design’.”
"OUR BUYERS ARE NOT LOOKING FOR A NEW CAR THEY’RE LOOKING FOR A UNIQUE EXPERIENCE."

DONKEROERT DESIGNER
JORDI WIERZMA
“I don’t design a car on my own,” says Jordi. “I am constantly consulting the production unit. After all, my ideas have to be feasible down in the plant.” “Designing a ship is, of course, a question of teamwork – that’s the basis for a quality product,” says Lucas.

THE GOLDEN SECTION
Lucas and Jordi agree that technical innovation and expressive design should go hand in hand. Expressiveness should not, however, be confused with unnecessary details or flashy spoilers. ‘No nonsense’ is a favoured approach for both designers.

“We can now manufacture the entire body out of carbon fibre,” says Jordi. “That makes the most outrageous shapes possible. Instead, the GTO has clean, modern lines. That’s our way of showing that this car is more advanced than the models it’s replacing. On the other hand, we don’t make a display of the software that tunes the engine.”

Lucas says that Damen’s design team also considered the lines of the AHTS. “This is the first time that we cast a sidelong glance at the ‘golden section’, which prescribes the ideal proportions between the hull, the deckhouse and the wheelhouse. It’s an unwritten rule that if a product looks good, it often performs beautifully too.”

EXPRESSING YOUR CORE VALUES
“A design communicates not only that a product is innovative – it says the same about the entire company,” says Jordi. “We can express our brand’s core values very effectively in our designs. Joop Donkervoort built his first sports car in 1978 in a simple shed. That first effort grew into a unique make that offers a pure, almost raw driving experience. That’s why the shape, with its long bonnet, alludes to archetypal racing cars.”

“Damen symbolises quality and reliability,” says Lucas. “The AHTS 200 looks robust, but in fact it’s really a high-tech ship. We prefer to stress calm and simplicity. That’s why we’ve remained a family business since 1927. Damen doesn’t make things harder, it makes them easier – fit for purpose. That’s the key to success.”
Damen Shipyards Group introduces its newly designed Damen AHTS 200, a versatile deepwater Anchor Handling Tug Supplier able to operate in water depths in excess of 3,000 m. The AHTS 200 is the latest addition to the Damen Offshore Series.

Following the company’s ambitions to increase its market share in the offshore industry, Damen heavily invests in designing state-of-the-art vessels for several offshore sub-markets, noticeably the Offshore Support, Offshore Wind, (Seismic) Research and Transport & Installation industries. Backed by ample R&D and engineering capacity, its own construction yards, specialised partner yards and a rapidly expanding service organisation, Damen feels confident that the chosen approach will be successful.

**RESEARCH**

The typical Damen design philosophy, featuring values like safety, functionality, standardisation, modularisation, ease of maintenance and overall quality, can also be found in the Damen AHTS 200. Extensive research analysis was executed on hull optimisation, sea-keeping qualities, noise and vibration reduction, fuel oil consumption reduction, changing rules and regulations and client-needs and lessons-learned from other Damen designs.

**INNOVATIVE WINCH PACKAGE**

The Damen AHTS 200 includes a new and innovative winch arrangement which is quite decisive for the overall dimensions and layout of the vessel. For the development of this extensive winch package Damen teamed-up with Huisman Equipment (the Netherlands), which specialises in heavy lift and deepwater cranes, winches and drilling equipment. The electrically driven winches resulting from this cooperation represent an innovative approach as the market is traditionally dominated by low-pressure hydraulics. The electrical-drive winches provide a clean, green, economical, functional and safe solution for the anticipated operations.

**PROПULSION**

The vessel is designed to generate 200-250 tonnes Bollard Pull and is fitted with engines in a father-son layout, featuring twin-in single-out gearboxes driving CP propellers in a nozzle. High performance flap-type rudders fitted to rotary vane steering gears facilitate a high degree of manoeuvrability supported by ample side thrust capacity, including tunnel thrusters as well as retractable thrusters in the fore- and aft ship.

**OUTFITTING OPTIONS**

Forward of the winches ample space has been reserved for the fitting of a high-end ROV system with the possibility of launching through a side door. The high beam AHTS could serve as a suitable platform for mounting a subsea construction crane. The design can easily be upgraded with dedicated anti-heeling systems, moon pools and sophisticated diving systems.

**ACCOMMODATION**

The comfortable accommodation can host up to 45 persons in single and double cabins fitted according to the Damen Business or Executive Line comprising modern and durable materials. Special attention is paid to sufficient natural lighting through maximum-sized windows. State-of-the-art infotainment systems, offering multiple levels of data communication, support the functionality and comfort of the vessel.

Although driven by its standardisation philosophy Damen offers ample opportunities to include owner’s standards and component choices to give them optimal support for their operations. The vessel is designed following an extensive DNV Class notation, although other class societies may be considered as well.

Damen is proud to present this design and is looking forward to discussing the details with possible clients.
Arnout Damen outlines his thoughts on how Damen is facing the challenges of today and those certain to arrive in the future.

For the fifth consecutive year Damen Shipyards has experienced a healthy growth in its orderbook and in its profits and this is despite a difficult operating environment, particularly in the “traditional” shipping markets and with most parts of Europe continuing to struggle to find any economic growth.

The vision to be the market leader in all of its niche sectors is still at the heart of Damen, he says. Diversification in products and in a geographical sense is very much the foundation of Damen Shipyards Group. “We have an extremely diversified product portfolio and fortunately we can absorb local crises. Although Damen is based in the Netherlands we work and deliver our vessels all over the world. Furthermore, in many regions there are no signs of an economic dip (Africa, Australia, Brazil) and we are active in all of them.”

Being active in so many markets also somewhat protects the Group if one sector experiences a dip. “While the shortsea market for cargo vessels and inland shipping is still in trouble, there are many more opportunities in the oil and gas business and in offshore wind for instance,” he points out.

And in 2013, even though there has been a very solid year behind the group, there is no sense that Damen is resting on its laurels. There will undoubtedly be more pressure from competitors, particularly in the Far East, he stresses. “There is so much capacity in shipbuilding, particularly for larger vessels and in Asia. No doubt more yards will go broke. And of course this also means that they are looking into the markets we are in. But they really have a completely different vision of the shipbuilding industry.”
"ULTIMATELY, WE WANT TO CONTINUE TO OFFER A QUALITY PRODUCT FOR A COMPETITIVE PRICE. AND, LAST BUT NOT LEAST, WE LIKE WHAT WE DO, SO WE WANT TO KEEP ON DOING IT!"

The standardisation concept and the focus on quality are just as important now as they were when the group was a much more modest organisation. And while Damen does not want to grow purely for the sake of it, the breadth of its portfolio is being expanded. Damen has recently added to its product range to include larger offshore vessels such as the 200 tonne bollard pull Anchor Handling Tug Supplier and the new Utility Vessel series, which ranges from 20 m to 60 m. New offshore construction vessels, ROV support vessels and others are also under consideration.

“We are renewing our existing models and developing new models adapted to the modern world by investing in innovation. Vessels have to be ready for new rules and regulations.” Damen’s Research & Development work is continually addressing all of today’s concerns such as reducing emissions and having the best seakeeping behaviour for efficient operations and for the safety and comfort of the crew. Damen continually strives to innovate and to reduce the environmental footprint of the building process and of a vessel throughout its lifetime.

“Our R&D programme is a big advantage for us, we don’t have to reinvent the wheel each time because we have decades of experience and customer feedback and this is embodied into each new design. An example of this is the recent launch of the first ever Damen Hybrid ASD Tug 2810.”

Specialising in niche markets
Mr Damen outlines the company’s focus for the coming years. “We want to be number one or at least in the top three in all of our niche markets.”

However, he stresses: “Growth is not a goal in itself, we have to continuously focus on the cost price of our products. Cost and quality are always utmost in our minds. Therefore we will also remain focused on our activities in every niche and work to continually improve our products and quality to stay ahead of the rest. We have to understand our customers’ changing requirements and give them what they need if we are to retain this leading position.”

Total Cost of Ownership increasingly important
Increasingly, customers are more concerned with the Total Cost of Ownership and full lifecycle of the vessel, says Mr Damen and he expects this trend to continue in the future. “Clients are now buying vessels based on an estimation of the TCO, not just the original vessel purchase price. Depreciation and long-term maintenance costs are certainly considered more nowadays. This is an advantage to us as our vessels retain a very high second-hand value and have low maintenance costs because of the quality of the build, the warranty structure and lifecycle maintenance programmes.”

This year Mr Damen is looking forward to following up on the success of the Damen Fast Crew Supplier 2610 with the arrival of the 2008 version in the second quarter and he is very positive about prospects for the 200 tonne BP Anchor Handling Tug Supplier.

The philosophy that Damen has built its success on remains unchanged, he stresses. “I don’t want our customers ever to feel alone, we always want to help and make sure their vessels keep on going, doing the tasks they were bought for. Customers can call us 24/7 if they need spare parts or any other service. Ultimately, we want to continue to offer a quality product for a competitive price. And, last but not least, we like what we do, so we want to keep on doing it!”

Taking the long-term view
Arnout Damen is also mindful of the importance that Damen stays true to its roots, even though it is a much larger organisation now. “If customers buy an 8 m tugboat, a 100 m offshore vessel or a 50 m patrol vessel, they are all equally important to us – and they should be. We have to keep an open culture and an open door; clients should feel welcome here. In short, we want to give everyone the red carpet treatment.”

“We are a family business and we will stay a family business; that is an important fact. We are not in this industry for short-term profits - we always take the long-term view. This gives certainty and allows us to invest in developing the skills and knowledge of our people and to play a pioneering role in the shipbuilding industry, making sure we can face the challenges of the future.”

ARNOUT DAMEN
CHIEF OPERATIONS OFFICER

Being Kommer Damen’s son some would assume that it was inevitable that Arnout would enter the Damen Shipyards Group as soon as he finished his studies. But this was not the case with Arnout.

He did want a career in the shipbuilding industry from a very early age. At Dutch primary schools all children have to give talks about subjects of interest to them. While most choose to talk about their pet hamster or rabbit, Arnout laughs, his speech was not typical. “As a 10-year-old I told my class how I wanted to be a shipbuilder and about the horsepower of tugboats!” He admits it went above the head of his classmates - but clearly the ambition was there.

However, he was keen to be independent and forge his own path. This led him to create the Navingo publishing group based in Rotterdam, which boasts several well-respected titles and conferences such as Offshore Wind Magazine, the Maritime & Offshore Career Event, DredgingToday.com and the Offshore Energy exhibition. After more than a decade as one of the directors of Navingo, Damen’s former COO left to become CEO of Germanischer Lloyd in 2010. That was the moment Arnout was invited by his father Kommer to join the company. He was given 24-hours to decide. “I knew it was the right opportunity and right time to join the business.”

FAVOURITE DAMEN VESSEL

“The new Anchor Handling Tug Supplier. With a horsepower of 18,000 and 200 tons bollard pull it is incredibly powerful and its strength is really expressed in its look.”

Within Damen the new design is known simply as “white” to express the fact it is entirely new and in contrast to any other tug Damen has built. There is already a great deal of interest in the new design and he is hopeful that the first will be sold in 2013.
NEW DAMEN OFFICE OPENS IN

NORWAY

DAMEN OFFICIALLY OPENED A NEW OFFICE IN STAVANGER IN NOVEMBER 2012 AS A STRATEGIC BASE FROM WHICH TO SERVE THE NORWEGIAN OFFSHORE INDUSTRY - WHERE DAMEN HAS A GROWING PRESENCE - AS WELL AS DAMEN’S OTHER KEY MARKETS.

Remko Hottentot
Sales Manager North, West & South Europe

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Orders for a series of four Platform Supply Vessels to be built at Damen Shipyards Galati (Romania) and another two to be built at Damen Shipyards Bergum in the Netherlands were booked recently.

New Sales Manager Remko Hottentot, who is based in Norway and has an international nautical background and experience in the Offshore and LNG industries, says: “Stavanger is the European Oil & Gas capital and the place where the ONS Exhibition and conferences are held. Stavanger is, so to speak, a mini-Houston.”

He emphasises: “We are still a modest player in the Offshore industry but experienced in designing and building Platform Supply Vessels, Seismic Research Support Vessels, Fast Crew Suppliers and Offshore Wind catamarans. Customers can buy virtually off-the-shelf. One Norwegian customer found that out when he told me he was looking for a 10 m long tugboat. On second thoughts he said, ‘a 12 m long vessel would be more suitable’. I could immediately show him both and arrange delivery within two months, if so desired.”

Hottentot continues: “Besides offshore related vessels there will also be a focus on other vessels in our portfolio such as ferries, high speed craft, (fish farm) workboats, barges, special purpose vessels and tugs. Norway is still an expensive country to build vessels in and I am convinced that with our well established Damen yard in Romania the same or better quality can be delivered for a better price compared to Norwegian yards. The challenge is to convince our Norwegian clients.”

Family-owned
The fast response and the fact that Damen is a family-owned business appears to be appealing to Norwegian business partners, he adds. “Generally speaking, Norwegian companies are family-owned. People know that this can mean accessible management and being customer driven. That is exactly what Damen is.”
DAMEN SERVICES
A TRUSTED PARTNER AND FULL SERVICES PROVIDER DURING THE COMPLETE LIFECYCLE
Predictable TCO
Damen Services Commercial Director, Reinier van Herel comments: “Owners and operators don’t want to just buy a vessel; they want a partner which can assist in increasing the overall operational efficiency. Nowadays it is not unusual to see companies tendering for the Total Cost of Ownership (TCO) of the vessel for the next 25 years. A predictable cost for the lifetime of the vessel represents a very big competitive advantage for our clients.”

By providing total solutions, Damen Services has great insight into operational costs and revenues and can help optimise uptime, which ultimately increases the client’s profitability, he adds.

Closer to our customers
There are presently 100 highly experienced Service Engineers – “Damen’s Ambassadors” - travelling around the globe to provide excellent warranty services, amongst other things. Damen Services is ensuring that it is even closer to customers and can respond quickly by increasing the number of Service Hubs. “With 36 yards worldwide we are checking every yard and seeing whether it would add value if a Service Hub is based there. Certainly countries in Africa, Australasia, the Caribbean and the Middle East are likely to have new Service Hubs soon.” It is a continuous process, where we listen to our customers and look where we can add value throughout the supply chain, Mr Van Herel stresses.

Vast knowledge base
Damen has delivered more than 5,000 vessels over the decades and technical data and customer feedback from each and every vessel has been gathered by Damen Services. This knowledge is used for technical assistance to help Damen customers and for the continuous improvement of the service portfolio.

This knowledge base is accessible for Damen customers. Through the services portal customers can easily access information related to their vessel and the warranty period. If they need to replenish spares after initial provisioning they can also search and order the required parts online. Additionally, Damen Services offers training, such as maintenance, asset management and lifecycle costing courses.

Services for customer success
Damen Services is an integral part of Damen. “As a group we develop and design vessels, build them and service them. This knowledge is incorporated into the Services portfolio. Based on customer requirements, we combine our service products into a fitting service programme to make sure that customer goals are successfully achieved,” he adds.
DESIGNED FOR THE REAL WORLD

FCS 2610 - SAFE CREW TRANSFER
‘Twin Axe’ Fast Crew Supplier 2610 quickly becoming “Industry Standard”

SINCE ITS INTRODUCTION TO THE MARKET IN JUNE 2011, THE ‘TWIN AXE’ FAST CREW SUPPLIER (FCS) 2610 HAS TRULY TAKEN THE MARKET BY STORM AND IS FAST BECOMING THE “INDUSTRY STANDARD”.
Jaap Gelling, Product Director High Speed Craft comments: “Damen always strives to innovate. The ‘Twin Axe’ FCS 2610 is sailing proof that investment in R&D pays off.”

The Fast Crew Supplier can already be seen at many European Offshore Wind Farms and because of strong demand Damen is building the vessel for stock.

Damen’s launch customer for this revolutionary vessel was Scottish Offshore Wind Service company Marineco UK. At the time of the first delivery the company’s Managing Director Mike Conafray enthused: “I truly believe that this vessel will become the mainstay of the wind farm industry in the years to come. It is the best boat in generations!”

**24 under construction**

And indeed since that first delivery, a further 15 vessels have been sold and another 24 vessels are under construction. Marineco UK itself ordered two more ‘Twin Axes’, directly after delivery of its first FCS 2610.

The ‘Twin Axe’ FCS 2610 was a further development of Damen’s highly successful Axe Bow concept, which was designed together with Delft University of Technology. The design takes its name from the side view of the bow: the keel line slopes down forward and the sheer line slopes up – strongly resembling the blade of an axe. The extremely slender and deep bow, free of any flare, provides unprecedented soft seakeeping characteristics. Where a conventional high-speed vessel bounces over the waves, the Axe Bow effortlessly cuts through them.

Mr Gelling emphasises: “Most high-speed vessels are designed for ‘trial conditions’ rather than the real world, which can lead to serious shortcomings when the new vessels face wind and waves at sea. These vessels have to slow down when waves become significant to keep the crew – and the ship – in one piece.”

**Safe crew transfer**

The ‘Twin Axe’ FCS 2610 is entirely fit for purpose and has been designed for operability at sea instead of trial conditions. The unique hull form gives unparalleled seakeeping behaviour and means that the vessel can travel at full speed (26 knots), while still providing a safe and comfortable ride for the crew. Extensive tests have proven that the vessel reduces slamming by 50%.

“The ‘Twin Axe’ FCS 2610 can handle a crew transfer in 2 - 2.5 m significant wave height with absolutely no problem and with no loss in her performance. With its excellent seakeeping ability it has already made it possible to extend the operating window considerably.”

Additionally, the FCS 2610 is ideal as a support vessel as it is able to carry two 20ft containers. The vessels can stay out in the field for up to four days at a time with a range of 1,200 nm.

Damen is proud that one of the most recent tenders from a leading company in the Offshore Wind sector stated that services have to be carried out with Damen ‘Twin Axes’. Proof, if needed, that the FCS 2610 is becoming a true “Industry Standard”.

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**DAMEN FCS 2610**

- **Length o.a.** 25.75 m
- **Speed max** 25 kts
- **Speed range** 20 - 25
- **Deck area** 90 m²
- **Hull Construction** Aluminium
- **Industrial Personnel** 12 - 24

**FACTS**

- 15 sold
- 24 under construction
"The Queen’s Birthday is a public holiday in the Netherlands, but I didn’t have a day off this year because we were so busy building three FCS 2610s.

As a senior outfitter, I had a hand in turning the hull into a real ship: welding, aligning the engine, laying the floors, installing the pumps – the whole process, up to and including delivery to the client.

We often need to make modifications to the first ships in a new series. The details still have to be hammered out and each time, we learn a lot in the process. All these things make my job at the shipyard very interesting. No two days are alike. Personally, I am not really into shipping and yet I’ve been working for Damen for ten years now. It’s a well-structured company and I get good support here.

For example, when we had to work weekend overtime on the FCS 2610, the coordinators came round several times to see how things were going and to talk to the outfitters. The atmosphere is friendly and light-hearted. We work hard, but there’s always time for a laugh.”

TOM VAN DER HEIJDEN
SENIOR OUTFITTER, GORINCHEM
“It was a race against the clock to finish the very first FCS 2610. Damen wanted to premiere it at Seawork International in Southampton, so we only had a year for the whole project – engineering, construction and outfitting and completion.

It was a complex job because it was the very first time we’d produced that particular model. The whole team was highly motivated, in spite of all the overtime and extra work on weekends. A good atmosphere at work is important. Damen does a lot for its employees, and they are prepared to give a lot back – one good turn deserves another, so to speak! I really value being appreciated as an employee and having a good relationship with my colleagues. After almost 12.5 years, I still feel that this is the right place for me.

My roots are in the shipping industry. The great thing about my job is that I take part in the whole shipbuilding process, from beginning to end. From the coffee maker to the main engines – everything passes through my hands, in a manner of speaking. Damen is always working to develop and improve, and it feels good to contribute to that. What do I think makes the company so special? Well, even when I am on holiday in Italy, I spot a ship and think ‘Hey, that’s a Damen!!’.”
Damen was founded in 1927. Much has happened since then, especially since 1969, when Kommer Damen decided to start standardising designs and keeping vessels in stock. In the past five to 10 years, however, Damen has seen rapid growth, which in turn has encouraged all sorts of changes large and small: from a collection of 'local yards' to an international corporate group with a distinct identity; from a no-nonsense 'man with a plan' to a professional organisation with professional management.
Even so, “Our culture and values have broadly remained the same,” say Josien and Dina Damen, Kommer Damen’s wife and sister, who are both involved in the company in many ways and on many levels. “We’re a family-owned company, which is not the same as being one big family. But there is a strong sense of purpose, cooperation, and – for lack of a better word – ‘mutuality’ throughout the company.

“Our monthly drink with the employees at the Gorinchem yard originally began in the nineteen-thirties with Jan and Marinus Damen, who would pay their workers’ wages in cash. Nowadays, it’s a social occasion that plays an important part in creating cohesion at the yard. Every last Thursday of the month, one of the directors talks to the group about the month’s turnover, new and ongoing projects, developments at other yards, and so on.”

‘The PV’
The Staff Association (PV) was founded 40 years ago and is flourishing. It organises events regularly, from bingo evenings and motorcycle tours to groupwide parties.

“We also have our annual traditions,” says Dina, “including our pea soup meal in December – pea soup is a traditional Dutch dish – and the company barbecue. The Damen Band takes to the stage and makes sure the dance floor is filled. I am glad that the Staff Association is flourishing and that its members are enthusiastic about organising well-attended events and activities.”

Working abroad
“Many of our colleagues work abroad”, says Josien. “There’s nothing special about this in itself, but we think it’s important that they feel connected, that they’re part of Damen, even in remote areas. I think that the commitment is mutual, because many of our employees remain with us for a long time. Some of our employees describe Damen’s corporate culture as being ‘like family’ and that’s a big compliment!”
EYE-CATCHING EXHIBITIONS

Although Damen views itself as a no-nonsense shipbuilder, the company has a ‘thing’ for the arts. For example, it sponsors the largest Dutch contemporary dance company (read the interview with choreographers Paul Lightfoot and Sol León on page 98), and also arranges in-house and external exhibitions that always attract a fair amount of interest. At Damen’s headquarters, both the reception area and the main hall of the new building offer ample space for hosting various exhibitions several times a year. Dina (l) and Josien Damen (r) explain.

Origins
The exhibitions have their origins in Dina Damen’s private collection. She has always been a collector and saves everything, from old devices (for example the first Apple Macintosh) and tools to recent photographs and films or simply her father’s old cash account books.

Dina set up the Exhibitions Department together with Josien. “Each exhibition is meant to give people a different perspective on the company.” The exhibition themes are chosen with great care. One special point of attention is variety, with the topics ranging from social issues to business results. For example, the exhibition “After work” focused on employee hobbies. Another was “Damen Schelde Naval Shipbuilding”, which covered Damen’s naval shipyard, its development, designs and ships, including the SIGMA frigates, corvettes and Logistic Support vessels for navies worldwide.

“These exhibitions offer visitors and guests a fresh perspective on the company they are doing business with. Besides, it’s a nice diversion when people are waiting at the reception desk,” say Dina and Josien.

‘Going public’
According to Josien and Dina, Dutch museums often take the exhibitions on board, for example the muZEEum in Vlissingen, which adopted ‘Floating Capital’, an exhibition about Damens’ superyacht yard Amels. Ferry operator TESO adopted another exhibition depicting the design and building process for the ferry between Den Helder and the island of Texel. Other partners are the Towage Museum in Vlaardingen, the Dredging Museum in Sliedrecht and the Old Town Hall Museum in Urk. “Of course, when an exhibition ‘goes public’ we supervise the entire process in order to guarantee a consistent quality of design, concept and content.”

Damen Down Under
On 14 December, H.E. Neil Mules, the Australian Ambassador to the Netherlands, presided over the official opening of ‘Damen Down Under’. The exhibition focuses on the relationship between Damen and Australia and was motivated by the recent conclusion of 16 contracts with Australian clients and the fact that Australian customers have ordered almost 60 vessels from Damen since 2000. Since that time, Damen has become more closely involved with the continent, as highlighted in the Australia Special of this magazine.
Australia is the continent where Europe and Asia converge. Geographically, Australia has everything from beautiful rainforests and snow-capped mountains to vast deserts and tropical reefs. The country boasts vibrant, multicultural cities where some of the best fusion food in the world can be eaten reflecting its European and Asian influences. And in contrast, alongside bustling cities, Australia has ancient and mystical aboriginal sites.
GREETINGS
FROM
AUSTRALIA
DAMEN IN AUSTRALIA

A global competitor, Australia has one of the fastest growing economies in the world and has enjoyed unprecedented growth for the past two decades. It has huge reserves of natural resources such as iron ore, oil, natural gas and gold and this is coupled with a people with ambition and an entrepreneurial spirit.

Damen has naturally been attracted to this land of opportunity and in fact, Damen introduced the first vessel to Australia already back in the seventies. But over the past decade particularly, Damen has expanded its presence to pretty much every port in the country and just recently, Damen sold its 57th vessel. In 2012 alone, Damen successfully concluded 16 contracts.

In light of developments in this fascinating country, Damen is dedicating an exposition at its Gorinchem Headquarters to Australia. The Australia Exposition highlights the wonderful cultural diversity, including its famous sporting prowess, artists and aboriginal history, as well its great variety of wines and even the infamous Vegemite, (always a strong divider of opinions!). And so Damen employees can all celebrate the success the company has had in Australia, 2012’s Christmas present had an Australian theme too.

MORE THAN 65 DAMEN VESSELS WILL BE OPERATING HERE IN 2013

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Since Damen decided to focus on Australia in 2000 the speed of growth – like that of the country itself – has been very fast. Damen sold a tugboat to be used in Carnarvon port in 2001 and now the group expects to see more than 65 vessels operate there this year!

Many of Damen’s tugs are destined for Hay Point, Mackay, which is the largest coal exporting facility in the Southern Hemisphere. Roland Briene, Regional Sales Director Asia Pacific, comments: “Damen vessels are often being used by our clients to assist all the large dredging companies which are busy working on new LNG and coal terminals.

“Customers appreciate the quality and because we can deliver very quickly. Our standard vessels are in continuous production and this provides a great solution for the Australian market which is moving very fast.”

Damen also works directly with the mining companies. “Mining companies are keen to control the assets and the whole supply chain. With vessels they don’t want the risk that they won’t be available to help the huge bulkers berth and unberth. For these companies safety, reliability and quality are vital.”

Roland has been concentrating on the market since 2006 and has played a key role in Damen’s development in Australia. He visits at least once a month and supports clients wherever he is on the globe. Reflecting on a wonderful year, he comments: “2012 really has been fantastic and even though mining has slowed a little, 2013 is looking positive, particularly in the LNG sector.”

DMS 11-vessel order
Recently, a multi-vessel order for DMS Maritime Pty Ltd. culminated when a Rescue Gear Ship 9316 to support the Royal Australian Navy’s submarine fleet was ordered in November. This vessel is the last in a series of 11 and is due to be delivered in 2016.

“This really is a remarkable project. After working on this contract for more than three years, we are proud to say that all the vessels so far have been delivered ahead of schedule and in budget to the full satisfaction of the client,” he stresses.

Based in Sydney, DMS Maritime is part of the international service company Serco, which works with governments worldwide. Under the Fleet Marine Services Contract for the Royal Australian Navy DMS Maritime operates a fleet of around 75 vessels on the Navy’s behalf.
“WE COULD SHOW THAT WE HAVE PROVEN DESIGNS AND A TRACK RECORD FOR ON TIME DELIVERY, IN BUDGET.”
Previously, Damen had worked extensively with Serco in the UK on a 29-vessel order completed in 2010. “We took the lessons we all learnt onboard for this contract. For instance, rather than having five project managers we had one to make sure all communications are streamlined efficiently.”

The Rescue Gear Ship 9316 is based on a proven Damen concept having built a similar vessel, the ‘SD Victoria’, for Serco UK to support the Royal Navy.

“This is also the first regular contact Damen has had with the Royal Australian Navy and we hope that this positive experience means that the Navy will consider Damen in the future.”

Since 2011, DMS Maritime has ordered five tugboats (four Azimuth tugs - a Damen ASD Tug 2310 and ASD Tug 2009 plus two ASD’s 2411), as well as a Stan Tug 1606 to be deployed in Darwin, Sydney and Rockingham and four water fuel lighters (due for delivery in 2013/14). Four of the five tugs have been delivered. The ASD Tug 2009 will be delivered mid-2013.

As well as this, the contract includes an Escape Gear Ship 8316 Submarine Rescue Vessel, which was signed for in August 2012 and will be delivered in 2015.

“We started talks in 2007 but ultimately DMS Maritime chose us because of our ability to have all of the different types of vessels under one form of contract. During the tendering process we were able to get together with our product groups and give a very fast response and support them throughout the entire tender process with our project engineers, research and finance people. We could show that we have proven designs and a track record for on time delivery, in budget.”

Damen is also responsible for delivering all 11 vessels to Australia and carrying out the initial training and introduction into service.

Bhagwan Marine – seven vessels in 2012
Bhagwan Marine Pty Ltd is another Damen customer that has been extremely busy expanding in the last few years. The family owned company added seven vessels to its fleet, which is now nearly 70 strong (see the next story). The seven vessels included a Fast Crew Supplier 2610, which will be operated in Mackay in Northern Queensland.

In fact Mackay is becoming somewhat of a “show window” for Damen, Roland laughs. “There are five Damen terminal tugs, Shoalbusters, Multi Cats and Fast Crew Suppliers from at least five of our customers operating there.”

Rhumb Maritime – a new customer for Damen – ordered three vessels in the last 18 months, two Stan Tugs 1606 and a Stan Pontoon 4113. Roland knew one of the owners, Ian Dalgeish, very well when he worked for another Australian maritime company. But he always had a dream to start out on his own.

PB Towage Australia is another important customer of Damen and has ordered 11 vessels in the last few years, particularly the Stan Tug 1606 and the Damen ASD Tug 2411.

“The Stan Tug 1606 is a compact vessel giving a high bollard pull of 16 tonnes - it’s a real workhorse, offering a great price compared to the quality and the powerful BP. It really has proved a winner in Australia being suitable for all kinds of operations such as towing, pushing, crew supply, pilotage and pushing barges.”

Damen Australia Pty Ltd in Sydney
With Damen’s growth in Australia, the company wants to be as close to its customers as possible and indeed, Damen is proud to announce that it will open Damen Australia Pty Ltd. in the next year.

Damen has already been working with a local team of three engineers who look after vessels during the warranty period and beyond. Eventually, Damen hopes to have two to four Service Hubs in the country. In Sydney local service engineers will initially be handling warranty claims but the intention is to grow into a technical supporting role, including pre-docking inspections and maintenance assistance.

2013 looks to be another busy year for the Australian market. As Roland emphasises: “There is so much going on, never a dull moment!”
Originally established by Loui Kannikoski and his wife Kerren, with the unquestioned support of his father and mother, Bhagwan is based in Geraldton, Western Australia and serves the dredging, mining and oil & gas industries.

Co-founder Loui reflects on the company’s development since the late nineties and his change in career. Loui’s father originally came from Finland but moved to Australia in the fifties, where he established a successful cray fishing business. Loui followed his father into the business in 1975 and then stayed in the fishing industry for the next 22 years. But he spotted an opportunity in the growing oil & gas industry and decided to make a change in his career path.

The fishing business was leased out and they took the step into the oil & gas industry.

Dedicated vessels
Initially, he laughs, the company, where his wife, daughter Chloe and sister Dianne also work, started off in a home office with several people jammed into a bedroom and lounge. “My son was kicked out of his bedroom and that was turned into the Administration office.” And now 14 years on, the company employs 400 people and has nearly 70 vessels ranging from water taxis and Multi Cats to 50 m landing barges. “And my son has his own bedroom again!” Recently, Bhagwan won “Business of the Year Award 2012” from the Midwest Chamber of Commerce & Industry.

Loui comments: “At the time when we entered the oil & gas sector there was a desperate need for purpose built boats in the industry, most vessels were either old cray boats or very old vessels from the North Sea.” In 1999, the company decided to build its first dedicated vessel, a 25 m catamaran, which was completed in October 2000. Interestingly, Bhagwan Marine actually has one of the first ever Damen vessels that came to Australia in the seventies, which it acquired through a take over.
BHAGWAN MARINE, WHICH NOW OPERATES NEARLY 70 VESSELS, IS ONE OF DAMEN’S AUSTRALIAN CUSTOMERS THAT IS EXPANDING FAST AS IT NURTURES AMBITIONS TO BECOME AN INTERNATIONAL SERVICE PROVIDER.

“We had always been interested in Damen vessels but we really started to buy them a couple of years ago and in the last 24 months we have bought eight Damen vessels!” This has included two Shoalbuster 3009, three Multi Cats (2x1908 and 1x2611) and Bhagwan has ordered a second Fast Crew Supplier 2610 and Shoalbusters 2709 and the company is considering another order very soon. Additionally, Bhagwan has exclusive rights to two FCS 2610 and a Shoalbuster 2709.

Commenting on why he prefers Damen vessels, Loui says: “The main thing is undoubtedly the quality of the build. Damen has a long history in shipbuilding, it has been the designer and developer of these vessels, they are based on proven concepts. There is no point in trying to reinvent the wheel.”

Great reputation
And crucially, Damen has a great reputation all over the world, he stresses. “Many of our clients are involved in dredging and offshore for instance, and Damen vessels tick all the boxes with our clients, giving them peace of mind.”

He also highlights the relationship that has been built up with Damen. “Perhaps because we are also a family firm, we feel comfortable with Damen. It is very straightforward to deal with. I have met Kommer Damen and regularly see Roland Briene and we have a great relationship. We always prefer face-to-face negotiations. For us it is also pleasing to see that a family company can grow to the size of Damen.”

Currently, Bhagwan Marine has vessels working throughout Australia on both the east and west coast, with a presence in 10 ports. But it has ambitious plans to become an international service provider, particularly serving Asia and Africa.

“Australia itself is also very busy, we see a positive future and see ourselves expanding with Damen vessels as we go further afield.”
Damen Shipyards Group is very happy to be helping the Sydney Heritage Fleet, a volunteer organisation which restores heritage ships, as a gesture of thanks to the Australian maritime industry for the support it has shown Damen over the years.

Damen supports the Australian “museum that goes to sea”

Sydney Heritage Fleet, with its roots dating back to 1965, began when a small group of volunteers started restoring a NSW State Government VIP launch, the Lady Hopetoun, which was built in 1902. Now there are 1,100 volunteers and the Lady Hopetoun sails around Sydney harbour 110 years after she was built! Currently, Sydney Heritage Fleet has a 10-strong historical fleet, five of which are over 100 years old. One of its iconic ships, James Craig, is a stunning square rigger, which has 21 sails, representing 1,100 m². Built in 1874 in Sunderland in the UK, the rigger was beached in Tasmania in 1932 and abandoned for the next 40 years.

Volunteers worked tirelessly on this beautiful vessel for 28 years, which eventually included restoring 19.5 km of rigging and installing 50,000 rivets! Fully operational, the vessel is the only 19th century tall ship in the world sailing regularly. Other vessels in the fleet include one the oldest coal burning steam tugs, 'Waratah'. Following a visit to this extraordinary fleet in early 2012, Damen Chairman, Kommer Damen decided to make a donation to the volunteer organisation.

Damen’s donation has been used to replace the steel hull plates of the John Oxley, which was built in 1927 by Bow McLachlan of Paisley, Scotland. She was built for the Queensland Harbours and Rivers Board and steamed under her own power as a pilot vessel in Moreton Bay and as a buoy and lighthouse tender along the Queensland coast.

Ross Muir, General Manager of the Sydney Heritage Fleet, says: “Not only is the organisation a great social meeting point for all of our volunteers, it also helps preserve long-forgotten shipbuilding skills such as steam engineering and riveting.”

The Sydney Heritage Fleet is hoping that the next project, depending on whether it can raise the funding, will be a 100-year-old doubled-ended harbour ferry, “Kanangra”.

History in action
John Oxley was built in riveted steel with teak decks. She is a typical coastal steamship with raised forecastle, well deck, machinery and navigation midships and accommodation aft. Just recently, the last steel plate was replaced. The group has worked on the vessel for 10 years.
ASIA PACIFIC HAS RECORD YEAR AND MORE EXCITING OPPORTUNITIES ARE ON THE HORIZON
Many years of building up a presence in the Asia Pacific region have really proven fruitful in 2012 when the region experienced a record order intake of €300 million, with Vietnam, Australia, China and Indonesia all putting in a star performance.

Damen Area Director Asia Pacific, Pim Schuurman has been a frequent visitor since the early nineties. “This region has seen some impressive results but there are still plenty of opportunities for Damen to explore, both in terms of establishing partnerships with local shipyards and in expanding sales. Prospects for the next few years are very exciting.”

Damen already works with five shipyards in Vietnam, which provide employment for around 3,000 people. Production capacity will be extended towards the end of 2013 when Damen - for the first time – will have a majority-owned yard in the country.

Together with the local and well-established yard, Song Cam in Haiphong City, the new shipyard will be called Damen Song Cam Shipyard and Damen will have a 70% stake. With an ideal location and direct access to open sea, the yard is situated on a 42-hectare site in Haiphong City, near the River Cam.

New Vietnam yard gets the go-ahead
Ultimately, Damen intends to turn this yard into the largest yard in the entire group for medium sized vessels. Although the yard will have a 60-metre limit, this still means that it can accommodate around 90% of Damen’s vast portfolio. The production line will be entirely streamlined whereby a standard ASD Tug 2810 for instance, could be built every eight weeks. The new yard, where around 750 people will be employed on completion, is expected to be fully operational in the second quarter 2014 and the first phase by end-2013.

Currently, many Damen vessel types are being built across the country, including four Offshore Patrol Vessels for the Vietnamese Coast Guard and Navy, one of which has just been launched and will be delivered in the first quarter of 2013. Damen Salvage Tugs 4612 for the Vietnam Marine Police and a Fast Crew Supplier 5009 are also under construction.

Mr Schuurman comments: “Damen has built up a good reputation in Vietnam and is very well respected as a reliable partner. Indirectly, we help provide thousands of people with work.

“We started building locally in 2002 and have always had a good experience.” Originally, Damen had a contract for six Search and Rescue vessels (3x 42 m and 3x 27 m) of which five were built at Song Cam. “The order was completed successfully so it made sense to carry on building there because the yard had gained so much knowledge during the contract and we worked well together.”

160 vessels built in Vietnam
A decade on, Damen has built 160 ships in Vietnam, of which approximately 10% are for the local market.

China is another leading production centre, whereby the group works with three partner yards and Damen Shipyards Changde, which uniquely, is 100% owned by Damen. In China Damen builds vessels including pontoons, barges, high-speed craft, tugs and dredgers. The company is exploring further possibilities in the country for the production of offshore vessels.

In Indonesia, Damen Schelde Naval Shipbuilding is very busy with several defence contracts and other vessel types. But Damen is keen to explore this market further and has dedicated a Sales Manager to Indonesia. And indeed, Mr Schuurman is also aiming to add to his team with a Sales Manager for Japan and Korea too.

India is yet another country with vast potential and the group has recently employed a dedicated Sales Manager there. “India is such a vast country that we could use a similar model to that of Vietnam, where Damen partners local yards.”

“WE STARTED BUILDING LOCALLY IN VIETNAM AND HAVE ALWAYS HAD A GOOD EXPERIENCE.”

Super fast deliveries from Singapore
Damen Shipyards Singapore is also extremely busy. The yard has introduced an extremely high level of standardisation in its production line, whereby the Fast Crew Supplier 2610 is built in seven equal parts, with each section taking five weeks. This results in unbeatable delivery times of 35 weeks, combined with a frequency of one ship every five weeks.

But Damen is not stopping there and wants to cut delivery times down even further, reducing each section build time to just four weeks. “The management are completely focused on the whole process and trying to reduce the production time. Singapore is not the cheapest location to build but this yard is fantastically efficient. This increasing efficiency means that Damen can offer a very competitive price and it can deliver a top quality product in very fast delivery times.” Other types of vessels are also built in Singapore, such as 10 high-speed Patrol Boats that were built for the Singapore Police Coast Guard.

Australia too has had an exceptional year. Damen has just received an order for its 57th vessel in Australia!
Damen not only builds vessels for the Offshore Wind Industry, it also buys wind energy! In a bid to reduce its own greenhouse gas emissions, Damen Shipyards Gorinchem started buying all of its energy from North Sea wind farms in January. The greenhouse gases reduction programme is going to be rolled out to Damen’s production yards, with Damen Shipyards Galati in Romania starting its first reduction programmes soon.

Wind
Laure Jacquier, Coordinator Health & Safety, Environmental and Quality Assurance Management comments: “We really wanted to go beyond the Green House Gas Protocol and other international standards. We have clear emissions’ reduction targets in place but thought what else can we do. This led to a decision to buy green energy.”

LED
Other initiatives include introducing LED lighting in the production halls, which is much more efficient and consumes substantially less energy and installing digital transformers to follow electricity consumption around the clock. Employees will soon be able to see this information on opening the intranet.

Close the door!
Additionally, there are many smaller things, she stresses. “For instance, we try to make everyone aware that closing the huge production hall doors as quickly as possible saves a lot of energy because a vast amount of heat immediately escapes and the whole building starts to cool down rapidly. These small things can really make a difference.”

New HQ
A new five-storey office building in Gorinchem has also been designed with energy efficiency in mind and uses underfloor heating, top quality insulation and motion sensor lighting.

Commitment
“When it comes to our vessels, Damen is already a forerunner in terms of applying the best technologies to make them more energy efficient but we want to go even further. These initiatives have the full commitment of the top management and they are also an important part of our Corporate Social Responsibility strategy. We want to have the highest possible health, quality, safety and environmental standards throughout the group’s operations, wherever they are in the world.”
In a unique move in the shipbuilding industry, Damen introduced its own quality brand in 2012 – the E3 hallmark.

Founded on the “E3” principles: Environmentally friendly, Efficient in operation and Economically viable, the hallmark takes the needs of the planet, the people operating the ship and the owner’s need to make a profit into account.

Damen was keen to go beyond existing regulations, with E3 encompassing many factors ranging from emissions to recycling vessels. On a case-by-case basis each vessel is evaluated against a list of specified criteria. These criteria include emissions to air and water and fuel consumption but additionally, sound and vibration levels, ergonomic measures and seakeeping behaviour - all of which improve the comfort of the crew.

Emissions to air such as CO2, NOx, SOx and particulates are considered, as are emissions to water, including sewage, waste streams, oil leaks and special paints need to have been applied, which are less damaging to the environment.

Recycling

When the vessel comes to the end of its working life the ability to recycle it is also taken into account. Pieter Huyskens, Programme Manager Sustainability at Damen Research, comments: “The vessel should be disassembled easily. For instance, if sprayed-on insulation is used, this is much harder to remove than insulation plates when the vessel is decommissioned.” And in the event of an incident, fuel tanks should be protected so they don’t rupture on impact and they should be accessible from all sides so fuel can be pumped out easily.

E3 vessels need to have a Green Passport, whereby all hazardous materials and the quantities are listed. He stresses that Damen also asks all of its suppliers for this information as well.

Currently, Damen’s Platform Supply Vessel 3300, an LNG inland barge with an air-lubricated hull and a Hybrid tug, have been granted E3 status.
As Jesse Roubos, newly appointed Project Engineer for Africa, explains, the diversity of the Damen Services portfolio and the challenges of the job mean that no two days are ever the same.

At just 27 years old, Jesse is responsible for some 12 countries, ranging from Cape Verde to South Africa, from Madagascar to the Seychelles.

With a background in automotive engineering, Jesse says the decision to enter the maritime industry has proved the right one, as he has enjoyed every day since. He joined Damen in 2011 as a Sales Engineer and specialises in Africa. “Working at Damen has a lot of advantages; on the one side it really is fun to work with colleagues who all share the same goal, and on the other side, you get to have contact with customers and we are all working together with our trusted suppliers to get the customers what they need.”

Africa
Jesse is very happy to be working in Africa, which is a continent he is fascinated with. “I really enjoy having face-to-face contact with our customers as much as possible and there are so many interesting and diverse countries in the region.”

Damen Services has so many products and services that the job is always challenging but this is also what makes it so interesting, he says. “You could be working on submitting tenders, developing a spare parts package, providing technical assistance to a client, arranging for our field service engineers to visit customers, arranging training programmes, making logistics plans or liaising with local suppliers.”

Customer support
“We support the customer throughout the entire process, from the offer and specifications, through to initial provisioning and assisting them with their maintenance needs by installing the our computerised maintenance management system DAMOS and we also provide technical training.”

Increasingly customers are not asking for one product alone, Jesse says. “Clients would like to have the benefit of Damen’s technical knowledge and experience in several areas. We can step in, understand their operations and help arrange their maintenance planning.”

Know your vessel!
For Damen Services, it is really important to get to know the vessels as much as possible and to understand the requirements and ambitions of the customer. For example, Jesse recently had the chance to work closely with the Project Manager responsible for the construction of a Fast Crew Supplier 1905 due to be delivered to Angola. “Once the vessel is in Africa I will be responsible for the after sales services and any warranty issues. So I wanted to familiarise myself with the vessel and understand what goals the customer wants to achieve.”
BERNARD TIJS
CHIEF FINANCIAL OFFICER

As of April 1st, Mr Bernard Tijs has retired as CFO of Damen Shipyards Group, a function in which he assisted the company for 10 years, creating a solid financial structure and playing a key role in Damen’s ongoing worldwide expansion. Although now ‘retired’, Mr Tijs will continue to advise Damen for some time to come.

Mr Tijs joined Damen in 2003, a period in which the company’s management put a lot of effort in turning the group into a ‘lean and mean organisation’ able to adapt quickly to market conditions. Both his knowledge and decisiveness enabled Damen to become flexible, adaptable and ready for the future, both financially and as to shipbuilding and - design.

In his own words: “It sounds strange, but nothing will change fundamentally. We have to produce the highest quality at the lowest possible costs and understand the needs of our clients – not think for them, listen to them! Just because your company has grown very fast, you should not think you’re something special. We only exist because of our clients.”

Damen thanks Bernard Tijs heartily for his many and successful efforts to help make Damen what it is today.
2012 was an exciting year for Damen’s Research & Development Department with continuous efforts to support our Product Groups with predictions and specialist advice in the fields of hydrodynamics, noise and vibrations, structural design, marine engineering and ergonomics.
Eye-catching results of those efforts are the first Damen Rende Recovery Winches that have been taken into operation on the ASD Tug 3212 and the Research Vessel ’Simon Stevin’ that complies with the ICES standard 209 for silent ships and has, amongst other things, a wet and a dry laboratory onboard.

In cooperation with Delft University, the Royal Netherlands Sea Rescue Institution and De Vries Lentsch, a new lifeboat design was developed which is now under construction. Seakeeping behaviour and onboard noise levels have been drastically improved thanks to extensive research and development.

**Predictive capability**

Research projects dedicated to the improvement of our predictive capabilities contribute to the improvement of operational performance, sustainability (energy efficiency and emission reduction), crew comfort and lower lifecycle costs. Experimental programmes and development of mathematical models and tools have been carried out in combination with extensive analysis of the vast amount of measurement data of our standard designs. The work done to improve noise level predictions is an excellent example of the benefits of Damen’s philosophy of standardisation; results are being used in almost every vessel type.

**Sustainability**

Our efforts in the field of sustainability have led to the development of our first hybrid tug: the ASD Tug 2810 Hybrid (see article on the next page). Two of these are now under construction. LNG designs for several vessel types have been further developed and additional experimental research has been carried out for Damen’s air lubrication system ACES.

**System integrator**

As a result of our ambition to be at the forefront of technology development, cooperation with suppliers and research institutes has continued in 2012, fitting our role as system integrator.

Damen R&D is actively involved in cooperative research projects both in the Netherlands and internationally and will continue to do so in 2013.
In October 2012, Damen was proud to announce that Iskes Towage & Salvage would be the launching customer of the new Hybrid and a second vessel will be available from stock end-2013.

Depending on the operating profile of a tug, the ASD 2810 Hybrid, which has a combination of diesel-direct and diesel-electric propulsion, facilitates average fuel savings of between 10% and 30% and cuts local emissions by 20% to 60%. The vessel has a bollard pull of 60 tonnes.

Erik van Schaik, Design & Proposal Engineer, Damen Tugs says: “In the past many green solutions were simply too expensive for the tugboat market. We were very mindful that this vessel had to cut fuel and emissions but at the same time it had to be positioned at an attractive price for the market. We wanted to make being green commercially attractive too.”

“Being green has to be commercially attractive”

With fuel costs continuing to rise, the Hybrid facilitates considerable fuel savings as well. “The investment in the Hybrid version is higher but not excessively so when compared to a regular ASD Tug 2810”, stresses Mr Van Schaik.

The ASD Tug 2810 Hybrid embodies extensive Damen research. In 2012 the three-year ‘E3’ project was completed whereby Damen and its partners monitored a conventional ASD Tug 2810 operating in the port of Rotterdam. Robert van Koperen, Senior Project Engineer at Damen’s Research Department has been at the heart of these efforts. During an unprecedented benchmark study, a staggering 80 parameters were measured over four weeks in a bid to identify the average operational profile of a typical harbour tug.

During the monitoring campaign the E3 team found that the average load profile showed that tugs are running inefficiently for most of the time. For up to 75% of the day they can be free sailing, station keeping, running idle essentially, making them less environmentally friendly and leading to higher operational costs. Secondly, the engines are idling at very low loads of just 7% for half of the time, consequently leading to high levels of fuel consumption and emissions.
ASD Tug 2810 Hybrid cuts fuel and emissions by at least 20%

“BEING GREEN HAS TO BE COMMERCIALLY ATTRACTIVE”

The diesel electric propulsion system in the ASD Tug 2810 Hybrid delivers enough power to prevent the main engines of the diesel direct propulsion system from running idle frequently or at low loads.

Calculate exact savings
Alongside the E3 study Damen’s in-house Research team developed a computer simulation model looking at various propulsion trains such as diesel-electric or hybrid systems for the particular sailing profile of the tug. Damen can use this simulation model to calculate the exact savings that are possible in each individual case, based on the tug’s operating profile and running hours. “This model enables us to show our customers what they can expect to gain if they have a Hybrid instead of a conventional vessel. This methodology is completely scientific and gives real insight,” says Mr Van Koperen.

Battery packs
Additionally, as an option, Damen is offering battery packs of 100 kWh whereby it is possible to shut down all the engines during station keeping, manoeuvring and free sailing at low speeds, making the vessel even more environmentally friendly.
The crew on board Deniki have become used to travelling to exotic and remote corners of the globe. But their latest adventure to Antarctica was like nothing they had attempted before.
Within Damen, superyacht construction is carried out by Amels, which is recognised as one of the top brands in the world. The prestigious Amels yard is located in Vlissingen, in the south-west of the Netherlands, where it develops and builds superyachts of the highest calibre ranging from 55 to 83 metres. In 2005 Amels introduced the revolutionary Limited Editions concept, ensuring faster delivery, superior quality, higher value and better resale value. In the past years Amels is out-performing its rivals and currently has 12 new projects under construction.
DENIKI’S ADVENTURE TO THE ANTARCTIC

It was during the summer season of 2010 that the owner of DENIKI had first raised the idea of a trip to Antarctica. Captain Richard Callaghan had to do his homework first before he could agree to such an intrepid expedition. “Whilst an exciting prospect, Antarctica is not the sort of place you can agree to go to on the spur of the moment,” he says.

So Richard got together with his co-Captain Lawrence Cockx and they spent more than a year exhaustively researching the possibility and viability of sailing an AMELS 171 to the most remote continent on Earth. “We both wanted to do it, but it can be a dangerous place”, says Richard. “There was a cruise ship that sank down there a couple of years ago, and a few fishing boats sink there every year too, vessels which are purpose built for those waters.”

The AMELS 171, on the other hand, was not designed with the Antarctic in mind. The two captains, along with the chief engineer, investigated possible modifications to the yacht. “We looked at everything in detail because Antarctica is not somewhere that you want to have a breakdown. There is no back-up there, so we looked into all our systems. In particular we were concerned about the output of our watermakers and the diesel gelling in the main tanks, due to the cold. In the end we were satisfied that we didn’t need to make any modifications whatsoever to DENIKI. The design of the boat is very, very good.

“Since she was launched we have clocked up nearly 100,000 miles, averaging about 20,000 miles per year. We have sailed in all climates, from 40-plus degrees in the Med to more than minus 20 in Antarctica. And the boat just copes with it. We have always had a lot of confidence in the boat, but we really can’t test her anymore. DENIKI can go wherever the owner wants to take her.”

With the planning in place, and the huge amount of red tape, special permits and other administration dealt with, the captains settled on a passage from December 2011 to January 2012. “December through to January is the prime window for Antarctica,” says Richard. “You get almost 24 hours of daylight and also the best wildlife at that time.”

Although both captains had planned the voyage together, only one would get the opportunity to captain DENIKI for the journey south. Richard was fortunate enough for the Antarctica trip to fall during his watch. The consolation for Lawrence was that he had at least been the captain for DENIKI’s Alaskan adventure two years earlier. The first major challenge of the voyage south was Drake Passage, the 500-mile stretch of gale-swept water that separates Antarctica from South America.

“I had allowed a lot of time to wait in Ushuaia for a good weather window to get across, and that paid dividends. We had a fantastic crossing in very light winds and it took us just two days to cross to King George Island,” says Richard. “It was not quite so good coming back up north, though. We had 40 knots of wind and 4 to 5 metre seas on the beam, which DENIKI’s big stabiliser fins handled very well, and we made it to the Falkland Islands without any trouble. We were careful and fortunate to avoid any really monstrous conditions which are so common, but the weather certainly let us know we were in the Drake Passage and we would not have wanted it to deteriorate much more.”

Once they arrived in Antarctica, the scenery took everyone’s breath away. Words can barely describe the other-worldliness of this remote continent: “The best way I can describe it is if you took
any sign of human inhabitation out of the Alps and then filled it up with water. It’s beautiful, absolutely superb. It’s just totally wild and unspoilt; the absolute silence is incredible, with the occasional rumble of a glacier calving somewhere. You really get the feeling you are on your own, and you certainly would not want to be in that environment in a boat that you didn’t have total faith in.”

Richard took every safety measure possible, including hiring an ice pilot with good experience of navigating these treacherous waters. “There is of course a lot of ice, and very often our cruising speed was down to 7 or 8 knots. You have to be very careful and you have to assess each bit of ice that you see - whether its multi-year ice, glacial ice or whether it’s first-year soft ice that you can push through.” Amazingly, DENIKI survived her icy passage without even a scratch to the paintwork.

There were strict rules about everyone wearing proper thermal clothing and life jackets at all times on deck, not that people needed much reminding of this. “Of course you expect Antarctica to be cold, but it was a really debilitating cold at times - so cold that you just wanted to get back inside as soon as you could and certainly the idea of falling in the sea not bear thinking about.”

“So, for all the inherent risks, was the journey to Antarctica really worth it? For Richard, and everyone else on the trip, it was the voyage of a lifetime. “To see a pack of killer whales hunting two humpback whales, moments like those were amazing. At one point it seemed the humpbacks were trying to use DENIKI as protection from the killer whales and the humpbacks didn’t want to move too far away from the boat, so the hunt was really unfolding around us. To see the penguins and their chicks hatching was amazing. They are really comical. The interesting thing is, the wildlife is not scared of people. You can walk right next to penguins and they just look at you. To stand right next to a penguin with her chicks - and for them to be happy with that - that’s something quite special.”

The visit inside the volcanic caldera of Deception Island, and the chance to enjoy a volcanic bath in the great outdoors, was another high point. “The great thing was that the owner made sure the crew had a chance to enjoy the experience too,” says Richard. “All these moments were such once-in-a-lifetime opportunities for all of us, and it was a privilege for all of us to be involved.

“That’s the great thing about working for an owner with such a spirit of adventure. It was his idea to go, no one else’s. On average there seems to be just one super yacht per year going to the Antarctic, which I suppose is not that surprising. The logistics are immense, the safety issues are very real, but DENIKI excelled herself in the toughest of conditions. As for the yacht’s next big adventure, well, a visit to Spitsbergen and the Arctic has already been discussed.”
Damen delivers up to 150 vessels annually, from newbuilds at Damen yards to deliveries from stock and from licences to locally built vessels. On these pages you’ll find a selection, per market, of vessels we delivered in the past year. Some photos can represent a multi-vessel order.
Damen is very proud to have taken part in a unique project recently in Cape Verde, where a Damen Fast Ferry literally represents a lifeline to islanders.

The introduction of the much-anticipated Damen Fast Ferry 4512 to Cape Verde has proved a huge success, with very high occupancy rates. And after the success of the “Kriola” - which is also the first-ever newbuild ferry for the nine-island state - the owner Cape Verde Fast Ferry, will welcome a second sister vessel shortly.

Henk Grunstra, Damen Product Director Fast Ferries, says: “For the first time the islanders have a new ferry, providing a safe, regular service which they can rely on. The Kriola has really improved the transport infrastructure, stimulating travel between the islands and made an important contribution to the country’s economy. He adds: “The new ferry provides passengers with a very smooth ride, they have spacious accommodation, comfortable seating, large television screens and a well-stocked kiosk.”

Cape Verdean waves
Situated in the middle of the Atlantic, Cape Verde has always been somewhat isolated and this is particularly the case for the outlying island of Brava. Before the introduction of the Kriola, a service could only be carried out on an ad-hoc basis because the waters are subject to many currents, substantial wave heights and windy conditions.

Waves often impact from the rear or at an angle, they are seldom head-on and the ocean is very deep, so typically there are 2 m to 3 m wave heights. Trade winds and currents between the islands were other factors that needed to be considered.

Comfort levels, fuel consumption and operational costs, were all major factors in the decision to choose a Damen Fast Ferry 4512. The vessel also appealed because it offered a very fast turnaround in port. Sometimes Kriola has to be able to serve four islands in a day, before travelling back to its home-port in Brava for the night.

Training
Damen Services supported Cape Verde by providing training for the crew, who have proved very capable seamen, as well as providing technical backup for the engineers. In addition, Damen carried out the commissioning of the vessel and provided a spare parts package.
NEWBUILDS

UNDER CONSTRUCTION

Damen currently has more than 100 vessels, of all types and sizes, under construction at yards around the world. Below you’ll find a selection of them, either straight from the drawing table or showing a sister or similar vessel.
Each year, the yards of Damen Shipyards Group execute more than 1,000 jobs. The scope of work can vary from a few hours of maintenance to complete conversions of offshore rigs and can be done at berth, in dry docks or on location. We proudly present you with an overview of recent projects.
NEW CUTTER SUCTION DREDGER 650 JOINS THE STANDARD SERIES

A new, larger and more powerful Cutter Suction Dredger is nearing completion at Damen Dredging Equipment: the Damen CSD650, which joins the highly successful Standard Series.

In a response to customer demand for larger dredgers in the mid-sized sector, Damen Dredging Equipment has developed the CSD650, which is an extremely robust dredger, capable of handling a wide range of work. The new vessel, which will be available mid 2013, represents quite a leap in cutter power, with the CSD650 having 600kW (in comparison the CSD500 has 180kW).

Large dredger – small crew
Primarily, the new dredger is designed for the maintenance, sand mining and minerals market in coastal areas. The CSD650 is all about strength and durability, being heavier built with thicker steel plating and it can easily handle highly compacted material. And despite being larger, the dredger can still be operated by a relatively small crew.

The vessel is equipped with an in-house designed 650 mm dredge pump, which has a mixture capacity of 7,000 m³/h and can work in depths of up to 18 m. A submerged dredge pump installation for work up to a 22 m cutter depth is optional. The dredgers impressive swing width is 62.8 m, making it an extremely efficient dredging tool.

Options
The CSD650 has been designed to be very fuel-efficient and has the latest Caterpillar engines fitted as standard. Anchor boom installations and spud carriages are included in the new standard. Options such as accommodation units, deck cranes, stern swivel/swivel hoses and instrumentation packages will be kept on stock.

Build worldwide, operate worldwide
Damen Dredging Equipment is building the CSD650 for stock to facilitate short delivery times. Although the first vessel is being built in the Netherlands, it could be built anywhere in the world and because it is dismountable, it can be transported easily.
CSD500 ‘25th of January’ – Egypt
Prefabricated shipbuilding kit
Canal Naval Constructions Co (CNC) of Port Fouad (Egypt) built a CSD500 using Damen drawings and a prefabricated shipbuilding kit containing all the vital components such as the dredge pump and control cabin etc. The dredger was customised with a large number of options, such as a jib crane, navigation lights, a communication package, air conditioning, a bilge pump, heaver fenders, fire fighting installation and a 500L fresh water tank. The ‘25th of January’ received Bureau Veritas Class approval and is the second Damen dredger for the Egyptian General Authority for Fish Resources Development. Both vessels will operate in the northern lakes of Manzala, Burullus and Bardawil.

CSD450 ‘FEN HE’ – China
Delivery in 3 weeks
FEN HE, a standard CSD450, was delivered from stock within three weeks! The stationary dredger will work near Taiyuan, northern China, where it will perform maintenance work on the River Fen. Its main functions are cleaning the polluted riverbed, keeping the river navigable and preventing flooding.

Three CSD500 for Azerbaijan
Cleaning the rivers day and night
In 2012, Damen delivered three CSD500 to the Ministry of Emergency Situation of Azerbaijan in Baku. The dredgers will be used to clean and maintain the water system of the Kura River. The Damen dredgers can work up to a maximum dredging depth of 14 m and are able to pump 4,000 m$^3$/h of water/soil mixture per hour. For the best efficiency, safety and comfortable working conditions the dredgers are outfitted with a large number of options including anchor booms and spud carriage pontoons, as well as day and night accommodation.

DOP® SUBMERSIBLE DREDGE PUMP
Versatile tool for more than 20 years
The Damen DOP® submersible dredge pump is particularly popular, being a versatile tool fit for every challenging job. This proven design has been in use around the globe for over 20 years.

The compact, wear-resistant, hydraulically or electrically driven dredge pump, can be supplied with different suction heads to suit the job. The DOP can be attached to the boom of an excavator and run on the excavator’s hydraulics or be suspended by a wire from a crane. Operating depths can vary and can even be up to 1,000 m. DOPs can also be used as mobile booster stations.

TRAILING SUCTION HOPPER DREDGERS
ALL ABOUT EFFICIENCY
Damen’s Trailing Suction Hopper Dredger (TSHD) is designed as a dedicated maintenance dredger, with its main purpose to keep ports and navigation channels at the right depth. The TSHD Series comprises six medium sized vessels with capacities ranging from 500 cu m to 2,500 m$^3$. Each standard TSHD can be adapted to maximise its operational efficiency for a specific job site by using a wide variety of options.

Standard options include a hopper stripping system, a self-emptying system with bow coupling, degassing system, telescopic overflow and instrumentation packages. A state-of-the-art monitoring and control system is also available.

In 2012, Damen Dredging Equipment delivered two TSHD750 for new customers in the Ukraine, Delta Pilot and Mariupol Sea Trade Port. In addition, a large, 2,500 M$^3$ TSHD is being built in Indonesia for a local contractor for a harbour and navigation channel maintenance project.

PUMPS & PACKAGES
Damen delivers – from a single pump to full dredging packages
Damen Dredging Equipment delivers an extensive range of trailing pipe packages, which can be mounted on new or existing vessels. These packages, which range in size and can have a suction pipe diameter up to 900 mm, are also supplied to third-party shipyards.

In addition Damen can deliver dredge pumps for every dredging situation: low pressure dredge pumps for hopper loading, medium pressure for when there is only room for one pump which has to fill and discharge the cargo, and high pressure dredge pumps for discharging the sand cargo over significant distances (up to 1,000 m possible with a single pump).
High-speed operability

Worldwide, most high-speed vessels are designed for trial conditions, in which the promised speed has to be proven to the customer. To limit speed degradation due to wind and waves, ‘trial conditions’ basically means ‘no wind and no waves’. In waves of some significance, most vessels have to slow down to keep the crew – and the ship – in one piece. That’s why Damen and its Sea Axe partner, Delft University of Technology, changed their design philosophy for high-speed craft: Damen designs for ‘operability at sea’.
The Sea Axe design combines – as one owner exclaimed – ‘extraordinary seakeeping characteristics’ with highly fuel efficient hull lines. Another owner, operating a Twin Axe catamaran, simply stated: “It’s awesome!” when confronted with almost no slamming in stormy weather, the bow of his vessel cutting effortlessly through the waves.

A home away from home
In 2012, Damen client EDT Offshore was in the process of expanding its fleet. The company, based in Cyprus, supplies high specification support vessels to the oil and gas industry worldwide, with a fleet of some 20 Diving Support Vessels, Offshore Support Vessels and Multi-Purpose Crew Suppliers.

Already operating one FCS 5009, they opted for another 50 m FCS and a smaller FCS 3507. However, EDT wanted to adapt the basic design to fit it’s specific needs. For Managing Director Darios Melas, one of the most important things was to build a ship that would be both high-tech and a ‘home away from home’ on long trips to offshore platforms. Therefore, the FCS 5009 ‘EDT Nefeli’ was outfitted with extra luggage compartments and luxury seats with entertainment systems and internet access.

In addition to a number of technical requirements, such as Dynamic Positioning and fire fighting systems, the Damen-EDT team spent its time on creating a high level of safety and a low level of maintenance. For the latter, the crew plays an indispensable part. Mr Melas says: “We assigned two dedicated crews to each vessel, because a dedicated crew will take a real interest in their ship and its condition. In our experience, this has a positive effect on following safety procedures, maintenance and gaining technical knowledge; the crew really gets to know the ship inside-out.”

Why Damen?
EDT Offshore contracted Damen for several reasons. The proven Sea Axe concept was one of them. Another one was Damen’s reputation as a reliable partner and the favourable financing arrangement. Most of all, however, it was the personal approach and the good relationships between the people involved in this project.
THE QUESTION IS INTRIGUING:
How to keep the unique characteristics of a Gorinchem based family owned shipyard while the organisation has become a multinational employing over 7,000 people around the globe?
Although the Damen Group may look like a group of small and medium sized enterprises, each having its own identity and running its own business, they are actually all One Damen Family and this is a core strength of the Group. The statement in Damen’s Policy Plan cannot be misunderstood: “This company is built by people selling and building ships and services. The unique culture of entrepreneurship and business thinking combined with a ‘can-do’ mentality is why we are so successful.

Recognition, stimulation and cultivation of this unique culture are also key for future success.

Damen stands for challenging jobs, personal and professional development, and for numerous career opportunities. And above all it should be fun to work for Damen. Committed and happy people work five times harder.

Human Resources Director Arold de Vries, who joined Damen in October 2011 after having worked for multinational enterprises like Shell and Vopak, found a wide range of HR-practices within Damen. From a historical point of view this was no surprise to him.

In order to facilitate the ambitions of the Damen Shipyards Group, HR needs to shift from local optimisation towards integral solutions. ‘One Damen’ also holds good for HR.

Doesn’t this interfere with local entrepreneurship and freedom one might ask? De Vries is very clear about this. “It’s all about freedom within a framework. The more clarity about a common framework the more freedom remains. Nobody likes to reinvent the wheel. Besides that it is just common sense to collaborate on HR subjects like recruitment, employer branding and people development. Building professional centres of expertise not only works for the business. It also works for HR.”

Building a Groupwide HR strategy and organisation is a ‘Greenfield’ operation within Damen, and opportunities are widespread. “One can really build up a new way of doing things. 2012 has been the year of a series of important new initiatives. A Damen Employee Survey has been held, Leadership Development programmes have been rolled out and the first Damen Business Course took place in October. We also started talent reviews to spot future leaders and several Academies for professional development are currently under construction.”

"With everything HR does we keep five core values in mind," De Vries underlines:

- International
- Entrepreneurship
- Teamwork
- Versatility
- Innovative

“These key values are leading in HR campaigns. Damen is clearly a hi-tech organisation in which we strive towards further professionalisation. Today, we are building our plan and our HR-organisation for the future.

“The focus of 2013 will be to further improve and expand the initiatives we launched. A new Recruitment Standard will be in place to deliver a high quality selection of the best people. A Damen leadership profile will be available so we will be able to develop our workforce and to start succession management for our key positions. Mid-year Development Reviews will be started to provide feedback for our people and to give guidance for development plans. More Leadership and Management Development Programmes will be available. And we will further develop our Employer Brand using social media.

“Professionalisation also means that we need to look at how we do things in HR. We will change our HR structure slightly in order to strengthen our business focus through dedicated HR-business partners and to grow our profession through specialism. We will also assess our HR-performance against benchmark data. Quite an ambitious agenda but necessary in order to facilitate the growth of the business and to create a good working environment for all Damen employees.”

INTERNATIONAL  ENTREPRENEURSHIP  TEAMWORK  VERSATILITY  INNOVATIVE
In a strategic move in 2012 all 13 shipyards specialising in repair and conversion have been brought together under one organisation named 'Damen Shiprepair & Conversion', giving Damen a leading position, especially in the North Sea market.
DAMEN SHIPREPAIR & CONVERSION

With repair yards in the Netherlands, Sweden, France, Dubai, as well as yards in South Africa and Singapore, Damen now has more dry dock capacity than any of its competitors, which enables it to accommodate customer requests promptly.

Durk-Jan Nederlof, who is heading up Damen Shiprepair & Conversion, says: “This move to bring the yards under one umbrella organisation ensures that Damen makes the most of synergies between newbuilding and repair and that the group has a solid platform from which to grow its activities, whether organically or through acquisition.”

Most yards have been renamed Damen Shiprepair, followed by the yard’s location.

Mr Nederlof is in the process of building up cooperation amongst the repair yards in the group and the objective is that they work closely together when it comes to Sales, Public Relations, Procurement, Human Resources, ICT and HSEQ. “We want to professionalise the entire organisation, have uniform quality and safety standards and benefit from each other’s expertise. This more intensive cooperation will also enable us to grow.”

Five acquisitions
2012 saw Damen embark on a substantial acquisition spree in the repair sector, when the group acquired five yards in less than a year. “The extensive knowledge of offshore vessels and construction, as well as the commercial contacts with the offshore companies existing in the repair group will also be utilised to help Damen achieve its ambition to build larger vessels for the offshore market. We can now start to see that there is more synergy between newbuilding and repair and we can make the most of this.”

Brest, France
In March 2012, Damen became the new operator of the French shiprepair yard Sobrena. Now named Damen Shiprepair Brest, the yard has three dry docks, the biggest measuring 420 x 80 m, being one of the largest docks in Europe.

Sobrena had a very good reputation in the LNG sector and since the acquisition Damen has already worked on three LNG carriers. ‘Damen Shiprepair Brest’ is serving several markets and vessel types, such as LNG carriers, tankers, semi-submersibles, FPSOs, Offshore Construction Vessels, Jack-up rigs, cruise ships and ferries.

“Damen Shiprepair Brest has really added value to our ship repair business. Until then, our largest dock had been 350 m x 50 m in Rotterdam. This also means we can get a stronger position in markets such as semi-submersibles, LNG carriers and rigs.”

Oskarshamnsvartet, Sweden
Then in May Damen acquired Oskarshamnsvartet, a ship repair yard and steel construction company on the south-east coast of Sweden, specialised in the maintenance and repair of vessels up to 80 m. This yard has built, repaired and maintained a substantial part of the Swedish coastal fleet since 1863. Damen Services also has a Service Hub there serving Damen clients on the east coast.

ARNO Dunkerque, France
Damen then finished off the year with the acquisition of ARNO Dunkerque, which was established in 1987, although its roots date back more than 100 years. The French yard is known for a variety of specialities including ferries, cruise liners, ro-ro vessels, container ships, dredgers, bulkers and tankers, as well as many vessels for the offshore industry.

Mr Nederlof is hopeful for the future despite the present economic difficulties in the market. “At the moment it is quite a challenging market in the repair sector as owners are worried about the economic climate but we are confident going forward. Damen Shiprepair & Conversion has an enormous capacity and this allows us to operate a reliable service. We will always have a dock when the client needs one and not many competitors can say that. We can be more efficient and specialise in certain niche markets because we have a highly skilled workforce capable of taking on the most challenging jobs.”

Shipdock, Amsterdam & Harlingen
In the last weeks of the year, Damen made a series of rapid acquisitions on the back of each other. Closer to home it bought Shipdock, a very well known Amsterdam repair facility able to handle vessels up to 250 m. In Amsterdam, Shipdock has a professional machine shop and steel construction facility Niron Staal.

And Damen also acquired Shipdock’s other smaller yard in Harlingen, which handles vessels up to 120 m. “These yards have excellent facilities, a Synchro Lift and very skilled people,” Mr Nederlof points out.

Huge projects prove Damen Shiprepair’s extensive capabilities
Damen Shiprepair & Conversion has recently handled two of the largest projects in its history.

In a huge contract Damen Shiprepair Rotterdam carried out repairs and the lifetime extension of the FPSO Gryphon A for Maersk Oil UK Yards.

Taking place between June 2011 and August 2012, the Gryphon A project involved dry-docking, damage repairs and a complete refit.

The full scope of this challenging project included the complete overhaul of the turret and fairleads, around 800 tonnes of steel renewal in way of the cargo area, extensive coating of the vessel, both inside and outside involving over 200,000 m² of ballast tank coating. Additionally this included renewal and modification of the topsides and the overhaul of all thrusters, pumps, motors, winches etc., as well as an accommodation upgrade.

Furthermore, Scheldepoort Repair & Conversion Yard, which is now known as Damen Shiprepair Vlissingen, won a contract to convert a jack-up drill rig, the ‘Shelf Explorer’, into offshore hotel accommodation.

The accommodation unit is now known as ‘Atlantic Amsterdam’, and is owned by Atlantic Amsterdam Pte. Ltd. of Singapore, a subsidiary of Ezon Holdings. The new accommodation block, which houses approximately 135 people, was prefabricated in the yard prior to the arrival of the rig. Existing accommodation facilities were also refurbished. New lifeboats were installed and the rigs were fitted with stabiliser pumps to comply with the latest regulations.

Damen Shiprepair Vlissingen carried out an identical project in April 2011 on a drill rig, which is now known as Atlantic Labrador. Durk-Jan Nederlof emphasises: “These are some of the biggest projects in our history which we have completed very successfully. These really take us into the Champion’s League of repair and conversion and proves the capabilities of our yards.”
It’s his second world tour, and he has spent every single mile at the helm. Chairman of the board Kommer Damen is sailing round the world again, in his “very own kingdom”: the ‘Bellatrix’. He embarked on his adventure in 2005 and in 2012 completed the next leg of the voyage. Here is his captain’s log.

**September 10, 2012**

On route to our first stop as we sail from Brisbane to Cape Town: the Whitsunday Islands, making speeds upwards of nine knots and with a stiff backstay wind. I left the port of Manly, Brisbane, with my four-man crew, after taking leave of our many friends in the harbour and in Brunswick Heads. We departed two days later than planned owing to a fierce northerly, but we used the time wisely by stocking up on extra supplies.

The weather was fine and our store of Calvados replenished when we finally shoved off. On day two we set up the fishing rod for the first time with a highly successful pink lure. It took only a few minutes before we had caught a splendid Spanish mackerel. Our cook knew just how to prepare it.

**September 16, 2012**
POSITION: 10:24 E, 139:54 S Gulf of Carpentaria, North Australia.

We passed the Torres Strait last night, one of the most notorious passages in the world. In earlier times, dozens of ships went aground here between the northernmost tip of Australia (Cape York) and Papua New Guinea. The unbelievably strong current, narrow passages between the reefs and lack of good navigational aids made navigation extremely tricky. We chose a narrow shipping lane as our route but found ourselves heading straight for two oncoming ships. The momentary alarm proved unnecessary, fortunately. We continued along the East-Coast of Australia. Navigation and manoeuvring were generally difficult, but the sailing was fantastic. The traffic was quite heavy, with bulk carriers full of coal, iron ore and bauxite, container vessels and auto carriers. We took advantage of a favourable wind and passed up the Whitsundays, but we did stop to snorkel above the Great Barrier Reef, which was pure enjoyment.
**SEPTEMBER 23, 2012**  
POSITION: 12.27 S, 130.49 E  
CULLEN BAY MARINA, DARWIN.

We’re in Darwin, in a marina separated from Beagle Gulf by a lock. There’s a seven-metre difference in water level inside and outside the marina. In the end, smooth sailing between Brisbane and Darwin – thanks to good strong winds and our enormous spinnaker – brought us to Darwin sooner than we’d planned. We spent the time giving the ship a thorough cleaning, stocking up on supplies, making repairs and touring the Northern Territory. We saw imposing saltwater crocodiles in the Adelaide River – a spectacular sight. The penetrating heat and silence are also impressive. The land is desolate and wild, with hardly a living soul to be seen – only a passing road train.

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**OCTOBER 6, 2012**  
POSITION: 12.10 S, 100.07 E, 190 MILES E OF COCOS (KEELING).

We’ve almost reached Cocos – have 3850 miles under our belts by now, with 5000 to go. We started out with the engine running, but we have clearly caught a trade wind and are making good time. We have passed the Indonesian archipelago, which we had to learn the row of islands by heart in primary school: Bali, Lombok, Sumbawa, Sumba, Flores, and Timor. At Java, we had to remain alert. There were countless fishing vessels active there at night, moving helter-skelter with fully lit decks and no recognisable navigation lighting. We tried to reach them on the VHF to ask them whether they had cast their nets. I tried again saying “Primakassie, Slamat matang oedang oedang”, but got no response. We narrowly missed a lighted end-marker buoy that popped up suddenly, but otherwise managed to get through without incident.

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**OCTOBER 14, 2012**  
POSITION: 13.46 S, 88.41 E, 600 MILES WSW OF COCOS KEELING.

Nature sometimes acts in ways that defy statistics. A tropical storm along our route developed into a hurricane – the earliest one on record for this season of the year. Hurricane Anais is moving East of Mauritius to the South, but fortunately it’s still a long way from the Bellatrix. But I am keeping a sharp eye on the weather and wind forecasts. Our visit to the Cocos Keeling atoll was a special experience. Coral reefs, white beaches and a turquoise sea – incredibly lovely. The island has a remarkable history. It was owned by the Scottish Clunies-Ross family for 150 years, who ran coconut plantations there and paid their Malaysian contract labourers with their own coinage. This serf-master system came to an end in 1978, because of accusations of slavery, and the Australian government bought out the family. And the islanders? They are free now.

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**OCTOBER 21, 2012**  
POSITION: 18.47 S, 63.61 E, ABOUT 350 MILES FROM MAURITIUS.

We are just a few miles away from Mauritius. The weather is a mixture of sun and rain, moderate seas and rough winds – we’ve had wash on the deck and in the cockpit. Both conditions make for wonderful sailing.

I had quite an adventure in the lazarette aft, where I heard loud banging. Waves kept crashing over the hatches, but I found the noise so alarming that I scuttled between two waves and locked myself into the lazarette to find out what the commotion was. One of the crew kept watch and made sure I had enough air in there to keep breathing. The problem turned out to be the starboard steering mechanism. We’ll deal with that on Mauritius.
OCTOBER 28, 2012
POSITION: PORT LOUIS, MAURITIUS.

Anchored at a lovely spot on the waterfront at Port Louis. Mauritius is a true melting pot of races and nationalities, and impresses us as very friendly and bustling. We arrived sooner than expected, with 200-mile days and smooth sailing on the spinnaker, despite the calm. When I reported to Mauritius’ Port Control, they got quite nervous and shouted “Please stay where you are, we send a tugboat”. That wasn’t at all necessary, but it turned out that they wanted to send us a tug out of courtesy to guide us into port. The tug was a recently acquired DAMEN ASD 2411 “Da Pattan”, and it gave us a warm welcome.

NOVEMBER 12, 2012
POSITION: PORT OF DURBAN, SA.

We decided to give La Reunion a miss so that we would have more time along the South African coast to seek shelter against passing fronts. The weather is unpredictable; we are being hammered by waves and enduring heavy downpours and constant SW gales. I am full of admiration for our cook who has managed to conjure up one excellent meal after the next despite the crashing waves fore and aft. Hats off to him! We have spent a few days here in Kwazulu Natal and visited the splendid colonial capital of Pietermaritzburg.

This is a wonderful country, full of nice people of all races and groups; yet, there is police everywhere and there are extreme contrasts between rich and poor – I can only hope for the best. But there’s fun to be had here too. We went to a bar to watch a rugby match between Ireland and South Africa, everyone decked out in Springbok shirts, caps and flags. The Springboks won the match, and we were thanked because we “so goed had geskreeu vir die Bokkies” (had cheered on the Boks so well). We left in pitch darkness for Mossel Bay.
**November 18, 2012**

POSITION: 34.12 S; 25.52 E, SOUTH OF PORT ELIZABETH.

We visited the MTS Vantage, a recently built Damen Shoalbuster, which was lying in East London for repair because, while en route to Mozambique towing a huge 120-metre barge, it lost its train in the giant waves of the Agulhas Current. That current is hugely important to us too, and it’s quite tricky to locate it. Once we had tracked it down by testing the temperature of the sea water, we reached spectacular speeds: 14.5 knots on one of my watches. After sheltering in Mossel Bay, we may also stop in False Bay and Hout Bay and then go on to Cape Town.

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**November 26, 2012**

POSITION: PORT OF HOUT BAY, SOUTH OF CAPE TOWN.

Our trip is almost at an end, but that doesn’t mean that we’re slowing down. An unpleasant head wind and huge waves have forced us to alter our course slightly: we were unable to visit friends in Humansdorp unfortunately and instead set course for Cape Agulhas, the southernmost tip of the continent. The weather improved, but when we resumed our voyage a technical problem arose. We were unable to furl or unfurl the mainsail. We got help in Simonstown in False Bay and it turned out that the furler’s swivel had jammed and taken the halyard with it. After furling the sail, we moored at the False Bay Yacht Club, where we stayed another day owing to a storm. We then left for Hout Bay in fine weather, sailing right past the Cape Point lighthouse. We received a warm welcome when we arrived in the marina, with a huge group of friends and family awaiting us there. Tomorrow we’ll depart for our final destination, the Waterfront in Cape Town. That brings our holiday to an end, after 9,000 miles at sea, and each of us will go his own way.
BUILDING IN AND FOR BRAZIL
Building in and for Brazil

A near 20-year cooperation between Damen and Wilson Sons, one of Brazil’s largest shipbuilding and offshore companies at the same time, is set to further intensify as the two jointly start to build vessels for the wider Brazilian Offshore market. In addition, and based on experience, Damen will target the inland shipping and defence industries.

Until this time Wilson Sons, working almost exclusively together with Damen, using the Damen Technical Cooperation (DTC) method (see article on page 106), has largely built ships for its fleet at its own shipyards, including more than 50 tugboats and over 15 Platform Supply Vessels. At 175 years old, Wilson Sons is now the largest builder and operator of tugboats in the country.

Originally in the nineties, Damen and Wilson Sons worked on a Brazilian Navy contract for several tugs, with Damen supplying the design and material package. The cooperation worked very well and Wilson Sons was so pleased with the Damen tugboat design they decided to use Damen designs for its own fleet expansion. The company now boasts a fleet of around 50 Damen ASD Tugs of various sizes and outfitting.

Number One

Adalberto Souza, Wilson Sons Director, says: “To remain ‘Number One’ we have to continually upgrade and the Brazilian designs did not lead to the most efficient, manoeuvrable vessels. Then Damen came along with its designs, which led to an immediate improvement and the cooperation with Damen really began!”

This cooperation has enabled Wilson Sons to develop its shipbuilding knowledge, he adds. “If you visit our yard in Guaruja, you will see many similarities in our working methods. We have adopted Damen’s standardisation concept as well and operate in the same way as Damen does all over the world.”

Leading the market

At the start of the millennium Wilson Sons was keen to move into the growing offshore industry and Damen then developed a special new diesel-electric design for a Platform Supply Vessel. “This became the favoured design of Petrobras and the energy giant led the trend to switch to diesel electric systems!” Mr Souza points out.

The booming Brazilian shipbuilding market, being spurred on by Brazilian energy giant Petrobras, also led Wilson Sons to expand significantly, whereby it has doubled capacity with the creation of a new drydock with a 25 m beam. Anchor Handlers and small pipe layers of up to a 25 m beam can now be built there so this is a significant expansion, comments Erik Hertel, Sales Manager Americas. “This also means there is plenty of capacity for new customers.”

More capacity

Recently Damen and Wilson Sons agreed a contract for 10 more ASD Tugs 2411 and two newly designed ASD Tugs 3212 in addition to the PSV’s 4500 currently under construction for Wilson Sons own fleet. Furthermore, an ROV Support Vessel for a Dutch geological data provider is also under construction – the first contract for a new client.

“Our cooperation with Wilson Sons really is a win-win situation. Damen supplies material packages and designs for Damen’s standard vessels, incorporating local or industry-specific requirements. For example, Wilson Sons prefers a sea water cooler to a box cooler. And because of the large volume of PSVs built there, these are entirely adapted to the Brazilian market,” says Mr Hertel.

Single-purpose vessels?

A typical PSV for the North Sea tends to be a multi-purpose vessel, he explains, able to handle various kinds of cargo, but because Brazilian PSVs these vessels are being built to serve Petrobras and are on the back of long-term contracts in Brazil, each vessel is tailored to meet the end-client’s needs. This means every Platform Supplier is fit for a single purpose; one can be dedicated to fuel supply, while another is specifically built for water transport. The move from multi-purpose to dedicated PSVs allows, paradoxically, for faster delivery at lower cost. Due to the standardised and modular set-up of the Damen designs it is possible to create fit for purpose vessels.

And for owners looking to do business in Brazil the cooperation is ideal because the country has strict local content rules and most tenders specify that vessels have to be built in Brazil. Customers can benefit from the combination of proven Damen designs and Wilson Sons shipbuilding knowledge, he adds.

The engineering and project teams work very closely together to ensure an efficient build, Mr Hertel says. “It really is a very close relationship between builder, designer and customer.”

ROV Support Vessel

Keel laying for the 80 m ROV Support Vessel took place in January and is due to be delivered early 2014. “This is a very complex project and a prototype. The vessel’s winches and lifting equipment facilitate subsea installation work at 3,000 m water depth. We have started with Damen’s design knowledge and combined it with the client’s vast operational experience. In this particular case we are building a unique vessel, meanwhile developing a new standard range for ROV Support Vessels.”

Damen is very positive about the future of the offshore market and also sees vast potential in Brazil’s inland shipping market, which it is now exploring. “Damen’s designs are very competitive in the Brazilian market, which can be very expensive. We have the advantage of a considerable track record of building inland shipping vessels in the Netherlands, which boasts the most modern fleet worldwide, and in other European countries. Our specialised yard Bodewes Millingen always operates at the forefront of technical possibilities, resulting in, for example, a new LNG-powered inland shipping vessel for the European market.”

To further serve the Brazilian market, Damen will soon assign a dedicated representative who will be based permanently at Wilson Sons.
Damen Schelde Naval Shipbuilding’s unique “SIGMA” concept is being embraced by navies across the globe. 2012 saw DSNS deliver the last in a series of three SIGMA Class Frigates to the Royal Moroccan Navy in September. This had followed an order for four SIGMA Corvettes for the Indonesian Navy.
Damen Schelde Naval Shipbuilding offers a complete range in the Surface Combatants sector including corvettes and multi-mission frigates. SIGMA - an acronym of Ship Integrated Geometrical Modularity Approach - is a pioneering construction method based on standard modules.

**Royal Moroccan Navy delivery**

The Royal Moroccan Navy’s frigates are equipped to carry out both traditional naval tasks, as well as maritime security and humanitarian aid operations.

Hein van Ameijden, Chief Executive Officer of DSNS, says: “We were very proud that the Royal Moroccan Navy chose Damen. In 2007 the sea trials for the corvettes for the Indonesian Navy were taking place and we invited a delegation from Morocco to come along. They were impressed and an order shortly followed.”

There were two major changes from the Indonesian vessels, one of which required the frigate to have a hangar onboard as well as a helideck. However, given SIGMA, this was no problem. DSNS simply lengthened the vessel in accordance with the concept, adding a 7.2 m section to accommodate the hangar. This resulted in two 98 m vessels and one of 105 m. The Moroccan corvettes are also equipped with longer-range, anti-aircraft missiles.

**Short delivery times**

“Because of SIGMA we could present a proposal fairly quickly and offer a short delivery time. The delivery of the last of the three frigates was achieved within four and a half years from the effective date of contract, after a period of detailed engineering and three years of construction,” he says.

“Undoubtedly, the Royal Moroccan Navy decided to award this contract to DSNS because of our ability to offer such quick delivery times. And crucially, SIGMA means that there is little risk involved. Customers can rest assured that vessels will be delivered on time to their exact specifications and budget.”

SIGMA can readily accommodate any specific platform and combat system requirements and the concept enables vessels to be built worldwide. However, although they are based on a standard design, vessels can be equipped with a large range of options to meet specific customer requirements.

**Indonesian order**

In 2012, DSNS was also very proud to see the Indonesian Ministry of Defence return to the shipyard. In June, DSNS signed a contract for the first of two SIGMA 10514 Guided Missile Frigates (known locally as the Perusak Kawal Rudal).

The vessels will be built in PT PAL Shipyard in Surabaya, Indonesia. “These will be a ‘big sister’ of the corvettes at 105 m long and 14 m wide and they will have longer range missiles onboard.”

Closer to home, the ‘HMS Holland’ for the Royal Netherlands Navy recently won the ‘Ship of the Year Award’. The groundbreaking design - where DSNS worked very closely with the Royal Netherlands Navy, the Dutch government and esteemed naval maritime cluster - means that the three Offshore Patrol Vessels can be operated with a crew of only 50.

Operation with a small crew is partly possible due to the integrated mast, which incorporates sensor, communication and radar systems and the revolutionary layout of the command bridge. The HMS Holland needs only two diesel and two electrical motors, making it inexpensive to run and environmentally friendly.

**JSS on schedule**

Separately, a Joint Support Ship for the Royal Netherlands Navy, the ‘Karel Doorman’ - which at 205 m is the largest naval ship ever built by DSNS - is under construction and on schedule for delivery in 2015.

Mr Van Ameijden says that the cooperation with the Royal Netherlands Navy allows DSNS to remain at the forefront of technology and innovation and this is appreciated by international navies. “Even though there are some defence cuts going on in Europe, there are still a lot of opportunities worldwide in both the traditional naval market and the security sector.”
Dedicated to Offshore Wind

Damen Offshore Wind Portfolio continues to grow and grow.

Damen is developing an entire range of vessels specifically for the Offshore Wind Industry and many of these tailor-made vessels are already proving popular at Europe’s offshore wind farms.
In June 2011, Damen entered the crew transfer market with the revolutionary Twin Axe Fast Crew Supplier 2610, which is already heralded as the new “Industry Standard” (see separate FCS 2610 article on page 32). And following the success, Damen has introduced a smaller version, the Twin Axe 2008.

In addition to the successful Fast Crew Supplier, Damen has launched the Damen Offshore Carrier 7500, which is a true multi-purpose vessel, giving the ultimate flexibility. The DOC has a large, 2,300 m² unobstructed deck, an endurance of 65 days and is highly fuel-efficient.

This new breed of multi-purpose vessel is ideal for feeding the jack-up wind turbine installation vessel, saving valuable time and it can be used in a feederding solution transporting Nacelles, Transition Pieces and Monopiles.

Another recent member of the Damen Offshore Wind range is the Maintenance Barge, which is suitable for construction, service and maintenance support. And research and development continues apace as Damen looks to serve this growing industry.

Cable layer concept ready
Currently, Damen is working on the development of an infield and export cable layer concept, which has been benchmarked with many of the major offshore wind players. The concept was finalised in March 2013. The vessel will be able to beach and is capable of storing a 5,000-tonne cable reel onboard. It is being designed to work far offshore.

New Operations & Maintenance vessel
In a further move, Damen is working with a leading turbine manufacturer to develop a new Operations & Maintenance vessel specifically for Round 3 projects in the UK. Peter Robert, Damen Offshore Wind BusinessDevelopment Manager, explains: “Operators will not be going from the nearest port every day, the distances are too great. Instead it will be suitable to work in the field for a month and then go back to port for supplies and spare parts etc.

“It will have enough speed to be operated efficiently. With a Twin Axe it may take five hours one way to get to a port and this is five hours when the technicians are not able to do their job. This vessel will have excellent seakeeping ability for a comfortable ride and very high safety standards.”

This new concept is likely to launch mid-2013.

Damen is also keen to add a foundation installation vessel and a maintenance jack-up to its offshore wind portfolio.

“IT is our ambition to have a full product portfolio – at least in concept or an engineered solution - for every vessel type needed to serve the offshore wind market.”

Tailored Offshore Wind Workboat
The group is also looking into combining the strong points of Damen’s famous Shoalbuster and Multi Cat into a Workboat optimally suited for the wind industry. “Often Shoalbusters are brought into wind farms from the dredging industry and they are not tailored to this market,” he stresses.

“Ultimately, we are keenly aware that the cost of wind energy has to be reduced and these vessels help achieve this goal.” And as well as the many opportunities in Europe, Damen is eyeing possibilities in South Korea, China and the US.
Inspired. Our first impression of Paul Lightfoot, creative director and choreographer of Nederlands Dans Theater (NDT), is unmistakeable – this man lives to dance. He has been with the renowned modern ballet company for 28 years and is still full of praise for this “dance family”. With Spanish choreographer Sol León at his side, Lightfoot has created such celebrated ballets as Sehnsucht, Shoot the Moon and SH-BOOM. Time to interview both about their ambitions, their creativity and their ties with Damen.
THE CHEMISTRY OF CONTEMPORARY DANCE
“It has been a crazy time, we’re always busy around here.” Paul Lightfoot is clearly feeling restless. Sitting still and carrying on a quiet conversation are exceptions rather than the rule for this British dance prodigy. His soul mate León joins us and begins stretching her legs.

It’s Monday morning at the Lucent Dance Theatre in The Hague, NDT’s headquarters. Rehearsals are in full swing and there is a packed schedule to follow: a sponsorship event, a premiere and a series of performances in Oslo. The dance company has been affected by the reforms in the Dutch arts and culture sector, but it is soldiering on.

The past year was a hectic one – a lot of uncertainty about funding, but also a series of splendid premieres. How do you look back upon 2012?
PL: “I think we’ve had a very big positive push forward. A lot has changed in the past year. I became the creative director of NDT, and Robert van Leer became our new managing director. We had a lot of challenges, right immediately – but things are going in the right direction. That’s mainly because there’s a general feeling of solidarity; we are increasingly working as a family, focusing on one direction. It’s been difficult to combine my work as a choreographer with my position as creative director – I am still looking for the right balance. The honeymoon is over, so to speak, and reality has reared its head. I am fortunate to be working with someone like Sol; I couldn’t have done this work all on my own.”

NDT has been one of the most important figureheads of Dutch art abroad for years. What makes it so unique?
SL: “Without a doubt it’s the openness of our company, at all kinds of levels. NDT is a place where dancers have the opportunity to try out many different styles. We are very strong in style – and that’s what makes NDT special for me too. Our dancers have mastered different languages, literally and figuratively, and are open to new things. Each one has his or her unique qualities, but we are all open-minded when it comes to changing techniques and style. NDT is also a very internationally oriented dance company. That’s an aspect that requires each one of us to be able to deal with other cultures and to have an open mind towards the differences that this entails. Everyone in the company is different, but together we are a unified, close-knit group.”

Music, bodily movements and theatrical aspects – a dance production has many facets. How do you two create a ballet?
SL: “Our lives and our surroundings are so intense that we’re constantly busy gathering ‘material’ and inspiration for our creations without even being aware of it. But we don’t make straightforward plans; we don’t sit down to ‘invent’ a ballet. Paul and I have been working together for many years and we have a very special relationship. We don’t need to say a single word and yet we always think along the same lines. That’s the magic of creativity.”
PL: “Until the moment arrives that we start a conversation somewhere – it could be at home, or in a bar, or on the bus. Then there’s no stopping us and an exciting dialogue ensues that can lead to a ballet. It’s really a question of digging up the right ideas at the right time.”

SL: “I am a staunch advocate of the concept of evolution in the arts. Life is short, so we have to keep moving forward and renewing ourselves in each production. Every new ballet has a different starting point. It’s never the same – one time it might be a space, another time a piece of music or poetry. Creating is like cooking and creativity is like chemistry; we experiment a lot with our ingredients and that’s how we come up with new dishes.”

Damen Shipyards has been involved with NDT for years. Can you reflect on this relationship?
PL: “In relationships it’s the years that count, like Virginia Woolf said. That’s what makes our ties with Kommer and Josien so strong. I don’t want to fall into clichés, but there are huge similarities in the way Kommer runs his company and the way things happen here at NDT. He keeps people very much on a down-to-earth level and he has a vision to bring it forward like a family. That’s the feeling I get whenever I attend Damen events or talk to Damen employees – often they’re people who have been working together for many years. My hope for NDT is to do the same, more and more.”
SL: “Once again, it’s a question of chemistry; it’s a warm relationship of genuine love, trust and respect. It feels like family.”

"IT HAS BEEN A CRAZY TIME, WE’RE ALWAYS BUSY AROUND HERE"

SH-BOOM, Shooting the Moon and Sehnsucht are just a few pieces in your impressive repertoire. What has been your most memorable creation for NDT?
SL: “Every single production, to be honest. I really live for the moment and I put my soul in each ballet we create. We’ve also had a couple of bad ballets, I won’t deny that, but as you look back to them we’ve had a lot of love for them.”
PL: “I too have trouble choosing. I’ve had two lives here really; there are the ballets that you make and the ballets that you dance in. They’re not comparable, you get such different pleasures in such different ways. What’s most memorable is the actual path to a production and the responses you get after a performance. People are sometimes in tears, not because they’re sad but out of relief. The international nature of NDT has also given me many fond memories; we get to go to many other countries and share what we do in many different places. For example, it was an unforgettable experience to perform Shoot the Moon in Hong Kong.”

What are your ambitions for the upcoming years?
SL: “Big ones! But above all, to follow a natural course in the creative sense – to go forward with the group in the same direction. It’s not about success or making money. It’s about dreaming and about being free as an artist.”
PL: “For me, one of the nicest things that could happen – don’t laugh – is that we could make a mistake and that we could also be really good about it. That kind of ability, to be able to take a risk that sometimes doesn’t work, is very important to have as an organisation. It’s this honesty, this non-superficiality about what we do that attaches people to NDT.”
Nederlands Dans Theater
Internationally renowned, unique, and a breeding ground for talented young dancers and choreographers: NDT is unquestionably one of the most prestigious modern dance companies in the world. Founded in The Hague in 1959, it first rose to fame under the leadership of Jiří Kylián, Hans van Manen and other renowned choreographers. The two groups, NDT 1 and NDT 2, give more than 150 performances each year for thousands of people.

Lightfoot, León & NDT
Although Paul Lightfoot (born in Kingsley, UK, in 1966) has only been at the helm of NDT for 18 months, he has a long and multifaceted history with the dance company. He began his career at NDT in 1985 and quickly made his mark as a remarkable dancer. Within two years he moved from NDT 2 (the group for up-and-coming dancers) to the virtuoso NDT 1, where he also began to develop his choreographic skills. Lightfoot worked his way up to resident choreographer, a position he has held together with Solange Léon (born in Córdoba, Spain), in addition to master choreographer Jiří Kylián. Together they have created more than 40 productions and have received numerous awards. Their work is unique for its control, mystery and precision – but also for its healthy sense of humour and fantasy.

Damen & NDT
It began with admiration, developed into a flourishing partnership and ultimately resulted in a lead sponsorship. Josien Damen’s enthusiasm for modern dance was infectious and Kommer Damen quickly joined her in this – in fact, he was a member of NDT’s board for 12 years. Damen Shipyards Group has been closely involved in NDT for more than two decades and has eagerly shared its passion with others, leading to a series of unique events for Damen clients and business associates in the Netherlands and abroad. As a member of the Nederlands Dans Theater Society, Damen will follow up with other events in 2013.
STRONG DEMAND FOR NOZZLES AND OTHER PARTS
EXPANSION IN CHINA AND POLAND

Damen Marine Components (DMC) has seen such strong demand for nozzles and other ship parts that it has embarked on a considerable production capacity expansion. The offshore industry particularly, is driving demand.

DMC develops high quality propeller nozzles with a wide range of profiles, delivering higher efficiency under various operating conditions. Currently, it is producing more than 700 nozzles a year.

Sales turnover climbed by around 20% in 2012, and this has led DMC to acquire a second production facility in Poland and it is looking at opportunities to have a much larger facility in China. Additionally, the company has ordered a second spinning machine, which will be installed into its new China plant.

Steef Staal, DMC’s Managing Director, says: “We had a fantastic year in 2012 and it is still looking positive for 2013, so it was vital to extend our production capacity. There has been much more demand for nozzles from the offshore industry but also for other parts. Increasingly clients are using Dynamic Positioning, which is leading to more demand. Existing customers, such as Rolls-Royce and Schottel have also seen significant growth. Damen’s own activities, especially when it comes to tugs and workboats, are also leading to increasing demand for DMC products. “The offshore market is very strong and the same goes for the shortsea sector, which is now using slower speeds. Our nozzles have less resistance and save fuel,” he says.

In 2012 DMC expanded its production capacity in Poland with a new 3,000 m² covered facility in Elblag, near Gdansk. This joins DMC’s existing 30,000 m² site in Gdansk, of which 8,000 m² is a covered production hall. DMC has also invested in new pipe bending and welding equipment.

Closer to home, with the increase in production, DMC is also increasing staff members and its headquarters are undergoing a refurbishment to accommodate this.

China
The company is also undergoing an expansion in China, where its other main production facility is based in Suzhou. With the substantial growth and new products, it is necessary to have a much larger facility in China as well, he explains.

“Currently, the exact location of the new facility has not been decided upon, although it will probably be built near Shanghai.” Mr Staal is hopeful that the new production plant could be fully operational by the end of the year. The second spinning machine on order is set to be installed in China early next year.

New winch – no gearbox
Additionally DMC, which is based in Hardinxveld-Giessendam, the Netherlands, has introduced new products into its portfolio such as special towing winches. These have been developed in-house together with Maaskant Shipyards Stellendam, another Damen shipyard, which is well known for its expertise in fishing vessels and smaller vessels for research or support purposes.

The pioneering new winches are directly driven by a hydraulic motor on the main shaft rather than having a gearbox, making them very easy to steer and regulate.

Smooth, single-weld nozzles save fuel
In 2011, DMC developed a pioneering, environmentally friendly nozzle production method increasing production efficiency. The new spinning machine produces an improved end-product because there is only a single weld seam on the inner side of the nozzle. The new machinery was installed in Gdansk last year.

Now the single machine can produce nozzles with an inside diameter ranging from 1,000 mm to 4.5 m. “As the offshore industry demands more power the average nozzle diameter is growing. Now we have to be able to go to 4 metre-plus, whereas it was 2 metres a few years ago,” Mr Staal comments. Using a completely automated system, the machine can handle stainless steel, duplex, steel and special steel materials. The patented production method has been fully classed by all the leading classification societies.

Commenting on the future, he says: “Our quality is being recognised worldwide, and because we are producing in lower cost countries we can remain competitive but still retain top Damen quality. We have a very busy year coming up, with a healthy orderbook. And we are very much looking forward to our expansion in Poland and building a new facility in China.”
Damen can build at any location and any yard can build a Damen designed vessel.
Over the last four decades Damen Technical Cooperation (DTC) has assisted shipowners and shipyards build more than 1,000 vessels in more than 70 countries around the world.

DTC embodies a unique concept, and means that Damen vessels can literally be built anywhere, with Damen supplying everything from the licence or design, to a full material package. DTC can even assist customers build a shipyard or jetty at a greenfield site or help upgrade an existing facility. Civil works are executed in cooperation with Damen Services.

Damen can build at any location in the world and any yard can build a Damen designed vessel, Frits van Drenth, Product Director DTC, comments. “There is so much flexibility, DTC can supply the plan for a vessel or a complete knock-down material package (a shipbuilding kit) and everything in between.”

Past projects
Projects have ranged from 66 m Hydrographic Survey Vessels in Thailand and Vietnam, fishing vessels, tugs and ferries in Cuba, 55 m patrol vessels in Italy to 90 m Patrol Craft in Vietnam. In another example DTC has worked closely with Wilson Sons in Brazil for many years. Wilson Sons buys designs and part material packages from DTC for building its tugsboats and Platform Supply Vessels (see the article on page 93). Essentially, any vessel in Damen’s entire range can be built via DTC.

Local employment
And with many countries in the world specifying that there should be more local content, there is expected to be increasing demand for DTC’s services. Countries want to protect their economy or perhaps gain shipbuilding knowledge to provide employment for local people, says Mr Van Drenth.

“...A big advantage for customers of DTC is this transfer of technology and knowledge. They can upgrade their own yards and improve their employees’ skills, which in turn, builds up the shipbuilding industry. A DTC package allows yards to employ the local workforce and this gives a big boost to the economy.

For some projects Damen Services provides additional crew training on location or at Damen’s headquarters in the Netherlands.

Current projects
Currently, Damen vessels are being built in at least 15 countries at non-Damen shipyards. At the moment, two 26 m patrol craft are being built in Ecuador. Here DTC has supplied the full material package, including the steel, which has even been cut and bent to size. In addition, ASD Tugs and Stan Patrol vessels are being built in Qatar and four tankers are underway in Vietnam for an Australian owner.

In an historic project, Malawi will soon get its first ever new-built aluminium vessel - a 33 m Fast Crew Supplier - which is being built at a yard based on the shores of Lake Malawi. Damen supplies tools and equipment, as well as providing support for the yard.

In addition to supervising the project, DTC is supplying skilled welders to assist during the building process and to train local people. Although this project has just started, it is expected to take just over a year to complete. DTC has undertaken similar projects at Lake Victoria.

In another fascinating project that is underway, Damen helped construct a building shed and also assisted in upgrading Pashaliman Shipyard in Vloëre, Albania. The yard was then able to build the Damen Stan Patrol 4207 and has subsequently successfully built and delivered two vessels and a third vessel will be delivered this year.

Last but not least, a Venezuelan yard upgrade is also being carried out at this moment. Damen Services is building a shed again, which will enable the shipyard to build Patrol Craft up to 42 m.
LICENCE TO BUILD
DAMEN LICENCES PROVE A POPULAR CHOICE
Although technically possible, there can be instances when a Damen vessel cannot be built at the client’s preferred location via DTC’s material packages. When this is the case, there’s another, increasingly popular, solution: licences.

For instance, because of the Jones Act in the US no foreign built vessels are allowed to be imported, but DTC sells a lot of licence agreements there. Jan van Hogerwou, Damen Sales Manager Americas, says: “We can’t deliver to the US, yet there is an enormous market there, so we are happy to make our designs available.”

And it is not just the US that has vast potential. He adds that in Canada there is a 25% import duty, therefore this makes the licensing option attractive. Damen is currently working with yards in Canada that are interested in building its tug designs.

76 Offshore Patrol Vessels
The Damen licensing system is already a well-known concept in the US. The United States Coast Guard has 76 OPVs in its fleet (the 87-feet or Marine Protector Class) that were built under a Damen licence at Bollinger Shipyards.

‘Parent hulls’ for Bollinger
And recently, Damen has been awarded another contract to provide a licence for the first 18 of 58 Fast Response Cutters by Bollinger, which will also be for the USCG. This agreement concerns the Damen Stan Patrol 4708. The first three boats have been delivered and eight are under construction. “The USCG was looking for a ‘parent hull’, in other words a proven design concept, and we were one of the few yards that could provide this,” says Mr Van Hogerwou.

“The Damen Stan Patrol 4708 is a very good design and based on an Enlarged Ship Concept from the highly successful 26 m (87ft) smaller version. Therefore the USCG is very familiar with our design features.” Bollinger is building the Damen Stan Patrol 4708 in batches of six units and is on schedule to fulfil the order for the entire fleet of 58 vessels.

80 crewboats in 24 months
And in October last year at the International Workboat Show in New Orleans, Damen was delighted to sign licence agreements for a staggering 80 crewboats. The Damen crewboats will be built at three yards in the US, all of which are new customers to Damen.

Forty of the Fast Crew Suppliers (FCS) 1204 will be built by Horizon Shipbuilding, which is based in Bayou La Batre in Alabama, alongside C&G of Mobile, Alabama. Fifteen FCS 1204 will be built by TY Offshore, part of Trinity Offshore of New Orleans, and 25 FCS 1605 at Blount Boats, Rhode Island. Damen is providing both the drawings and some components and all of the vessels need to be delivered in just 24 months! “It was very important that these vessels were built in the US and Damen was prepared to team up with the US yards and support them with our technical know-how,” emphasises Mr Van Hogerwou.

Meanwhile in Canada, nine Coast Guard vessels (Damen Stan Patrol 4207) are being built at Irving Shipbuilding in Halifax, the major shipyard on the east coast, of which the first three have been delivered. Irving Shipbuilding is a new customer and selected Damen’s design following a tender process. “Canada is a growing market for Damen and we are not just looking at patrol vessels but at tugs and offshore vessels as well.” In addition, Damen is supplying the licence for the Damen Stan Patrol 4207 and the drawings and full materials for the Stan Patrol 4207 to a shipyard in Mexico.

Licensing options
Damen has three licensing packages available, one providing the basic design lines, plan and weight calculations, a second where all the drawings have been approved by Class and a third, including the detailed engineering and production information. “These are popular with yards that do not have their own engineering departments. And a huge advantage for customers choosing Damen’s designs is that often even drawing offices that supply vessel designs do not actually have building experience, whereas we have all the feedback from the thousands of vessels we have built, so we are continually improving designs,” stresses Mr Van Drenth, Product Director DTC.

“Customers make use of our proven designs because we have built most vessels many, many times. They have our entire engineering department at their disposal and know they have a reliable, proven design.”
A WORLD STANDARD IN JUST ONE YEAR

UNRIVALLED SEAKEEPING ABILITY
A year after its launch the Damen Stan Patrol 5009 is proving popular worldwide

LAUNCHED JUST A YEAR AGO, DAMEN’S UNIQUE 50 M PATROL VESSEL, THE ‘SEA AXE’ STAN PATROL 5009 IS PROVING ATTRACTIVE TO NAVIES, COASTGUARDS AND COMMERCIAL SECURITY COMPANIES WORLDWIDE. THE VESSEL’S SUPERB AXE BOW DESIGN GIVES THE STAN PATROL 5009 UNRIVALLED SEAKEEPING ABILITY.
A year after its launch the Damen Stan Patrol 5009 is proving popular worldwide. Cape Verde became the first country to welcome the ‘Sea Axe’ Stan Patrol 5009 when the Ministry of Transport took delivery in December 2011. The vessel is successfully deployed patrolling Cape Verde’s Exclusive Economic Zone (EEZ), carrying out Search & Rescue operations, salvage, patrol and anti-smuggling activities.

Jaap Gelling, Damen Product Director High Speed Craft, says that initially the Ministry of Transport was considering a Stan Patrol 4207, but actually wanted a larger vessel such as the Stan Patrol 4708. This Damen design had just been selected by the US Coast Guard, which is currently having a staggering 58 built in the US! (see article on Licensing on page 108). However, as a standard within Damen, this vessel was already replaced by the ‘Sea Axe’ Stan Patrol 5009.

“In our discussions in Cape Verde we agreed that the Stan Patrol 4207 might be too small for their operations. The combination of the number of crew, time at sea and range was indeed pushing the limits of the Stan Patrol 4207 too far.”

Excellent seakeeping

“Instead of offering the ‘big sister’, the Stan Patrol 4708, we suggested the state-of-the-art ‘Sea Axe’ Stan Patrol 5009. In close cooperation with our customer, the design was adapted to fit their requirements and a smaller engine type was selected to get the vessel within the budgetary limits (four Caterpillar C32’s instead of 3516’s).

“Although we were initially expecting a significant drop in speed from 26 knots to approximately 20 knots because of the smaller engines, we found out that the reduction in weight partly compensated, resulting in a trial speed of 23 knots. Our customer was delighted to have a much bigger spacious boat, with excellent seakeeping, offering great value for money.”

And with the 50 m now becoming a standard design, a 55 m Stan Patrol standard is expected to follow after an order for two vessels from Guardia di Finanza (the Italian Ministry of Finance), a new customer for Damen. The two vessels are now under construction in Italy and will be delivered in 2013.

New 55 m Stan Patrol

Guardia di Finanza was keen to have something slightly larger than the 50 m and it originally had a preference for an aluminium vessel. However Damen, supported by years of experience with aluminium vessels, was able to show Guardia di Finanza that there are considerable problems with aluminium fatigue in larger, 40 m plus, vessels.

Naturally speed is of the essence when patrolling and with speeds of 30+ knots needed, a light hull is vital. Damen Research has developed a calculation method to estimate the fatigue life of aluminium vessels. From calculations with this extremely useful tool, it was concluded that over a length of 40 m, steel vessels could be built much lighter than aluminium vessels – and for the same fatigue life. “As well as this, the lighter steel vessel is a lot cheaper, an argument appreciated by our customers too!” adds Mr Gelling.

Damen is seeing a great deal of interest in the new ‘Sea Axe’ Stan Patrols and expects to receive orders soon for more than 10 vessels from various customers worldwide. With such keen demand, Damen is already building two for stock.
Damen created an additional Department especially for new products last year, further broadening its portfolio. And just a few months after becoming official in April, the Workboats Department launched a new product series – Damen Utility Vessels.

Workboats is headed up by Lodewijk van Os. With a background in naval architecture, Mr Van Os started at Damen as a trainee and then went on to become a Design & Proposal engineer. He later moved into sales, becoming part of the Middle East team, where he was for seven years. But always keen to develop new products, Mr Van Os was given the chance to create the new Workboats Department.

“Initially I am looking to see where we can add the most value,” he says. Pretty quickly he realised that Damen had a slight gap in its portfolio when it came to a series of designs dedicated to light duty work, such as buoy laying, pollution control, fire fighting, survey work etc. Such utility vessels had been built in the past, however many were built incidentally according to specific customer requirements.

“The aim for the new Utility Vessel range is to build a series of standard vessels, which is very much the strength of Damen. To be able to do this the concept embodies a simple platform into which multiple functionalities can be integrated.”

Two new Utility Vessel concepts

Two concepts have been developed initially by the two Design & Proposal Engineers and GA Plan Engineer, Marije De Jong, Sylvia Reinders, Willem Wijnbelt respectively. “This was a great opportunity because our team could start with a blank sheet of paper for the new designs. They are all new to Damen and could come with an open view and ask why we do certain things in a certain way and if we can improve on them - ultimately seeking the best solution for our clients.”

UV 5314

The larger of the two concepts, the UV 5314 (53 m long) is already creating quite some market interest. With spacious accommodation and a shallow draught of only 2.5 m and deadweight of 550 tonnes, the vessel can stay at sea for up to three weeks at a time. It can be fitted with DP 2 propulsion and an offshore crane, making it ideally suited for offshore and wind farm maintenance.
It can also be fitted with an A frame for survey work or used for oil recovery with a simple modification. “This really is a very versatile platform for multiple tasks.”

**Versatile platform**
The UV 5314 is expected to appeal to the growing offshore wind industry. Mr Van Os emphasises: “Damen’s new design complies to the latest regulations, has modern, spacious accommodation for up to 40 people and good seakeeping ability. I think these vessels will make it much easier to attract people to work on wind farms and to retain them.

“The vessels are compact, with a large, clear deck space. We are also making sure the basic platform is simple to keep the price as low as possible.” Concepts along similar lines for a 40-45 m and 60 m version are currently being worked on.

**UV 2509**
The UV 2509 concept has been designed for coastal operations and has a very shallow draught. Twin pushbows give owners the possibility to take a barge with additional equipment or cargo to worksites. These vessels could also be deployed for buoy laying, fire fighting, emergency response and maintenance, perhaps working for marine contractors or port authorities.

“We are getting a lot of positive feedback from customers and we will further develop the designs with their input to meet market demand.”

**Offshore Support Tugs**
In 2013, the Workboats Department will also start work on developing a series of Offshore Support Tugs. Again, these will be very versatile, ideally suited for anything from Anchor Handling, SBM support to ocean towage. These are likely to range from 40-60 m with bollard pulls of 80-120 tonnes.

As well as this, Workboats will in the future include a series for Pusher tugs and landing craft.

“Ultimately we want to show customers that we can do more. Customers get all of our experience from design, through to production to after sales.

We are responsible from A to Z, making sure every detail is perfected and that input from customers is integrated to ensure the very best solution is created.”
As Angola rebuilds its economy after the devastating civil war it urgently needed assistance in protecting its rich fishing grounds and fish stock.
Less than two years after the order was officially placed, the trio have already been delivered. Friso Visser, Damen Regional Director Africa comments: “Because these are based on successful proven designs, Damen was able to offer very short delivery times for all three vessels.”

The Angolan Ministry of Agriculture, Rural Development and Fisheries will deploy the vessels to help establish a MONICAP vessel tracking and surveillance system so it can tackle illegal fishing. Under a SADC regional programme Angola collaborates with Namibia and South Africa to protect and survey these vast fishing grounds. The larger vessels are equipped with a helipad.

Ideal for patrolling EEZ
“These vessels have really shown to be an ideal solution for patrolling an EEZ. The Damen FISV 6210 has low operational costs and are very fuel efficient, have a competitive purchase price and crucially, are easy to maintain. Overall, they provide a reasonable Total Cost of Ownership for customers making them interesting for countries that have a duty to patrol an EEZ.”

The two FISV 6210 have been built at Damen Shipyards Galati in Romania, while the Damen FRV 2808 has been built at Damen Shipyards Cape Town. “We are building in Africa for Africa,” stresses Mr Visser.

Excellent cooperation
In addition to commissioning, Damen is carrying out a 15 day training programme for each vessel in Angola.

Damen has been active in Angola for several decades and has previously built two ferries, several tugboats, dredgers and offshore related vessels for the country. “We have a very good relationship with the Angolan Government and cooperation with the Ministry of Finance and Fisheries during the whole project has been excellent.”

This threefold order came about following a unique collaboration between Damen, the Dutch Government and ING Bank. Because of its “Least Developed Country” status, Angola qualified for a Dutch government grant (O.R.E.T.). ING Bank provided the export financing and Atradius DSB secured the export credit insurance.
“We’re ready for it!” Production Managers Ton van Oorschot and Jaco Vlaanderen are enthusiastic about the flourishing Offshore & Transport market. Both men are ready to spring into action in this busy, challenging year and with expansion and growth ahead. One is a long-standing member of the team, while the other has just joined. The two managers talk about their work for Damen.
"With 13 project managers and dozens of projects underway, O&T – myself included – has some great challenges ahead. The demand for ships in the oil, gas and offshore industry is growing as worldwide demand for raw materials rises. Damen will undoubtedly be able to meet some of the market’s needs. My aim for 2013 – along with many new employees – is to see that Damen tackles all our projects efficiently and effectively. What initially drew me to Damen was the pleasant, open-hearted ambience and the many opportunities for professional development. My colleagues are always ready to help out, we get together in the cafeteria and at company parties and celebrations. All that makes our work more enjoyable and it ultimately pays off in the end product. I recently transferred from Damen Technical Cooperation to Offshore & Transport. That’s another thing about Damen: anyone who feels they’re ready for the next step or thinks they might do better in another unit is given the opportunity."
"No two days are the same here. My duties as a production manager are extremely varied. One minute I am in my overalls visiting a production site or visiting a subcontractor, and the next I am at the office in Gorinchem consulting the team, attending a construction meeting or welcoming clients. The nature of the Department’s duties and responsibilities also has a huge impact on the content of my work, from design to technology to planning and the financial aspects. Like I always say: project management is there to relieve our clients and sales of some of their work. We should make it clear to them that Damen understands what they want and that we’ll do precisely that, transparently and subject to close monitoring, and all in line with the agreed technical standards, quality, deadlines and budgets.

O&T used to work on special assignments, one-off vessels sold at irregular intervals. In the past few decades, however, we’ve developed into a steady-earning, stable unit within the company. We had already made our mark with our tugs and patrol boats, but now we’re moving into the Offshore Market, where there’s a lot of room for growth. The group’s typical products include Platform Supply Vessels (PSV) and Anchor Handling Tug Supply (AHTS) vessels. There’s growth in other markets too, for example the bigger patrol ships, installation vessels and survey vessels used by oil companies to explore for oil and gas. We also take on a whole range of other projects, from dredgers to roll-on roll-off models, research vessels and large sailing ships.

O&T has proved that we can handle larger volumes while remaining vigilant. The Department has grown rapidly and I am proud that we have a good, stable, cooperative team.

Damen has become part of my life. I’ve not only watched O&T but the whole company grow – in the broadest sense of the word. Damen is a worldwide business. We are active on multiple continents and we’re gaining knowledge and experience all over the world, both as a company and as individuals. Personal input is valued and every employee who wants to can make a difference.

One of the highlights of my career? There have been several. One special one was when the new ferryboat arrived in the harbour on the island of Texel, an exciting occasion that drew a big crowd. Another was when we completed Worldwide Support Ship 8316, destined for the UK. It took a lot of blood, sweat and tears – and more importantly, persuasion – to introduce construction techniques that ultimately led to a high-profile success. Many of those involved were sceptical at first, but it’s now commonly acknowledged that this is one of our crowning achievements.”
**BRINGING PEOPLE TOGETHER**

**DAMEN MODULAR WATERBUS**

In an entirely new development, Damen Product Group Ferries has designed a fully standardised, modular composite ferry. Following strong demand from customers, this stunning, sleek ferry is entirely built from modules, therefore allowing clients to semi-customise the vessel. For example, they can decide where they would like the masts to be placed, the wheelhouse, or if they want an extended or short version.

To be officially launched in 2013, the modular ferry will range from 16 m to 24 m and can carry a maximum of 100 seated passengers. With a speed of up to 40 km an hour, the ferry type has been specifically designed for protected waters such as harbours, rivers and estuaries.

Henk Grunstra, Damen Product Director Fast Ferries, says: “Damen’s philosophy is based on having vessels in stock to facilitate the shortest lead times and to keep costs down. Modules from this composite design will be kept in stock enabling super-fast delivery times. The beauty of this design means that the vessel can be built anywhere in the world, if necessary.”

**DAMEN INTRODUCES FIRST LNG FERRY**

Continuing its Research & Development initiatives to develop cutting edge ferries that are also more environmentally friendly, Damen has designed a ferry powered by LNG.

The Damen 6616 E3 is a wide (66 m x 16 m) aluminium catamaran, RoPax ferry with a capacity for 600 passengers and 60 cars. Fuel consumption and CO₂ will be dramatically cut by 20%, while NOx, SOx and particulate matter reduce to zero. Many other green features such as having a zero waste system, environmentally friendly coatings and solar panels are also included in the new design.

The LNG ferry carries Damen’s own quality brand – the E3 hallmark. E3 represents Environmentally friendly, Efficient in operation and Economically viable. These take into account the needs of the planet, the people operating the ship and the owner’s need to make a profit.

**Doeksen**
The ferry has been developed together with Rederij Doeksen, a company operating since 1923 with passenger and car ferries between Harlingen and the Dutch Wadden islands of Vlieland and Terschelling, an area that is a UNESCO World Heritage Site.

Pioneering efforts to make sure Damen offers the most modern, efficient and environmentally friendly ferries to the market continue, as the group prepares to launch a modular, composite Waterbus, an LNG ferry and a new “Flying Cat”.

"The Modular Waterbus vessel can be built anywhere in the world, if necessary"
DAMEN CONTINUES TO BRING CUTTING EDGE FERRY DESIGN TO THE MARKET

Damen is also working on an order from Translink Seabus, a new customer to the group, for a new aluminium ferry to operate in Vancouver.

Damen won an international tender for the new ferry construction, which will be an updated version of one of the company’s existing ferries. Recognised as a super-efficient public transport system, Translink’s vessels operate from downtown Vancouver to the north shore directly into a dedicated passenger terminal, where they can berth/unberth very quickly.

To be built at Damen Shipyards Singapore, the 34 m vessel has a capacity for 398 passengers and will be delivered mid-2014.

A FLYING CAT IN SOUTH AMERICA

Damen is currently working on a replacement of the well-known aluminium “Flying Cat” ferry design. A new version, the Damen Fast Ferry 4210, is under construction in Damen Shipyards Singapore for a South American client, and is due for delivery end-2013. This vessel will actually be an extended version of the new standard because it will include a deck crane and has to be able to accommodate 250 passengers, cars and containers.

However, with a lot of interest already, Damen is building the new “Flying Cat” for stock. Two vessels are being built at Damen’s partner yard Afai in China, one with a Controllable Pitch Propeller and one with a Waterjet. This multi-purpose vessel is particularly fuel-efficient. It complies with the very latest safety standards, HSC Code 2000, and has a modern, spacious interior and fittings.
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Anyone entering the stunning new offices at Damen can see a highly modern working environment where light and space have been given priority. And this fresh new office building is in stark contrast to those that can usually be found at shipyards worldwide.

The creation and design of the new building, which has 164 offices, several meeting rooms and a large lunchroom, has certainly been a Damen family affair. Arnout Damen, Chief Operations Officer of the group, was very much the driving force behind its inception and the emphasis on being open and airy. Josien Damen, who heads up special projects at the company, was the creative inspiration behind the interior design, with its subtle colour scheme and stylish furniture and Arnout’s wife, Godelief, drove the first pile of the new HQ in!

Glass is used wherever possible and the offices are based around an atrium providing vast amounts of light and an exhibition space on the ground floor. Outside walkways and gardens will also be added to further enhance the working environment.

**8,150 m² in 10 months**

Opening in late August last year, the five-storey, 8,150 m² building had to be achieved in a very short time frame – just 10 months - given the rapid expansion of Damen.

Bert Jan ter Riet, Managing Director of Damen Shipyards Gorinchem, explains: “Originally we expected to realise a 1 billion orderbook in Gorinchem by the year 2015 but our sales force has been so successful this was already achieved in 2012 and over the last few years there has been a substantial growth in staff levels. Full-time employee numbers have risen from 650 in 2009 to 1,020 now and clearly we had to manage this.” The Group asked Dutch architect Piet van Es, who Damen has worked with for many years, to design the new office.

**Sustainability**

Another important aspect was that the office building should be built according to sustainable practices and it is extremely energy efficient. Damen will continue to expand this year with the addition of a further four-storey office for production staff and a new car parking facility. As well as this, the existing offices will be renovated.

“We really are very proud to have achieved such a beautiful new office and to have created such a pleasant working atmosphere for our employees,” stresses Mr ter Riet.
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