

## LANKHORST EURONETE PORTUGAL

### Aquaculture Workshop in Maia, Portugal

Last August, Euronete together with Euronete Sudamericana organized the second Aquaculture Workshop which was held at the Lankhorst Euronete premises in Maia, Portugal.

Once again we succeeded in joining some of the most important Chilean companies that work in the aquaculture business.

This workshop's major objective was to understand the characteristics of the different fibers available in the market, the production processes and finally to search for even better solutions for the aquaculture market.

The aquaculture industry is a major economic activity in Chile. Among diverse aquacultures practiced in Chile, the Atlantic Salmon is the largest sector.

Up to 2007, Chile experienced 15 years of huge growth in the salmon aquaculture, thus becoming the second largest producer in the world, after Norway.

Chile's contribution to the world's salmon production volume is approximately 38%, Norway contributes 39%.

Salmon is the third largest Chilean export product in terms of volume.

The main areas of aquaculture in Chile lie in the southern part of the country in particular in



Workshop in Maia, Portugal

the interior waters of Los Lagos region and also in the fjords and channels of Aysén and the Magallanes regions.

Euronete Sudamerica once again organized a very interesting workshop in which important aspects of the new technologies of the aquaculture industry were discussed.

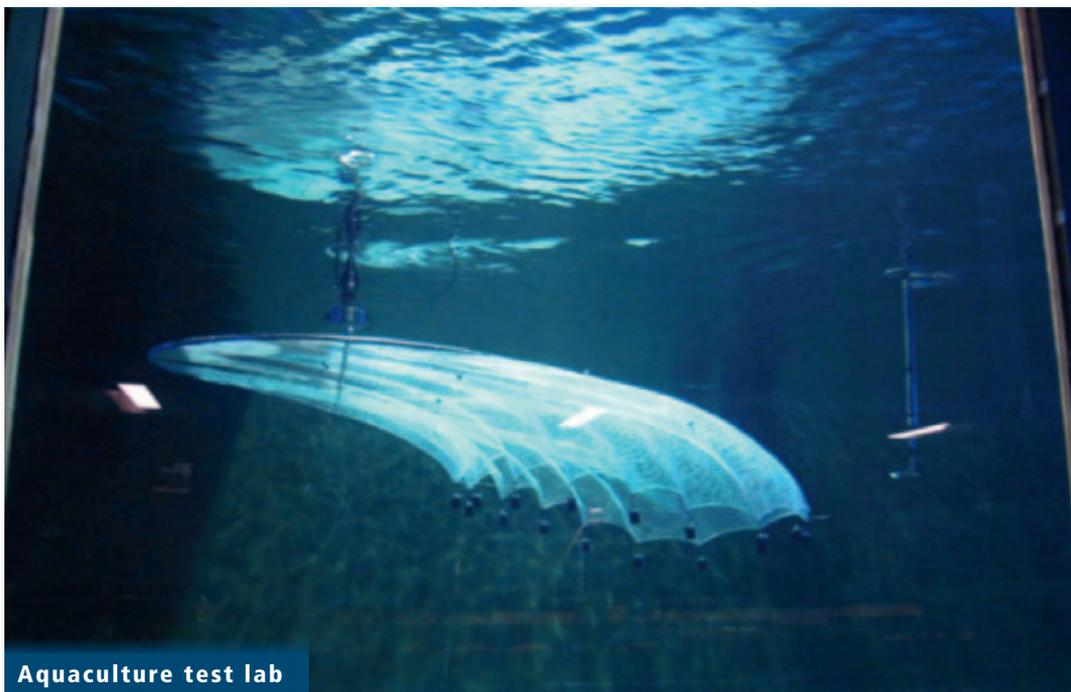
The exchange of information and experiences with our technicians, explaining the stages of production and characteristics of our products, was extremely positive. Also the feedback and concerns from the end users will



Euroline Predator

contribute to the development of new products as well as to improving the service from our side.

In the last years, the aquaculture industry has been investing in new improvements and technologies, not only regarding the mooring ropes, but also regarding the netting. Euronete has developed new products to be applied in the mooring systems guaranteeing better security and lifetime of the installations. Concerning the netting, and after replacing the nylon and polyester with our Euroline materials, new decisions had to be taken regarding the best solution for the market.



Aquaculture test lab

## LANKHORST EURONETE BRASIL



### Lankhorst Euronete Brasil

Lankhorst Euronete Brasil - LEB - has received a contract to provide the complete supply of polyester lines for the mooring of FPSO Cidade de Maricá and FPSO Cidade de Saquarema.



SBM Offshore has contracted LEB to service the two new FPSO's. It will be a polyester spread mooring system based on LEB's Cabral 512® production technology and will be installed at a water depth of 2,300 m, on the Lula field in the pre-salt area offshore Brazil. Production output is expected to be at an oil production capacity of 150,000 barrels per day (bbl/d) and a gas production capacity of 6.0 million cubic meters per day (m(3)/d).

Both FPSO's will operate in block BM-S-11, which is under concession by a consortium comprised of PETROBRAS (65%), BG E&P Brasil Ltda.



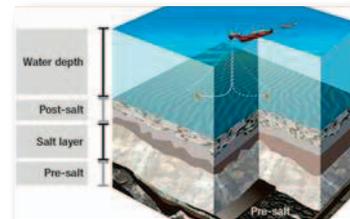
Cabral 512® Deep Water Mooring rope

(25%) and Petrogal Brasil S.A. (10%), with planned delivery at the end of 2015 and early 2016.

The FPSO's will be owned and operated by a Joint Venture of SBM Offshore, Mitsubishi Corporation, Nippon Yusen Kabushiki Kaisha and Queiroz Galvão Óleo e Gás S.A.

The supply contract includes about 150,000 meters of Cabral 512®, with 1,200 tonnes

of minimum breaking load. Production at LEB already started late July and we are extremely honoured to have received this order from SBM.



## LANKHORST ROPES



### Lankhorst Strengthens Deepwater Mooring Sales Team

Lankhorst Ropes has strengthened its offshore and deepwater team with the appointment of Neil Schulz as sales director Deepwater Mooring.

Former sales and technology manager with Parker Scanrope AS, Neil will be responsible for developing Lankhorst's presence in the growing deepwater mooring market. He has an impressive track record, taking in many key milestone projects in the development of offshore mooring.

"I am very happy to welcome Neil Schulz to Lankhorst Ropes as sales director Deepwater Mooring," says Wilco Stroet,

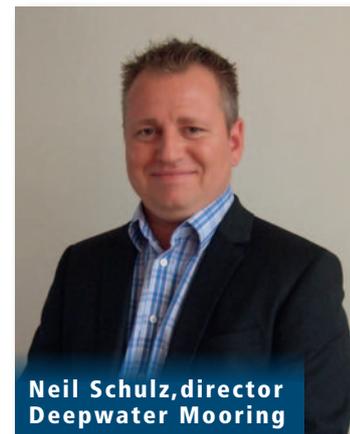
managing director, Lankhorst Ropes. "Neil's product knowledge and project experience are a good fit with our growing range of fibre and steel wire, offshore and deepwater ropes, as we develop our offshore business."

Neil Schulz has over 18 years of technical and commercial experience in fibre rope and steel wire rope technology, sales and marketing. At Marlow Ropes,

he worked on the first polyester mooring systems for Petrobras in Brazil in the mid 90's and was involved in the design, testing and approval and installation of the first polyester deepwater mooring ropes in the Gulf of Mexico (GoM) for Shell and BP.

At Parker Scanrope he was responsible for the Shell Perdido polyester ropes used to moor the deepest Spar in the GoM. More recently, Neil was technically responsible for Chevron's Jack & St. Malo semi-submersible - the largest single order of polyester rope at 3,000 T. In addition to polyester ropes, Neil has worked on spiral strand and six strand steel mooring ropes including securing the contract for the Bluewater Haewene Brim FPSO.

"Lankhorst Ropes has a formidable reputation in the offshore mooring industry for its sales and technical prowess. I am delighted to have the opportunity to contribute to its future success and again working alongside Chris Johnson sales director, Lankhorst Ropes - a friend and former colleague for many years," says Neil Schulz.



Neil Schulz, director Deepwater Mooring

# LANKHORST ROPES



Lanko®Force Slings

## Lankhorst Takes the Load

Heavy lift is an area of growing importance offshore. Assembly of oil rigs and production platforms, as well as renewable energy wind farms and wave devices, rely on the ability to safely lift large components weighing 1,000 t – 5,000 t. The market has traditionally been dominated by steel wire rope but synthetic fibre ropes from Lankhorst Ropes are beginning to make inroads.

“Synthetic fibre ropes have important practical advantages over steel wire in heavy lifting,” notes Sergio Leite, head of heavy lifting at Lankhorst Ropes. “They are easier to handle, especially where manual handling is required, and as strong as conventional steel wire rope but 7 times lighter.”

Too large to fit into either normal containers or onto conventional transporters, the transportation, handling and installation of heavy items are normally one-off projects.

Sergio again, “They are among the most challenging and complex logistics challenges, characterized by the need for individual transport planning – every heavy lift project is different. Our opportunity lies in supplying synthetic fibre rope slings for the cranes on special heavy lift vessels”

The lighter fibre sling allows the crane to handle heavier loads as there is less weight in the sling, enabling maximum payload lift. In addition, the lift is gentler, avoiding unnecessary damage to the load.

At present Lankhorst offers the Lanko®Force 12 x 1 construction and standard 12 strand ropes to produce slings with a minimum breaking load (MBL) of around 1,600 mT in single leg configuration and 2,700 mT on a grommet configuration.

For heavier loads, high performance Gama98® Dyneema® rope can be used.

“With our specialist manufacturing equipment, we are able to offer 300 mm diameter rope corresponding to a sling with 5,000 mT MBL (single leg) and 8,500 mT MBL (grommet configuration), allowing us to provide ropes for the most demanding heavy lift projects,” concludes Sergio Leite.



Heavy lifting

## LANKHORST ENGINEERED PRODUCTS

### Biggest order in the history of Lankhorst Recycling Products

The municipality of Haren has awarded Lankhorst Recycling Products with the biggest order ever for the project called "Meerweg ontwikkelt meer, fase 1". Not only has the municipality decided to choose our synthetic KLP® materials because of our knowledge of constructions and our innovative power, but also especially because of sustainability and 'social return' aspects.

The project concerns the supply of 2,000 KLP® Combination-Sheet Piling planks and 6,000 meter m1 (=19,685 feet!) of KLP® Landing planks. The KLP® Combination-Sheet Piling planks consist of PEFC certified pinewood planks, the tops of which are (extrusion-)coated with recycled plastic. The result is a remarkably rigid sheet pile that is not only maintenance free, but also has the great advantage of a non-rotting air-water line. The landing stages are constructed entirely from recycled plastic construction parts. In order to achieve large spans, Lankhorst combines the plastic KLP® beams with steel. This means that fewer poles are required which helps to reduce the total material and construction costs. Both innovations have been developed in-house by our R&D dept. With its knowledge of constructions, engineering and calculations, Lankhorst mainly focuses on project-based work.

And there are currently a number of even bigger projects in the pipe line. Sustainability and 'social return' play an increasingly important role, particularly in procurement. Also for the municipality of Haren this was an award criterion in this project. A number of years ago Lankhorst and (sheltered workshop) Empatec joined forces. The two companies decided to establish an internal workshop for Empatec on the Lankhorst site in Sneek. In this workshop, many standard products are tailored by means of sawing, milling, assembling, et cetera. These activities have been integrated into the primary process of Lankhorst – a practical example of Corporate Social Responsibility. This cooperation will continue to be of great importance in the coming years.

We also see that recycled plastics are more and more used as an alternative to wood as the durable material lasts decades,



KLP® Combination-Sheet Piling planks

Supplied for the project "Meerweg ontwikkelt meer, fase 1":

- 2000 KLP® combi sheetpiles
- 550 KLP® steel reinforced girders and beams
- 6000 meter KLP® landingstage planks

hardly requires any maintenance and contributes to a better environment. Plastic waste can get a new life, for instance as a

landing stage. And, last but not least, an increased use of recycled plastics means less deforestation.

## EXHIBITIONS 2013



### LANKHORST ROPES

5 – 8 November Europort Rotterdam (NL)

### LANKHORST ENGINEERED PRODUCTS

5 – 8 November BlechExpo, Stuttgart (D)

18 – 21 November Fabtech / Metalform, Chicago (USA)

## FROM THE EDITORS

The next edition of Lankhorst Euronete News will be published in February 2014.

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Lankhorst Ropes at the Seatrade Middle East Workboat Show in Abu Dhabi