BRING A VISIT TO THE ARCA!
WHERE  ExCel London
WHEN   13 - 15 March
TIME   10:00 - 17:00 hours

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PORTFOLIO
POLLUTION AND ENVIRONMENTAL CONTROL VESSELS

Damen has a long track record designing and building pollution control and environmental vessels. Visit www.damen.com for our complete portfolio.

MULTI CAT 1506/1906

MULTI PURPOSE TASKS
- Pollution control
- Removal of debris
- Harbour maintenance
- Sheltered waters
- Harbours

RO-CLEAN DESMI SYSTEMS
- Outrigger with boom
- Wire or disk Skimmer
- 2x 25m³ storage bags
- 150 m Ro-Boom

DPV 6210

MULTI PURPOSE TASKS
- Pollution control
- Search and rescue (SAR)
- Diving support

RO-CLEAN DESMI SYSTEMS
- Outrigger with boom
- Wire or disk Skimmer
- 2x 25m³ storage bags
- 150 m Ro-Boom

MPV 5212

MULTI PURPOSE TASKS
- Pollution control
- Search and rescue (SAR)
- Buoy laying
- Towing
- Diving support
- Sweeping arms with cranes
- 360 m³ rec. oil tank capacity

ADDITIONAL EQUIPMENT
- Wire or disk Skimmer
- 200 m Ro-Boom
- Workboat with 2 tons bollardpull
MPV 8313

MULTI PURPOSE TASKS
- Pollution control
- Hydrographic research
- Buoy laying
- Sweeping arms with cranes
- 1060 m³ rec. oil tank capacity

ADDITIONAL EQUIPMENT
- Wire or disk Skimmer
- Ro-Booms
- Workboat

MPV 8116

MULTI PURPOSE TASKS
- Pollution control (oil and toxic gasses)
- Search and rescue (SAR)
- Towing (100 t. bp)
- Diving support
- Fire fighting
  (suitable for Ice conditions)

ADDITIONAL EQUIPMENT
- Wire or disk Skimmer
- Booms
- Workboat

LAMOR SYSTEM
- Sweeping arms
  with built in brush system
- 1000 m³ rec. oil tank capacity

OSRV 1050

MULTI PURPOSE TASKS
- Pollution control (oil recovery)
- Supply of fresh water and fuel oil to remote areas
- Fire fighting
- Emergency evacuation personnel

SKIMMER 2408

MULTI PURPOSE TASKS
- Pollution control
- Harbour maintenance
PURPOSE

The Sens2Sea products increase efficiency and safety at sea and on vessels. The system can provide wide-area measurements of water depth and currents through an analysis of the radar image sequences. While analysis tasks are being performed the standard radar display, with ships and buoys, remains available to operators. The clutter processing enhances detail in the radar images and small objects are clearly visible on the screen. Oil Spills can be detected. In case of incidents the right material can be directed to location more efficient so reducing the environmental damage. The environmental conditions in which the incident takes place, e.g. current patterns, bottom topography and water depth can be reconstructed, since the raw radar data can be stored and retrieved at later times. In man-over-board situations, a search and rescue operation can be more efficient, because current measurements are available, providing an accurate prediction of water movement in time and the possible location of the person.

HYDROGRAPHY

Hydrographical parameters can be extracted from the radar image sequences, provided sufficient wave information is present in the raw radar images. The hydrographical parameters that can be extracted are wave spectra and spectral properties (wave length and directions), current strength and direction, and water depth.

SEDIMENT

Time-lapse visualization of sediment movement is obtained by processing of a sequence of images with enhacement algorithms. The resolution of these images is determined by the resolution of radar. Visualization of bottom topography is possible, in circumstances in which currents and capillary waves are present.

SMALL OBJECT DETECTION

The small object detection module is based on the elimination of the clutter by adaptive filtering. Submersible is visible through its wake effect, notwithstanding that on the raw radar images it will be hidden in the clutter. The system can be equipped with a single channel navigation radar and a dual channel system. The dual system will improve range and distance sensitivity under most weather and sea circumstances.

SENS2SEA, NEW RADAR VIDEO PROCESSING

Wave-physics based algorithms are applied to detect disturbances of the water surface. These disturbances are separated from other information in the radar signal and subsequently analyzed with pattern recognition techniques. The disturbances have different patterns or structures. Some are caused by changes of sea-bottom topography, other types of patterns can be related to current seams or strong current gradients, etc. The performance of the system depends on the presence of water waves, capillary waves or a combinations of these.

The Spill Response Group Holland (SRGH) represents a selection of private companies, governmental, research, and academic organizations active in the maritime sector with a focus on spill prevention, preparedness, response and control for all aspects of marine, inland waters and coastal pollution control worldwide.

In recent years Spill Response Group Holland members have proven their skills across the globe and have become international leaders in their fields of expertise. Members include manufacturers of spill response equipment and materials, spill response organizations, oil disposal contractors, consultancy companies, R&D institutes, training providers, salvage companies, contractors and shipbuilding companies.

SRGH actively exchanges information with associated member Rijkswaterstaat, a department within the Ministry of Infrastructure and the Environment in the Netherlands, which is responsible for the oil extraction activities on Dutch inland waterways, coastal areas and in the North Sea and at the port of Rotterdam.

In the SRGH, Damen provides with their many years of experience, the know-how on building the floating units at one of the Damen yards in the world or by means of license building at a clients preferred yard through the well-known Damen Technical cooperation (DTC) concept.

For more info please visit www.srgh.nl
On 9th November, Damen Shipyards Galati launched a Fishery Research Vessel (FRV) 7417 for the Angolan Ministry of Fisheries. The sponsor of the vessel, named Baía Farta, was Dra. Isabel Cristóvão, director of Gabinete de Estudos, Planeamento e Estatística.

The Ministry is a long-standing client of Damen, having previously taken delivery of two 62-metre Fishery Inspection Vessels 6210 and a smaller FRV 2808. This new vessel boasts a number of state-of-the-art features.

The FRV has Silent A/F/R Class notation. Close attention is being paid to the design, construction and outfitting of the vessel in order to minimise noise and vibration both on board and underwater.

The FRV 7417 is suited to various purposes, including hydrographic operations, acoustics research, pelagic and demersal trawling, plankton, water, environmental and geographical sampling, oil recovery and emergency towing operations.

Friso Visser, Damen Regional Director Africa, said: “This vessel represents the future of fishery research, featuring cutting-edge technologies to make operations both sustainable and comfortable. She will enable the Angolan Fisheries Ministry to carry out research into its fishing grounds that will help to develop and preserve the nation’s industry and environment.”

The design of the Baía Farta is based on the ST-368 design for which Damen worked together with the Norwegian design specialist Skipsteknisk. Her construction has been an international project, involving input from Damen Shipyards Gorinchem and Damen Schelde Naval Shipbuilding in the Netherlands, with building taking place at Damen Shipyards Galati in Romania.
GERMAN FEDERAL OFFICE FOR AGRICULTURE AND FOOD
AWARDS DAMEN FISHERIES RESEARCH VESSEL CONTRACT

22 March 2017: The German Federal Office for Agriculture and Food (Bundesanstalt für Landwirtschaft und Ernährung, BLE) has signed a contract with Damen Shipyards Group for the construction of a Fisheries Research Vessel. The contract followed the successful result of a European tendering process, realized by the Federal Waterways Engineering and Research Institute (Bundesanstalt für Wasserbau, BAW). With the vessel, to be called the Walther Herwig, the German Federal Ministry for Food and Agriculture (BMEL) will support Germany’s fisheries and oceanographic research programmes. To this end, Damen will construct the Walther Herwig to the highest levels of scientific and environmental standards.

Measuring 85 x 17,40 metres, the Walther Herwig will be the largest vessel in the German Federal Ministry of Food and Agriculture’s fleet. Such dimensions will allow for accommodation for 26 crew and 26 scientists.

In terms of scientific facilities and equipment, the vessel will be outfitted with two hangars, wet and dry laboratory areas and trawling gear for both demersal and pelagic fisheries research. For physical and biological oceanographic studies, the vessel’s scientific teams will be able to utilise winches capable of relaying equipment to depths of up to 6,000 metres.

Talking at this morning’s contract signing ceremony at the BLE office in Hamburg, Damen Commercial Director North, West & South Europe Frank de Lange commented: “We are proud to have been awarded this prestigious contract for such an advanced research vessel. We are looking forward to continuing our close cooperation with representatives from the German Federal Office for Agriculture and Food during the construction process.”

The Walther Herwig will be built at Damen Shipyards Galati in Romania to a design that has been finalised in cooperation with Norwegian ship designers Skipsteknisk. The expected delivery is January 2020.

LONG LASTING AND CLOSE COOPERATION BETWEEN DAMEN AND SKIPSTEKNISK
The Walther Herwig is the latest example of vessels built in cooperation with the Norwegian ship designers Skipsteknisk.

Fine examples of this cooperation:
- Walther Herwig to be delivered 2020
- Baia Farta to be delivered 2018
- Ellen Khuzwayo delivered 2007
- Celtic Explorer delivered 2002
AUSTRALIAN ICEBREAKER OPERATED BY DMS MARITIME TO BE CONSTRUCTED BY DAMEN OPENS UP NEW POSSIBILITIES

On April 28 at a ceremony in Hobart Tasmania, the Australian Government signed a contract with DMS Maritime, a wholly owned subsidiary of Serco, for the delivery, operation and maintenance of an Antarctic Supply Research Vessel (ASRV) with icebreaking capabilities. The vessel will be built by the Damen Shipyards Group and will form an integral part of the Australian Antarctic Division (AAD) programme in the coming years. The ceremony was attended by Australia’s Minister for Foreign Affairs, Julia Bishop and Minister for the Environment, Greg Hunt.

Explaining the decision to subcontract Damen for the design and building of the vessel, Serco CEO Asia Pacific Mark Irwin said, “Damen is a leading international shipyards group with a strong international presence. As well as building a broad portfolio of standardised vessels in series, Damen has produced a range of bespoke vessels including scientific, hydrographic, naval and ice ships. Damen and Serco have a strong partnership and over the last ten years, Damen has supplied over 40 vessels used by Serco to support naval operations in the UK and Australia.”

The realisation of this vessel will draw upon a number of companies within the Damen Shipyards Group and Damen’s wider network. Denmark-based KNUD E. HANSEN executed the concept and tender designs, whilst engineering and project management is being delivered by Damen Schelde Naval Shipbuilding (DSNS) in Vlissingen, the Netherlands. Construction and outfitting of the vessel will be carried out at Damen Shipyards Galati, Romania.

Damen Sales Director Asia Pacific Roland Briene said: “Drawing on the diverse skills found across our organisation, we are able to connect up all the dots in order to deliver a cohesive, full scope project execution. An icebreaking research and supply vessel such as this represents a new market entry for Damen and we are very pleased to be working with AAD and DMS on this exciting project.”

The ASRV represents a state-of-the-art solution which will facilitate Australia’s wider exploration of the Southern Ocean and Antarctica. She will be able to break ice up 1.65 metres at speeds of 3 knots and will supply Australia’s permanent research stations in Antarctica and Macquarie Island with cargo, equipment and personnel. Designed with 500 m2 on board laboratory and office facilities, the vessel will also serve to conduct research activities. The ASRV will host up to 32 DMS Maritime crew and as many as 116 AAD scientific personnel as well as a doctor, in climate controlled accommodation.

AAD’s programme aims at the advancement of Australia’s scientific, strategic, environmental and economic interests in the Southern Ocean and Antarctica. It is a world-class programme focused on stewardship, climate research and the study of both terrestrial and marine eco-systems.

After completion at Damen’s yard in Galati, the ASRV will sail to DSNS in the Netherlands for handover to the client, scheduled for April 2020.
OVER 90 YEARS OF MARITIME EXPERIENCE

Visit www.damen.com to see our complete story and portfolio.