ASTANDER
CONVERSIONS

www.astander.es

EXPERIENCE AND CAPACITY

A professional team with strict management procedures to coordinate all human and material resources and willing to fulfil any requirement, along with the support of a vast qualified net of subcontractors, both workers and specialised workshops, with large experience cooperating with ASTANDER and working at the Yard, ensure the highest quality of the work and the fast reaction to unexpected issues, no matter its nature.

Modernization and updating programmes are continuously developed in Astander, where technology meets tradition, safety and respect for the environment to offer the customer the most complete that could be found in the market.

CRANES

1	Drydock nº2 (230x32 m)	1x200 t	1x40 t	1x15 t
2	Drydock nº1 (160x23,8 m)	2x30 t		
3	Slipway (1200 t lifting capacity)	1x15 t		

CRANES

4	North and South quays	2x15 t	
5	Quays 3 and 4	1x15 t	1x25 t
6	Prefabrication area		

7	Slop Disposal plant
8	Workshops
9	Main offices and superintendent offices

Astander Shipyard, present in the shipbuilding and shiprepair industry since 1871, is presently devoted to ship repairs and conversions, a field in which has achieved international recognition.

Located on Spain's northern coast, in a privileged area in terms of easy access to any kind of additional qualified workforce, workshops and suppliers: the Bilbao-Santander-Gijon axle, historically linked to the marine industry. This guarantees that all kind of qualified workmanship, technical assistance and supplies that might be needed are available for any conversion project where the shipyard is very well recognized internationally.

Astander's Comprehensive Management System has been approved to ISO 9001-2015, ISO 14001-2015 and OHSAS 18001-2007 standards by Lloyd's Register Quality Assurance.

In a complex business like ship conversion, management is essential. It is, to a great extent, the guarantee for a successful project. This is due, first of all, to the nature of the activity. There are many factors to take into account, with flexibility but without leaving room for improvisation. Flexibility means being ready, in all senses and includes the ability to redesign strategies in a short period of time. The more complex the project is, the more important this capability becomes.

As every experienced shipyard knows perfectly well, every vessel has different needs and every shipowner particular requirements. In this sense, each project is different and demands a particular rhythm of work.

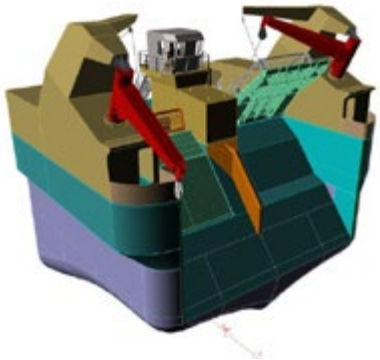
Good management must be able to define this rhythm and the methodical steps to be taken. Each and every one of those steps entails a series of human and material resources that must be carefully assigned by the shipyard.

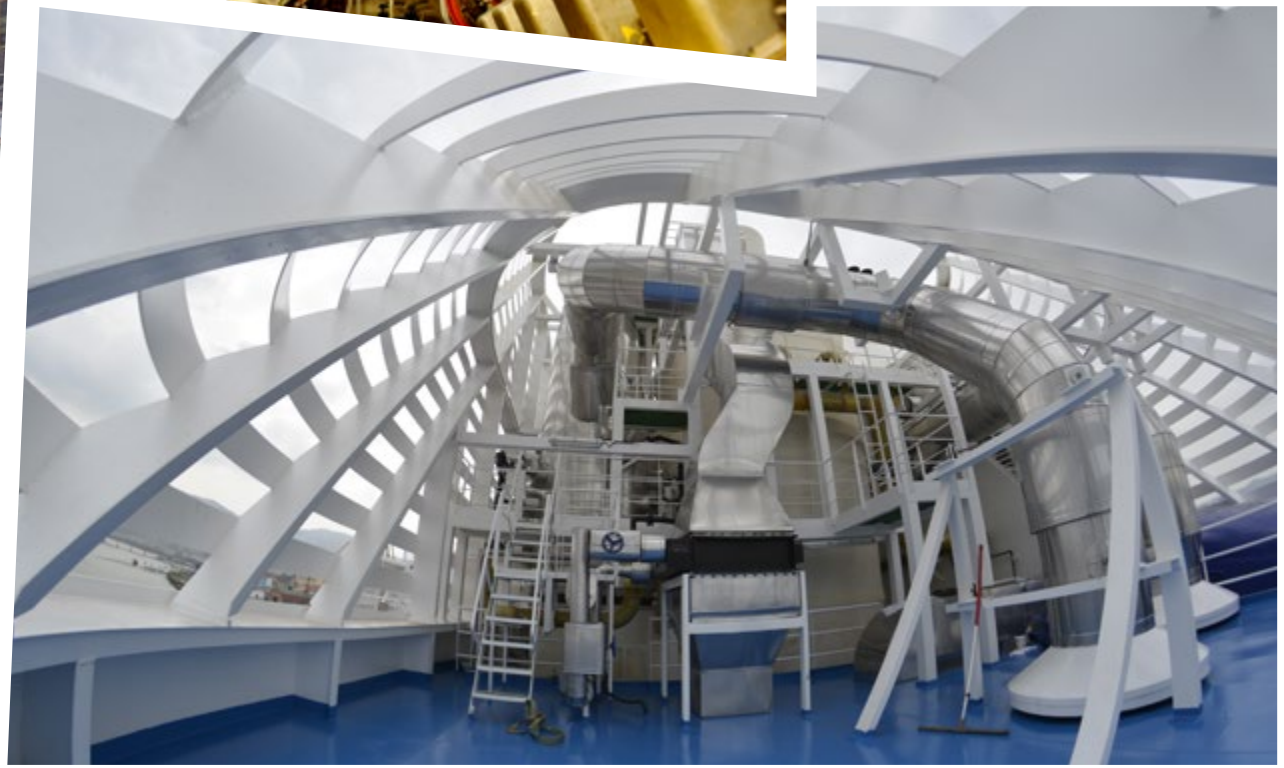
The tasks to be carried out are highly specialised and require a wide range of professionals, all of whom must row together following the same end goal. They must be guided by the ship-owner's interests, through strict management procedures as well as respect towards the environment.

If one of the steps goes wrong, it can jeopardise the entire project or delay the whole process. Needless to say: a vessel cannot wait; freight or duties cannot be delayed.

This coordination is not simple since not only the shipyard's personnel is involved but also supportive subcontractors whose input, very often turns out to be indispensable in these processes. Tasks, from blasting and repainting to rebuilding, remodelling of interiors and exteriors, installation of machinery, system replacement and overhauling, require highly-qualified and specialised professionals that the shipyard, and consequently the ship-owner can rely on. That is what management is about. That is what makes the difference and that is what you can rest assure you will be able to find in ASTANDER.

In the following pages you can enjoy with some examples of some significant conversion projects carried out in Astander.





BELLE CARNELL
(ex Siddis Skipper)

ANNE RISLEY
(ex Siddis Supplier)

Modification of an Offshore Supply Vessel into a Clam Harvesting Vessel.

The conversion included the removal of the bulk cargo systems and the fabrication and installation of 2 factory decks, sponsons and new accommodation.

A new ammonia refrigeration plant was installed, as well as a freezer tunnel and plate freezers.

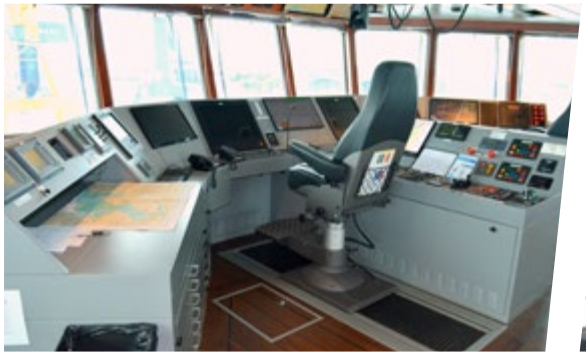
New hydraulics systems were mounted to provide service to the winches, fishing equipment and Factory systems. A new accommodation meant new cabins, rooms, A/C system, piping, electricity...

The propellers were replaced and the gearboxes reconditioned.

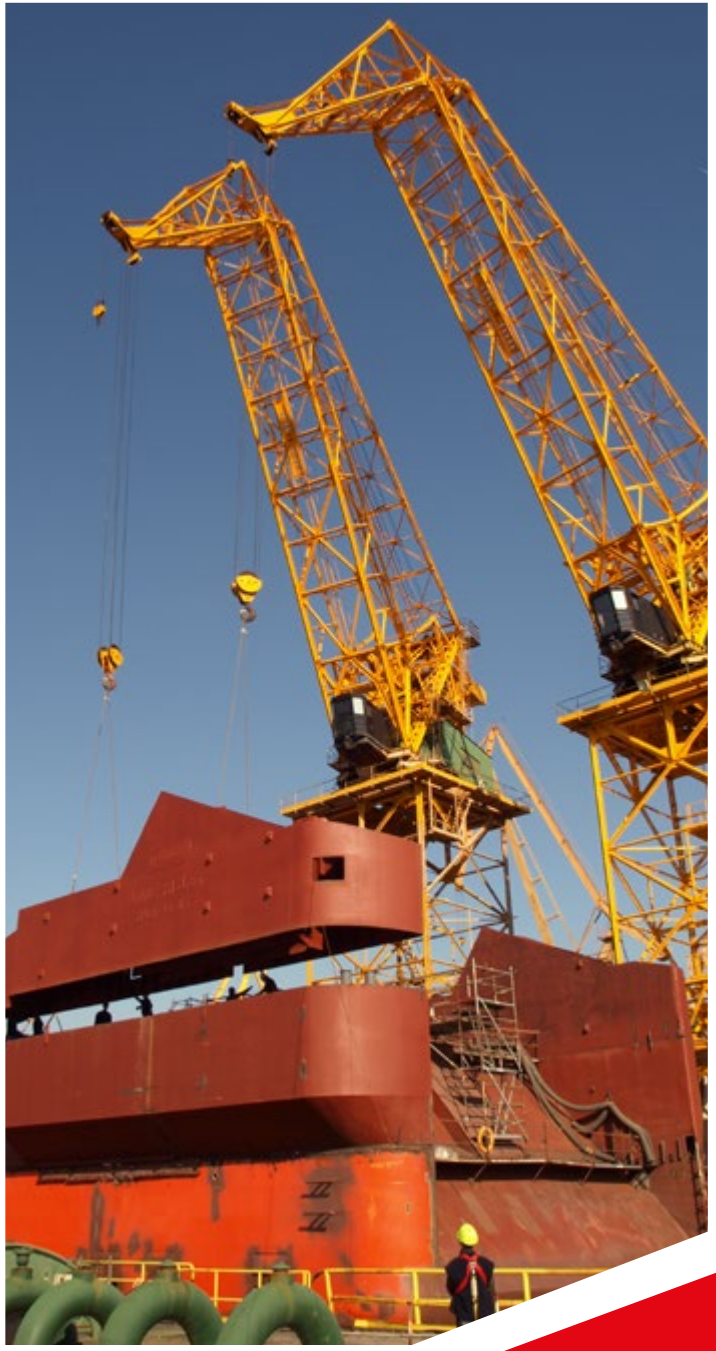
New systems were installed: 2 gensets, a new dredger system, high capacity and pressure dredging pumps, new steam boiler to give service to the fish processing plant, installation of a new incinerator, a new lift, etc.

Before conversion

After conversion




STAVANGER



MONT ST MICHEL & ARMORIQUE

Installation of In-line Scrubbers in vessels:
- M/V Mont St Michel (2015).
- M/V Armorique (2016).

Same as with the open loop systems, the hybrid system (possibility of closed or open loop) for the last two retrofitted vessels was also designed by the new building shipyard STX France (located in St-Nazaire) and the scrubber was designed and built by LAB.

These two vessels, powered by four or two four-stroke Mak engines, had one single off-line scrubber designed to treat the exhaust gases of the main and auxiliary engines.

The conversion projects also included the fabrication of two pump rooms to provide water to the scrubbers and other systems, as well as a dilution tank, hydrocyclons, a sludge tank, a magnesia tank... to collect and treat the outlet water when operating as closed loop.

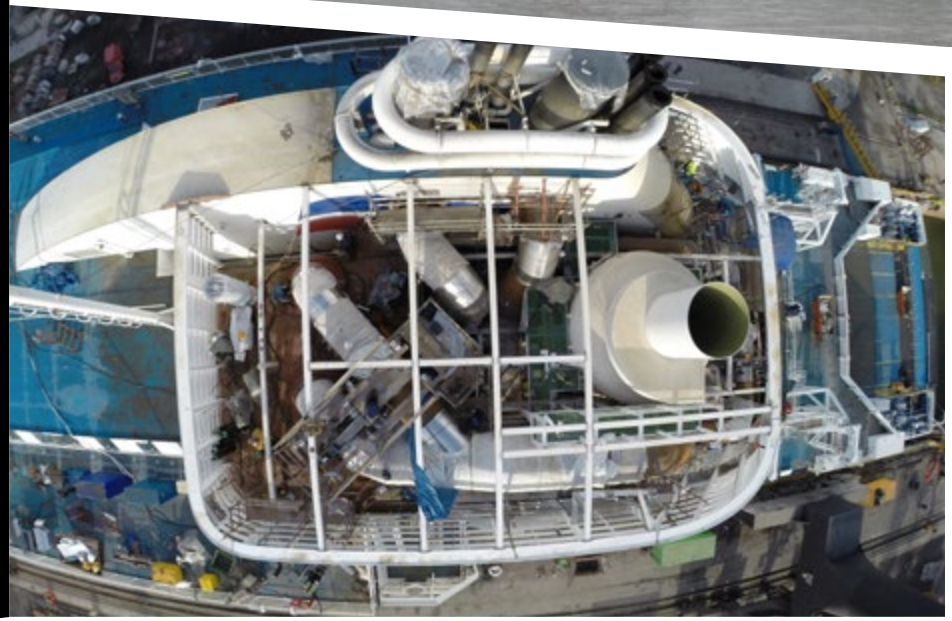
The new water systems were built in different areas, from the new pump room through the car decks and into the casing using GRE and Polyethylene materials.

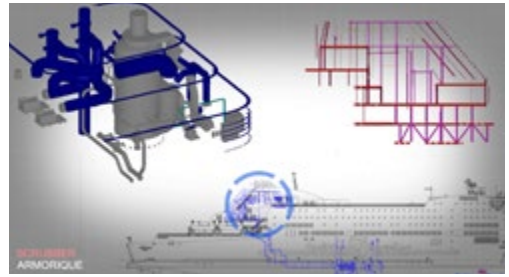
The modifications also affected to the external layout of the vessel, including the fabrication of a new room on deck to host the scrubber and a large new space for the exhaust fans.

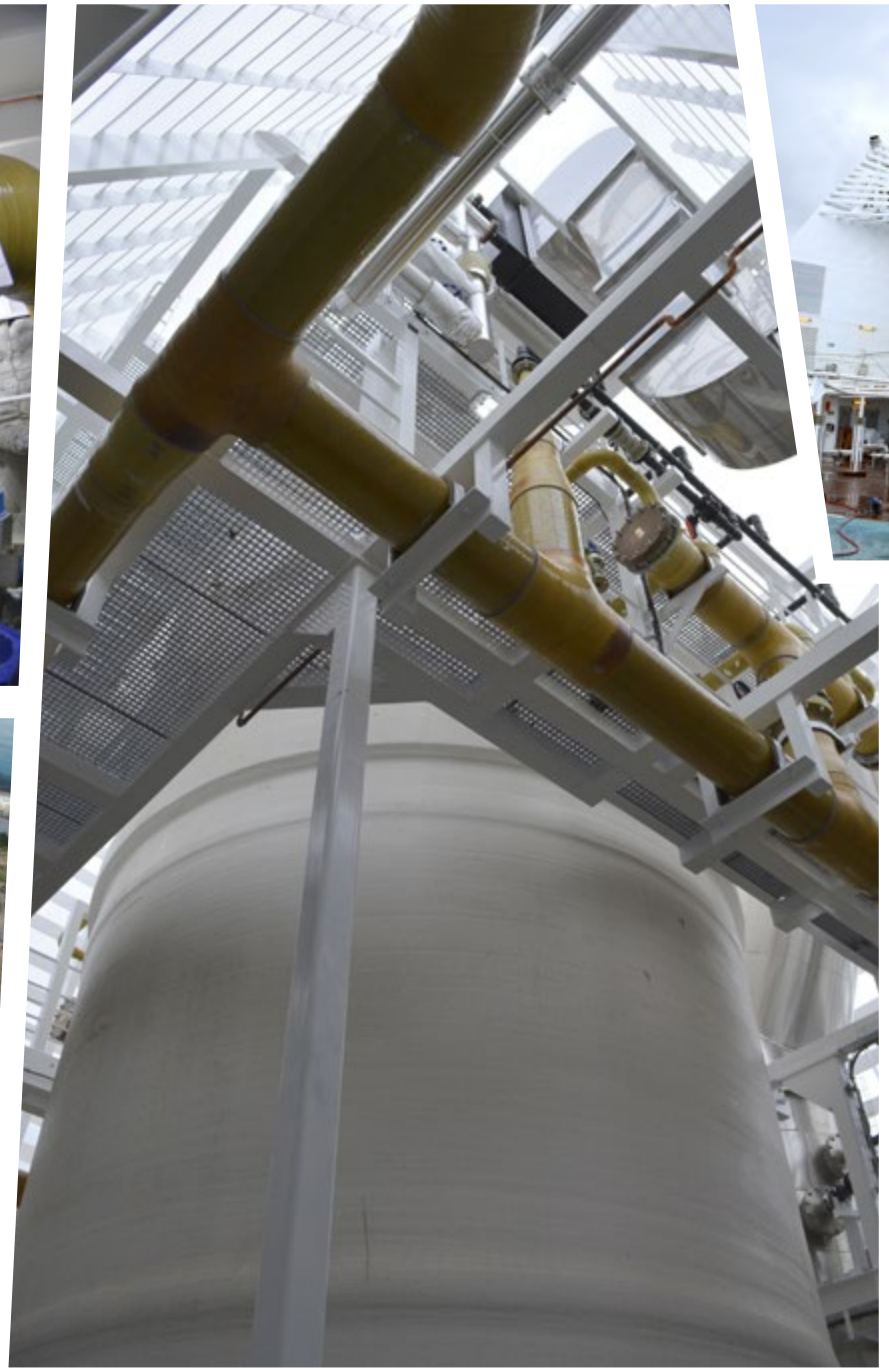
The large single scrubber, the associated piping and the resulting scrubber room, required important reinforcements underneath, affecting to several accommodation areas. For instance, a large restaurant and several cabins had to be dismantled to install new pillars and beams, being those areas later fully rebuilt.

Same as in previous projects, at the same time the retrofit was being done, docking and maintenance jobs were carried out, maintaining also in these projects the very demanding tight delivery times.

At this moment, all the described vessel are in operation, with the new systems installed, making Brittany Ferries one the leading ferry companies with a modernized and environmental friendly fleet equipped with new systems to reduce the emissions.







NORMANDIE, BARFLEUR & CAP FINISTERE

The French Company Brittany Ferries, has completed the installation of scrubbers in three of their vessels: Normandie, Cap Finistere, and Barfleur. As these ferries regularly operate in the SECA area, and in order to comply with the newly updated MARPOL VI Regulation, an extensive program to update the fleet has been performed, based on maintaining the use of the cost-effective heavy fuel oil, and, consequently installing scrubbers.

In October 2014, the M/V Normandie was docked in Astander Shipyard for a less-than-two-months Project, consisting on:

- The removal of the existing exhaust systems and replacement of the silencers by the new scrubbers.
- Installation of the new seven scrubbers (four for the M/E and three for the A/E)
- Rerouting of the existing pipe network in the casing.
- Installation of new pump rooms
- Installation of the new exhausts and water system piping
- Fabrication and mounting of new enlarged funnel
- Installation of new electrical systems, control systems, insulation, structural modifications and other auxiliary jobs.

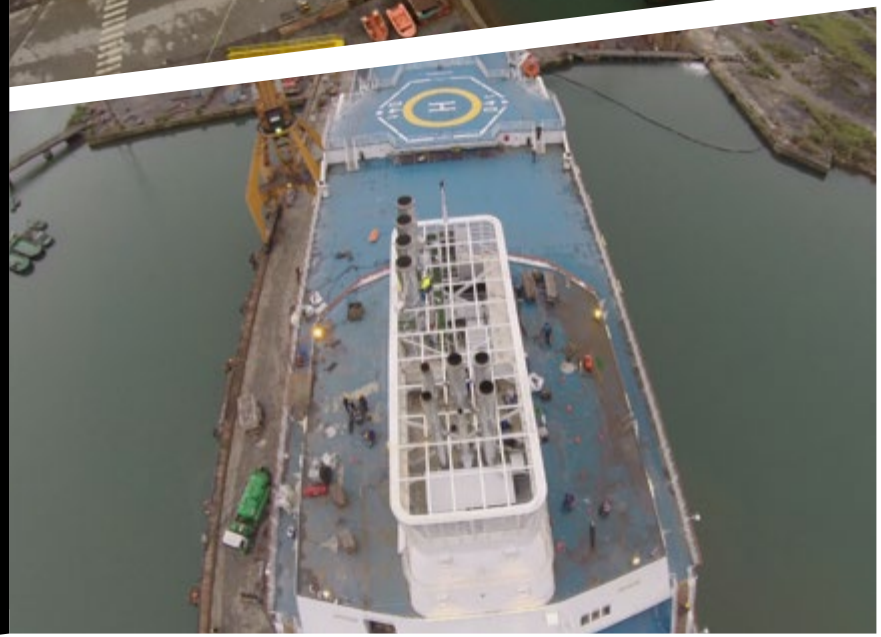
Due to the limited space available in the casings, and the important interference of piping and structural systems, the tight delivery time was achieved by means of a correct planning and strategy of removal/mounting process.

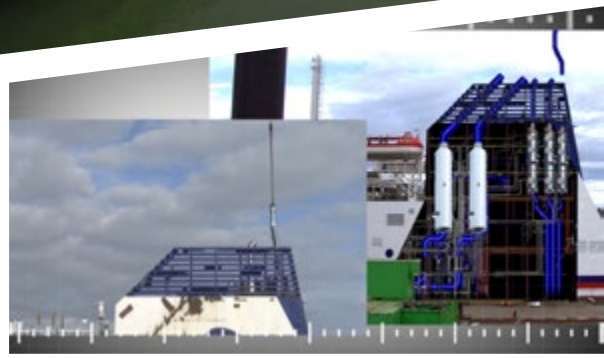
Apart of the specific works related to the new plant, the vessel was extensively upgraded and major repairs were carried out.

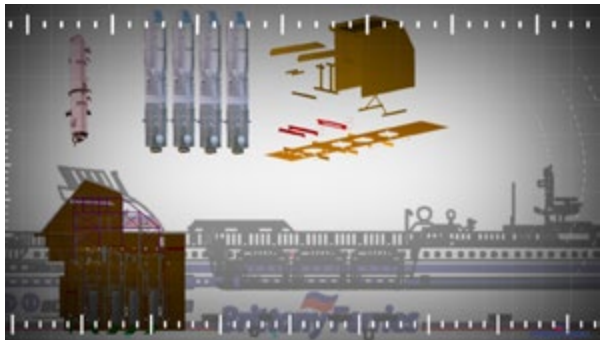
Soon after the vessel was delivered in December, the Cap Finistere arrived to Astander in January 2015 for a similar Project.

Following the two previous completed contracts, in March 2015, the M/V Barfleur also experienced the same type of open loop scrubber conversion at Astander.

All the three vessels are currently operating and make Brittany Ferries a much more environmentally friendly fleet.







CAPESANTE
(ex Atlantic Leader)

A fishing trawler was converted into a Deep Sea Scallops Fishing Vessel.

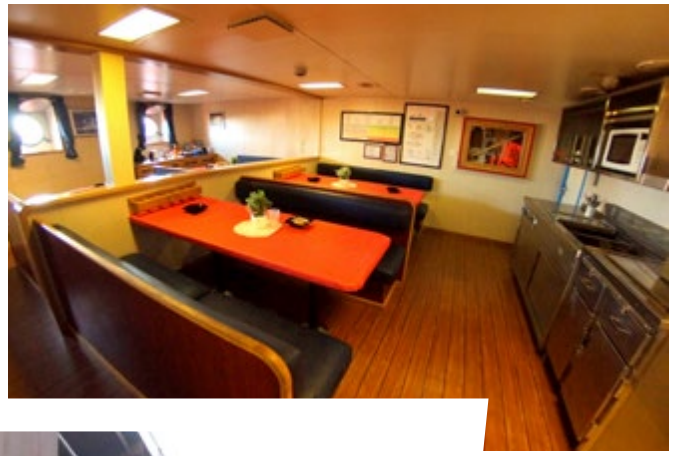
This conversion included cutting the vessel at midship and adding a 9.6mm long midship module, adding 1.5m long module to the transom, a new upper deck and the installation of a new processing Factory and two new cargo holds.

The new accommodation also required the complete renewal of the A/C plant.

A new hydraulic system was necessary for the new fishing equipment and the cooling system was also upgraded.

A new generator and new Main Switchboard were installed, a part of the new IAS and Alarm systems.

After conversion



TEAM OMAN

Conversion project completed on the cable layer TEAM OMAN for Qatar's Topaz Marine MENA in 2012.

The new TEAM OMAN left the yard back to North Sea beginning of June after successful sea trials.

Among others, three were the outstanding jobs that TEAM OMAN underwent during the conversion period:
Building and installation of a new accommodation block.

Renewal of bow with a built-in bow thruster new bulbous bow.

Pre-installation work for a new 25 t crane.

After conversion

NDURANCE

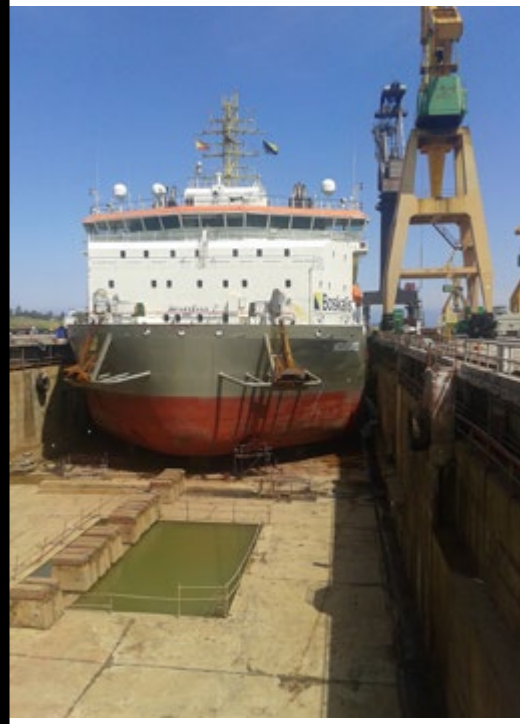
Installation of Launch and Recovery System (LARS) for trenching remote operated vehicles and quadrant handling.

Initially built as a Construction Support vessel with Class notation Offshore Multifunctional Accommodation Barge and then equipped as a cable layer the project targeted to expand the functionality of the multipurpose cable layer by installing a Launch and Recovery System (LARS) for trenching remote operated vehicles and quadrant handling.

This modification is a last phase of the integration of cable laying equipment onboard of the vessel Ndurance for Boskalis.

To complete this modifications the following equipment was integrated with vessel construction and system:

- Pre assembly of A-frame and swingbeam
- Installation of deck foundation bracket and A-frame.
- Installation of swingbeam to A-frame, load testing.
- Installation of hydraulic power unit room (HPU).
- Installation of hydraulic piping.
- A-frame Hoisting winch.
- Skid system.
- Quadrant sliding track.
- Quandrant skid upending frame.
- Umbilical winch and main generator platform.
- Auxiliary generator foundation frame.
- Mass flow jetting device.
- Survey ROV station PS and SB.
- Roller box modifications.
- Jointing container.
- Access and working platform in turn table core.
- Alignment of central bearing turn table.
- Other Vessel modification and repairs.



ASTANDER

BOS ARCTIC
(ex Ocean Trawler)

Conversion process from Stern Trawler to Seismic vessel, built by ASTANDER for Norwegian owner BOS.

The order was placed by Bergen Oilfield Services (BOS), to convert the Stern trawler named Ocean Trawler into a six-streamer seismic vessel. The ship is now called BOS Arctic.

Work began in January, and seven months later, the BOS Arctic was delivered to its owner and has been in operation since that time.

Aside from the seismic research systems, the new elements installed included a control/instrumentation room, three additional generating sets (one for emergencies), a hydraulic pumping unit (HPU) for the entire new hydraulic system, three 3000 psi (214 bar) compressors, an azimuth propeller and a bow thruster.

The control room was enlarged to practically double its original size.

Two and one half fully out new decks were arranged; and new communication and navigation systems and a dynamic positioning system were installed.

Three new cranes and a support structure for the helideck were mounted on the old accommodation.

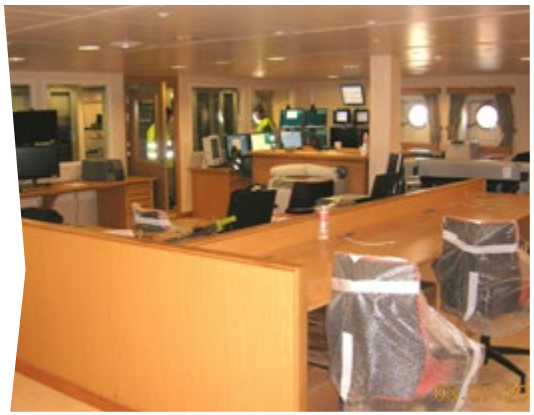
To accommodate the new elements, the hull was lengthened 10.20 m at the centre, and another four m aft. The beam was broadened a total of 4 m by installing sponson tanks starting from frame 42.

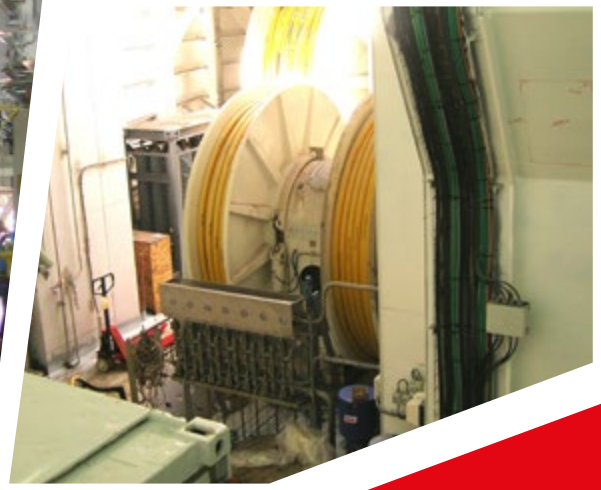
The accommodation capacity has increased from 25 to 47 crewmembers.

The control systems and alarms on the original ship were replaced with new systems and automatic devices. A new Integrated Power Management System (PMS) has been installed for remote operation, control and monitoring of the new power plant.

Before conversion

After conversion





GEOWAVE MASTER
(ex Kouki Maru)

Cable-laying ship “GEOMASTER” converted into a seismic exploration vessel “GEOWAVE MASTER”.

After six months of work, she was delivered to owners on August the 3rd, converted into a seismic ship, equipped with the state of the art technology and re-baptized as “GEOWAVE MASTER”.

The ship, property of the Norwegian owner DOF management AS, now provides her services to another company also Norwegian, specialized in marine geophysics, WAVEFIELD-INSEIS; this company contracted ASTANDER for the conversion of the ship.

To carry out the work was necessary the fabrication and assembly of the new structures and reinforcements with a total weight added to the ship of 950 tons.

The aft part of the vessel was modified and the superstructure was extended towards the aft.

New decks were added aft from the superstructure until the end of the ship, also new hangars to host the seismic equipment.

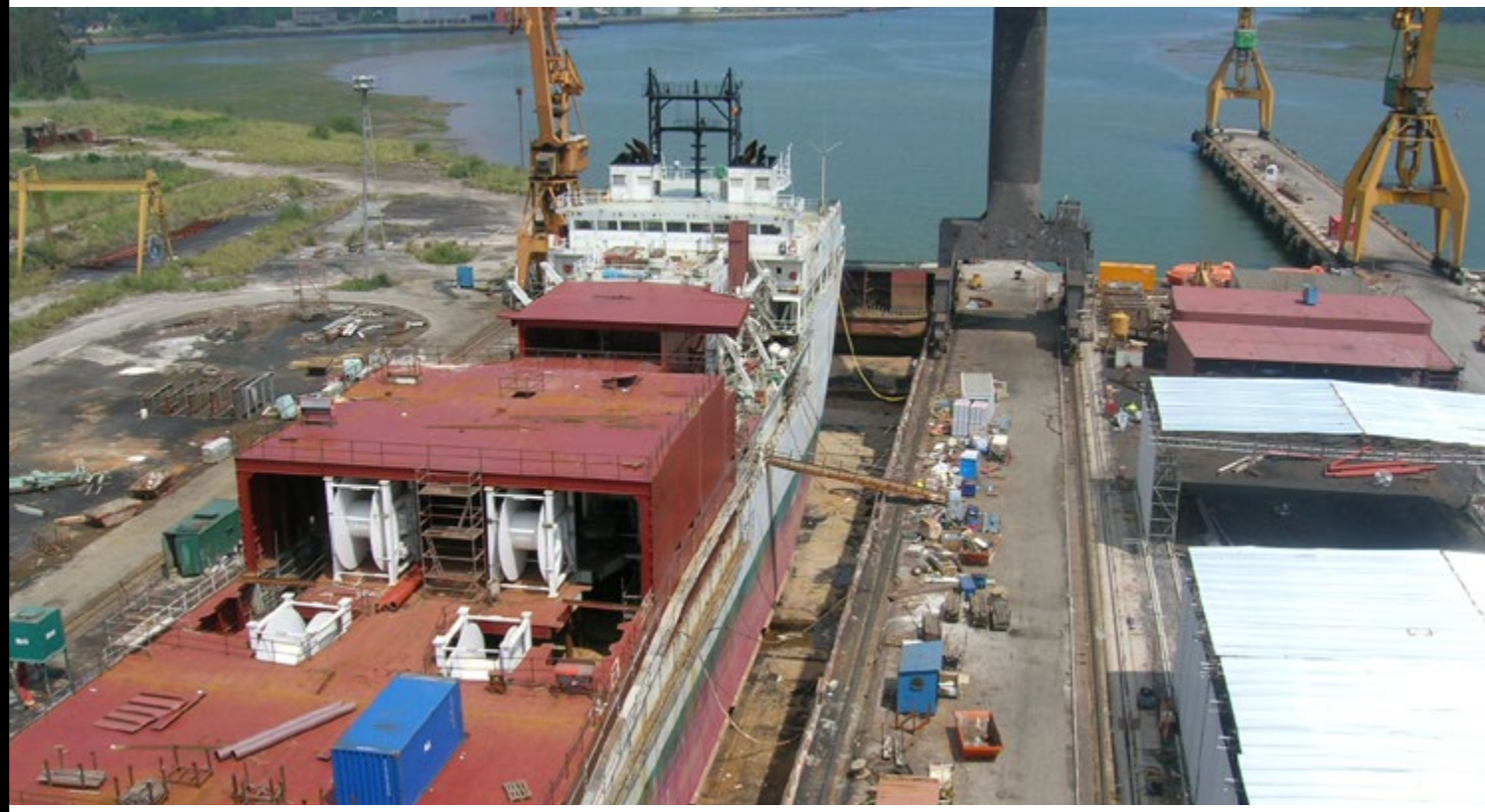
The bow cable tank was divided with longitudinal bulkheads to create the new tanks for fuel, providing the ship additional autonomy.

The fore hold was converted into a new machine room to fit three compressors and a new machine room to fit three compressors and a new hydraulic unit for the seismic plant, switchboards, etc.

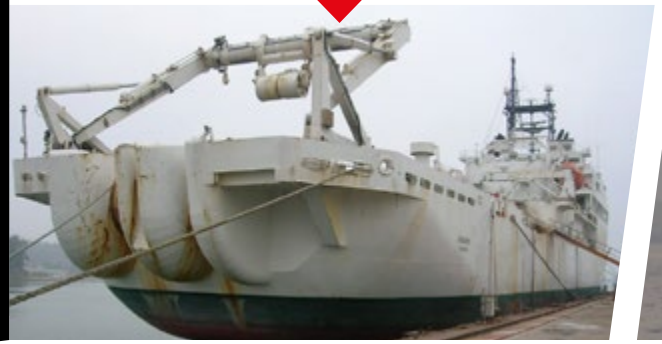
60 new individual cabins were built, including new officer and crew’s rooms, all with the highest quality standards.

The dockyard carried out the installation of the following equipment:

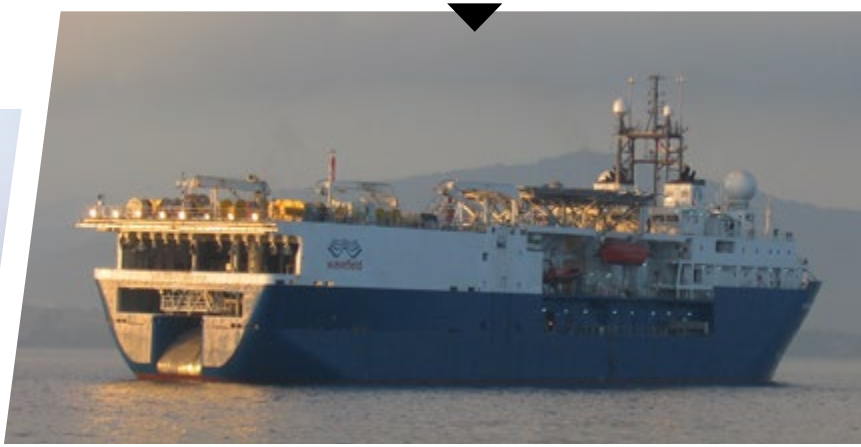
8 gun winches. 12 streamer winches. 12 towing points for streamer lines. Streamer guiding system. New hydraulic system for operating of hydraulic equipment. New compressors and high pressure air system. 3 cranes. 2 mob boats. Sewage plant, incinerator, and many other minor equipment and systems.

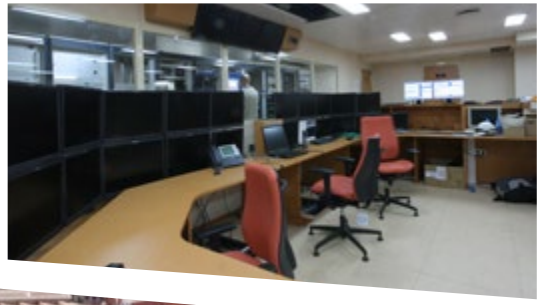


Before conversion



After conversion





DANA MAXIMA

HYDROGAS, HYDROGAS II, HYDROGAS III

GEOFJORD

SUPER-FAST ANDALUCÍA, SUPER-FAST CANARIAS

CALAMITY JANE

RIDLEY THOMAS

LAS PALMAS DE GRAN CANARIA

FATHER MCKEE, BRENDELEN

YEAR	VESSEL	WORKS	CUSTOMER	COUNTRY	TYPE OF VESSEL
2018	FATHER McKEEE & BRENDELEN	Fabrication and fitting of newly designed bulbous bows	CAVANKEE & BRENDELEN	IRELAND	Pelagic fishing vessels
2017	ANNE RISLEY	Conversion from PSV into a clam fishing and processing factory ship	CLEARWATER Seafoods	CANADA	Clam factory ship/Stern trawler
2016	ARMORIQUE	Installation of scrubbers and modification of existing accommodation.	BRITTANY Ferries	FRANCE	Pass/RoRo Ship (Vehicles)
2015	MONT ST MICHEL	Installation of scrubbers and modification of existing accommodation.	BRITTANY Ferries	FRANCE	Pass/RoRo Ship (Vehicles)
2015	BARFLEUR	Installation of scrubbers and modification of existing accommodation.	BRITTANY Ferries	FRANCE	Pass/RoRo Ship (Vehicles)
2015	CAP FINISTERE	Installation of scrubbers and modification of existing accommodation.	BRITTANY Ferries	FRANCE	Pass/RoRo Ship (Vehicles)
2014/2015	BELLE CARNELL	Conversion from PSV into a clam fishing and processing factory ship	CLEARWATER Seafoods	CANADA	Clam factory ship/Stern trawler
2014	NORMANDIE	Installation of scrubbers and modification of existing accommodation.	BRITTANY Ferries	FRANCE	Pass/RoRo Ship (Vehicles)
2014	NDURANCE	Conversion from an OSV into a cable layer	BOSKALIS	NETHERLANDS	Cable layer
2014	ATLANTIC LEADER	Lengthening and conversion from trawler into a scallop fishing and processing factory ship	CLEARWATER Seafoods	CANADA	Scallop factory ship/Stern trawler
2012	TEAM OMAN	Construction/fitting of additional accomodation block, bulbous bow with thruster and installation of new crane pedestal	TOPAZ Marine	U.A.E.	Cable ship
2012	RIDLEY THOMAS	Fabrication and installation of a new 7500 mm x700 mm sonar gondola	EGS (Asia)	HONG KONG	Research ship
2008	BOS ARCTIC	Factory Stern Trawler into a 3D seismic vessel	BERGEN Oilfield Services (BOS)	NORWAY	Seismic ship
2007	GEOWAVE MASTER	Cable layer into 3D seismic vessel	WAVEFIELD INSEIS	NORWAY	Seismic ship
	LAS PALMAS DE GRAN CANARIA	Garage RoRo cargo space converted into additional accomodation space	ACCIONA TRASMEDITERRANEA	SPAIN	Pass/RoRo
	LAGA & LAIDA	Modification of systems from MDO to FO	MURUETA	SPAIN	General cargo
2006	SANTA CRUZ DE TENERIFE	Garage RoRo cargo space converted into additional accomodation space	ACCIONA TRASMEDITERRANEA	SPAIN	Pass/RoRo
2005	CALAMITY JANE (ex Provider I)	Pipe layer into trenching support vessel	ALLSEAS Engineering	NETHERLANDS	Trenching support ship
2003	CSO DEEP PIONEER	Installation of 2 ROV L&R equipment, moonpool & sliding door, new generator room (3 gensets), additional accom. block	TECHNIP UK	U.K.	Multipurp. subsea installation ship
2002	WAVE SENTINEL	Installation of new heeling tank,new foundations and new ROV equipment	GLOBAL MARINE SYSTEMS	U.K.	Cable ship
2001	SUPERFAST CANARIAS	Construction/installation of additional RoRo upper deck	TRASMEDITERRANEA	SPAIN	RoRo
	SUPERFAST ANDALUCIA	Construction/installation of additional RoRo upper deck	TRASMEDITERRANEA	SPAIN	RoRo
1997	GEOFJORD	Lengthening and conversion from supply ship into a subsea topographic research/supply/tug ship	GEOSHIPPING	NORWAY	Research ship
1996	PONTA SAO LOURENÇO	Containership into self-unloading cement carrier	TRANSINSULAR	PORTUGAL	Cement carrier
	HYDROGAS III	Containership into an IMO type III gas carrier for transportation of liquified CO2	NORSK HYDRO	NORWAY	CO2 carrier
1995	DANA MAXIMA	Lengthening, installation of new hoistable, fixed amd stern ramps, raising forecastle dk, install. of new bowthruster motors		DFDS	DENMARK RoRo
1994	TRANSFENNIA	Construction of new 500 sqm garaga served by newly installed side door and lift	SEATRANS	NORWAY	Paper pallet carrier
	ECUADORIAN REEFER	Modifications in cargo holds to accomodate 2.2 metre high pallets	KVAERNER Shipping	NORWAY	Reefer ship
	CANADIAN REEFER	Modifications in cargo holds to accomodate 2.2 metre high pallets	KVAERNER Shipping	NORWAY	Reefer ship
1992	HYDROGAS II	Containership into an IMO type III gas carrier for transportation of liquified CO2	NORSK HYDRO	NORWAY	CO2 carrier
1991	CIUDAD DE ZARAGOZA	Opening of hull and fitting bow helm and forward ramp/door, replacement of car decks, installation of 4 new side doors	TRASMEDITERRANEA	SPAIN	RoRo/Ferry
	CIUDAD DE CEUTA	Opening of hull and fitting bow helm and forward ramp/door, replacement of car decks, installation of 4 new side doors	TRASMEDITERRANEA	SPAIN	RoRo/Ferry

Astilleros de Santander, S.A.U.
Fernández Hontoria, 24
39610 El Astillero (Cantabria) · SPAIN

T +34 942 20 91 00
F +34 942 20 91 01
E comercial@astander.es

www.astander.es