New technologies
Business concepts of diving operations have changed significantly over the past few decades. What may once have been considered a record-breaking dive has become a daily routine exercise. The North Sea is emerging as one of the world’s largest oil fields, but one that guards its treasures well. Diving conditions are among the worst encountered in professional diving. Therefore, new technologies are required to perform safer and more efficient operations. Based on years of experience in the field, IHC Hytech develops new concepts for safe and efficient (saturation) diving solutions.

New generation of vessels
Current developments in the exploration and production sector require a new generation of diving support vessels. The key factors to be considered are multifunctionality, optimal efficiency and worldwide usability. IHC and IHC Hytech’s solutions are designed to support professional diving integration, mission control and de-risking.

Positive outlook
The offshore market is improving and the pre-salt oil fields development in Brazil is playing a significant role in this upward trend. The offshore oil and gas markets are also developing elsewhere in the world. This provides a greater demand for high-end or mid-range twin-bell Diving Support Vessels (DSV). There is also a growing need for more refurbishment of existing saturation diving systems. A third category of smaller single-bell DSVs is needed for inspections etc. IHC Hytech’s qualified specialists extensively support their shipbuilding colleagues at Royal IHC in the integration of third-party-supplied saturation diving equipment. The company’s strapline – “we keep you breathing” – underlines the focus of IHC Hytech.

Safety and regulations
Increasingly stringent regulations have consequences for all parties involved in saturating diving. As a reliable supplier of saturation diving solutions, IHC Hytech is well aware of how its customers have to comply with legislation. Due to its vast experience in this field, IHC Hytech has become an authority on this area of the business and can advise on the best and safest solutions to meet specific requirements. It is also actively involved in the development of regulations.

IHC Hytech understands that its customers don’t want to spend too much time on paperwork. Its equipment and systems are provided with the right certificates ex works. This means that a faster time to market off new-build or refurbished DSVs is possible, which therefore reduces costs and risks for customers.
IHC Hytech strives to deliver the best value to its customers. It is a partner of choice for innovative, sustainable and integrated hyperbaric systems and saturation diving equipment such as Self-Propelled Hyperbaric Lifeboats. IHC Hytech’s solutions are reliable, efficient and flexible to the demands of challenging hyperbaric diving projects. With its extensive knowledge and in-house design capabilities, IHC Hytech ensures compliance with the latest technological developments, strictest safety regulations and most stringent environmental standards.

IHC Hytech excels at managing the complexity inherent within the development and production of these systems. Each project is approached with care, creativity and adaptability, so that customers can depend on delivery within the terms of the agreement.

IHC Hytech is Royal IHC’s in-house specialist in high-quality diving systems and equipment. With a broad customer base that includes various navies, governmental organisations, salvage companies and inshore/offshore diving contractors (both domestic and international), it has extensive experience in designing and manufacturing safe and reliable diving equipment. IHC is able to integrate diving systems from every reputable supplier.

Specific demands require bespoke designs. IHC Hytech provides cost-effective products, not only when newly acquired, but also throughout their working lives. The IHC Hytech team works closely with the customer and becomes an extension of their organisation, so that both parties can complement each other’s expertise. It can, for example, advise on the design, regulations and structure of the project. This reduces risk and cost to create a smoother process, which leads to better results.

IHC Hytech constructs bespoke systems and equipment to meet customer-specific requirements, as well as standard products, solutions and systems with a ready-to-build design. Conducting business in an offshore environment is often turbulent. Technical and financial risks are significant, and margins are constantly fluctuating. The difference between profit and loss for an owner or operator of technological systems is greatly influenced by the productivity of these long-term investments. Efficiency, reliability, durability and safety are key factors to success. IHC Hytech understands its customers’ needs and has the ability to provide innovative and efficient solutions for a variety of hyperbaric projects.

**Reliable partner for efficient saturation diving solutions**
Products

**SPHL saturation chamber**

Inside a self-propelled hyperbaric lifeboat
IHC Hytech offers a wide range of advanced equipment to ensure that its customers’ deep diving operations can be carried out safely and effectively. This includes saturation diving equipment such as self-propelled hyperbaric lifeboats and decompression chambers that allow prolonged occupation, such as the high-end deep tunnelling chambers.

The decompression chambers built by IHC Hytech are considered to be market leading and suitable for any application. They are the result of divers working together with skilled design teams, mixing seasoned experience with fresh perspectives. The company believes that decompression chambers should be easy to operate in order to avoid possible errors or losing precious time. That’s why high-quality components are used to avoid unnecessary maintenance. This increases the durability of the decompression chamber.

IHC Hytech manufactures decompression chambers in various types of materials and configurations: aluminium, steel, duplex, stationary, mobile or transportable. It can deliver standard tanks, but is by no means limited to one model. All decompression chambers can be custom-made to fit their applications precisely. Safety and reliability are important features and IHC Hytech is able to build decompression chambers according to any standard: Lloyd’s Register, ABS, GL, DNV, IMCA, and so on. A standard decompression chamber comes with two compartments: the main chamber and an entry lock. The chamber is skid-mounted and has large lifting lugs for increased mobility. The tank will go wherever the diving operation is located.

The interior and exterior of the chambers are covered with a special coating. Working pressures usually range from 50, 70 or 100 metres of seawater (msw) for surface-supplied diving activities for air and mixed gas operations. Deep tunnelling saturation systems with working depths of 100, 150 or 200 msw can be provided. Chambers for self-propelled hyperbaric lifeboats with working pressures of up to 400msw can, however, also be provided for saturation diving operations. IHC Hytech also delivers escape trunks in various dimensions, connections flanges and clamping systems with interlocks. For integration in existing systems, the chambers can be supplied with connection flanges to fit any bell or auxiliary chamber. The support skid can be used to integrate the breathing gas cylinders required to provide maximum operational independence. The pressure hull has a number of spare penetrators that allow additional systems to be installed. A large-size medical lock is a standard feature. View ports allow observation of both compartments.

**Mini SAT system**

A variety of innovative and modular air and mixed gas diving systems are available. These range from basic transportable decompression chambers via air-dive basket LARS (Launch and Recovery System) units, to fully integrated mini SAT diving systems with all the necessary life-support equipment. SAT systems are built around deck compression chambers, which provide safe and controlled diver decompression. The layout of the deck compression chambers includes wet-pod facilities (with sanitary provisions) and multiple main locks, depending on customer requirements.

**Self-propelled hyperbaric lifeboats**

Oceanwide Safety at Sea in Rotterdam is the global market leader of self propelled hyperbaric lifeboats (SPHL) and IHC Hytech is its strategic partner for the duplex chamber and all associated life-support equipment.

It is mandatory for Diving Support Vessels (DSV) to be equipped with adequate and dedicated safety equipment to allow for the evacuation of divers under pressure in life-threatening situations. The principle of the SPHL is the installation of an independent autonomous saturation system chamber, i.e. a saturation diving evacuation chamber, in a standard self-propelled and SOLAS-approved GPR hull that is otherwise normally equipped with a propulsion system, cooling system, hot water plant, navigation control and monitoring equipment, food/water supply and medical aid kits. The evacuation chamber, suitable for 12, 18 or 24 divers at working pressures specified up to 400 metres of seawater, is accessible through a lock in the bottom of the lifeboat. This lock normally connects the SPHL to the vessel’s saturation diving chamber system and is kept under system pressure to allow immediate deployment.

In compliance with IMD regulations and on the basis of the presumption that some means of rescue will arise within that time span, the SPHL is capable to offer autonomy for the evacuated divers for 72 hours. The helium and oxygen supplies needed for that period are stored in gas cylinders in the boat. The CO2 produced by the divers’ metabolic oxygen consumption is filtered by CO2 removal scrubbers, containing exchangeable canisters with soda lime granulate. Once saturated the canisters are exchanged with fresh unused ones through a so-called ‘medical lock’, which also serves for the exchange of other supplies. A contamination scrubber and a hyperbaric toilet completes the outfit.

The outside of the evacuation chamber, accessible through the lifeboat’s passageway, is crammed with control and monitoring equipment by which the crew can tend the divers and operate the chamber. To guarantee simplicity, safety and reliability, it consists of auxiliary redundant independent valves, pressure regulators, manometers, couplings and so on – highly appealing to those who grew up before the computer games’ era. It’s testament to the quality of IHC Hytech that every component as depicted in this picture is documented, certified, approved and traceable during its whole lifetime.

A life-support package (fly-away package) for a SPHL provides the essential services to a hyperbaric rescue chamber/SPHL when evacuated from the mother vessel (DSV). For more information about this package, see ‘Containerised systems’ on the following page.
Containerised systems

IHC Hytech has established a name for itself in containerised systems. These complete self-supporting units are independent and easy to handle. They can be built as standard or custom-made to any specification, such as personal preferences, size of the decompression chamber, selection of compressors and weather conditions (they are operable under extreme weather conditions such as tropical or arctic). Supported by its in-house engineering department, IHC Hytech can manufacture the right container for the job according to various standards, such as IMCA, DNV, ABS and Lloyd’s Register.

The versatility of these containerised systems is unrivalled. IHC Hytech can offer a total package whether it is a portable or integrated system (in a ship or building). All necessary equipment, such as personal gear, can be delivered. For use on offshore rigs, IHC Hytech has made an extensive number of customised containers with all the necessary equipment.

Over the years, IHC Hytech has manufactured a large number of containerised systems such as:
- containerised decompression chambers for air, nitrox, trimix and heliox
- mixed gas production units (EAN/O2)
- machinery containers
- dive control containers
- Saturation tunneling chambers

Many of IHC Hytech’s employees have a wealth of experience in the field. Therefore, it can develop user-friendly systems with an ergonomic layout. Due to the use of high-quality components, the maintenance costs are relatively low.

Life-support package (fly-away package)

Life-support package (LSP) provides essential services to a hyperbaric rescue chamber/self-propelled hyperbaric lifeboat when evacuated from the mother vessel (DSV) and there is no rescue facility directly available. The main goal of the LSP is to supplement the SPHL’s life-support systems and provide a sufficient breathing gas supply to complete decompression, especially in a remote location.

The LSP is self-contained in a custom-built 20ft Offshore EN12079 or DNV 2.7-1 container, outfitted in accordance with applicable regulations. The system can operate in temperatures ranging from +5°C to +35°C. The LSP can be placed either on a supply vessel, barge or quay side, depending on the operational requirements. The LSP container consists of a control, engine and wet room.

An LSP package provides essential services, including the following:
- cold and hot water for the chamber conditioning system
- electrical power supply for the electrical system in the chamber/SPHL
- oxygen and mixed gas connection manifolds integrated in the junction panel of the container to which external gas banks can be connected
- all distribution and control systems for the above
- a readout panel for the display of the essential chamber parameters (pressure, O2, CO2).

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Launch and Recovery Systems (LARS)

Launch and Recovery Systems (LARS) divers can be transported to and from the subsea work site using the LARS. This is a diving handling system designed for a dive cage with two divers and two 50-litre air bottles, with a deployment depth of 100 metres. Two versions are available: an air-dive LARS and an air-dive LARS basic. The air-dive LARS has an extendable A-frame. The benefits of IHC Hytech’s LARS are as follows:
- easy to transport (fully stackable) and operate
- guaranteed safety
- the clamp winch can raise a manned cage in case of emergency (secondary back-up)
- certified by Lloyd’s Register and meets IMCA guidelines
- marine working environment
- heavy-duty parts.

The lifeboat-trunk will be lifted against the lifeboat-trunk. The clamping is a DNV approved design to EN 13445. The clamping system is outfitted with a safety interlock system.

The clamp and optional scissor-table are used to connect the lifeboat to the trunk. With the scissor-table the clamp will be lifted against the lifeboat-trunk. The clamping is a DNV approved design to EN 13445. The clamping system is outfitted with a safety interlock system.

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Spool pieces

IHC Hytech designed and manufactured several adaptor pieces / spool pieces which fit on both sides of a pressure chamber like a SPHL or tunneling shuttle/chamber. This main transfer tunneling shuttle can be connected to the tunnel boring machine with a spool piece.

The system can be completed with a containerised decompression chamber (20ft container), and various additional diving materials such as hot water suits, a hot water supply unit, diving suits and helmets, and various underwater tools.

Clamps and spool pieces

Wet bell

The WBBH5-100 is an open wet bell handling system that allows three divers to work at a depth of up to 100 metres. This wet bell handling system can be integrated in a ship. The bell is designed for strong current operations and is equipped with an extra heavy clamp.

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Heaters and scrubbers

A smaller scrubber unit is also available. It is especially suitable for use inside smaller hyperbaric/decompression chambers where space is limited, such as a DART. The unit has a clamp that holds two CO₂ adsorbent canisters. It has a built-in electric fan, in case of electric failure, it is possible to connect a simple medical breathing mask and use the scrubber as a lung-powered unit.

The heater and scrubber motor units are completely casted. Environmental conditions such as oxygen level, humidity or pressure will not affect the motor at all. The motor is very dependable because of its brushless design. The motor speed configuration can be either fixed or controllable.

Decontamination canister
IHC Hytech’s decontamination canister removes pollution from a breathing gas in an enclosed environment other than CO₂ when connected with the IHC Hytech scrubber fan unit. The decontamination scrubber canister contains a special blend of carbon molecular sieves and a catalyst, and is stored in an airtight container. Once the container is opened and the canister is exposed to the environment, it starts to work. The special filling mixture of the canister removes all kind of contamination caused by humans in an enclosed environment due to breathing, vomit, urine, faeces and sweat.

In enclosed saturation chamber it’s important to maintain the right environmental conditions. IHC Hytech designs and manufactures its own heaters and scrubbers. The benefits of this equipment include:
- non-corrosive materials
- high efficiency
- low voltage DC
- RPM control
- encapsulated motor.

Heaters
The single and double heat exchangers are designed to control the temperature in a deck decompression chamber. The single heat exchanger can be used either for heating or cooling the chamber atmosphere. The combi unit (double heat exchanger) consists of a heating and a cooling exchanger, and can be used for both simultaneously. Additionally the combi unit can be used for moisture removal out of the chamber environment.

Scrubbers
The CO₂ scrubber unit is designed to remove CO₂ from the atmosphere in a diving system or decompression chamber. The scrubber unit consists of a fan that pulls air through a canister filled with CO₂ adsorbent, such as Sodasorb or soda lime. The canister is provided with an internal fine mesh. This prevents off-dusting of the soda lime.

Control panels
IHC Hytech manufactures various kinds of mounted and portable control panels for several applications. By listening to feedback from experienced colleagues and customers, IHC Hytech designs the panels so that they are easy to operate. It can provide customised solutions, such as detached control panels, or control panels at the end or on the side of a decompression chamber. Automatic chamber control is possible on IHC Hytech control panels.

Saturation Diving Monitoring Systems
Fathom Systems’ Saturation Diving Monitoring Systems (DMS) comply with all current international regulations and codes of practice.

A DMS significantly enhances the safety and efficiency of diving operations. The DMS displays and records vital data, including diver and chamber depth, and provides long-term personnel exposure tracking. The systems are easy to set up and calibrate, and come with comprehensive diagnostic monitoring for the sensors and electronics. The DMS interfaces to networked PCs for data storage and display. Permanently archived data cannot be tampered with and is easily accessible to provide clear output reports in Excel format.

Automatic Depressurisation System
IHC Hytech has developed a portable Automatic Depressurisation System (ADS), for all kinds of decompression chambers. The depressurisation (ascent) has to be carried out slowly. Doing this by hand is difficult because the ascent rate has to be controlled accurately. The ADS ensures a gradual depressurisation of 0-2 metres of seawater/hour.

Critical System Monitoring and Tracking System
The CSMTS – Critical System Monitoring and Tracking System is a stand-alone data acquisition, recording, communication and transmission product developed by Fathom Systems (and installed by IHC Hytech and Oceanwide Safety at Sea) to meet and exceed the current guidelines and requirements for the safe operation of self-propelled hyperbaric lifeboats (SPHL) in the event of an evacuation from the host Dive Support Vessel (DSV). The product is a multi-unit system that is an industry wide requirement as stipulated in OGP Report 478 (7.4) and an essential element of the hyperbaric evacuation plan set out in the IMCA D052 guideline document.

The system transmits critical sensor and mission data from the SPHL to shore using the low-level "Iridium®" satellite communications network via two antenna mounted in a suitable position on the topside of the craft. A terrestrial server system managed by Fathom Systems receives the data which is then distributed via the Internet to allow remote monitoring and incident management of the SPHL from any location globally either on land or at sea. The DSV Operator has access to all data from the terrestrial servers via the Internet connection and a ‘Client-side’ application allows bi-directional data transfer between incident rooms and the SPHL.

As the service provider, Fathom Systems automatically monitors the status of all equipped SPHLs continuously. In the event of a launch, an immediate alert is received allowing the shore based response teams to be notified by telephone, SMS or e-mail. Automated periodic ‘health check’ inter-rogation ensures a fail-safe and direct system availability.

Products
**Communication**

Good and reliable communication is an important aspect of ataration diving. IHC Hytech can provide communication units to perform the job: rack-mounted or portable, digital or analogue, helium unscramblers, electret or dynamic, and so on.

**Diving communication**

The IHC Hytech diving communicators have been designed to provide a reliable method of communication. Divers can be connected to the communication unit using a four-core cable with four banana plugs. When pressing the "PRESS TO TALK" switch, both divers can be addressed through the speaker, which also serves as a microphone. The communicators have a built-in battery, as well as a mains power connection and an external battery power connection. While the mains supply is connected, the internal battery is automatically charged. The built-in battery allows the communicator to be in standby mode for up to 72 hours. The diver connections are separated from the rest of the system to ensure the divers can never be exposed to a dangerous high-voltage current.

**Chamber communication**

Equipment used in hyperbaric conditions has specific requirements. The IHC Hytech 2102 chamber communicator is a communication unit designed for hyperbaric chambers and decom-pressure tanks. The unit can be mounted in the operating panel. The operator can talk to the main chamber, entrance lock or both.

**Emergency bell communicator**

Designed for commercial deep-diving systems, the Fathom Systems’ Emergency Bell Communicator provides high-quality voice communications in case of failure of the primary hard-wired system.

Fathom Systems’ knowledge of diving operations, coupled with extensive consultation with a major diving contractor, has resulted in a design that has a number of unique safety and operational features, including:

- the capability to operate from inside a survival bag
- remote control from the surface, allowing the supervisor to listen in on activity in the bell
- the bell battery can be continuously float charged, removing the need to open the system for external charging
- electronic circuit protection, internal diagnostics and robust packaging provides proven, long-term reliability
- diagnostic displays on the bell external unit provide status and troubleshooting information.

**Manifolds**

In its decompression chambers, diving panels, life-support panels, hydraulic units, reducer systems and all other pressure systems, IHC Hytech makes extensive use of manifolds. Any connection fitting in a pressure system poses a potential leakage risk. In the old days, for instance, diving panels were constructed using countless fittings, connections, valves, adapters and other plumbing. Leaks were a major problem.

A manifold is usually a solid bar of suitable material, which has most valves and connections concentrated in it. Good use of manifolds significantly reduces the use of fittings, and therefore the leakage risk. A further advantage is that manifolds make the diving panel or system compact and extremely strong. IHC Hytech benefits from several years of experience in designing and manufacturing manifolds.

**Reducers**

The IHC Hytech line of reducers has been especially engineered for applications that require lightweight, corrosion-resistant, compact and reliable regulation in high-pressure systems. Simplicity in design provides a very high level of reliability. The reducer has only one moving part. It has an aluminium bronze body, which has been chosen for its corrosion resistance and great tensile strength.

**High-quality components**

IHC Hytech manufactures and delivers a wide range of high-quality components, which are designed to meet the toughest standards in the industry. Examples include flow fuses, reducers, analysers, manifolds, silencers, check valves, tubing, and so on.

**Emergency bell communicator**

The chamber communicator 2102 mounted in a control panel

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Every diver needs adequate equipment. IHC Hytech can deliver a wide range of personal gear for specific diving tasks. This can vary from helmets and masks, to suits, harnesses, knives and other accessories.

**Suits and undersuits**
A suit is an important garment to protect a diver from underwater environments. These can vary, so different versions are available, such as constant volume suits, dry suits, hot water suits and suits made for heavy-duty work or usage in contaminated waters. Using the right undersuit is also essential. The undergarments supplied by IHC Hytech are proven by years of field testing by the Norwegian Navy, the British Antarctic Survey Dive Team, the French Marines and the Danish Navy. The undersuits are designed using high-technology fabrics and have been tested in real diving conditions from the Arctic to the Antarctic. Matching boots, gloves and hoods are also available.

**Harnesses and jackets**
Safety harnesses were once complicated and time-consuming to put on. However, IHC Hytech harnesses have been developed to reduce the time and complication involved in putting on safety/recovery harnesses, bail-out bottle harnesses and weight belts. The strong base material of the harness distributes the load across the body.

**Thickness gauge**
IHC Hytech is an official supplier of the Cygnus Instruments underwater thickness gauges, including the Cygnus DIVE MK2. With its brightly coloured AMOLED display, the Cygnus DIVE MK2 provides easy viewing from all angles for the diver and his camera, even in poor visibility. This wrist-mountable ultrasonic thickness gauge has been designed for the professional diver and can be worn on the forearm, providing an invaluable free hand while performing thickness surveys underwater. Rated to a depth of 300 metres, it delivers accurate meter readings, and is reliable and simple to use. The Cygnus DIVE underwater thickness gauge can measure through corrosion and through coatings up to 20mm thick (when in ‘Deep-Coat’ mode) using Single Crystal probes.

IHC Hytech is an official supplier of Kirby Morgan diving helmets, full-face and band masks, and also an official repair centre for all maintenance on this equipment. The company’s certified KMDSI instructor is licensed to give basic repair technician training/refresher training. After this, participants are allowed to perform small maintenance work and repairs to their own helmets and band masks.

**The SuperLite® 27®**
The SuperLite® 27® is the result of years of research and testing. The design gives the working diver a reliable and extremely comfortable helmet. The SuperFlow® 350 regulator used on the SuperLite® 27® provides outstanding performance. It features a diver-adjustable system so that the regulator can be ‘tuned’ during the dive according to the workload. This adjustment also allows the diver to set the regulator as the supply pressure varies, which is especially important when working with a low-pressure compressor. The diver is also provided with an internally adjustable chin support. This, along with the adjustable neck pad on the locking collar, gives the diver a comfortable, secure, custom fit.

**The Kirby Morgan® 37**
The Kirby Morgan® 37 is similar to the SuperLite® 27® but has a larger shell. It also includes the Quad-Valve™ Exhaust System. The Kirby Morgan® 37 diving helmet continues with the manufacturer’s long tradition of providing the highest quality and superior performance. The Quad-Valve™ exhaust system has less breathing resistance than the older single-valve exhaust and provides an extremely dry hat. This system is recommended for diving in biologically contaminated water. The SuperFlow® 350 regulator is a proven design that provides excellent breathing characteristics over a wide range of depths. The Kirby Morgan® 37 is one of the most popular in the world. A rugged diving helmet with a traditional design, it is considered the standard of the commercial diving industry.

**Kirby Morgan® 37SS**
For divers requiring a metal helmet with the sleek style of the 37, the new stainless-steel Kirby Morgan® 37SS helmet is ideal. It features a stainless-steel shell, as well as a stainless-steel sideblock, helmet ring, bent tube, handle and other key components. No refinishing is required if the surface gets scratched or gouged. The SuperFlow® 350 is standard on this helmet. The Kirby Morgan® 37SS features a quick change communications module, available with either bare wire posts or a waterproof connector. This allows for easy, efficient maintenance of the helmet’s communications.
IHC customers know that they can rely on a dedicated and comprehensive global service offering for the life cycle of their investment. This not only helps to extend the lifespan of the vessel or equipment, but also to maintain the correct and safe operation of all IHC products on board.

As the technology innovator, IHC has the ability to enhance the reliability and efficiency of its systems, which in turn boosts the productivity of its customers’ investments. The company’s life-cycle support maximises the uptime and return on investment, and therefore reduces the total cost of ownership.

Concepts, design and building
IHC’s highly qualified life-cycle support personnel can provide new or improved concepts for complete systems and components, as well as project evaluation and advice on the selection of equipment. The company’s team of experts designs optimal vessels and equipment based on customer requirements and their design, building and operational experience.

Maintenance management
IHC aims to assist offshore operators by improving their system availability in the most efficient way. This can be done with a single service offering, such as condition monitoring, technical surveys or other maintenance tasks. It can also be achieved by an integration of several different services from the company’s life-cycle support programme.

Spare parts and component repair
IHC wants to be prepared for every eventuality and provide limitless logistical support to its customers. This includes attention to system availability with the immediate supply of spare parts and repair of components. With this approach, the complete IHC global network of qualified service technicians, sourcing officers and stock locations is available to all customers.

Dry docking and ship repair
IHC’s team of experts offers a high level of knowledge and expertise to manage dry dockings, ranging from supervision of the repair yard to the performance of complete dockings and ship repairs. All dry docking services are focused on keeping the period of work as short as possible according to forecasted budgets and planning. Experience shows that the correct scope of work and solid preparation – especially for major repairs and dry dockings – are essential for efficient performance.

Renovations
The renovation of vessels and equipment is a complex process. IHC possesses expert knowledge to research, engineer and install to such a high standard that these measures will optimise the equipment. This results in the start of a new life cycle for the vessel or the extension of the existing life cycle.

Life-cycle engineering
With all vessels fully engineered in 3D models and a full set of engineering documents available, IHC has a unique starting position to accurately and quickly provide engineering support for all requests. IHC engineers can liaise with original vessel designers regarding complex engineering issues.

Training
In the months leading up to delivery, IHC enables its customers to bring their crew on board and become acquainted with the vessel, and gradually assume control. As a result, the vessels are fully deployable from their maiden voyage, maximising the value of IHC customers’ investments. Training is offered with the use of simulators to allow crew members to become familiarised with all of the equipment on board, ranging from the complete vessel management and DP systems, to the safe and efficient use of the mission equipment.