INTRODUCTION

Royal IHC is the global market leader for the design and construction of innovative vessels and equipment for the offshore market. We are unique in our ability to provide single source solutions for power and fibre optic cablelay and burial. Together with our independent subsidiary, KCI, we have an extensive track record in engineering and manufacturing high-performance integrated vessels and equipment. In close cooperation with our customers, we create the optimal solution.

We offer equipment for both sale and rental – from single components through to complete deck solutions. In addition, we can convert existing vessels, build new cablelay vessels and refurbish equipment, as well as act as consultants.

CABLELAY SERVICES

ENGINEERING

IHC has many years of expertise in shipbuilding and mission equipment. Together with our independent engineering companies, Vuyk Engineering Rotterdam and KCI, we offer complete design, engineering and manufacturing packages for cablelay spreads or their components. IHC is also able to analyse cable behaviour during an operation and offer solutions to optimise the process.

RENTAL

IHC offers short-, medium- and long-term rentals of modular and flexible cablelay equipment from our locations in Europe or our local offices such as China, the USA and Singapore. These services range from the short-term rental of a single piece of equipment to complete life-cycle rental solutions for full backdeck spreads. In addition, we have a strong team of offshore operators and engineers to run and maintain our rental fleet, which includes:

- tracked tensioners
- linear cable engines
- hydraulic power units (HPUs)
- winches
- spooling drum engines
- spoolers
- powered quadrants.

IHC can provide full deck solutions, including sea-fastening base frames, LCEs and control systems. Our rental LCEs have a proven track record across multiple markets, including international telecoms, as well as oil and gas, and offshore renewables industries, and military and seismic cables. If required, we can offer local building solutions from China, the USA and Asia Pacific.
IHC has a proven track record in designing and building offshore carousel systems for the lay and storage of power cables, umbilicals, and flexible products (500-7,000t+). Each carousel and loader arm is designed to ensure maximum productivity and minimum downtime by incorporating features such as an innovative hydraulic roller suspension system. Depending on your project, the carousel can be designed to be modular or to be lifted containing product for rapid mobilisation.

**TENSIONERS**

We design and deliver tracked tensioners which have a strong track record of laying inter-array and export cables on projects throughout Europe. Our customised tensioners include containerised systems and units that have a break-back feature which allows the passage of a quadrant to speed up inter-array cablelay operations. The iterative design of our tensioners draws on the operational experience we have from the rental fleet. We also produce four track tensioners which can be used for deep water flexible product and power cablelay.

**QUADRANT SYSTEMS**

KCI has developed an innovative quadrant handling system for cablelay vessels. This allows for safe and easy overboarding of the quadrant with only one controlled motion meaning that a crane does not need to be used for this operation. This patented system ensures that the minimum bend radius is maintained whilst the cable is being overboarded.

**INTEGRATED DECK SPREADS**

IHC can supply integrated cablelay spreads for existing or newly built vessels. We are also able to build components locally, reducing transport and building costs, and involving regional supply chains.

**POWER CABLELAY VESSELS**

IHC has designed a vessel dedicated to inter-array cablelaying that combines two underdeck 1,250t carousels with an in-line quadrant system. The vessel is able to lay cable via SB and PS, which means that the optimal heading can be selected dependent on weather conditions. With two tensioners, the two carousels can be loaded simultaneously, while the deck layout provides ample space for cable protection systems.
CONTROL SYSTEMS
Our integrated control systems are based on proven industry-standard equipment and open software. This ensures that support and spare parts are readily available, and that the equipment can be maintained, developed and extended easily. The system equipment is controlled by a Siemens PLC and Siemens Remote IO modules operating on a Profinet network. The supervisory and control system is generally a Siemens HMI/WinCC SCADA package, which provides full operational and diagnostic capability. The loader arm and drive system are independently controlled within an integrated monitoring system for the carousel.

FIBRE OPTIC CABLELAY VESSELS
IHC’s knowledge of cablelay and burial equipment, control systems and innovative vessels is combined in our newly developed fibre optic cablelay vessel. Its design builds upon our previous vessels and includes features such as a hybrid engine arrangement, higher cablelay speed, and separation between the working and living areas.
CABLE BURIAL EQUIPMENT

PLOUGHS
IHC has more than 15 years’ experience in the supply of cable burial equipment, which started with the market-leading Sea Stallion. Unlike other ‘vertical knife’ ploughs, the forward rake of the Sea Stallion cutting elements create an additional downward force. This ensures consistent and reliable product burial up to three metres in a wide range of seabed conditions, at depths of up to 1,500m.

Sea Stallion 3 cable ploughs have extensive track records in burying telecommunication cables worldwide. In addition, the Sea Stallion 4 has gained global recognition for its performance in the offshore wind power cable industry.

TRENCHERS
Our award-winning Hi-Traq™ trencher is ideal for projects in harsh environments. It is equipped with a unique self-levelling suspension system for the installation and burial of power cables. Due to its multi-tool functionality, Hi-Traq™ can perform both jetting and mechanical cutting operations. These features enable it to seamlessly handle varying soil types and minimise delays.

The I-Trencher is a versatile system with a high power-to-weight ratio suitable for trenching and backfilling flowlines, umbilicals and cable products. It is one of the most widely used tracked trenchers in the world, having completed numerous pipeline protection projects. The I-Trencher has been used extensively for the installation of inter-array and export cables at a number of North Sea wind farms.

LAUNCH AND RECOVERY SYSTEMS
We offer a wide range of launch and recovery systems (LARS) which are designed to maximise productivity, provide a long and reliable service life, and minimise operational costs. This is achieved through their robust design and high-quality construction, while our tailor-made LARS offer increased flexibility and operability.

JET SLEDS
IHC provides jet sleds to assist with pipeline burials in soft seabed conditions. These can be supplied with deeper burial capabilities for operations in deeper waters. The Sea tempest shallow water jet sled uses high-pressure, surface-fed water through forward-facing jetting nozzles to soften the seabed and allow product burial.