



Suppliers to the offshore world



offshore division

Introduction

IHC Holland specializes in designing and building equipment meeting the increasingly stringent requirements for quality performance imposed by the growing scale and sophistication of offshore operations. Dynamically positioned drillships, jack-ups for offshore drilling and civil engineering purposes, giant offshore cranes, SBM systems (offshore terminals), and steel constructions for offshore oil and gas exploitation operations: all custom-built and all backed by know-how and worldwide experience. And supplemented by a comprehensive package of engineering services for the solution of problems in the offshore field. Because IHC Holland are specialists, always abreast of developments and prepared for any demand which Tomorrow may bring.



DP Drillships

IHC dynamically positioned drillships have been designed to carry out offshore petroleum exploration in deep water areas with the utmost efficiency and safety, and thus at the most economical operating cost. They have been designed to cope with a wide range of environmental conditions. The following basic requirements have been taken into consideration:

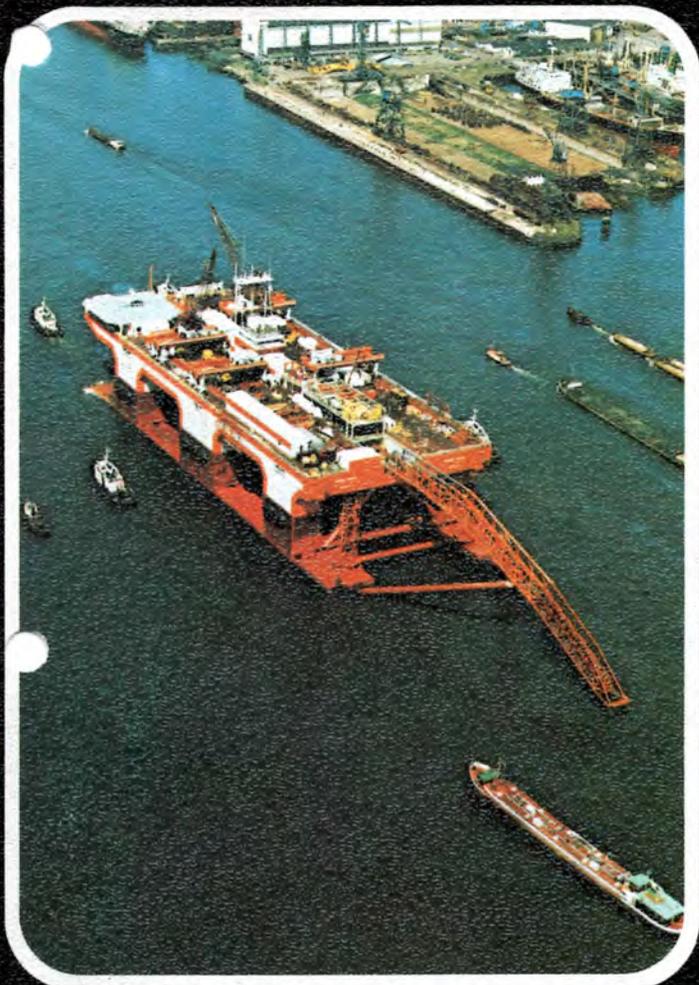
- high steaming speed and ability to operate in all climatic areas
- maximum self-sufficiency: external logistic support, both offshore and onshore, is kept to a minimum
- maximum operational flexibility, achieved by severe limitation of the physical connections between the ship and the seabed.

IHC drillships are equipped with a fully dynamic positioning system, free of any mechanical mooring device.



Up till 1975 two IHC-drillships, the *Pelican* and the *Havdrill* have been operating to the full satisfaction of their owners for already five years. Under construction are 6 more drillships at the yards of IHC Holland and its licensee Scott Lithgow of Scotland.





Organization

IHC Offshore Division

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B. Schuil, Joint Managing Director IHC Holland and Director in charge IHC Offshore Division.

Products

Drillships - Jack-up rigs -
Offshore cranes -
Self-elevating platforms for civil engineering -
Offshore engineering

Drilling and production platforms -
Modules -
Other offshore steel structures -
Pontoons -
Pipe systems -
Turnkey projects -
Mechanical erection

SBM-systems -
Feasibility studies -
System design -
Construction -
Installation -
Offshore contracting -
Start-up and operator training -
Maintenance

Companies

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Telex 36207

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Management

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J. D. Bax
Managing Director
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Th. W. de Kleijn
Managing Director

R. Maari
President
J. E. Jansen
Executive Vice-President

SEP's for civil engineering

The accelerated development of equipment for offshore oil and gas exploration has produced a range of heavy plant capable of solving many problems experienced in civil engineering, particularly where adverse conditions are encountered. Typical examples are the self-elevating platforms for operations in rough or open water. They provide an area of "terra firma" offshore from which a variety of operations can be performed. With the legs raised, a self-elevating platform becomes a floating object with a sufficiently shallow draft to enable it to be used almost anywhere. On the completion of one job, it can immediately be towed to the site of the next. These self-elevating platforms can be supplied with all kinds of equipment; typical examples are pile-driving frames, cranes and drilling installations. More-



over, the equipment can be easily interchanged, allowing optimum use of the platform. IHC Holland and its licensee, Kawasaki Heavy Industries, have designed and built a considerable number of SEP's for various purposes.

For detailed information ask for brochure OPU 9.

Offshore cranes

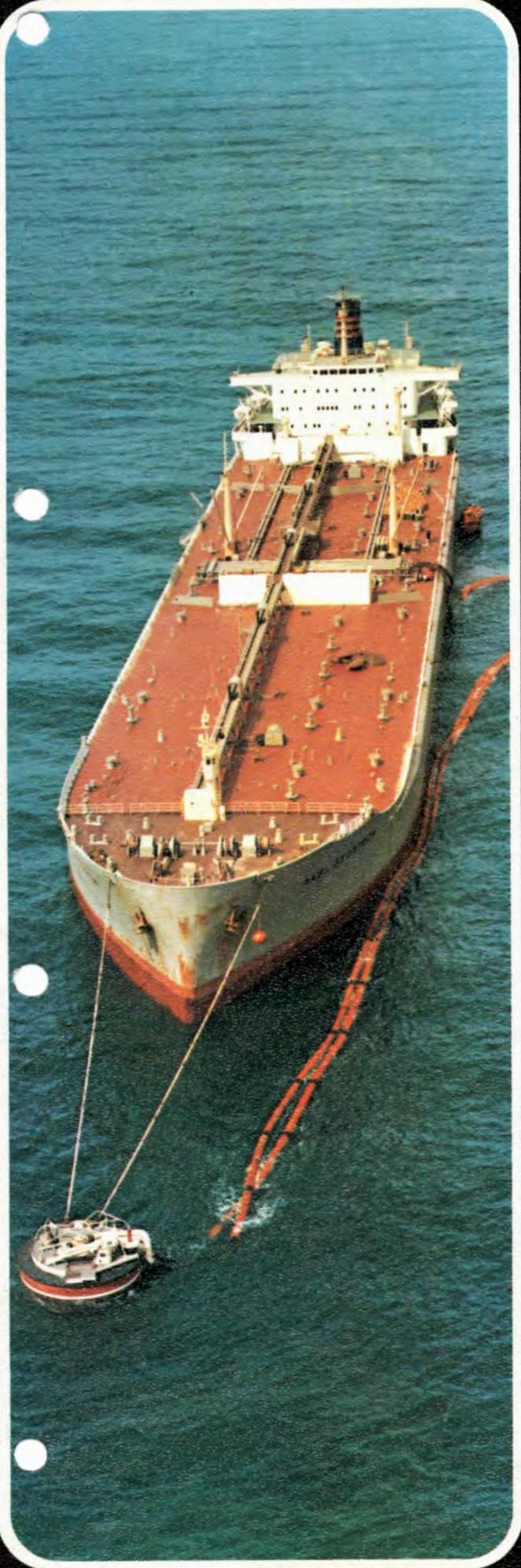
IHC Holland is proud of its leadership in designing and building some of the offshore industry's most revolutionary giant offshore cranes.

Floating cranes with lift capacities undreamed of just a few years back are now a major tool in the offshore contractor's package of equipment.

They have become indispensable for pile driving, putting in well protectors, and installing the jackets and platforms of fixed structures. The important role played by IHC Holland in this inevitable step toward bigger lift capacities is reflected in almost 200 units, small and large, for a variety of applications, now at work around the world.

For detailed information ask for brochure OPU 13.





SBM-systems (Offshore terminals)

The oil industry repeatedly faces new problems, not least in the transport and handling fields. Oil wells and refineries are seldom conveniently situated in respect to port terminals, and with today's giant tankers, existing terminal facilities are proving inadequate for the quantities of cargo involved and the draft of the vessels employed.

A solution to these problems are the Single Buoy Mooring Systems such as SBM, SALM, SBS. These combine optimum technical performance with relatively modest outlay, and require only a minimum of maintenance. Systems of this type are available for tankers of all tonnages in service and projected. Further developments resulted in the design and construction of offshore floating storage/loading facilities (SPAR). Engineering and design studies have been made to develop pro-



duction and storage/loading units.

For detailed information ask for SBM-brochures and OPU 21.



Steel construction

IHC Holland has over the years specialized in the design, fabrication and erection of many kinds of steelwork. Its technical staff and highly skilled full-time operators are available anywhere at any time. IHC Holland has long enjoyed a mutually beneficial association with both the land-based and offshore sectors of the oil industry. For the offshore industry IHC has built an impressive number of jackets, platforms, modules, well head protectors and other high grade steel structures. Its highly skilled staff has completed many "hooking-ups" on offshore locations at various parts of the world. Onshore, IHC Holland serves the oil, petrochemical, and chemical industries in the execution of widely varying projects:

- the development of oil refineries



- structural steelwork for the civil engineering industry
- erection of blast furnaces
- construction of desalination plants
- fabrication and erection of piping systems, tank farms, transport systems, bridges, chimneys, derricks, etc.

For detailed information ask for brochure OPU 3.



Miscellaneous

Pipelaying barges

For operations in the Caspian Sea IHC Holland designed and built the pipelaying barge *Suleyman Vezirov*. The pontoon of this barge was divided into three parts in order to be able to pass the relatively narrow sluices during the voyage via Leningrad and the Volga to the Caspian.

A revolutionary design resulted in the construction of the first third generation pipelaying barge *Viking Piper* (167.5 x 58.5 x 33 m), capable of laying large-diameter pipes in 600 m water depth under the most unfavourable weather conditions.

Work-over units

For operations in Nigeria IHC completed a work-over drilling and well-completion jack-up barge.

Heave compensators

In 1937 the first motion compensator for dredging operations was installed on an IHC-built suction dredger. 200 such units are now in use throughout the world.

A major requirement of the oil industry as this moved into deeper waters in its search for hydrocarbons was for an efficient heave-compensation device on floating units.

Together with Institut Français du Pétrole (IFP), another pioneer in motion compensation equipment, IHC Holland has developed a range of heave compensation devices for drillstrings, marine risers and guide lines.

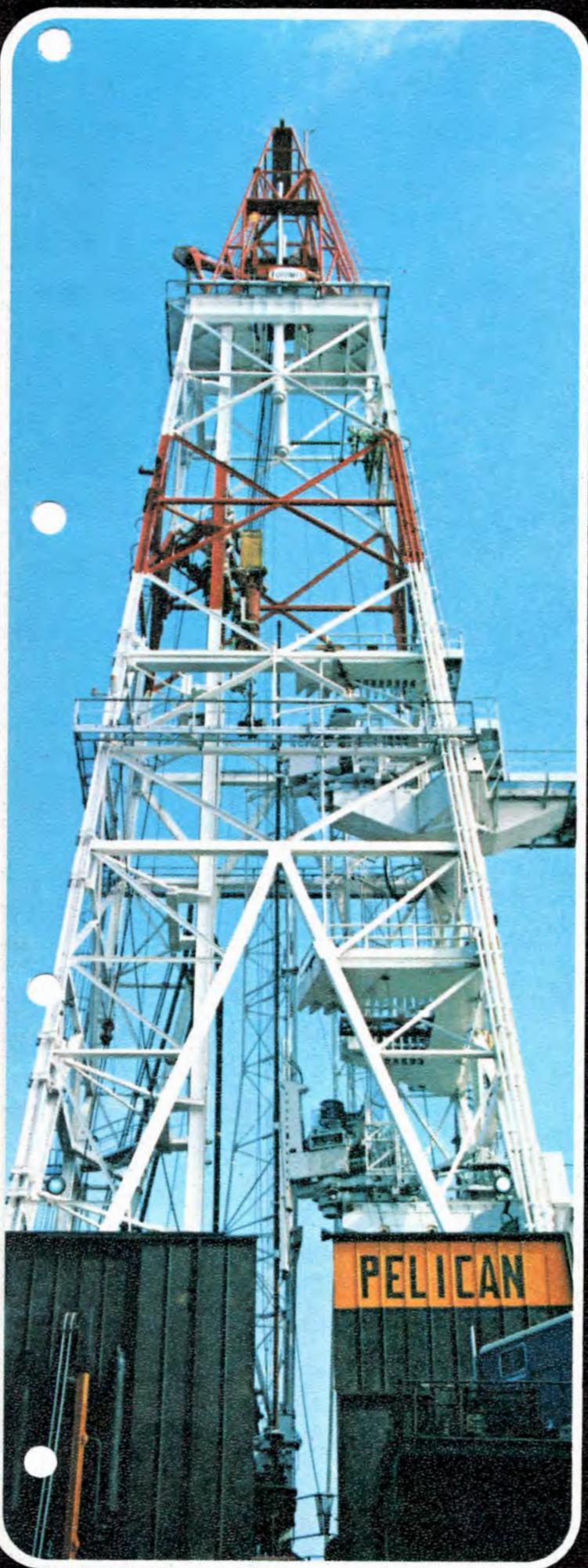


Special ships

Among the special ships built by IHC Holland are a great number of passenger / car ferries for services between Great Britain and the continent. A special design of engine room and parking spaces has resulted in maximum capacity for the transport of cars. Passenger accommodation complies with the highest requirements of comfort. The comprehensive staff of IHC Holland is able to make designs for a variety of special-purpose ships. The ample building capacity guarantees short delivery times.

Winches

IHC Holland has manufactured more than 5000 winches of many types and capacities for use on dredgers, self-elevating pontoons, drilling rigs, floating cranes and other vessels and structures. They can be powered by a diesel engine, by hydraulic motor or by AC or DC electric motors.



Jack-up rigs

In 1959, IHC Holland built the 8-leg jack-up rig *Seashell*, which has since operated to the entire satisfaction of its owners.

The hydraulic jacking system developed for this rig has proved to be efficient and safe, and from it has been developed a range of jacking installations, each with its own specific design and application features. The know-how obtained from the *Seashell* provided a firm foundation for a series of self-elevating platforms for offshore exploration and also for civil engineering purposes. Among these are the jack-up rigs *Sedneth II*, *Ile de France*, *Chazar*, *Pétrobras III* and *Maersk Explorer*.

Under the terms of an agreement with Kawasaki Heavy Industries, jack-up rigs to our design can also be built in Japan. Collaboration between IHC Holland

and Kawasaki means that rigs can be built and serviced on either side of the globe, thus substantially reducing transportation costs and delivery time.

For detailed information ask for brochure OPU 6.





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DREDGER DIVISION

Standard and custom-built dredgers, dredger components, measuring and control equipment, dredging pipes. Diesel engines. Shiprepairs.

Engineering for alluvial mining, ore treatment and bulk goods handling. Equipment for the mechanizing and automation of industrial processes.

OFFSHORE DIVISION

Drillships, drilling platforms, offshore cranes, single buoy mooring systems. Self-elevating platforms for civil engineering purposes. Structural steelwork.