

# The roots - from Gusto Shipyard to GustoMSC

By Robert Smulders,  
great grandson of August Frans Smulders

## A history awaiting new and colorful chapters

Company histories often hide within such sources as founders' correspondence; patents, court and board documents; personal memories and recollections; all tough stuff to collect, corroborate and collate. Robert Smulders has done his homework, taking the reader on a trip through many key events of GustoMSC's history, from the utterly fascinating origin of the name, the introduction of floating cranes and production line build techniques. As its splendid past, GustoMSC undoubtedly promises a creative future.

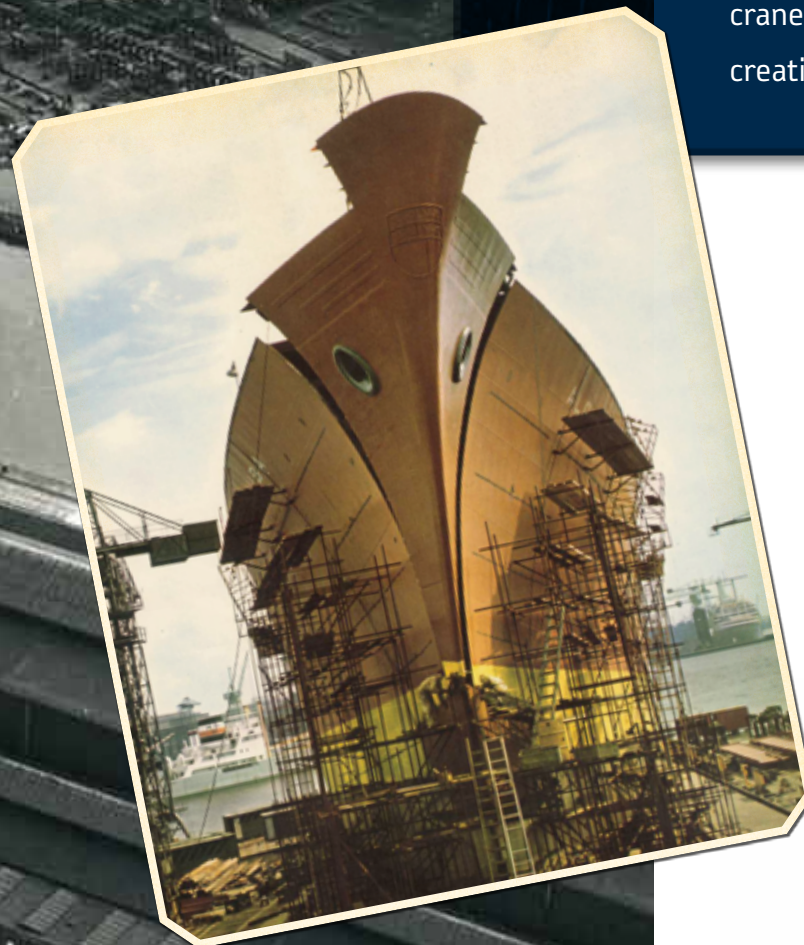
The pioneer in this story was the entrepreneur August Frans Smulders (1838-1908). He had inherited a passion for engineering from his father Willem Hendrik Smulders (1815-1883) who had started a forging shop and later a more generally oriented machinery plant in his home town of Tilburg. His company was one of the 10 enterprises building steam engines in the Netherlands in 1850. After secondary school, August Frans started to work for his father to learn the trade and in 1862, at the age of twenty-three, August set up his own factory with a small shipyard on the Zuid-Willemsvaart in 's-Hertogenbosch, concentrating first on steam engines and boilers before diversifying into an iron foundry.

From the outset, he realized that versatility would be the key to the long-term survival of the business, so he looked for new markets in which the company's skills could be utilized. When in 1872 it became clear that expansion of the business was not possible because of lack of space, he moved the company to a larger location in Utrecht where he started the building of traction engines, locomotives and other railway equipment. The

company also began building bucket and suction dredgers, but had to subcontract the hulls to a third party because the plant's location was not adjacent to a waterway. This dependency on others proved to be a major disadvantage, and prompted him, in 1894, to buy shipyard "de Industrie" from Piet Smit Jr. (a member of the Kinderdijk-based Smit shipbuilding family) in Slikkerveer, and renamed the yard "Gusto" - this name was derived from August Smulders' own first name (Guust) and that of his wife Catharina ("Cato").

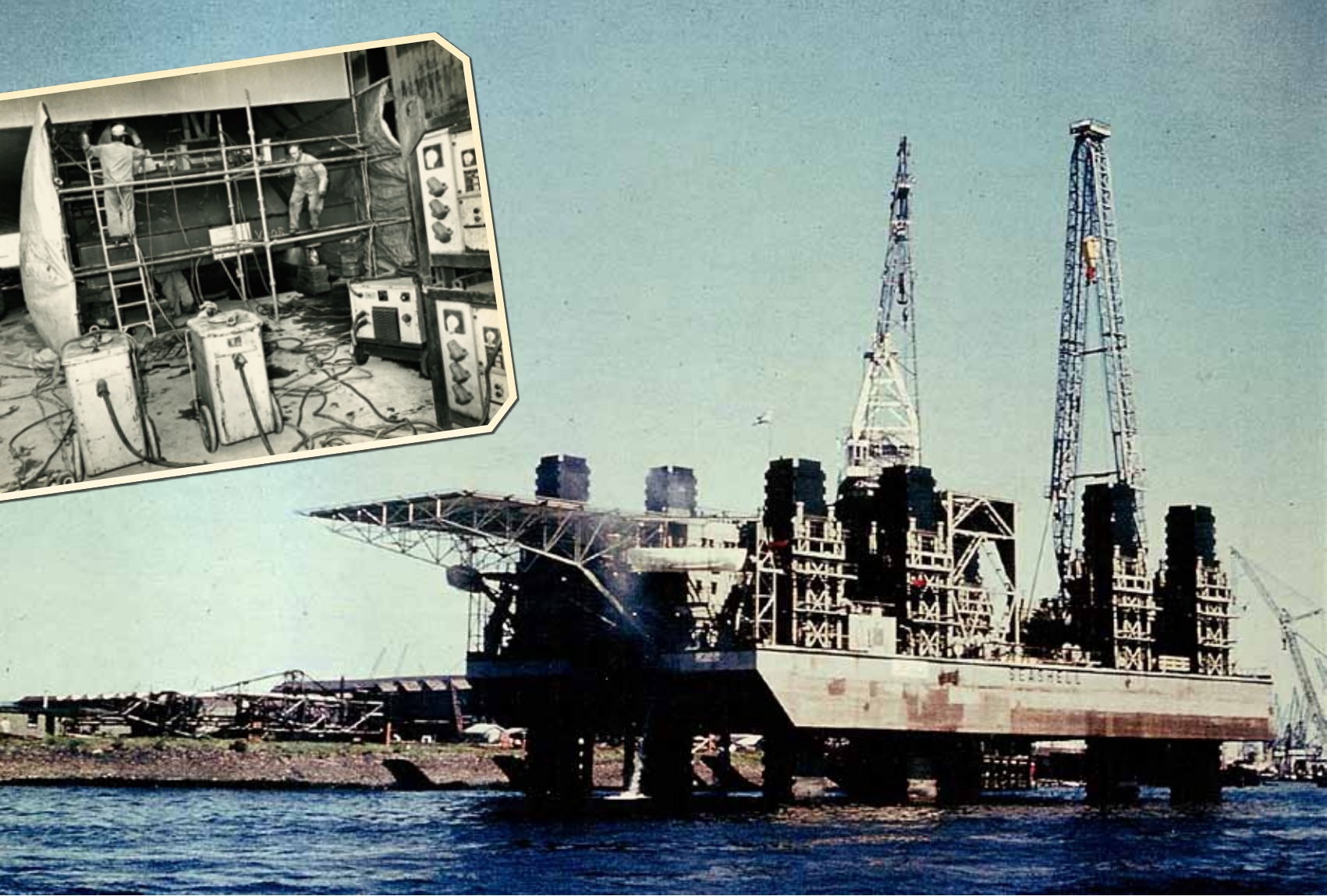
Over the next decade the Slikkerveer shipyard built approximately 100 vessels, mainly for international clients, including the Imperial Russian Government, Port Arthur, and the Tsingtau harbor works. Some of their dredgers played an essential role in well-known projects including the construction of the Panama Canal and China's Tientsin harbor.

In 1904, to handle its fast-growing order book, the company once again embarked on a search for bigger facilities, resulting in the purchase of a ten hectare plot of marshland in Schiedam near Rotterdam. Even though the level of the site had to be raised



1862 » 2012 TIMELINE





The capacity of the company's cranes rose steadily in the early 20th century, as illustrated in 1932 by the delivery of a floating crane which could lift up to 540 tons to the French civil engineering contractor Chagnaud & Cie. Being an innovative company, Gusto fitted its floating cranes with a central tower and a patented ball-type cast iron bearing at the top of the tower resulting in a design which left the deck under the crane almost completely free. In the period between 1911 and 1938, Gusto built 14 of these tower fitted standardized cranes with a lifting capacity of 150/200 tons for international customers. In the mid 1930s the Gusto Yard, Conrad-Stork, De Klop, J&K Smit, L.Smit&Zonen and the Verschure yard started to cooperate, modestly at first by bidding together for international dredger building contracts which were too important or too complicated for an individual company to take on. After World War II, this cooperation resulted in an agreement that all jointly obtained international orders for dredgers would be split between the partners and that every new order would be obtained by common efforts and allocated to the shipyard in the group whose turn it was to build. The new group was named IHC-HOLLAND; a head office was established in the Hague and a joint research laboratory M.T.I. (Mineraal Technologisch Instituut) was set up in Delft. IHC-Holland's sales and marketing efforts were coordinated from the Head Office, and it also served as the initial point of contact for the customers of the group. Responsibility for dealing with regions and specific countries was divided up among the IHC companies. After World War II, Gusto reinvested, re-equipped and reorganized its facilities, thus sparking a renewed period of growth. During those early post war years, the yard built various types of vessels to replace wartime losses, including several warships for the Dutch Royal Navy, and simple cargo vessels of between 5,000 and 8,000 deadweight tons.



Even though IHC was successfully obtaining orders, the volume was not always enough to fully occupy the manhour capacity of all the yards. This meant that underemployed yards such as Gusto had to generate additional work to fill their remaining capacity: diversification. With the design and building of the first European built jack-up-drilling platform "SeaShell", the floating crane Atlas with a 400 ton crane for Maracaibo, several drilling tenders and the first SBM to be installed and tested at Miri, Sarawak, the Gusto Yard became the market leader for building offshore structures outside the U.S.A. By 1963 Gusto had signed a license agreement with Shell to market, design and build turn-key Single Buoy Mooring systems, including offshore installation. Later - in 1969 - this formed the basis for the founding of Single Buoy Moorings Inc. in Fribourg/Monaco, now a world leader in the design, building and operation of Floating Production Systems. This company is now named SBM Offshore N.V. and is a major company listed on the Amsterdam Stock Exchange.

facilities and size of the yards. A small yard might for example have to build a Trailing Suction Hopper Dredger which was too large for its facilities while Gusto, the largest of the group, might be allocated a small cutter dredger. This didn't make economic sense. In 1962 the partners agreed, also pressed by the upcoming threat posed by the Far East's emerging shipbuilding industry, on a full merger. An independent financial expert was appointed to establish the value of each company based on book value and profitability. The merger was completed on the 21st of September 1965. To capitalize on their existing reputation, the five partners decided to continue trading under the name IHC Holland and obtained a listing on the Amsterdam stock exchange and later also on the Brussels and Paris exchanges.

Harry Smulders, one of the Managing Directors, headed the new Board of Management as President, along with fellow Directors Dick Smit and Wim van Beelen, who was subsequently replaced by Piet Verschure on his retirement. Through Gusto, the range of products now offered by IHC expanded beyond dredgers to

by four metres before construction of the shipbuilding facilities could begin, its position on the Nieuwe Waterweg provided the firm with a direct link to the North Sea. This new plant was also given the name Werf Gusto. The undeveloped site provided a blank canvas on which to create state-of-the-art facilities. In particular, the company wanted the new yard's facilities to be laid out so that they would enable a smooth flow of materials to different production areas and provide a comfortable working environment for the employees. To achieve these goals, Gusto pioneered the technique of prefabricating small sections of a ship within the yard's two 140 x 52 metre assembly halls. Each building was fitted with several overhead electric cranes, to maintain the flow of production before the ships took

shape on one of the yard's five slipways (including two which measured 180 metres long x 17 metres wide). As August Smulders pioneered the efficient layout of a modern shipyard, his sons Henri and Frans were focused on winning contracts to build sophisticated specialized vessels for which it could charge a premium. Early examples of this lateral thinking include its pioneering of floating cranes both with and without their own propulsion, as well as mechanized coaling vessels. Fortunately, the development of floating cranes turned into a more sustainable market. Gusto had secured its first such order in 1900, when it was commissioned by the Hamburg-based company Schuback to build a fixed floating crane capable of lifting 80 tons.



By 1962 it was becoming clear that IHC-Holland's legal structure involved risks as the value of new orders became larger and the partners were each fully and jointly liable for the handling of these obtained orders. Another risk was that jointly obtained orders were split between the yards regardless of the technical





encompass self-elevating platforms for drilling or civil engineering, pipe laying vessels, heavy floating cranes and single-buoy mooring systems, while Gusto's 33 percent share holding in the French drilling contractor Foramer also brought access to the offshore drilling business, which until shortly before the merger had been declined by the other partners. In the United States, the oil industry was very excited by the offshore discovery and, before long, a number of companies were commissioning projects in the Gulf of Mexico. This in turn triggered a sustained period of technological advancement, as engineers developed a wealth of innovative products for the new environment, including semi-submersible platforms, jack-up drilling rigs, crane barges and pipe laying barges. From the late 1950s onwards, Gusto played an increasing role in the development, design and construction of all these products. The good contacts which August Smulders junior (Dipl.Ing. E.T.H. Zurich), a grandson of the company's founder August Frans Smulders, had with Shell opened the doors for the Gusto Shipyard to become a pioneer in the market of the Oil&Gas industry. When summarizing the relationship style, August used to say "when going to The Hague, always hold your hat in your hands but when going to London, make sure you take your shoes and socks off as well". He nonetheless used his good relations very effectively and secured orders for offshore engineering development work, which on several occasions led to supply contracts.

In 1958 Shell commissioned Gusto to undertake an engineering study to develop a jacking system which would not infringe the existing patents held by DeLong and LeTourneau. The year after, as a follow up to this work, the oil company contracted Gusto to build the first jack-up platform for the offshore industry to be made outside America. Shell planned to deploy the distinctive eight-leg drilling platform SeaShell offshore Qatar, and use it to drill in waters up to 30 metres deep. Although three or four legs would have been sufficient to support SeaShell's weight, August, and his technical friends from Shell, were very focused on the design of a "safety first" platform, and therefore opted for a total of eight, split into four pairs of two, placed relatively close together. In those days, operational experience was still very limited, and it was reassuring that such redundancy would make the platform more secure in the event of scouring around the legs, as often happens in shallow waters near the coast. Thanks to Gusto's reputation, the French Drilling Contractor Forasol contacted the Gusto Yard in 1964 to participate for 50% in a new Offshore Drilling Company to be named Foramer. The investment being on the high side for Gusto alone, Gusto tried to interest its other IHC-Holland partners to invest as well but since the other five had no knowledge of the Offshore Industry this offer was politely declined. Gusto settled for a participation of 33%. This resulted in an order for the first 5 legged drilling jack-up, the "Ile de France".

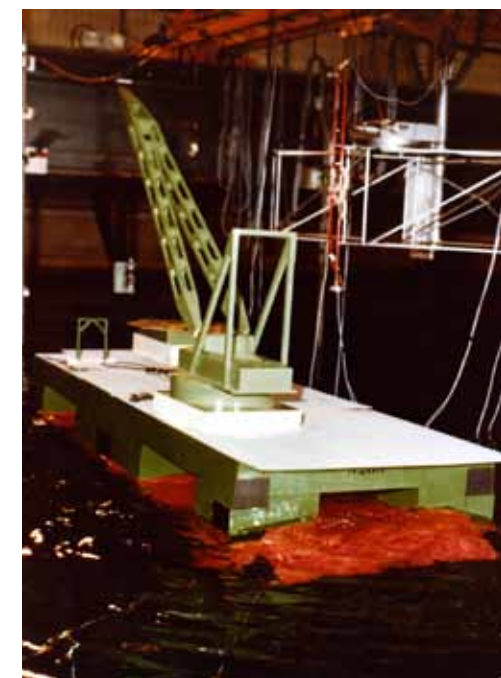
The hydraulic jacking system developed and patented by Gusto for the construction of SeaShell became a real success for the company. Between 1959 and the yard's closure in 1977, a total of seven jack-up rigs for offshore drilling and eighteen jack-up platforms, mainly for civil engineering purposes, were completed.

In the 1970s IHC Gusto pioneered the construction of the first DP drillship. Foramer's opportunity to secure a long-term drilling contract for a self-propelled drillship from Compagnie Francaise de Pétrole triggered the development of the world's first computer-controlled, dynamically positioned drillship, Pelican. Previously, drillships had relied on anchors to remain in the correct position. Gusto, however, developed a computer-controlled positioning system that used seven variable pitch propellers to hold the ship in the required location, using the axis of the drilling well as the datum point. Two of the propellers were mounted longitudinally, and were also used for propulsion. To allow drilling to continue even in bad weather, Gusto developed a swell compensation system which was inspired by the suction pipe heave compensators of the trailing suction hopper dredgers. Two of these systems were installed on top of the derrick to keep the drill string and riser under tension whenever the vessel started to heave because of the swell. After delivery of the Pelican another dozen vessels followed.

In 1972, IHC's offshore division formed Viking Jersey Equipment Ltd as a joint venture with the Heerema Group and other investors to

lay pipelines from the North Sea's oil and gas fields to the adjacent countries. In order to have the appropriate equipment, Viking commissioned IHC Gusto to build the 167 metre semi-submersible lay barge Viking Piper, to a basic design by R.J. Brown & Associates. As the forerunner of the third generation lay barges, Viking Piper was able to lay a larger diameter pipe at greater speed in deeper waters and under worse weather conditions than was previously possible with conventional lay barges. This was due to her stable semi-submersible hull design, and computer controlled winch system. After three decades of service, the Viking Piper is still in use, although it now has a different owner.

Another red line through the history of Gusto Shipyard is the design and construction of heavy lift cranes. Starting in the early 1930s, the big step change came in the late 1960s. Offshore production platforms had to be installed and the first crane order was placed in 1967. The long-lasting relationship with Heerema was cemented starting with the 800 ton rotating crane for the Heerema vessel Challenger and later followed by the delivery (under license) of the two cranes of 2,000 and 3,000 tons each for the Hermod and the Balder.



In the early 1970s the Offshore Industry really took off, requiring new and innovative equipment. IHC Gusto's Product Development Group (PRODO) could really prove its worth. New products such as the ELSBM and SPAR were designed, again in close cooperation with Shell. The initial SPAR design started in 1968 and the first Brent SPAR was installed and became operational in 1976.

At that time the European shipbuilding industry was in crisis, and the Dutch government decided to shrink shipyard capacity in order to reduce the costs of subsidizing new contracts. IHC-Holland had to reduce its manhour capacity by 30%, resulting in the closure of the Gusto shipyard (1978) and shifting its engineering team - under the name of Gusto Engineering - to the Rijn Schelde Verolme group which had important large dry dock facilities in the Rijnmond area. In 1977, some of the Project/Design Team and R&D engineers left the Gusto Shipyard and formed an independent design and engineering company named Marine Structure Consultants (MSC) BV. In 1978 the shipyard closed and Gusto Engineering was founded. When the Gusto yard was closed, IHC-Holland shifted the 3 remaining shipyards into a "NEW" IHC-Holland and sold the majority of the shares to the Dutch government to bear the future losses and changed its name to Caland Holdings N.V. with a listing on the Amsterdam stock exchange. The SBM group of companies, the 33% participation in the French Offshore Drilling company Foramer and several other profitable investments were brought into a new holding called IHC Inter N.V., also with a listing in Amsterdam. When in the early eighties the Rotterdam based company Pakhoed N.V. made a hostile bid for the shares of IHC-Inter N.V., management proposed a merger with Caland Holdings in order to defend its independency. The combination became IHC Caland N.V., which proved to be too big a morsel for Pakhoed to swallow.

By 1988 IHC Caland had repurchased all the shares of Gusto Engineering and Marine Structure Consultants (MSC) and in 1991 it

gained control over the "NEW" IHC Holland group through a rather complicated financial structure.

This structure lasted until 2005 when, due to heavy losses, IHC Caland got rid of its dredging/shipbuilding activities and changed its name (again!) to SBM Offshore N.V.

Back to the history of GustoMSC with a short overview of their recent activities. In 2002, Gusto Engineering and MSC agreed to set up an alliance, GustoMSC, for joint marketing activities. As the US was seen as a prime market, the Ocean Design Associates Group (ODA) was purchased and merged with the GustoMSC foothold in Houston. From that moment the GustoMSC organization has had two offices: in Schiedam and Houston.

In 2011 GustoMSC B.V. has been formally established. Both companies are now operating under one name and concentrating on design and engineering services for third parties. Also SBM Offshore created SBM Schiedam as an execution centre for SBM activities. Arriving in 2012, the 150th anniversary of Gusto, GustoMSC is a major player in the mobile offshore market. We have recognized the three development phases of offshore oil and gas fields, being the exploration, construction/ installation and production phase, and our proprietary designs of jack-ups, semi-submersibles and vessels follow these markets. GustoMSC has a leading role in the exploration market, with over 100 units delivered to date and a further 34 units of our designs under construction.

The name of GustoMSC is already well established in the upcoming market for offshore renewable energy, more specifically in the offshore wind farms. At this moment there are many European offshore wind farms in the process of construction and installation. Jack-up platforms and heavy lift vessels are being used, but dedicated self-propelled, DP2 jack-up installation vessels are also entering the scene. GustoMSC is the prime designer of these vessels and is playing a highly significant role.

