Delivery of mv "Zita Schulte" - 12,000 m³ gas carrier



SMC is pleased to report delivery in STX Offshore & Shipbuilding, Korea: of mv "Zita Schulte", Hull No. S4035, the fifth unit from the series of $6 \times 12,000$ m³ ethylene/LPG/NH3/VCM gas carrier ordered by Ultragas-Europe.

Vessel's principal particulars: LOA = 146.2 m, B = 22.6 m, D = 12.1 m, T d/s = 7.4/9.3 m. Propelled by STX MAN 6S40ME-B9.1 and developing 6,129 kW x 141 rpm at NCR, the vessel will operate at the speed of 16.4 knots. All vessels in the series are classed by DNV GL and will be built to Isle of Man flag requirements.

Classification notes: +1A1 Tanker for liquefied gas, Ship type 2G (-104 deg C, 972 Kg/m3, 5.0 bar), E0, TMON, BIS, COAT-PSPC(B), BWM-E(S) & BWM-T, ICE-C1.



Delivery News

The vessel will be chartered by UNIGAS POOL PARTNERS.

Delivery of mv "Interlink Fortuity" - 38,800 DWT bulk carrier

SMC is pleased to report delivery in Taizhou Kouan Shipbuilding Co. Ltd, China: of mv "Interlink Fortuity", Hull No. TK1017, the tenth unit from the series of 13 x Green Dolphin 38,800 DWT bulk carriers ordered by Marine Capital Corporation, Bermuda.

Vessel's principal particulars: LOA = 180.0 m, B = 32.0 m, D = 15.0 m, T d/s = 9.5/10.5 m. Propelled by MAN 5S50ME-B9.3 Tier II engine and developing 4,575 kW x 89.9 rpm at CSR, the vessel will operate at the speed of 14 knots at 9.50 draft. All vessels in the series are classed by Lloyd's Register and will be built to Marshall Islands flag requirements.

Classification notes: LR +100A1 Bulk Carrier, CSR, BC-A, Hold Nos. 2, 4 may be empty, Grab [20], ESP, Ship Right (CM, ACS(B,D)), *IWS, LI, ECO(P, BWT, EEDI, IHM), Ice Class 1C FS. + LMC, UMS; With Descriptive notes: Ship Right ((BWMP (F,T), SCM, SERS).

The construction commenced with Steel Cutting on 2nd Mar 2015 followed by the erection starting in slipway on 26th Jan 2016. The Ship launched on 14th May 2016 and the sea trial completed successfully on 19th Apr 2017. BSM HK took the ship after Delivery Signing Ceremony on 18th May 2017 which was attended by Ship Owners, Class Surveyors, SMC and Shipyard representatives.

The ship sailed out from shipyard on 19th May 2017.



Another floating dry dock for SMC



Vigor, an innovator in complex fabrication, a specialized shipbuilder and a ship repair powerhouse in the United States, has entered into an agreement to purchase a floating dry dock from a South Korean seller. The floating dry dock will undergo extensive repairs before it's ready to tow to its new home at Vigor's facility in Seattle, Washington.

SMC has been involved in this project since last December, acting in a

similar role for another potential buyer who decided not to go ahead with the purchase. This preparatory work was not without its rewards as SMC have been awarded the supervision service to the new buyers for the entire period from pre-purchase to sailing out of the Chinese yard for the tow to Seattle.

The drydock is currently under pre-towing preparation in Korea, before it can be towed to China shipyard for overhaul and repairs. The preparations work may take up to three months, a two-week towage and the repair work take a further three months.

SMC has valuable experience on floating dry dock supervision with three floating drydock newbuilding projects over the past 12 months – one is successfully delivered and the other two under construction. This repair and reactivating work strengthens SMC's experience in this area.

Dry Dock Principal Characteristics Length: 640 FT (198 Mtrs) Clear Width: 116 FT (35.4 Mtrs) Lift Capacity: 20,000 LT (20,321 T)

Safety First, Last & Always

Control the SOx in the Exhaust with a Scrubber System



Scrubbers are designed to reduce the SOx in the engine and boiler exhaust.

An open loop scrubber system is based on the same technology as that used in well-known inert gas systems and been used for more than 50 years. The system in an open loop utilities seawater to remove SOx from the exhaust.

Exhaust gas enters the scrubber and is sprayed with seawater in three different stages. The SOx in the exhaust reacts with water and forms sulphuric acid. Chemicals are not required since the natural alkalinity of seawater neutralizes the acid.

Wash water from the scrubber is treated and monitored at the inlet and outlet to ensure that it conforms with the MEPC 184(59) before being discharged

Steve Nolan Technical Manager Schulte Marine Concept



into the sea with no risk of harm to the environment.

The closed loop scrubber system works in a similar way, however, the wash water is recycled (via a cooler), in a closed loop scrubber system, the exhaust gas enters the scrubber and is sprayed with sea water that has been mixed with caustic soda (NaOH, Alkali). The SOx in the exhaust react with this mixture and are neutralized. Wash water from the scrubber enters a process tank and a treatment unit which takes out the solids and foreign particles to a tote sludge tank. The treated water is cooled and reused in the washing process. Cleaned effluents can be safely discharged overboard with no harm to the environment.

If operation in zero discharge mode is requested, the effluent can be sent to a holding tank for scheduled periodical discharge so you don't need to worry about sea water alkalinity levels. The holding tank can be discharged into the sea or to shore facilities. This system is best suited for full time operation in low alkalinity areas (e.g. Great Lakes).

There is also a hybrid solution. These solutions have the flexibility to operate in both open and closed loop. This provides a flexibility of operation in low alkaline waters as well as the open ocean. The hybrid approach enables operation in closed loop mode when required, for instance whilst in port and during maneuvering using NaOH as a buffer. The system can be operated in zero discharge mode for a limited period. When at sea the switch can be made to open loop using only seawater.

SMC forays in to a new area of expertise of constructing military floating dry docks

Safety First, Last & Always







With the induction of a 55,000 lift capacity US navy certified floating dry dock in May 2017 by BAE Systems, SMC convincingly establishes a lead in the industry for technical management of military floating dry dock projects.

BAE (British Aerospace Engineering) systems, USA, as part of their 100 million capability expansion program, ordered this floating dock in February 2015 and hired Schulte Marine Concept for plan review and supervision services. On completion of construction and successful post-construction test and trials in China, the dock was disassembled and wet towed to USA west coast, which took about 45 days. Re-assembly of the dock and commissioning took place at their ship repair facility in San Diego, California for which BAE once again, contracted SMC's services.

The floating dry dock, named 'Pride of California', is a new generation military floating dry dock with an environmentally responsible design to meet stringent laws in California. It has two all-electric wing wall cranes, storm water

collection system, environmentally friendly underwater paint system, energy efficient LED lighting system and a closed loop salt water fire protection.

According to Managing Director of SMC, Mr Krzysztof Kozdron, SMC's extensive experience in managing large and complex technical projects has been called for by the project's main challenge of adaptation of a US design to ship construction standards in China. SMC's contributions included careful substitution of local equivalent design standards, equivalent equipment, upgrading to environmentally friendly paint systems and working with the ship builder to ensure compliance with US design standards.

SMC's high-quality delivery yielded two more US military floating dry dock construction projects, construction on which is currently progressing.

