



# MATTERHORN EXPLORER: Very large gas carrier

Shipbuilder: ..... **Hyundai Samho Heavy Industries Co., Ltd.**  
 Vessel's name: ..... **Matterhorn Explorer**  
 Hull No: ..... **S977**  
 Owner/Operator: ..... **CCB Financial Leasing Co., Ltd / Trafigura**  
 Country: ..... **China/Switzerland**  
 Designer: ..... **Hyundai Samho Heavy Industries Co., Ltd.**  
 Country: ..... **Republic of Korea**  
 Model test establishment used: ..... **Hyundai Maritime Research Institute**  
 Flag: ..... **Singapore**  
 IMO number: ..... **9847425**  
 Total number of sister ships already completed (excluding ship presented): ..... **3**  
 Total number of sister ships still on order: ..... **nil**

## TECHNICAL PARTICULARS

Length oa: ..... 229.98m  
 Length bp: ..... 223m  
 Breadth moulded: ..... 32.25m  
 Depth moulded  
 to upper deck: ..... 23.2m  
 Width of double skin  
 side: ..... 1.68m  
 bottom: ..... 1.85m  
 Draught  
 scantling: ..... 12.1m  
 design: ..... 11.6m  
 Gross: ..... 46,668gt  
 Displacement: ..... 69,699 (at scant)  
 Lightweight: ..... 19,186t  
 Deadweight  
 Design: ..... 47,248t  
 scantling: ..... 50,513t  
 Block co-efficient: ..... 0.7788 (at scant)  
 Speed, service (– %MCR output): .. 16.8knots at design draught

Cargo capacity (m<sup>3</sup>)  
 Refrigerated cargo: ..... 80,000  
 Bunkers (m<sup>3</sup>)  
 Heavy oil: ..... 2,388.2  
 Diesel oil: ..... 274.2  
 Water ballast (m<sup>3</sup>): ..... 17,398  
 Daily fuel consumption (tonnes/day)  
 Main engine only: ..... 171.14g/kW·h (MCR)

Classification society and notations: ..... ABS  
 +A1, (E), Liquefied Gas Carrier with independent tanks, +AMS, +ACCU, SM, SHCM, FL(20), IMM, BWT, TCM, CPS, UWILD, RW, EGC-SCR, EGC-SOX, CIRC, SP, SC-PL+  
 % high-tensile steel used in construction:.. 81.77%  
 Main engine(s)  
 Design: .....Hyundai-B&W  
 Model: ..... 6G60ME-C9.5  
 Manufacturer: .....Hyundai Heavy Industries Co., Ltd.

Number: ..... 1 off  
 Type of fuel : .....HFO  
 Output of each engine: ..... 13,500kW  
 Propeller(s)  
 Material: .....Ni-Al-Bronze  
 Designer/Manufacturer: ..... Hyundai Heavy Industries Co., Ltd.

Number: ..... 1 off  
 Fixed/Controllable pitch: .....Fixed  
 Diameter: ..... 7,200mm  
 Diesel-driven alternators  
 Number: ..... 3 off  
 Engine make/type: ..... Hyundai Heavy Industries Co., Ltd.  
 Type of fuel: .....HFO  
 Output/speed of each set: ... 1,400kW / 900rpm

Alternator make/type: .....Hyundai Electric & Energy Systems Co., Ltd / HFC7 636-08P / 568-8P  
 Output/speed of each set: .....2,125KVA & 1,625KVA / 900rpm  
 Exhaust-gas scrubbing equipment  
 Manufacturer: .....Alfa Laval  
 Type: .....PureSox ECA open-loop hybrid prepared U-type system  
 On main engines?: ..... Yes  
 On auxiliary engines?: ..... Yes  
 Boilers  
 Number: ..... 1 off  
 Type: ..... OS-TCi  
 Make: .....Alfa Laval  
 Output, each boiler: .....4,300kg/h  
 Cargo cranes/cargo gear  
 Number: ..... 2 off  
 Make: ..... Dongnam Marine Crane Co., Ltd.  
 Type: ..... Electro-Hydraulic type  
 Performance: .....SWL 10t  
 Other cranes  
 Number: ..... 2 off  
 Make: ..... Dongnam Marine Crane Co., Ltd.  
 Type: .....Electro-hydraulic type  
 Tasks: .....Provision crane  
 Performance: .....SWL 5t, 2t  
 Mooring equipment  
 Number: ..... 8 off  
 Make: .....Flutek, Ltd  
 Type: ..... Hydraulic  
 Special lifesaving equipment (eg MES, free-fall lifeboats)  
 Number of each and capacity: .....1 off / 28 persons  
 Make: ..... Jiangyinshi Beihai LSA Co., Ltd.  
 Type: .....Free-fall lifeboat  
 Cargo tanks  
 Number: ..... 8 off  
 Grades of cargo carried: ..... Liquefied gas  
 Product range: ..... Butane (all isomers), Butane-propane mixture, Commercial propane, Propane, Propylene  
 Cargo pumps  
 Number: ..... 8 off  
 Type: ..... Vertical deepwell  
 Make: ..... Wärtsilä Svanehoj A/S  
 Capacity (each): ..... 600m<sup>3</sup>/h  
 Cargo control system  
 Make: ..... Kongsberg Maritime AS  
 Type: ..... PC-001  
 Ballast control system  
 Make: ..... KSB  
 Type: ..... Hydraulic and remote control  
 Water ballast Treatment System  
 Make: ..... ERMA First ESk Engineering Solutions  
 Capacity: ..... 800m<sup>3</sup>/h  
 Complement  
 Officers: .....13 persons  
 Crew: .....13 persons  
 Bridge control system  
 Make: .....KTE Co., Ltd.  
 Type: ..... Console  
 Is bridge fitted for one-man operation? ..... Yes

Fire detection system  
 Make: .....Consilium Marine AB  
 Type: ..... Unit of control panel  
 Fire extinguishing systems  
 Cargo holds: .....Dry powder  
 Make/Type: ..... Fain Co., Ltd / Chemical  
 Engine room: .....CO<sub>2</sub>  
 Make/Type: .. Fain Co., Ltd / high pressure  
 Cabins: .....Water spray system

Radars  
 Number: ..... 2 off  
 Make: .....Furuno Electric Co., Ltd.  
 Model(s) : .....FAR-3xxO

Waste disposal plant  
 Incinerator  
 Make: .....Hyundai Marine Machinery Co., Ltd.  
 Model: .....MAXI NG50SL WS  
 Sewage plant  
 Make: ..... IL Seung Co., Ltd  
 Model: ..... ISB-02  
 Contract date: .....22 December 2017  
 Launch/float-out date: .....29 October 2018  
 Delivery date: .....15 May 2019

Ordered in late 2017, the VLGC *Matterhorn Explorer* was handed over to commodity and energy trader Trafigura in May 2019 by Hyundai Samho Heavy Industries, as the first of a four-ship series. The quartet which includes *Eiger Explorer*, *Weisshorn Explorer* and *Dom Explorer* delivered in June, August and September respectively, are the second series of ships built to the same design but the first ordered by Trafigura in conjunction with Asian partners.

The order for the vessels came at the end of what was generally acknowledged as a difficult year in LPG trading, when the combination of new ship arrivals and a shortage of product halved average spot market rates. On the positive side for owners, newbuild prices in the sector were very attractive but rising.

*Matterhorn Explorer's* hull dimensions are designed around the old Panamax restrictions and are 229.98m length, 32.25m beam and 12.02m draught. The ship is fully refrigerated and has four tanks with a capacity of 80,000m<sup>3</sup>. It also has two deck storage tanks to hold the chemicals used for conditioning the cargo tanks. Cargo is pumped out by eight Svanehoj vertical deepwell pumps of 600m<sup>3</sup>/h capacity.

Traigura had decided before ordering the vessels that the 2020 sulphur rules would be met by installation of a scrubber that would serve the main engine, auxiliaries and boiler. The scrubber is an Alfa Laval PureSox open-loop hybrid ready model with multiple inlets.

The main engine is a MAN B&W ultra-long stroke type 6G60ME-C9.5 with an output of 13,500kW which with the 7.2m propeller and Hi-Fin cap fin and a rudder bulb, allows for an efficient propulsion system and a maximum speed of 16.5knots and a service speed of 13.5knots.

Compliance with NOx Tier III levels is achieved using a high pressure selective catalytic reduction system.

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