KMTC TOKYO: Feeder container ship

Shipbuilder: ...**Hyundai Mipo Dockyard Co., Ltd.**
Vessel's name: ..... ***KMTC Tokyo***
Owner/Operator: .....**Mitsui & Co., Ltd.**
Country: .....**Japan**
Designer: ...**Hyundai Mipo Dockyard Co., Ltd.**
Country: .....**Republic of Korea**
Model test establishment used: .....**FORCE Technology**
Flag: .....**Panama**
IMO number: **9848871**
Total number of sister ships already completed (excluding ship presented): **7**
Total number of sister ships still on order: **4**

KMTC Tokyo, which entered service in February, is the first ship of the new 1,800TEU feeder container ship design developed by Hyundai Mipo Dockyard under a project begun in 2016. The Con-Green project involved a partnership with MAN, DNV GL and others, to develop efficient and environmentally friendly feeder ships of varying sizes. The 1,800TEU design was not among the first proposed but the principals of the project team have been applied to this type.

Japanese owner Nissen Kaiun has ordered 12 of the type for charter to Korea Marine Transport Co (KMTC), which has also ordered more vessels of the same type for its own account. Orders by other owners mean that there are now more than 30 of the type in service or on order. Including *KMTC Tokyo*, six vessels were delivered to KMTC and a further seven vessels to other owners and operators in 2019.

KMTC Tokyo and its sisters feature a hull form with bulbous bow, transom stern, flush deck with forecastle and raised quarter deck, and an open water type stern frame. The ships dimensions are 172m loa, 27.43m beam and 9.8m draught. Nominal capacity is 1,809TEU of which 558 are under deck and 1,251 on deck.

The under deck arrangement allows for five tiers of containers including two tiers of 1.14m high boxes in nine rows athwartships, and seven tiers in 11 rows on deck. There are also 279 reefer points in total in holds 2 and 3, and on deck.

KMTC Tokyo is powered by a Hyundai-MAN B&W 6S60ME-C10.5 main engine capable of 11,960kW at 98.5rpm MCR and 10,764kW at 95rpm service rating allowing a speed of 18.5knots. The single FPP is a 6.6m diameter type. The attained EEDI value is 16 which is considerably below the 20.9 required value, proving that the aims of the Con-Green project have been achieved.

TECHNICAL PARTICULARS

Length oa:..... 172.07m
Length bp:..... 163.55m
Breadth moulded: 27.4m
Depth moulded: 14.3m
to main deck:..... 14.3m
to upper deck: 14.3m
to other decks:..... 16m (raised quarter deck)
Width of double skin
side: 2.17m
bottom: 1.55m
Draught
scantling: 9.75m
design: 8.75m
Gross: 17,853gt
Deadweight:
scantling: 22,444t
design: 18,576t
Speed, service (78.2%MCR output): abt. 19.9knots
Bunkers (m^3)
Heavy oil: 1,140
Diesel oil: 150
Water ballast (m^3): 6,790
Daily fuel consumption (tonnes/day)
Main engine only: 43.4
Classification society and notations: .....NK, NS*(CNC, EQ C DG, PSPC-WBT, NC)(PS-DA-CNC)(IWS) (PSCM)(IHM)(CSSA)(SDCL)(EA) MNS*M0
% high-tensile steel used in construction: 53.9
Heel control equipment: .....Anti-heeling pump system (in No.3 hold)
Propulsion
Design: .....Hyundai-MAN B&W 6S60ME-C10.5(Tier II)
Model: KAA006660
Manufacturer: .....Hyundai Heavy Industries Co., Ltd.
Number: 1
Type of fuel: .....HFO & MDO
Output of each engine: .... MCR –11,960kW x 98.5rpm / NCR – 10,764kW x 95.1rpm
Propeller(s)
Material: .....Ni-Al-Bronze
Designer/Manufacturer : .....Hyundai Mipo Dockyard/Hyundai Heavy Industries
Number: 1
Fixed/Controllable pitch: .....Fixed
Diameter: 6.6m
Boilers
Number: 1
Type: .....Vertical, cylindrical type
Make: ..... Kangrim Heavy Industries
Output, each boiler: 1,500/1,100kg/h
Stern appendages/special rudders: ..... Becker rudder
Bow thruster(s)
Make: ..... KTE
Number: .....1 Set
Output (each): .....1,000kW / AC 3,300V / 3Ø / 60Hz
Mooring equipment
Number: 4
Make: .....Flutek
Type: .....Elec-Hyd.
Special lifesaving equipment
Number of each and capacity: .....25 persons each
Make: .....Oriental
Type: ..... Gravity type
Hatch covers
Design: ..... MacGregor
Manufacturer : ..... MacGregor
Type (upper deck/other decks) : ..... Pontoon (lift away)
Containers
Lengths: 6,058m
Heights: 2,591mm
Total TEU capacity: 1,809TEU
On deck: 1,251TEU
In holds: 558TEU
Homogeneously loaded to 14tonnes: 1,250TEU
Tiers/rows (maximum)
On deck: ..... 7 / 11
In holds: ..... 5 / 9
Ballast water treatment system
Make: ..... Miura
Capacity: ..... 300m^3/h
Complement
Officers:..... 10
Crew:..... 11
Suez/Repair Crew:..... 6
Single/double/other rooms: 21/0/1
Navigation and other equipment
Bridge control system
Make: ..... HHI
Integrated bridge system?: .....No
Radars
Number: .....2 sets
Make: ..... JRC
Model(s) : .....JMR-9230-S (S-Band) & JMR-9225-6X (X-Band)
Fire detection system
Make: ..... Autronica
Type: ..... Autroprime fire alarm system
Fire extinguishing systems
Cargo holds: ..... High pressure CO_2 system with smoke detection system / sea water
Make/Type: ..... NK/CO_2 (High pressure CO_2 sys.)
Engine room: ..... High pressure CO_2 system / sea water / portable / fixed local fire extinguishers
Make/Type: .....NK/CO_2 (high pressure CO_2 sys.). NK/dry powder, foam, CO_2 (fire extinguishers)
Cabins: .....Portable fire extinguishers
Make/Type: .....NK/dry powder, foam, CO_2
Public spaces: .....Portable extinguishers
Make/Type: .....NK/dry powder, foam, CO_2
Efficiency
Attained EEDI value: 16.0
Required EEDI value: 20.9
Energy Saving Technologies*: .....Becker rudder

Contract date: .....28 December 2017
Launch/float-out date: .....7 December 2019
Delivery date: .....28 February 2019

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