

# DOLE MAYA – Reefer container ship



Source: Port Tampa Bay

Shipbuilder: .....CSSC Chengxi Shipyard  
Vessel's name: .....Dole Maya  
Owner/Operator: .....Ventura Trading Ltd  
Country: .....United States  
Designer: .....Shanghai Merchant Ship Design & Research Institute, CSSC (SDARI)  
Country: .....China  
Model test establishment used: .....Shanghai Ship & Shipping Research Institute  
Flag: .....Bahamas  
IMO number: .....9877729  
Total number of sister ships already completed (excluding ship presented): .....2

**D**esigned specifically for the US fruit and vegetable trade from Latin America by SDARI, *Dole Maya* is a 195m loa 32.20m beam reefer container vessel and one of a pair ordered by Dole. *Dole Maya* was delivered by CSSC Chengxi Shipyard in January and its sister *Dole Aztec* five months later.

The hull form is a conventional one for the vessel type with a bulbous bow and a transom stern. They are fully cellular vessels equipped with three MacGregor hydraulic cranes of 45tonne lift capacity at 28m.

Cargo capacity is nominally 2,336TEU although for reefer vessels it is more normal to discuss in 40ft or FEU capacity. *Dole Maya* can accommodate a total of 1,012FEU – 447 under deck and 565 above deck. A further 312TEUs can be accommodated on deck. At a homogenous 25tonne box weight, capacity is 988FEU. With 919 reefer plugs available 80% of the ships total capacity is covered. The reefer containers under deck are cooled by fresh water, this greatly reduces the number of ventilation fans, electric power load, noise and CO<sub>2</sub> emissions.

The main engine is MAN B&W 7G60ME-C9.5 type with a power output of 18,760kW at 97rpm. For propulsion purposes it is directly linked to a 7m diameter controllable pitch propeller for a service speed of 19.7knots at design draught. Reefer vessels have a high power demand for cooling boxes and to cover this the vessel is fitted with four gensets based on MAN 7L27/38 medium-speed diesels each producing 2,310kW at 720rpm.

To meet SOx rules, an Andritz hybrid scrubber has been fitted treating the exhaust of the main engine and all four auxiliaries.

## TECHNICAL PARTICULARS

Length oa: .....195.00m  
Length bp: .....185.00m  
Breadth moulded: .....32.20m  
Depth moulded: .....17.00m  
Width of double skin  
side: .....2.10m  
bottom: .....1.65m  
Draught  
scantling: .....11.50m  
design: .....10.50m  
Gross: .....28,780t  
Displacement: .....47,430.1t  
Lightweight: .....13,366.0t  
Deadweight  
scantling: .....3,406.4t  
design: .....28,816t

Block co-efficient: .....0.656 at design draught  
Speed, service (85%MCR output): .....19.7knots at 85% MCR with 15% SM

Cargo capacity (m<sup>3</sup>)  
Bale: .....447  
Refrigerated storage: .....444  
Bunkers (m<sup>3</sup>)  
Heavy oil: .....1,994  
Diesel oil: .....875  
Water ballast (m<sup>3</sup>): .....12,630  
Container ships – water ballast in loaded condition (tonnes): .....6,420 at 25t homogeneously loaded at scantling draught  
Daily fuel consumption (tonnes/day)  
Main engine only: .....63.1, Tier II  
Auxiliaries: .....28.6, Tier II  
Classification society and notations: .....DNVGL + 1A Container Ship, CMON, COAT-PPSPC(B), BIS, EO, LCS, NAUT(NAV), Clean(Tier III), ER(SCR, EGR, TIER III, EGCS Hybrid), BWM(T), Recyclable, TMON(Oil lubricated), DG(P)  
Heel control equipment: .....1 pair  
Anti-heeling tank

Propulsion  
Main engine(s)  
Design: .....MAN B&W  
Model: .....7G60ME-C9.5-EGRBP  
Manufacturer: .....CSSC-MES Diesel Co., Ltd  
Number: .....1  
Type of fuel: .....HFO & MGO  
Output of each engine: .....18,760kW  
Is this a diesel-electric or hybrid?: .....N  
Propeller(s)  
Material: .....Ni-Al Bronze Cu3  
Designer/Manufacturer: .....SDARI  
Number: .....1  
Fixed/Controllable pitch: .....CPP  
Diameter: .....7,000mm  
Speed: .....97rpm (MCR)  
Diesel-driven alternators  
Number: .....4  
Engine make/type: .....CSSC Marine Power Co., Ltd / MAN 7L27/38  
Type of fuel: .....HFO & MGO  
Alternator make/type: .....ZhenJiang China Marine-XianDai Generating Co., Ltd / HFC6 564-84K  
Output/speed of each set: .....2,310kW / 720rpm

Exhaust-gas scrubbing equipment  
Manufacturer: .....Andritz  
Type: .....Hybrid  
On main engines?: .....M/E 85%SMCR (CSR)  
On auxiliary engines?: .....3 sets G/E at 85% load

Boilers  
Number: .....1  
Type: .....1 × composite boiler  
Make: .....Jiujiang-Mitsubishi Marine Boiler  
Output, each boiler: .....oil fired section: 2,500kg/h; exhaust gas section: 2,000kg/h

Stern appendages/special rudders: .....single rudder with bulb

Bow thruster(s)  
Make: .....Nakashima Propeller Co., Ltd  
Number: .....1  
Output (each): .....1,200kW

Deck machinery  
Cargo cranes/cargo gear  
Number: .....3

Make: .....MacGregor  
Type: .....Hydraulic Crane Type GL4528/3930.5-2  
Performance: .....45/39t  
Other cranes  
Number: .....1  
Make: .....Ningbo Kairong Ship Machinery Co., Ltd  
Type: .....Electric Provision Crane  
Tasks: .....Provision handling  
Performance: .....SWL 7t @ 4m outreach  
Mooring equipment  
Number: .....8  
Make: .....TTS Marine  
Type: .....Electric  
Special lifesaving equipment  
Number of each and capacity: .....30 person  
Make: .....Jiangyin Neptune Marine Appliance Co., Ltd  
Type: .....6.7m totally enclosed free fall life boat

Cargo/capacity  
Hatch covers  
Design: .....Brightseas Ships Equipment Co., Ltd  
Manufacturer: .....Chengxi Shipyard Co., Ltd  
Type: .....Upper Deck  
Containers  
Lengths: .....20ft, 40ft, 45ft  
Heights: .....8ft 6in, 9ft 6in  
Cell guides: .....40ft container of 40'(L) x 8'(W) x 9'6"(H) ISO container  
Total TEU capacity: .....312TEU/1,012FEU  
On deck: .....312TEU/565FEU  
In holds: .....0TEU/447FEU  
Homogeneously loaded to: .....25tonnes/FEU: 988  
Reefer plugs: .....919  
Tiers/rows (maximum)  
On deck: .....8 tiers / 13 rows  
In holds: .....6 tiers / 11 rows  
Hold refrigeration system: .....cooled by fresh water

Doors/ramps/lifts/moveable car decks  
Number of each: .....Sliding pilot side door (2)  
Type: .....Hydraulic  
Designer: .....Wuxi Dongzhou Marine Equipment Co., Ltd

Cargo tanks  
Number: .....5  
Grades of cargo carried: .....Containers  
Ballast control system  
Make: .....Panasia  
Type: .....GloEn-P500  
Ballast water treatment system  
Make: .....Panasia  
Capacity: .....500  
Complement  
Crew: .....25  
Suez/Repair Crew: .....6  
Single/double/other rooms: .....1 cabin for pilot  
Navigation and other equipment  
Bridge control system  
Make: .....Dongze  
Is bridge fitted for one-man operation? .....N  
Integrated bridge system: .....N

Radars  
Number: .....2  
Make: .....Furuno  
Model(s): .....FAR-2338SW, FAR-2328W

Fire detection system  
Make: .....Apollo  
Type: .....Syncro

Fire extinguishing systems  
Cargo holds: .....CO<sub>2</sub>  
Engine room: .....CO<sub>2</sub> and fixed water-based local applicatopm fire fighting  
Make/Type: .....NK Co. Ltd/DESMI

Waste disposal plant  
Sewage plant  
Make: .....Wärtsilä Water Systems Ltd  
Model: .....STC06-13

Efficiency  
Attained EEDI value: .....16.37g-CO<sub>2</sub>/tonne-NM  
Required EEDI value: .....19.25g-CO<sub>2</sub>/tonne-NM  
Energy Saving Technologies: .....single rudder with bulb  
Hull coatings: .....Antifouling paint

Contract date: .....07 January 2019  
Launch/float-out date: .....June 2020  
Delivery date: .....20 January 2021



