Fact Sheet | Brassavola

Brassavola will be Singapore's largest LNG bunker vessel (Photo: MOL, Pavilion Energy, Sembcorp Marine, all rights reserved)

Vessel type	:	LNG Bunker Vessel
Vessel name	:	Brassavola
Place of build	:	Singapore, Sembcorp Marine Tuas Boulevard Yard
Hull number	:	J420004
Date of keel laying	:	April 18, 2020
Date of launching	:	April 4, 2022
Classification	:	Bureau Veritas
Port of registry	:	Singapore
IMO number	:	9880764
Length	:	116.50 m
Breadth	:	22.0 m
Depth	:	13.220 m
Gross tonnage	:	12,123
Net tonnage	:	3,571
Complement.....	:	20 persons
Number of decks	:	Four (4)
Cargo capacity.....	:	12,000 m^3
Number of cargo tanks	:	Two (2)
Cargo containment system	:	GTT Mark III Flex
Boil-off rate	:	0.185%
Number of cargo holds	:	Two (2)
LNG bunkering rate.....	:	2,000 m^3/hr
Engine manufacturer & type	:	Wartsila 9L20DF (Dual fuel)
Number of generator engine.....	:	1,665 kW x Three (3)
Number of thrusters.....	:	Azimuth x Two (2), Bow x One (1)
Service speed	:	11.5 knots

Cargo Containment System

GTT Mark III Flex (Type of membrane containment system: MARK III FLEX. The boil-off rate (BOR) considered for design purposes is equal to 0.185% per day of methane. Mark III technology is a cryogenic liner used to contain liquefied gas at low temperatures during shipping, onshore and offshore storage, at atmospheric pressure. The insulation solution provided by the Mark III Flex Cargo Containment System reduces the daily guaranteed boil-off gas (BOG).

Ship to Ship Bunkering System

Pressure reduction system to optimise bunkering operations of 'Type C' tank vessels under all conditions. Also, Electric Bunker Delivery Notes (e-BDN) is available.

Subcooler Plant

Injecting subcooled liquid inside the tanks and reliquefying the BOG exiting the tanks are solutions to return the LNG back to cargo tanks compensating for heat ingress. The process allows free vapour to return during the LNG bunkering operation without LBV's GCU/Boiler Burning. The LNG subcooler plant also maintains the temperature and pressure of LNG at low levels. LNG is transferred from cargo tanks 1 & 2 by stripping spray and fuel gas pumps to the LNG subcooler. Thereafter, LNG is subcooled and sent back to the cargo tanks by dedicated LNG return lines via educators or spraying nozzles. In Laden condition, the subcooled LNG is sent back through mixing educator inside liquid phase to achieve maximum efficiency. Spraying will be used during bunkering operations, in order to reduce pressure of vapour header and cargo tanks when the vapour is sent back to the bunker vessel.

Ballast Water Treatment System (BWTS)

Brassavola is fitted with the Semb-Eco LUV Ballast Water Management System (BWMS), the world's first Ultra-Low Frequency (ULF) ballast water treatment system. A chemical free solution, it treats ballast water efficiently using a two-stage process of filtration, UV irradiation and patented ULF waves generated by a Biofouling Control (BFC) unit. The synergy between the BFC and UV results in a more effective disinfectant treatment with very low power consumption. The Semb-Eco LUV BWMS is the first system of its kind that is researched, developed, manufactured and factory tested in Singapore. It carries the IMO type-approval certification issued by the Maritime and Port Authority of Singapore. The system is both land-based tested by IMO and USCG accredited facilities.

****