# 43000 DWT BULK CARRIER – POCKET PLAN

43,000 DWT worldwide service, 5 holds, with wide hatches, eco-friendly, fuel-efficient double-skin, dual deadweight bulk carrier, with service speed 13.00 knots fully loaded, equipped with electronic MAN 5S 50ME – B9.3 two stroke diesel engine with part load tuning for low load operations, BWTS, cargo hold washing and 4 sets 30t SWL hydraulic level luffing cranes, 4x Sets of Peiner Electro-hydraulic Grabs with 15 mt payload and hydraulically operated folding type hatch covers.



### **OUTLINE PARTICULARS**

### TYPE OF VESSEL

Single screw motor driven double skin bulk carrier, capable of carrying dry bulk and break-bulk cargoES, such as coal, bauxite, phosphates, iron ore, coke, cement, grain including soya, soya bean meals, salt, sugar, fertilizers, steel products (sheet, rolls, coils, pipe), bagged cargoes and cargoes of BC Code class: 4.1, 4.2, 5.1, 8 and 9

### FLAG AND HOME PORT OF VESSEL

Flag: Marshall Islands, Home Port: Majuro

### CLASSIFICATION

ABS 1A Bulk carrier BC (A) BIS BWM(E(s, f), T) Clean COAT-PSPC(B, D) CSR E0 ESP, AMS, ACCU, CPS-B, CPS-D, Grab(25 t) Holds(2,4) may be empty LCS Recyclable TMON (oil lubricated) Additional notations: BWE, BWT, CRC (1), ENVIO, IHM, RRDA, TCM, UWLD

### PRINCIPAL DIMENSIONS

Length O.A.	189.99 m
Length B.P.	186.65 m
Breadth Mld.	30.00 m
Depth Mld.	14.99 m
Designed Draft Mld.	9.50 m
Scantling Draft Mld.	10.70m

### HOLD DIMENSIONS(Footprint)

Hold 1 (trapezoid)	Wsmaller=9.4m, Wbigger=22.4m, L=26m
Hold 2	W=22.4m, L=33.6m
Hold 3	W=22.4m, L=24m
Hold 4	W=22.4m, L=33.6m
Hold 5 (trapezoid)	Wsmaller=11.4m, Wbigger =22.4m, L=21.6m

### HATCH SIZES

Hatch 1	16.8(L) x 16.0(W)
Hatch 2	24.0(L) x 20.8(W)
Hatch 3	19.2(L) x 20.8(W)
Hatch 4	24.0(L) x 20.8(W)
Hatch 5	19.2(L) x 20.8(W)

### LOADING DIMENSIONS

#### DEADWEIGHT:

At designed draft	abt. 37,000 metric tons
At the scantling draft	abt. 43,300 metric tons
Gross Tonnage	abt. 26,411
Net Tonnage	abt. 14,769

#### CAPACITY:

Cargo hold (grain)	55,299 m³
Cargo hold (bale)	53,247 m3
Ballast water (incl. clean WBT)	16,113 m³
Fuel oil	1300 m³
Diesel	136 m³
Fresh Water	292 m³

### DESIGN CONDITION

hatch cover Max Load

#### Max Tank Top Load

21,0 t/m2 for Cargo Holds No. 1, 3, 5 15,1 t/m2 for Cargo Holds No. 2, 4  $\,$ 

#### **Steel Coil Loading:**

 $25\ \text{mt}\ x\ 2\ \text{tiers},\ \text{coil}\ \text{length}\ 1.90\ \text{m},\ \text{diameter}\ 1.8\ \text{m},\ 4\ \text{rows}\ \text{of}\ \text{dunnage}$ 

2.2 t/m2

#### Cargo hold ventilation:

Natural/Electrical spark proof 30 000 M3/Hour/Hold

#### **Cement Holes:**

2 Per Hold fwd/ aft (700MM)

#### Bilge and Ballast system:

Ring main with remote hydraulically operated valves & stripping eductor of 1) Ballast 100 m<sup>3</sup>/ h. 2) Cargo hold Bilge 50 m<sup>3</sup>/ h. Centralized control for ballast, bilge and stripping valves in the Ballast Control Room.

Capacity of ballast tanks	(100%): 16114.6 m3
Ballast hold No.3:	10490.6 m3
Rate of ballasting:	2 pumps X 800 m3/hour each
Rate of deballasting:	2 pumps X 800 m3/hour each
Unpumpable quantity:	200.0 m3

#### **Ballast Water Treatment Plant:**

USCG approved BWT Plant, TECHCROSS electrolysis process (Electro-Clean System) type, 900 m3/hr capacity – 2 sets

Cargo hold washing: Fitted

#### SPEED AND ENDURANCE

Sea consumption about 13.0 knt on 17.0 mt/day ifo + 3.0 mt/day ifo auxiliaries

About 12.0 knt on 14.0 mt/day ifo + 3.0 mt/day ifo auxiliaries [Eco speed]

Port consumption idle about 3.0 mt/day ifo + 0.1 mt/day mgo

Working about 5.5 mt/day ifo + 0.1 mt/day mgo

### PROPULSION & AUX. MACHINERY

#### Main Engine

Make and model	MAN 5S 50ME-B9.3 – 1 set (IMO NOx Tier II compliant)
CMCR	6050 kW at 99.0 rpm
CSR (75% CMCR)	4750 kW at 91 rpm
Propeller:	Four (4) blades, solid fixed

#### **Electric Generator**

Main D. Generator	3 sets x abt. 680 kW each Daihatsu 6DK-20e
Emergency DG (MGO)	1 set x abt. 150 kW Cummins QSB 7-DM
Boiler (Insert type)	
Oil Fired Section	Composite boiler
Exhaust gas section for	Aalborg OC-TCi
M/E and 2 DGs	1.600 t/hr
	0.765 t/hr

#### CARGO HANDLING

4x IHI Electrohydraulic Cranes SWL 30 Mt Outreach 16 M (20 degrees) Fitted Between Holds 1-2, 2-3, 3-4, 4-5 on the center line.

4x Peiner Electrohydraulic Grabs 14/12/10/8/6 m3 max payload 15 mt

Hoisting time of gear: Hoisting –  $30t \times abt$ 19m/min, 24t x abt 19m/min,18t x abt. 24 m/min; 6t x abt. 50 m/min Luffing time of gear: Luffing -  $\leq 60c$ Slewing time of gear: Slewing - 0.8 rpm (at most)

Cargo hatch cover:

Steel folding type, weather tight double skin construction, hydraulically operated, grain and cement openings.

#### ACCOMMODATION

European type – Vacuum Toilets and shower

Complement:

Captain class	2
Senior Officer class	2
Junior Officer class	6
Rating class	13
Owner, Pilot	2
Total	25

Gymnasium fitted for 6 Suez Crew

Life saving equipment for persons 25

### AIR CONDITIONING SYSTEM

High velocity, single auct system

Design condition: Summer (outside) Summer (Inside) Winter (outside) Winter (inside)

35°C, 70% rel. humidity (RH) 25.5°C, about 50% RH -10°C 20°C, about 40% RH

### CORROSION PROTECTION

(PSPC COMPLIANCE FOR WBT)

Vertical & flat bottom SPC antifouling paint, Tin Free, 60-month guarantee

Top side	Pure Epoxy/Polyurethane
Deck	Pure Epoxy/Polyurethane
Cargo holds	Pure Epoxy paint
Hatch covers	Pure Epoxy/Polyurethane
Superstructure	Pure Epoxy/Polyurethane
Ballast water tanks	Pure Epoxy paint 60-month guarantee Sacrificial anodes in WBT
External hull	Impressed current cathodic protection

\*\*\* All details given in good faith and without guarantees. \*\*\*

## CHARACTERISTICS

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The	The following major characteristics shall be applied:			
•	Worldv Suez C	vide transportation including Panama and Canals	•	IMO approved Ballast Water Treatment Plants to treat ballast water during ballasting and de-ballasting.
•	Energy reduct	efficient design with projected EEDI ion of around 29.60% from IMO norms.	٠	Green Passport (IHM) implementation
٠	Fuel ef	ficient hull form	٠	EU & CARB compliance- MGO burning facility for main engine, generators, boiler at Port.
٠	Good I	evel of redundancy of critical equipment	•	Adaptability of fuel system on board for main engine & generators to be able to burn HFO grade 700 cst
•	Five (5 corrug	<ul> <li>i) Cargo holds all double skinned and ated bulkheads</li> </ul>	٠	Heavy fuel oil generators eliminating diesel oil consumption at sea
۲	Four w	ide hatches for easy spotting of cargoes	•	Centralized freshwater cooling system in engine room
•	Dange	rous cargo carriage facility in holds	۲	Independent shower and toilet units for officers and semiprivate units for ratings
•	Flexibi	lity of carrying various cargoes including:	•	Maintenance free refrigeration units for provision cabinets
•	-	Dry bulk and break bulk such as grain, metal concentrates, coal, iron ore, bauxite, salt, sugar, cement in bags and scrap metal	•	CO2 fire extinguishing system for cargo holds
•	-	General cargoes such as steel products, forest products, packaged freight and palletized cargo	٢	Natural ventilation for Cargo Holds
٠	-	High cubic Holds capacity allows different grades of cargo to be optimised	٠	Exhaust gas recovery for heating from DG no. 1 & 2 exhaust, even when the vessel is in port.
•	Strengthened for heavy cargoes – cargo hold tank top is strengthened for grab handling and forklift operations		٠	Corrosion-prevention features: IMO PSPC compliance for water ballast tanks
•	Part lo consur	ad tuning of main engine for fuel nption optimization	٠	Interactive ergonomic Bridge design
٠	"B" type freeboard – Drier decks in loaded condition		٢	Equipped with V-Sat & FBB and full GMDSS application
٠	Tank top strength – 21 t/m <sup>2</sup> (holds 1/3/5) & 15 t/ m <sup>2</sup> (holds 2/4)		٠	Monorail 4 T capacity for provision & engine room parts handling.
	Cargo	hatch cover uniform load of 2.2 tons/m <sup>2</sup>	٠	Embodies anticipated future legislation requirements
•	Alterna	ate loading in holds 1, 3 and 5	٢	Designed and constructed for long reliable service and optimum life-cycle cost
۲	Very lo	w WLTHC	٢	Vacuum toilet system for conservation of water
•	Pre sw propell	irl strator absorption fin for improved ler efficiency.	٢	Segregation for clean and dirty water ballast tanks