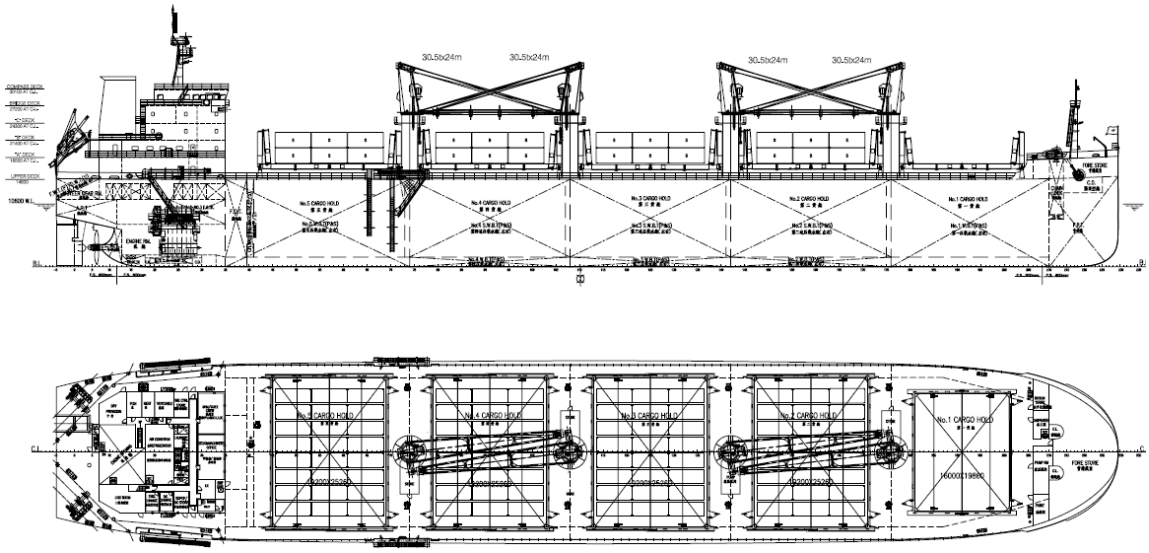
# 39000 DWT BULK CARRIER – POCKET PLAN

39000 DWT worldwide service, 5 holds, with open hatch, box shaped hold nos. 2/3/4, multipurpose dry cargo, ice class 1C, eco-friendly, fuel efficient double skin bulk carrier, with service speed 13.70 knots fully loaded , equipped with electronic MAN 5S 50ME – B9.3 two stroke diesel engine with part load tuning for low load operations , exhaust gas economizers for diesel generators, electric winches, BWTS, cargo hold washing and 4 sets hydraulic level luffing cranes and hydraulically operated folding type hatch covers.


**OWNER: INTERLINK MARITIME CORP., BERMUDA**
**BUILDER: ZHEJIANG ZENGZHOU SHIPBUILDING CO., CHINA**

**SUPERVISION: SCHULTE MARINE CONCEPT LTD, HONG KONG**

## GENERAL ARRANGEMENT



# OUTLINE PARTICULARS

## TYPE OF VESSEL

Single screw motor driven double skin bulk carrier, capable of carrying dry bulk and break bulk cargo, such as coal, bauxite, phosphates, iron ore, coke, grain including soya, soya bean meals, salt, sugar, fertilizers, steel products (sheet, rolls, coils, pipe), forest products in holds, bagged cargoes like cement and cargoes of BC code and dangerous class.
[Dangerous goods class:1.4S, 2.2, 2.3, 3.3, 4.1, 5.1, 6.1 (solids), 8 (solids), 9]

## FLAG AND HOME PORT OF VESSEL

Flag: Marshall Islands, Home Port: Majuro

## CLASSIFICATION

Lloyds Register of Shipping
LR + 100A1, BULK CARRIER, CSR, BC-A, {HOLDS No.2&4MAYBE EMPTY}, ICE CLASS 1C FS, GRAB[25], ESP, *IWS, LI, ECO(EEDI,IHM),SHIPRIGHT(ACS(B,D),CM), WITH THE DESCRIPTIVE NOTES:"SHIPRIGHT(SCM,BWMP(F, T),SERS)"

+LMC, UMS, SCM, SERS

## PRINCIPAL DIMENSIONS

| | |
|---|---|
| Length O.A. | 179.90 m |
| Length B.P. | 176.85 m |
| Breadth Mld. | 30.00 m |
| Depth Mld. | 14.80 m |
| Designed Draft Mld. | 9.50 m |
| Scantling Draft Mld. | 10.60m |
| Air draft in full load cond. | ~33.20m |

## HOLD DIMENSIONS(*Footprint*) (Lx B)

No.1: 26.8 x 12.14/25.26 m Breadth tapered

No.2: 27.2 x 25.26 m

No.3: 27.2 x 25.26 m

No.4: 27.2 x 25.26

No.5: 26.4 x 25.26/8.58 m Breadth tapered

## HATCH SIZES

No.1 Hatch: 16.0 m (l) x 19.86 m (w)
No.2-5 Hatches: 19.2 m (l) x 25.26 m (w)

Dist. From WL to top of hatch coaming: 10.0 m

## LOADING DIMENSIONS

### Deadweight:

| | |
|---|---|
| At designed draft | abt. 33,200 metric tons |
| At the scantling draft | abt. 39,000 metric tons |
| Gross Tonnage | abt. 24,900 |
| Net Tonnage | abt. 12,800 |
| Alternate hold loading | |

### Capacity:

| | |
|---|---|
| Cargo hold (grain) | 48,200 $m^3$ |
| Cargo hold (bale) | 47,000 $m^3$ |
| Ballast water | 16,600 $m^3$ * |
| Heavy fuel oil | 1,480 $m^3$ |
| Diesel oil | 100 $m^3$ |
| LSMDO / MGO | 180 $m^3$ |
| Fresh water | 160 $m^3$ |
| Drinking water | 160 $m^3$ |

* Ballast water (incl. clean WBT) for Heavy Ballast condition without any hold flooding.

## DESIGN CONDITION

### Upper deck hatch cover:

Uniform Load 3.0 $t/m^2$

### Upper deck:

Outside line of opening 3.0 $t/m^2$
Inside line of opening 3.0 $t/m^2$

### Tank Top:

Uniform Load 25 $t/m^2$

Strengthened for forklift 10 T SWL

### Steel Coil Loading:

Load 56 t (two tiers each of 28 t)
Length 2000 mm
Dunnage 5

### Grab weight:

Un-laden grab weight 25T

## SPEED AND ENDURANCE

Service speed at CSR power of M/E (4810 kW, 79.5% CMCR) at scantling draft of 10.60 m, abt. 13.70 knots.

Endurance at scantling draft moulded of 10.60 m, based on fuel (HFO 380 cst) daily consumption of about 21.0 t, fuel tank capacity of 1400 t and sea speed of 13.70 knots is abt. 22,000 nautical miles.

### Fuel Consumption (HFO 380 cst grade):

| | | | |
|---|---|---|---|
| Main Engine: | abt. | 20.9 t/day | @14.0 knots |
| | abt. | 18.1 t/day | @13.5 knots |
| | abt. | 15.9 t/day | @13.0 knots |
| | abt. | 14.0 t/day | @12.5 knots |
| 1 Elec. Gen: | abt. | 2.5 t/day | @sea load of 440 kW |
| *using MDO | abt. | 4.2 t/day* | @port, cranes working |
| | abt. | 1.80 t/day* | @port, w/o cranes |

## PROPULSION & AUX. MACHINERY

### Main engine:

| | |
|---|---|
| Make and model | MAN 5S 50ME-B9.3 – 1 set<br>(IMO NOx Tier II compliant)<br>Part load tuning, EGB |
| CMCR | 6050 kW at 99.0 rpm |
| CSR (~80% CMCR) | 4810 kW at 91.7 rpm |
| Propeller: | Four (4) blades, solid fixed pitch, aerofoil section keyless, nickel aluminium bronze casting |

### Electric generator:

Main D. Generator (HFO) 3 sets x abt. 600 kW each
Emergency DG (MGO) 1 set x abt. 120 kW

### Boiler (Smoke tube type):

| | |
|---|---|
| Oil fired section | 1.2 t/hr |
| EGE | 0.4 t/hr |
| EGE for DGs | |

## CARGO HANDLING

### Cargo gear:

Four (4) sets single electro-hydraulic wire luffing type jib cranes with provision for grab handling.

| | |
|---|---|
| Hoisting load | 30.5 t |
| Hoisting speed | 19 m/min |
| Working radius | 4.5 m to 24 m |
| Outreach beyond half breadth, maximum | 9 m |
| Luffing time | 48 seconds |
| Slewing speed | 0.55 rpm |

### Cargo hatch cover:

Steel folding type, weather tight double skin construction, hydraulically operated, grain and cement openings.
Pump unit 100% x 2 sets

### Container carriage on Hatch Cover

Carriage of empty containers in 2-tier on top of hatch cover

### Cargo hold ventilation:

Explosion proof exhaust fans at 6 air changes per hour.

### Bilge and Ballast system:

Ring main with remote hydraulically operated valves & stripping eductor of 150 m³/ h. Separate stripping line.
Centralized control for ballast, bilge and stripping valves in ship office.

### Ballast pump:

Electric motor driven centrifugal, bronze casting and phosphor bronze impeller, 750 m³/h x 0.30 MPa – 2 sets

### Ballast Water Treatment Plant:

USCG/AMS approved BWT Plant, filtration and UV type, 800 $m^3$/hr capacity – 2 sets

### Cargo hold washing : Fitted

## ACCOMMODATION

| | | |
|---|---|---|
| | Independent shower and toilet units | |
| 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 duct system

| | | |
|---|---|---|
| Design condition | | |
| summer | outside | 40°C, 70% rel. humidity (RH) |
| | inside | 26°C, about 50% RH |
| winter | outside | -15°C |
| | inside | 20°C, about 50% RH |

## CORROSION PROTECTION

(PSPC COMPLIANCE FOR WBT)

| | |
|---|---|
| Vertical & flat bottom | SilylAcrylate SPC antifouling paint, Tin Free, 60 month guarantee |
| Top side | Anti-abrasive pure Epoxy/polyurethane |
| Deck | Pure Epoxy/polyurethane |
| Cargo holds | Anti-abrasive pure Epoxy |
| Hatch covers | Pure Epoxy/polyurethane |
| Superstructure | Pure Epoxy/polyurethane |
| Ballast water tanks | Pure Epoxy paint<br>60 month guarantee<br>Sacrificial anodes in WBT |
| External hull | Impressed current cathodic protection & anodes in stern |

# CHARACTERISTICS

The following major characteristics shall be applied:

| | | | |
|---|---|---|---|
| ● | Worldwide transportation including Panama and Suez Canals | ● | IMO approved Ballast Water Treatment Plants to treat ballast water during ballasting and de-ballasting. |
| | Energy efficient design with projected EEDI reduction of around 25% from IMO norms. | | Green Passport (IHM) implementation |
| ● | Ice Class 1C | ● | EU & CARB compliance- MGO burning facility for main engine, generators, boiler at Port. |
| ● | Fuel efficient hull form | ● | Rudder with bulb for improved propulsion efficiency |
| ● | Good level of redundancy of critical equipment | ● | Heavy fuel oil generators eliminating diesel oil consumption at sea |
| ● | Five (5) Cargo holds all double skinned and corrugated bulkheads | ● | Centralized fresh water cooling system in engine room |
| ● | Four (4) wide open hatches ( > 80% of beam) for easy spotting of cargoes | ● | Citadel anti-piracy protection for crew |
| ● | Dangerous cargo carriage facility in holds | ● | Independent shower and toilet units for officers and semi-private units for ratings |
| ● | Flexibility 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 | ● | Mechanical Ventilation for Cargo Holds |
| ● | - Long cargoes such as pipes, packaged lumber and deck cargoes | ● | Increased capacity of low sulphur fuel oil tanks to cater to new legislations |
| ● | - 2-tier empty container carriage on deck -160 nos. | ● | Exhaust gas recovery for heating from DG exhaust, even when the vessel is in port. |
| ● | Strengthened for heavy cargoes – cargo hold tank top is strengthened for grab handling and fork lift op. | ● | Part load tuning of main engine for fuel consumption optimization |
| ● | Hold 2, 3 and 4 box-shaped with no hopper or wing tanks. | ● | Corrosion-prevention features: IMO PSPC compliance for water ballast tanks |
| ● | Pipe tunnel extending from engine room to No.1 hold | ● | User friendly bridge design |
| ● | Tank top strength – 25 t/$m^2$ | ● | Inmarsat C and F and full GMDSS application |
| ● | Cargo hatch cover uniform load of 3.0 tons/$m^2$ | ● | 3 T capacity Cranes P&S for provision & engine room parts handling. |
| ● | Alternate loading in holds 1, 3 and 5 | ● | Embodies anticipated future legislation requirements |
| ● | Hold flooding not required in heavy ballast condition. It is possible to manage with WBT. | ● | Designed and constructed for long reliable service and optimum life-cycle cost |
| ● | Segregation for clean and dirty water ballast tanks | ● | Vacuum toilet system for conservation of water |
| ● | | ● | |
| ● | | ● | |