

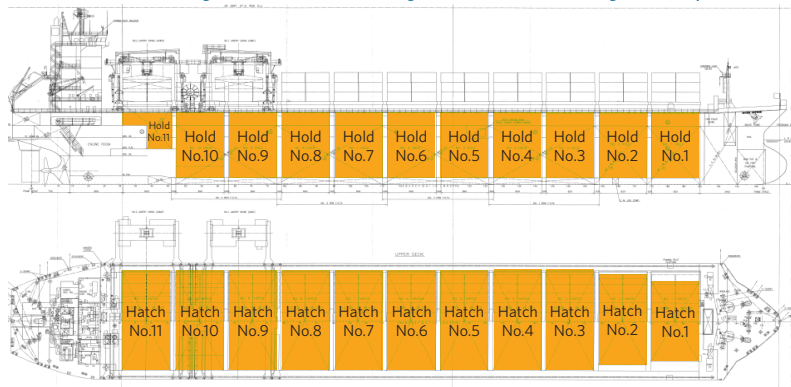


GRIEG STAR

I-class vessels

CLASS NOTATION: +1A1 General Cargo Container HC/EA GRAIN-U E0 NAUT-OC-LCS-GIS HA (+) IB (except hold 11) 1914 TEU

NOTE! Information given in this booklet is reflecting the situation at the time being created, July 2012.



MAIN DIMENSIONS

LOA:	198,00 m	Depth main deck:	19,00 m	Depth mld.:	19,00 m
LPP:	189,015 m	Draught mld.:	12,019 m	Cargo hold cap.:	61.491 m ³
Breadth moulded:	31,00 m	Draught ext.	12,319 m	Max air draught:	47,00 m



Owners: Grieg International II AS / Grieg Shipping II AS

Management: Grieg Star AS

Operator: Grieg Star AS

Nationality: Norway (NIS)

Port of registry: Bergen

Deadweight: 46.428 mt (41.749 mt, Star Isfjord)

Gross ton: 32.628 mt (29.898 mt, Star Isfjord)

Net ton: 13.538 mt (16.282 mt, Star Isfjord)

Bale capacity: 61.491 m³

Number of holds: 11

Speed: 16,00 knots

General description:

Open hatch general cargo carrier with 2 x 68 mt Mitsui, Paceco Gantry Cranes on deck and 11 box-shaped cargo holds intended for the carrying baled pulp, ore, grain, cement, paper, packaged lumber and other solid bulk cargoes. Containers arranged on deck and in holds. Max load on tank top 28 mt/m². Dehumidifier system for all cargo holds.

Accommodation aft for a total of 29 persons. Water ballast in fore- and aft peak tanks and in 12 tanks in double hull and double bottom. No ballast in cargo holds. Four HFO tanks in double bottom.

Painted surface:

Hull (top side): 4.020 m²

Flat bottom: 3.670 m²

Vertical bottom: 4.470 m²

Deadweight & Draft

Zone	Draft (m)	Deadweight (mt)
Tropical fresh water	12,854	49.260
Fresh water	12,598	47.903
Tropical sea water	12,575	47.781
Summer	12,319	46.428
Winter	12,061	45.080

Above figures not available for Star Isfjord



GRIEG STAR

Water Ballast & Oil Tanks

WATER BALLAST TANKS

SPECIFIC GRAVITY = 1.025

COMPARTMENT	LOCATION FR.NO.	CAPACITY		WEIGHT		CENTER OF GRAVITY (100% FULL)		MAX. FREE SURFACE (M ²)
		100% FULL (CUB.M)	96% FULL (CUB.M)	100% FULL (M.TONS)	96% FULL (M.TONS)	MID.Q (M)	KG (M)	
FORE PEAK TANK	C 190 - 194	2051.6		2102.9		-81.62	8.21	7240
NO.1 WING W. B. T.	P 174 - 190	961.8		984.8		-69.92	7.86	681
	S 174 - 190	1008.7		1033.9		-70.01	7.40	1429
NO.2 WING W. B. T.	P 158 - 174	772.3		791.6		-57.01	6.53	1364
	S 158 - 174	809.0		829.3		-57.08	6.54	2362
NO.3 WING W. B. T.	P 126 - 158	1181.8		1211.4		-36.57	6.63	807
	S 126 - 158	1165.0		1194.2		-36.65	6.32	806
NO.4 WING W. B. T.	P 110 - 126	1165.0		1194.2		-9.48	6.39	839
	S 110 - 126	1149.1		1177.8		-9.57	6.28	839
NO.5 WING W. B. T.	P 78 - 110	1193.7		1223.6		17.28	6.57	839
	S 78 - 110	1176.9		1206.3		17.20	6.46	839
NO.6 WING W. B. T.	P 47 - 78	1176.7		1206.1		43.94	6.89	586
	S 47 - 78	1168.3		1197.5		43.94	6.84	586
AFT PEAK TANK	C A.E. - 14	577.3		591.7		87.73	12.35	6893
TOTAL	—	15547.0		15935.4		—	—	26110

FUEL OIL TANKS

SPECIFIC GRAVITY = 0.950

COMPARTMENT	LOCATION FR.NO.	CAPACITY		WEIGHT		CENTER OF GRAVITY (100% FULL)		MAX. FREE SURFACE (M ²)
		100% FULL (CUB.M)	96% FULL (CUB.M)	96% FULL (M.TONS)	96% FULL (M.TONS)	MID.Q (M)	KG (M)	
NO.1 BTM. F. O. T.	C 126 - 159	567.1	544.4	517.2		-37.59	0.88	3479
NO.2 BTM. F. O. T.	C 110 - 127	549.2	527.2	517.2		-10.30	0.88	3479
	C 79 - 110	549.1	527.1	501.0		16.70	0.88	3404
NO.4 BTM. F. O. T.	C 46 - 79	490.1	470.5	447.2		42.43	0.88	2768
H. F. O. SERV. TANK	P 33 - 37	33.2	* 27.6	* 26.2		* 66.79	* 13.35	7
H. F. O. SEET. TANK	P 31 - 34	33.6	* 25.1	* 23.8		* 69.04	* 11.54	23
LIFO. SETT. TK	P 21 - 33	21.9	21.4	19.3		67.85	13.53	8
LIFO. SERV. TK	P 32-35	16.3	15.6	14.9		65.65	13.53	8
TOTAL	—	2260.5	2158.9	2056.8		—	—	13176

Note * : at overflow level capacity

DIESEL OIL TANKS

SPECIFIC GRAVITY = 0.880

COMPARTMENT	LOCATION FR.NO.	CAPACITY		WEIGHT		CENTER OF GRAVITY (100% FULL)		MAX. FREE SURFACE (M ²)
		100% FULL (CUB.M)	96% FULL (CUB.M)	96% FULL (M.TONS)	96% FULL (M.TONS)	MID.Q (M)	KG (M)	
DIESEL OIL TANK	P 39 - 47	115.4	110.8	97.5		1.15	1.15	681
D. O. SERV. TANK	P 35.5-37.5	17.7	* 17	* 15.0		* 9.13	* 9.13	12
TOTAL	—	133.1	127.8	112.5		—	—	693



Max intake 20 ft units, balance of 40 ft units

Hold/Hatch NO.	No. 11	No. 10	No. 09	No. 08	No. 07	No. 06	No. 05	No. 04	No. 03	No. 02	No. 01			
40 ft. BAY NO.	42	38	34	30	26	22	18	14	10	06	02			
20 ft. BAY NO.	43	39	35	31	27	23	19	15	11	07	03			
	TIER NO.											TOTAL		
	11			10	10	10	10	10	10			UNITS	TEU	
	10			10	10	10	10	10	10	10	10	120	120	
ON DECK	09	10	10	10	10	10	10	10	10	10	10	160	160	
	08	10	10	10	10	10	10	10	10	10	10	220	220	
TOTAL	40 ft											220	220	
	20 ft	20	20	20	40	40	40	40	40	40	30	30	720	720
	07		10	10	10	10		10	10	8	5	73	146	
	10										2	24	24	
	06		10	10	10	10		10	10	8	5	73	146	
	10										2	24	24	
IN HOLD	05		8	10	10	10		10	10	8	5	71	142	
			2									14	14	
	04		8	10	10	10		10	10	8	5	71	142	
			2									14	14	
	03		2									2	4	
			8	10	10	10	10	10	10	8	5	182	182	
	02													
			6	10	10	10	10	10	10	8	5	178	178	
	01													
TOTAL	40 ft		6	10	10	10	10	10	10	8	5	178	178	
			38	40	40	40		40	40	32	20	290	580	
	20 ft	20	24	30	30	30	30	30	30	24	19	614	1194	
As per GSS request, new container capacity after removal of cell guides and lengthening with one hold: 1914 TEU												GRAND TOTAL	1914	



Max intake 40 ft units

Hold/Hatch NO.	No. 11	No. 10	No. 09	No. 08	No. 07	No. 06	No. 05	No. 04	No. 03	No. 02	No. 01			
40 ft. BAY NO.	42	38	34	30	26	22	18	14	10	06	02			
20 ft. BAY NO.	43	39	35	31	27	23	19	15	11	07	03			
	TIER NO.												TOTAL	
													UNITS	TEU
	11			10	10	10	10	10	10				60	120
	10			10	10	10	10	10	10	10	10		80	160
ON DECK	09	10	10	10	10	10	10	10	10	10	10	10	110	220
	08	10	10	10	10	10	10	10	10	10	10	10	110	220
TOTAL	40 ft	20	20	20	40	40	40	40	40	40	30	30	360	720
	20 ft													
	07	10	10	10	10	10		10	10	8	7		85	170
	06	10	10	10	10	10		10	10	8	7		85	170
	05		10	10	10	10		10	10	8	5		73	146
IN HOLD		(10)											(10)	(10)
	04		10	10	10	10		10	10	8	5		73	146
		(10)											(10)	(10)
	03		10	10	10	10	10	10	10	8	5		93	186
	02		6	10	10	10	10	10	10	8	5		89	178
	01		6	10	10	10	10	10	10	8	5		89	178
TOTAL	40 ft	20	62	70	70	70	30	30	70	70	56	39	587	1174
	20 ft		(20)										(20)	
As per GSS request, new container capacity after removal of cell guides and lengthening with one hold: 1914 TEU												GRAND TOTAL	1914	



COMPARTMENT	LOCATION FR. NO.	CAPACITY		CENTER OF GRAVITY		HATCH COVER STRENGHT MT/M ²	TWEEN DECK STRENGHT MT/M ²	TANK TOP STRENGHT MT/M ²
		CUB. M	CUB. FT	MID G. (M)	KG (M)			
NO. 01 HOLD	175 - 190	4.048,8	142.983	-71,05	12,43	3,00	5,50	22,00
NO. 02 HOLD	159 - 174	5.510,5	194.603	-57,55	11,55	3,00	5,50	28,00
NO. 03 HOLD	143 - 158	6.206,4	219.179	-44,05	11,43	3,00	5,50	28,00
NO. 04 HOLD	127 - 142	6.206,4	219.179	-30,55	11,43	3,00	5,50	28,00
NO. 05 HOLD	L - 125	6.206,3	219.175	-17,05	11,43	3,00	5,50	28,00
NO. 06 HOLD	111 - K	6.206,4	219.179	-3,55	11,43	3,00	5,50	28,00
NO. 07 HOLD	95 - 110	6.206,3	219.175	9,95	11,43	3,00	5,50	28,00
NO. 08 HOLD	79 - 94	6.206,3	219.175	23,45	11,43	3,00	5,50	28,00
NO. 09 HOLD	63 - 78	6.206,4	219.179	36,95	11,43	3,00	5,50	28,00
NO. 10 HOLD	47 - 62	5.722,2	202.079	50,45	12,04	3,00	5,50	28,00
NO. 11 HOLD	31 - 46	2.764,5	97.628	62,83	16,19	3,00	5,50	17/8
TOTAL		61.490,5	2.171.534					



GRIEG STAR

Main engine

One 6-cylinder 2 stroke single acting cross head marine diesel engine

Type: Mitsui MAN 6S60MC

NCR: 9470 kW at 92,7 rpm

Turbo charger: Mitsui MAN

Diesel Generators

Two 8 cylinder 4 cycle single acting diesel engine

Type: Rolls Royce KRG-8

Engine output: 1395 kW at 720 rpm

Generator output: 1300 kW

One 5 cylinder 4 cycle single acting diesel engine

Type: Rolls Royce KRG-5

Engine output: 775 kW

Generator output: 720 kW

Emergency Diesel Generator

Maker: MES Machinery & Service

Bow thruster/stern thruster

Nakashima TC-220N

Incinerator

One incinerator TeamTech Type OG 400(C).
500.000 kcal/h capacity. Burning sludge oil and solid waste

Air compressors

Two main air compressors:

SPERRE HV2/200

136 m³/h capacity at 30 bar.

One working air compressor

SPERRE HV2/300

437 m³/h capacity at 8 bar.

One diesel generator cold start air compressor

SANWA Iron Works S10A, 41,5 m³/h at 30 bar.

Boilers

Auxiliary Boiler, OSAKA Boiler

Type: AQ 12 - 160 - 17

Steam production: 1200 kg/h

Working pressure: 6 kg/cm²

Fuel oil consumption: 89 kg/h

Exhaust gas economizer, OSAKA Boiler

Type: EG-183242-H

Steam production: 1100 kg/h

Working pressure: 6 kg/cm²

Exhaust gas amount: 79200 kg/h

Fresh Water Generator

One fresh water generator NIREX

Type: JWP-26-C100.

Capacity: 30 tons/day



Purifiers and Separators

Two HFO purifiers, Alfa Laval type MFPX307
2200 l/h capacity at 380 cSt.
Two M/E lube oil purifiers Alfa Laval type MOPX205
1500 l/h capacity at 100 cSt.
One HEISHIN HMS-200, 15 ppm Bilge Separator 2 m³/h

Sewage Treatment Plant

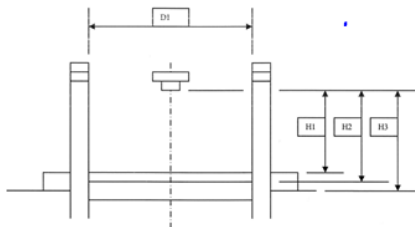
One marine sewage plant, Sasakura Type ST-3A,
Max 38 person capacity.

Cargo hold and deck arrangement

Brackets for tween deck (see drawing)
Two levels in hold 4 & 8
Benches are fitted in hold 1 & 10
Cargo holds clear opening 26,24m x 12,30 m
Hatch cover size 26,64 m x 12,62 m

Container capacity

On hatch covers	720
In holds	1.174
Total	1.914



Gantry Cranes vital measurements

Distance between crane legs D1	13,95 m
Max drift to hatch cover H1	6,60 m
Max drift to Cillbeam H2 (mid part)	6,65 m
Max drift to hatch coaming H3	7,45 m

Gantry Cranes

2 x Mitsui Paceco make,	
SWL:	68 mt
Hoisting speed:	35 m/min
Lowering speed:	43 m/min
Trolley speed:	76 m/min
Gantry speed	30 m/min
Turn table rotation:	1 r.p.m.
Hoisting height (top hatch):	26,6 m
Outreach, from shipside:	8 m
Clearance between legs:	13,95 m
Auxiliary hoist cap.	6 mt