

2 MAIN PARTICULARS OF VESSEL/GAS FORM C

2.1 PREAMBLE

Ship's name	<i>Berge Nantong</i>
Owners	<i>Ursa Navigation Corporation Limited</i>
Flag - Registry	Hong Kong
Builder	<i>Hyundai Heavy Industries Co., Ltd.</i>
Delivery	July 27, 2006
Class	DNV
IMO No.	9317987

GRT/NRT	
International	47012 / 17305
Suez	50223 / 45505
Panama	

Is vessel approved?	
USCG	<i>To be complied</i>
IMO	<i>To be complied</i>

2.2 HULL

	Metres	Feet
LOA	225.3	739.16
LBP	215	705.37
Breadth	36.63 (extreme)	120.17
Depth	22.024 (extreme)	72.25
Keel to highest point	50	164.04

Max summer draft(equivalent)	12.55	Corresponding deadweight	58757 m/tons
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TPC fully loaded	71.19
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Mean draft with full bunkers and full cargo		
Specific Gravity	Mean draft	Corresponding DW
0.581	11.38	50329
0.596	11.56	51594
0.680	12.49	58160

Communication equipment	
International call sign	<i>VRBU6</i>
Radio station	MF/HF 400W X 1 set
Satcom F	1 set
- Telephone	3 sets
- TeleX	1 set
- Telefax	1 set

SatcomC	1 set
MMSI	Automatic Identification System
E-mail	Available in PC

2.3 MACHINERY

Main Engine	
Hyundai-B&W 6S60MC-C	
Max Cont.	18420 BHP X 105 RPM
Grade fuel used	700 eSt at 50 deg.C

Auxiliaries	
Diesel	5L28/32H
Make	Hyundai-B&W
kW/ RPM	1050 kW /720 RPM
Grade fuel used	700 eSt at 50 deg.C

Speed/Consumption *)		
Guaranteed average loaded/ballast speed over 12 months		
Consumption on guaranteed speed at design draft	Main Engine	
	Auxiliaries	

*) Above based on 50/50 propane/butane and max force 5 Beaufort

Slow speed/consumption figures as guidance only	
Average loaded/ballast	Consumption (based on H.F.0=9.700kcal/kg)
13.5 Knots	
14.0Knots	
15.0 Knots	
16.0Knots	

Gas oil consumption alongside in port	NA
Inert gas plant when operating	505kg/h at design capacity
Boiler consumption	Max 225kg/h (Fuel consumption)

Permanent bunkers capacity (Excl. daily service tanks)			
HFO	2701.9m3 including settling and service tanks		
MDO	63.1m3 (Can be used only for IGG)	LSMGO	810.1m3

2.4 CARGO INSTALLATION

Transportable products and respective quantities								
Tank No.	100% M3	98% M3	Butane 0.596 -2°C mt	Propane 0.581 -41.5°C mt	NH ₃ 0.680 -32°C mt	Butadiene 0.651 -5°C mt	Naphtha 0.703 30°C mt	Naphtha 0.676 30°C mt
1	17883	17526	10445	10183	11918	11409		
2	21833	21396	12752	12431	14549	13929		
3	21829	21392	12750	12429	14547	13926		

4	20699	20285	12090	11786	13794	13206		
Total	82244	80599	48037	46828	54807	52470		

Other transportable products: Butylene, Propylene

Scantlings of the cargo tanks are based on a maximum density of cargo of 690 kg/m³ per contract. Cargo with density up to 1,000 kg/m³ may be carried in the cargo tanks on the following conditions:

For density of 1,000 kg/m ³	Up to 67% filling
For densities between 690 and 1,000 kg/m ³	Inversely linear proportional to cargo density from 98% filling at S.G =0.69 to 67% filling at S.G=1.0
For densities between 600 and 690 kg/m ³	Up to 98% filling (no filling restriction)

Tank working pressure (Per contract)	
Maximum pressure	0.4 barg (harbour), 0.25 barg (sea)
Minimum pressure	-0.05 barg
Minimum temperature acceptable in tanks	-50°C

Loading rate - tons/hour	5000 m ³ (propane with vapour return)
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2.5 CARGO PUMPS

Number and type	8 off HKSE DW 250/200-3-K+I
Location	Cargo tank hatches
Max permissible specific gravity	690 kg/m ³
Time for discharging full cargo using all pumps against no backpressure	19 hours (Excluding Stripping with vapour return)
Cargo remaining onboard in cargo tanks after completion pumping	80 m ³ (approximate Liquid)
Total head when working in series with booster pump	235 mlc
Booster pumps	2 off HKSE NMB 150E

2.6 CARGO COMPRESSORS

Number and type	4 off Burckhardt 3K-140-3A
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	Propane	Ammonia
Refrigeration Capacity	308 kW	508 kW
Suction pressure	1.4 bar abs	1.4 bar abs

2.7 INERT GAS SYSTEM

Does the vessel use inert gas?	Yes
Utilization	Hold space, cargo tank condition

Does the vessel produce inert gas?	Yes
Type	Combustion
Daily production	5300 Nm ³ /hr

Composition of inert gas	
Carbon dioxide	14% VOL

Oxygen max.	0.5% VOL
Carbon monoxide max.	100ppm
Hydrogen max.	
Nitrogen	Balance
Soot	0 on Bacharach scale
Sulphur oxides max.	1 ppm
Dewpoint	-40°C

State if any shore supply of liquid nitrogen may be required	
Tank conditioning for ammonia, butylene, propylene, butadiene cargoes	
What quantity?	

2.8 GAS FREEING

Can this operation be carried out at sea?	Yes
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State method incl. all details	
For LPG	Inert gas
For NH ₃	Ventilation fans

Advise time required and consumption of inert gas if any ***does not include liquid freeing,***	
From LPG approximately	48 hours, 125,000 Nm ³
From NH ₃ approximately	98 hours

Is the vessel equipped with inert gas blower?	No
Capacity	

Ventilation fan	2 off 10,000 Nm ³ /hr
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2.9 CHANGING GRADE

Can this operation be carried out at sea?	Partially
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State method used and time required for changing from NH ₃ to LPG and vice versa, to reach 50 ppm of previous cargo in tanks atmosphere, the tanks being dry and free of moisture (dewpoint plus 10 degrees C)

From NH ₃ to LPG	Puddle heating, ventilation, inerting, (purging, cooldown alongside)
Time required	162 hours, (108 hrs)

From LPG to NH ₃	Puddle heating, inerting, ventilation, (purging, cooldown alongside)
Time required	56 hours, (120 hrs)

Can vessel reduce in tank atmosphere and gas installation concentration of previous cargo below 50 ppm?	Yes
Method used, time required and extra shore supply if any	Inert gas, air ventilation
How can it be checked that no liquid gas remain onboard	Sample connections Temperature Indication

2.10 CARGO HEATER

State discharging rate for propane with 2.5 mol % ethane to be brought from -44°C to -5°C at sea temperature of 15°C	600 m ³ /hr
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2.11 CARGO VAPORIZER

In case of need of vapour gas during discharge, can vessel produce its own if no shore gas available?	Yes
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2.12 REFRIGERATING APPARATUS

Is it independent of cargo?	No
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2.13 MEASURING APPARATUS

What gauges onboard	Float type level gauge
Location and type	Cargo tank hatches - 8 off UASI 806 MHN/HT37

2.14 SAMPLES

Where can samples be taken?	Cargo tanks, deepwell pump discharge, compressor discharge
Are sample bottles available onboard?	No

2.15 CARGO LINES

(See also last page of this gas form C)

Is vessel fitted with midship manifolds	YES
Distance from cargo manifold to bow	109.56 m
Distance from manifold to stern	115.74 m
Height cargo manifold above deck	2.1 m
Height cargo manifold above waterline when in ballast	16.77 m
Height cargo manifold above waterline when loaded	11.55 m
Distance from shipside to manifold flange	4 m
Distance between loading and vapour return connections	2.25 m
Is vessel fitted with stern discharge	NO
Is vessel fitted with fore discharge	NO

Dimension of lines		
	Diameter	Flange size
Liquid	14"	300#
Gas Line	10"	150#
Booster Line	Uses liquid Manifold	-

What reducers onboard		
Number	Diameter	Pressure rating
2	16" x 14"	300#
2	14" x 12"	300#
2	14" x 10"	300#
2	14" x 8"	300#

2	14" x 12"	300# x 150#
2	14" x 14"	300# x 150#
2	12" x 10"	300# x 150#
2	10" x 10"	150# x 300#
2	10" x 8"	150# x 150#
2	10" x 8"	150# x 300#
2	10" x 6"	150# x 300#
2	14" x 16"	300# x 150#
2	14" x 10"	300# x 150#
2	14" x 8"	300# x 150#
2	14" x 12"	150# x 150#
2	14" x 8"	150# x 150#
2	14" x 6"	300# x 150#

2.16 LIFTING DEVICE

Where situated	Aft	Amidship
Number and type	Two x electro hydraulic	One x electro hydraulic
Lifting capacity	5 ton	10 ton
Max. distance from ship's side of lifting hook	4m	5m

2.17 HOSES

For what products are hoses suitable	NA
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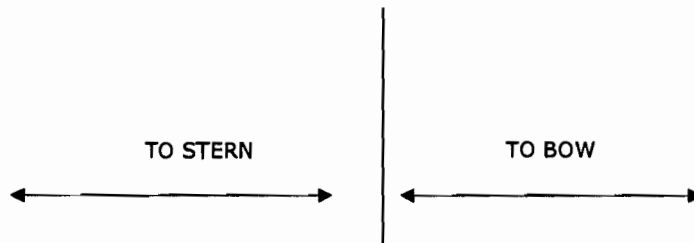
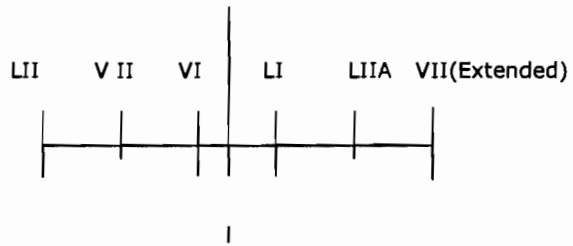
Number	Length	Diameter	Working pressure	Flange

2.18 SPECIAL FACILITIES

How many grades can vessel segregate?	Two
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Indicate systems	
Is vessel able to load/discharge two or more grades simultaneously?	Yes (two)
Can vessel sail with slack tanks?	Yes
Is vessel fitted with purge tank?	No

ARRANGEMENT OF CARGO MANIFOLD



PARALLELL BODY LENGTH
BALLAST and LOADED CONDITIONS

