

**INTERTANKO Standard Gas Form - LPG**

<b>1. GENREAL INFORMATION</b>					
1.1	Vessels Name (IMO number):	Clipper Eos (9827205)			
1.2	Flag/Port of Registry:	Norway - Stavanger			
1.3	Date delivered/Builder:	31.01.2019 / Hyundai Mipo Dockyards, Ulsan, South Korea			
1.4	Hull Type:	Double Bottom			
1.5	Call sign/MMSI:	LAFM8 / 257389000			
1.6	Vessels contact:	+870 773154221 master.clipper.eos@solvanship.no			
<b>Classification</b>					
1.7	Classification society:	DNV			
1.8	Class notation:	+1A1, Tanker For Liquefied Gas, Ship Type 2G, (-104 deg C, 680 kg/m3, 0,39 Mpa.) EO, TMON, BIS, BWM-T, Recyclable, COAT-PSPS (B), Nauticus (Newbuilding), PLUS			
1.9	Previous Classification Society (if applicable) / Date of Classification Society Change	N/A			
1.10	EEDI Rating:	10.6			
1.11	Does the ship have a Condition Assessment Programme (CAP) rating? What is the latest CAP rating (if applicable):	No			
<b>Ownership and Operation / QI</b>					
1.12	Registered Owner:	CLIPPER SHIPPING AS Strandkaien 36 N-4005 Stavanger Norway Tel: +4751848400 Fax: +4751848411 Telex: Not Applicable Email: maritime.vetting@solvanship.no			
1.13	Technical Operator:	SOLVANG ASA Strandkaien 36 N-4005 Stavanger Norway Tel: +47 51848400 Fax: +47 51848411 Telex: - Email: maritime.vetting@solvanship.no Company IMO#: 1242256			
1.14	Commerical Operator:	Solvang ASA Haakon Vlls gt. 6 P.O.Box 1737 Vika N-0121 Oslo Norway VAT No 992 197 994 Norway Tel: +47 22471950 Fax: -Not Applicable Telex: -Not Applicable Email: operation@solvanship.no			
1.15	Qualified Individual:	Hudson Marine Management Service Ferry Terminal Building, Suite 300 2 Aquarium Drive, Camden, NJ 08103 Tel: +1 856 342 7500/+1 6 Fax: +1 856 372 8888 Email: reporting@hudsonmarine.com			
<b>Insurance</b>					
1.16	P & I Club - Full style:	Gard P&I (Bermuda) Ltd. Gard P. & I. (Bermuda) Ltd. Norwegian Branch Kittelsbuktveien 31 4836 Arendal Norway			
<b>Dimensions</b>					
1.17	Type of vessel (Fully ref/ semi ref/ pressurized):	Semi ref			
1.18	Length overall (LOA):	159,86 Metres			
1.19	Extreme Breadth (Beam):	25,60 Metres			
1.20	Distance bow to bridge:	109,41 Metres			
1.21	Parallel body distances	<b>Lightship</b>	<b>Normal Ballast</b>	<b>Summer Dwt</b>	
	Parallel body length:	Metres	59,10 Metres	73,20 Metres	
	Aft to mid-point manifold:	Metres	33,50 Metres	41,70 Metres	
	Fwd to mid-point manifold:	Metres	25,60 Metres	31,50 Metres	
<b>Tonnages</b>					
1.22	Gross Tonnage:	18898,00 Tonnes			
1.23	Net Tonnage:	5738,00 Tonnes			
1.24	Suez Canal Tonnage Gross(SCGT)/ Net(SCNT):	16347,00	15788,00		
	Panama Canal Net Tonnage:	19847,00			
<b>Loadline information</b>					
1.25	Loadline:	<b>Freeboard</b>	<b>Draft</b>	<b>Deadweighth</b>	<b>Displacement</b>
	Summer	Metres	9,016 Metres	18056 MT	26599 MT
	Winter	Metres	8,828 Metres	17386 MT	25929 MT
	Tropical	Metres	9,204 Metres	18729 MT	27272 MT
	Normal Ballast Condition:	Metres	6,300 Metres	9014 MT	17557 MT
1.26	FWA/TPC at summer draft:	187 mm		35,70 MT	
1.27	Does vessel have multiple SDWT? If so, please enter Maximum deadweight (mt)	No			

<b>2. DEADWEIGHTS</b> *All cargoes listed are as per Certificate of Fitness					
	Cargo	Draft Foré (m)	Draft Aft´ (m)	Draft Mean (m)	Corresponding Deadweight (mt)
2.1	Ammonia anhydrous (98,0%)	8,90	8,90	8,90	17969
2.2	Butadiene (98,0%)	8,85	8,85	8,85	17473
2.3	Butane (98,0%)	8,63	8,63	8,63	16691
2.4	Butane-propane (%)				
2.5	Butylene (98,0%)	8,71	8,71	8,71	16981
2.6	Commercial Propane (%)				
2.7	Diethyl Ether (93,3%)	8,99	8,99	8,99	17983
2.8	Dimethyl Ether (DME) (91,0%)	8,99	8,99	8,99	17984
2.9	Dimethylamine (98,0%)	8,95	8,95	8,95	17824
2.10	Ethane (98,0%)	8,31	8,31	8,31	15583
2.11	Ethylene (98,0%)	8,42	8,42	8,42	15965
2.12	Isoprene (98,0%)	8,99	8,99	8,99	18010
2.13	Isopropylamine (96,6%)	8,99	8,99	8,99	17982
2.14	Mixed C4 (%)				
2.15	Propane (98,0%)	8,50	8,50	8,50	16228
2.16	Propylene (98,0%)	8,64	8,64	8,64	16716
2.17	Vinyl Ethyl Ether (87,7%)	9,00	9,00	9,00	17987

<b>3. CARGO TANK CAPACITIES</b> *All cargoes listed are as per Certificate of Fitness					
		Density	Tank 1 (m3)	Tank 2 (m3)	Tank 3 (m3)
3.1	100% Capacity		5905	7658	7657
3.2	98% Capacity		5787	7505	7504
3.3	Ammonia anhydrous	0,680	3935,1	5103,3	5102,6
3.4	Butadiene	0,651	3767,3	4885,7	4885,0
3.5	Butane	0,573	3315,9	4300,3	4299,7
3.6	Butane-propane	0,594	3437,4	4457,9	4457,3
3.7	Butylene	0,620	3587,9	4653,0	4652,4
3.8	Commercial Propane	0,493	2852,9	3699,9	3699,4
3.9	Diethyl Ether	0,713	4126,1	5351,0	5350,3
3.10	Dimethyl Ether (DME)	2,115	12239,3	15872,7	15870,7
3.11	Dimethylamine	0,670	3877,2	5028,2	5027,6
3.12	Ethane	0,544	3148,1	4082,6	4082,1
3.13	Ethylene	0,569	3292,7	4270,3	4269,7
3.14	Isoprene	0,681	3940,9	5110,8	5110,1
3.15	Isopropylamine	0,722	4178,1	5418,5	5417,8
3.16	Mixed C4	0,670	3877,2	5028,2	5027,6
3.17	Propane	0,580	3356,4	4352,8	4352,2
3.18	Propylene	0,610	3530,0	4578,0	4577,4
3.19	Vinyl Ethyl Ether	0,759	4392,3	5696,2	5695,4

<b>4. DECK MACHINERY</b>	
<b>Mooring</b>	
4.1	Number Of Mooring Winches: Forecast: 3 Poopdeck: 3
4.2	Mooring lines on drum (Number/Length/Diameter) Forecast: 6/200,00 m/50,00 Poopdeck: 6/200,00 m/50,00
4.3	Mooring lines (Material) Forecast: New D-flex 8 strand fiber rope Poopdeck: New D-flex 8 strand fiber rope
4.4	Number of Mooring lines onboard: 16
4.5	Ship design minimum breaking load (mt): 49,0
4.6	Winch Brake holding Capacity (mt): Forecast: 39,20 Poopdeck: 39,20
<b>Lifting Equipment</b>	
4.7	Number of Cranes: Cranes: 1 x 5 Tonnes Midship, Center
4.8	SWL Of Cranes(mt): Cranes: 1 x 5 Tonnes Midship, Center

<b>5. MACHINERY AND PROPULSION</b>				
Engines		No	Power (KW)	Make/Type
5.1	Main Engine:	1	7100	Hyundai-B&W 6S50ME-C8.5
5.2	Auxiliary Engine:	3	1400	Himsen 8H21/32

5.3	Main Engine - Type of fuel used:	HFO		
5.4	Auxiliary Engine - Type of fuel used:	HFO		
<b>Propulsion</b>				
5.5	Propeller number and type:	Fixed		
5.6	Bow Thruster Power (if fitted):	No		
<b>Bunkers</b>				
5.7	Capacity of bunker tanks:	Fuel oil:1420,00 Diesel oil: 269,50		
5.8	Ballast Tank Capacity (100%):	349687,2		
<b>6. CARGO HANDLING</b>				
<b>Discharging General</b>				
6.1	Number of Cargo Tanks:	3		
6.2	Cargo Pumps:	Type	No Per Tank	Run simultaneously at full capacity
		Other	2	6
6.3	Number and Capacity of Booster Pumps:	2 - 350 (m3/hour)		
6.4	Max loading rate for homogenous cargo (without vapour return):	2100		
6.5	Max loading rate for homogenous cargo per manifold (without vapour return):	1400		
<b>Unpumpables</b>				
6.6	Total Unpumpables:	Tank Number	Unpumpable (m3)	
		1	2	
		2	2	
		3	2	
<b>Transport and Carriage Conditions</b>				
6.7	What is the minimum/maximum permissible tank pressure?	-0,25Kp/Sq. cm	3,90Kp/Sq. cm	
6.8	What is the minimum/maximum permissible tank temperature?	-104 °C	N/A	
6.9	Does the vessel have a cargo heater? If yes, stat capacity of cargo heater	Yes		
6.10	Number and capacity of Vapouriser	Yes		
6.11	Number and capacity of Cargo Deck Tanks	1 1 Propane: 99,47 2 Ammonia: 116,62 3 Ethylene: 97,5835		
6.12	IS ESD shore connection available? If yes, state type of connection	Yes		
		If yes, is the ESD system pneumatic?	Yes	
		If yes, is the ESD system electrical?	Yes	
		If yes, is the ESD system fiber optic?	Yes	
6.13	Maximum number of grades that can be loaded/carried/discharged simultaneously with complete segregation	2		
6.14	No. of products that can be conditioned by the reliquefaction plant simultaneously	2		
<b>7. INERT GAS</b>				
<b>Main IG Plant</b>				
7.1	Inert Gas system fitted:	Yes		
7.2	Inert Gas Capacity:	1500,00		
7.3	Inert Gas - Lowest dew point achievable:	-60,00		
<b>Nitrogen</b>				
7.4	N2 Plant fitted:	Yes		
7.5	N2 Generating Plant - Lowest dew point achievable:	-60		
<b>8. RELIQUEFACTION PLANT</b>				
8.1	Coolant Type:	Propylene		
8.2	Manufacturer/type of compressors:	Burckhardt	Screw	
8.3	Number and capacity of compressors:	3	2513 m3/hour	
8.4	Are compressors oil free?:	Yes		
<b>Plant Design Conditions</b>				
8.5	Design temperature conditions - Air:	45 °C		
8.6	Design temperature conditions - Sea:	32 °C		
<b>9. MANIFOLD</b>				
9.1	Type of manifold valve:	Butterfly		

9.2	Manifold Layout (Fwd to Aft):	Cargo Manifold Dimension B: 3750 Cargo Manifold Dimension C: 2250 Cargo Manifold Dimension D: 750 Cargo Manifold Dimension E: 750 Cargo Manifold Dimension F: 2250 Cargo Manifold Dimension G: 3500 Cargo Manifold Dimension H: 4250			
9.3	Do manifold arrangements comply with SIGTTO standards?:	Yes			
9.4	Liquid manifold size:	10			
9.5	Vapour manifold size:	8			
9.6	Are local pressure gauges fitted outboard of the manifold valve:	Yes			
9.7	<b>Pipe Flange</b>				
	<b>Pipe Flange letter</b>	<b>Duty</b>	<b>Rating (bar)</b>	<b>Size</b>	<b>Raised/Flat face</b>
	B	HFO	18	6	Raised
	C	Liquid	25	10	Raised
	D	Vapour	18	8	Raised
	E	Vapour	18	8	Raised
	F	Liquid	25	10	Raised
	G	DO	6	4	Raised
	H	HFO	6	6	Raised
<b>Dimensions</b>					
9.8	Bow to center manifold (BCM)/Stern to center manifold (SCM):	76 Metres	84 Metres		
9.9	Distance manifold to ship side:	4000 mm			
9.10	Height above uppermost continuous deck:	1940 mm			
9.11	Height of the manifold connections above the waterline at light condition:	14850 mm			
9.12	Height of the manifold connections above the waterline at loaded condition:	9320 mm			
9.13	Reducers:	<b>No.</b>	<b>Flange Rating</b>	<b>Size</b>	<b>Length</b>
	ANSI Class 300:	8	18 bar	300 mm	397 mm
	ANSI Class 300 to 150:	8	18 bar	300mm	397 mm
	ANSI Class 150:	8	18 bar	300 mm	397 mm
<b>10. SHIP TO SHIP TRANSFER</b>					
10.1	Does vessel comply with recommendations contained in OCIMF/ICS Ship To Ship Transfer Guide (Petroleum, Chemicals or Liquidified Gas, as applicable)?	Yes			

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