ELECTRIC LOAD ANALYSIS

SUMMARY SHEET (174K LNGC XDF)

CLASSIFICATION	NORMAL SEAGOING				PORT IN/OUT	PORT				HARBOUR	AT EMERGENCY	
	LADEN (GAS)	BALLAST (GAS)	LADEN/BALLAST (F.O.)	LADEN W/ RELIQ. (GAS)	(M/E on) (GAS)	UNLOADING (GAS)	UNLOADING (F.O.)	LOADING (GAS)	LOADING (F.O.)	LADEN/BALLAST (GAS)	BLACK OUT	FIRE
CONTINUOUS LOAD	2,829.6	2,680.4	2,482.9	2,556.4	2,557.8	2,592.8	2,628.2	2,411.2	2,370.7	1,367.0	263.7	444.6
INTERMITTENT LOAD	290.6	290.6	337.3	290.6	308.5	166.1	180.8	198.1	212.8	166.1		
GROUP DIVERSITY FACTOR	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
ACTUAL INTERMITTENT LOAD	116.3	116.3	134.9	116.3	123.4	66.4	72.3	79.2	85.1	66.4		
CARGO PART LOAD	941.8	941.8	64.3	1,973.0	937.9	4,808.2	3,976.5	1,961.0	1,273.1	915.5		
DECK MACHINERY LOAD	0.0	0.0	0.0	0.0	95.2	0.0	0.0	0.0	0.0	0.0		
PREFERENTIAL LOAD	1,999.7	1,850.5	1,216.4	2,757.7	1,325.9	5,212.8	4,578.7	2,310.8	1,676.7	1,323.5		
TOTAL LOAD	3,887.6	3,738.4	2,682.1	4,645.6	3,714.3	7,467.5	6,677.1	4,451.5	3,728.9	2,348.9	263.7	444.6
(AFTER PREFERENTIAL)	1,888.0	1,888.0	1,465.7	1,888.0	2,388.3	2,254.7	2,098.4	2,140.7	2,052.2	1,025.4		
NO. OF GENERATOR	2xA/G	2xA/G	1xM/G	2xA/G	2xA/G	1xM/G + 2xA/G	1xM/G + 2xA/G	1xM/G + 1xA/G	2xA/G	1xA/G	1 x E/G	1 x E/G
(AFTER PREFERENTIAL)	1xA/G	1xA/G	1xM/G	1xA/G	1xA/G	1xA/G	1xA/G	1xA/G	1xA/G	1xA/G		
LOAD FACTOR	70.0%	67.4%	72.5%	83.7%	66.9%	80.7%	72.2%	68.7%	67.2%	84.6%	31.0%	52.3%
(AFTER PREFERENTIAL)	68.0%	68.0%	39.6%	68.0%	86.1%	81.3%	75.6%	77.1%	74.0%	37.0%		
TOTAL LOAD OF MAIN HV SWBD (kW)	0.0	0.0	0.0	0.0	0.0	769.3	769.3	769.3	769.3	0.0		
TOTAL LOAD OF MAIN LV SWBD (kW)	2,557.4	2,557.4	2,166.1	2,557.4	3,029.1	2,146.3	1,994.6	2,026.7	1,942.8	1,686.2		
TOTAL LOAD OF CARGO HV SWBD (kW)	655.0	655.0	21.0	1,686.3	655.0	4,544.3	3,910.2	1,642.3	1,008.2	655.0		
TOTAL LOAD OF CARGO LV SWBD (kW)	33.8	33.8	2.8	33.8	29.9	7.5	2.8	13.1	8.4	7.5		
MAIN TR (kVA) (INCL. 10%)	3,552.0	3,552.0	3,008.5	3,552.0	4,207.1	2,980.9	2,770.2	2,814.8	2,698.3	2,342.0		
CARGO TR (kVA) (INCL. 10%)	46.9	46.9	3.9	46.9	41.5	10.3	3.9	18.1	11.7	10.3		

	MAIN GENERATOR (M/G)	AUX GENERATOR (A/G)			EM'CY GENERATOR
CAPACITY	3,700 kW	2,775 kW			850 kW
NO. OF SET	2 set	2 set			1 set
VOLTAGE	6,600 volt				450 volt
PHASE, FREQUENCY	3 ph, 60 Hz				3 ph, 60 Hz
PRIME MOVER	DF ENGINE				DIESEL ENGINE

G/E : HIMSEN 8H35DF x 2sets + 6H35DF x 2set

Note)
1. This ELA is calculated for general service power under tropical condition.
2. The summary and electric loads will be changed at detail design stage according to the selected makers and design development.
3. Generator running configurations aforementioned will not be bound by a transient elapse such as motor starting period.
4. The Sea full ahead loaded with reliquification condition is based on ship's speed of 12.5 knts.
5. Generator running configuration aforementioned to be varied depending on operating conditions of air lubrication system.
6. Load for ALS compressor depend on vessel speed.
   - ALS compressor power at 12.0 knots with laden condition : 354 kW
   - ALS compressor power at 19.5 knots with laden condition : 607 kW
   - ALS compressor power at 12.0 knots with ballast condition : 308 kW
   - ALS compressor power at 19.5 knots with ballast condition : 538 kW

   Please note that the required air volume and the related ALS compressor powers can be adjusted due to various environments at sea