PLAN HISTORY

REV. NO.	DATE	DESCRIPTION	REMARK
0	2023 05. 04	Prepared by outfitting design team	

TOTAL (10) SHEETS WITH COVER

MANAGER	K.D. OK	DATE : 2023.05.04	SCALE
APPROVED	S.S. SHIN	**DWT 13,000 CLASS METHANOL DF PRODUCT CARRIER**	NONE
CHECKED	-	**ELECTRIC LOAD ANALYSIS**	TEAM
DRAWN	J.K. YEO		OUTFITTING DESIGN
TEL.	051-260-7836		REV. 0
KRISO		친환경선박설계기술사업단 ECO-FRIENDLY SHIP DESIGN ENGINEERING	

SUMMARY OF ELECTRIC LOAD

CASE \ CONDITION			NORMAL SEAGOING		MANEUVERING		CARGO HANDLING	IN HARBOUR	EM'CY	
			Without Tank Clean	With Tank Clean	Wiithout Thruster	Wiith Thruster			AT BLACKOUT	AT FIRE
CONSUMER GROUP	ENGINE ROOM AUXILIARIES		373.6	373.6	357.8	357.8	297	277.5		
	DECK MACHINERY		4.2	10.9	6.3	6.3	2.1	4		
	AIR-COND. & HEATER		83.6	83.6	83.6	83.6	83.6	83.6		
	VENT FANS		64.7	65.5	65.5	65.5	65.5	35.6		
	CARGO MACHINERY SYSTEM		86	88.4	250.2	578.6	945	0		
	EM'CY CONSUMERS								77.6	60.1
GENERATOR CAPACITY (KW)			900	900	900	1,800	1,800	900	120	120
			DG x 1	DG x 1	DG x 1	DG x 2	DG x 2	DG x 1		
									EG x 1	EG x 1
TOTAL LOAD (KW)		BEFORE PT	612	622	763	1,092	1,393	401	78	60
		AFTER PT	524	533	510	510	565	310	-	
LOAD OF GENERATOR (%)		BEFORE PT	68.0%	69.1%	84.8%	60.7%	77.4%	44.5%	64.7%	50.1%
		AFTER PT	58.2%	59.2%	56.7%	28.3%	31.4%	34.5%	-	

MAIN ENGINE	NCR : 2,700KW	x 1 set	125.5 rpm	Wartsila W6L32M
MAIN GEN. (DG)	900 KW	x 2 set	900 rpm	HHI (8H17/28)
EM'CY GEN.	120 KW	x 1 set	1,800 rpm	
THRUSTER	350 KW	x 1 set	HYD. MOTOR DRIVEN	

E/R AUXILIARIES

NO.	ITEM	Q'TY	MOTOR CAPACITY			LOAD FAC.	DIV. FAC.	REQ. LOAD (KW)	NORMAL SEAGOING				MANEU-VERING		CARGO HANDLING		IN HARBOUR		PREF. TRIP
			OUTPUT (KW)	EFF'Y (%)	INPUT (KW)				Without Tank Clean		With Tank Clean								
1	MAIN C.S.W PUMP	2	27.0	95.0	28.4	0.80	1.00	22.7	1	22.7	1	22.7	1	22.7					
2	CENT L.T.C.F.W PUMP	2	28.0	90.0	31.1	0.80	1.00	24.9	1	24.9	1	24.9	1	24.9	1	24.9			
3	M/E H.T.C.F.W ST'BY PUMP	1	9.4	90.0	10.4	0.80	1.00	8.4	1	8.4	1	8.4	1	8.4	1	8.4			
4	M/E L.T.C.F.W ST'BY PUMP	1	9.4	90.0	10.4	0.80	1.00	8.4	1	8.4	1	8.4	1	8.4	1	8.4			
5	M/E L.O ST'BY PUMP	1	33.8	90.0	37.6	0.80	1.00	30.0	1	30.0	1	30.0	1	30.0					
6	M/E M.G.O SUPPLY PUMP	2	2.0	80.0	2.5	0.80	1.00	2.0	1	2.0	1	2.0	1	2.0					
7	M/E M.G.O CIRC. PUMP	2	0.8	80.0	1.0	0.80	1.00	0.8	1	0.8	1	0.8	1	0.8					
8	G/E M.G.O SUPPLY PUMP	2	3.5	80.0	4.4	0.80	1.00	3.5	1	3.5	1	3.5	1	3.5	1	3.5			
9	G/E M.G.O CIRC. PUMP	2	0.9	80.0	1.1	0.80	1.00	0.9	1	0.9	1	0.9	1	0.9	1	0.9			
10	G/E A.C CHEM. CLEAN PUMP	1	2.5	80.0	3.1	0.80	1.00	2.5							1	2.5			
11	M/E TURNING GEAR	1	0.8	85.0	0.9	0.80	0.10	0.1							1	0.1	1	0.1	
12	G/E EM'CY SUPPLY PUMP	1	1.3	80.0	1.6	0.80	1.00	1.3											
13	G/E L.O PRIMING PUMP	2	0.9	80.0	1.1	0.80	1.00	0.9	1	0.9	1	0.9	1	0.9			1	0.9	
14	M.G.O AUTO FILTER	1	0.1	85.0	0.1	0.80	1.00	0.1	1	0.1	1	0.1	1	0.1	1	0.1	1	0.1	
15	M/E L.O AUTO FILTER	1	0.1	85.0	0.1	0.80	1.00	0.1	1	0.1	1	0.1	1	0.1	1	0.1	1	0.1	
17	G/E J.ACKET W. PREHEATER	1	45.0	100.0	45.0	1.00	1.00	45.0									1	45.0	
18	M.G.O PURIFIER	1	3.0	90.0	3.3	0.80	1.00	2.7	1	2.7	1	2.7	1	2.7	1	2.7	1	2.7	
19	M.G.O PURIFIER FEED PUMP	1	0.5	80.0	0.6	0.70	1.00	0.4	1	0.4	1	0.4	1	0.4	1	0.4	1	0.4	
20	L.O PURIFIER	1	3.0	90.0	3.3	0.80	1.00	2.7	1	2.7	1	2.7	1	2.7	1	2.7	1	2.7	
21	L.O PURIFIER FEED PUMP	1	0.5	80.0	0.6	0.70	1.00	0.4	1	0.4	1	0.4	1	0.4	1	0.4	1	0.4	
22	M.G.O TRANS PUMP	1	2.0	90.0	2.2	0.50	0.30	0.3	1	0.3	1	0.3	1	0.3	1	0.3			
23	L.O TRANS PUMP	1	2.0	90.0	2.2	0.50	0.30	0.3	1	0.3	1	0.3	1	0.3	1	0.3			
24	M/E J.W PREHEATER	1	42.0	90.0	46.7	0.70	1.00	32.7							1	32.7			
25	C.P.P. HYD. POWER UNIT	1	18.3	90.0	20.3	0.80	1.00	16.3	1	16.3	1	16.3	1	16.3					
26	R/G ST'BY L.O PUMP	1	20.0	90.0	22.2	0.80	1.00	17.8	1	17.8	1	17.8	1	17.8					
TOTAL OF E/R AUXILIARIES (1)						TOTAL			143.6		143.6		143.6		88.4		52.4		
						TOTAL OF AFTER PT			143.6		143.6		143.6		88.4		52.4		

E/R AUXILIARIES

NO.	ITEM	Q'TY	MOTOR CAPACITY			LOAD FAC.	DIV. FAC.	REQ. LOAD (KW)	NORMAL SEAGOING				MANEU-VERING		CARGO HANDLING		IN HARBOUR		PREF. TRIP
			OUTPUT (KW)	EFF'Y (%)	INPUT (KW)				Without Tank Clean		With Tank Clean								
1	MAIN AIR COMPRESSOR	2	22.0	95.0	23.2	0.80	0.30	5.6	1	5.6	1	5.6	1	5.6	1	5.6	1	5.6	
2	DECK AIR COMPRESSOR	1	25.6	90.0	28.4	0.80	0.30	6.8	1	6.8	1	6.8	1	6.8	1	6.8	1	6.8	
3	FIRE & G/S PUMP	1	63.0	90.0	70.0	0.80	0.30	16.8							1	16.8	1	16.8	
4	FIRE & BILGE PUMP	1	63.0	90.0	70.0	0.80	0.30	16.8									1	16.8	
5	S/T L.O PUMP	2	1.5	80.0	1.9	0.80	1.00	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	
6	CONTROL AIR DRYER	1	1.4	100.0	1.4	0.80	0.30	0.3	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3	
7	F.W GENERATOR EJECT C.S.W PUMP	1	11.0	85.0	12.9	0.80	1.00	10.4	1	10.4	1	10.4							
8	F.W GENERATOR FEED WATER PUMP	1	0.8	85.0	0.9	0.80	1.00	0.8	1	0.8	1	0.8							
9	F.W HYD. PUMP	2	1.4	85.0	1.6	0.80	0.50	0.7	1	0.7	1	0.7	1	0.7	1	0.7	1	0.7	
10	OILY WATER SEPARATOR BILGE PUMP	1	3.5	80.0	4.4	0.80	0.10	0.4	1	0.4	1	0.4							
11	SLUDGE PUMP	1	2.5	80.0	3.1	0.80	0.10	0.3									1	0.3	
12	SEWAGE TREAT. DISCH PUMP	1	4.4	80.0	5.5	0.80	0.50	2.2	1	2.2	1	2.2							
13	SEWAGE TREAT. AIR BLOWER	1	0.7	80.0	0.9	0.80	1.00	0.7	1	0.7	1	0.7	1	0.7	1	0.7	1	0.7	
14	AUX. BOILER F.O PUMP	2	2.6	90.0	2.9	0.80	1.00	2.3	1	2.3	1	2.3	1	2.3	1	2.3	1	2.3	
15	AUX. BOILER FEED WATER PUMP	2	11.0	90.0	12.2	0.80	1.00	9.8	1	9.8	1	9.8	1	9.8	1	9.8	1	9.8	
16	AUX. BOILER BURNER & FAN	1	32.7	90.0	36.3	0.80	1.00	29.1	1	29.1	1	29.1	1	29.1	1	29.1	1	29.1	
17	AUX. BOILER WATER CIRC PUMP	2	2.5	90.0	2.8	0.80	0.50	1.1	1	1.1	1	1.1	1	1.1	1	1.1	1	1.1	
18	AUX. BOILER FEED W. SERV. PUMP	1	1.3	90.0	1.4	0.80	0.50	0.6	1	0.6	1	0.6	1	0.6	1	0.6	1	0.6	
19	AUX. BOILER CHEM. DOSING PUMP	1	0.1	90.0	0.1	0.80	0.50	0.0	1	0.0	1	0.0	1	0.0	1	0.0	1	0.0	
20	HOT WATER CORC. PUMP	1	0.4	75.0	0.5	0.80	1.00	0.4	1	0.4	1	0.4	1	0.4	1	0.4	1	0.4	PT
21	U.V STERILIZER	1	0.1	100.0	0.1	1.00	1.00	0.1	1	0.1	1	0.1	1	0.1	1	0.1	1	0.1	
22	W.O. INCINERATOR DOSING PUMP	1	0.5	85.0	0.6	0.80	0.20	0.1	1	0.1	1	0.1							
23	W.O. INCINERATOR BLOWER	1	5.5	85.0	6.5	0.80	0.20	1.0	1	1.0	1	1.0							
24	W.O. INCINERATOR MILL PUMP	1	4.6	85.0	5.4	0.80	0.20	0.9	1	0.9	1	0.9							
25	CALORIFIER	1	30.0	100.0	30.0	0.60	1.00	18.0	1	18.0	1	18.0	1	18.0	1	18.0	1	18.0	
26	BILGE TRANSFER PUMP	1	1.5	80.0	1.9	0.70	0.30	0.4	1	0.4	1	0.4	1	0.4	1	0.4	1	0.4	
27	LOCAL FIRE FIGHTING PUMP	1	6.3	85.0	7.4	0.80	0.10	0.6											
28	VALVE REMOTE CONTROL SYSTEM	1	2.0	80.0	2.5	0.75	1.00	1.9	1	1.9	1	1.9	1	1.9	1	1.9			
TOTAL OF E/R AUXILIARIES (2)						TOTAL				95.1		95.1		79.3		96.1		111.3	
						TOTAL OF AFTER PT				94.7		94.7		78.9		95.7		110.9	

E/R AUXILIARIES

NO.	ITEM	Q'TY	MOTOR CAPACITY			LOAD FAC.	DIV. FAC.	REQ. LOAD (KW)	NORMAL SEAGOING				MANEU-VERING		CARGO HANDLING		IN HARBOUR		PREF. TRIP
			OUTPUT (KW)	EFF'Y (%)	INPUT (KW)				Without Tank Clean		With Tank Clean								
1	ECR AIR CON COMPRESSOR	1	0.3	85.0	0.4	0.80	0.30	0.1	1	0.1	1	0.1	1	0.1	1	0.1	1	0.1	
2	EXH. V/V GRINDING MACH.	1	0.4	80.0	0.5	0.80	0.30	0.1	1	0.1	1	0.1	1	0.1	1	0.1	1	0.1	
3	WORKSHOP PACKAGE AIR CON.	1	7.1	80.0	8.9	0.80	0.30	2.1	1	2.1	1	2.1	1	2.1	1	2.1	1	2.1	
4	ICCP & MGPS SYSTEM	1	7.0	100.0	7.0	0.80	0.50	2.8	1	2.8	1	2.8	1	2.8	1	2.8	1	2.8	
5	BATTERY CH. & DISCH. BOARD	1	1.5	100.0	1.5	1.00	0.50	0.8	1	0.8	1	0.8	1	0.8	1	0.8	1	0.8	
6	MAIN TRANSFORMER	2	90.0	100.0	90.0	1.00	0.60	54.0	1	54.0	1	54.0	1	54.0	1	54.0	1	54.0	
7	EM'CY TRANSFORMER	2	30.0	100.0	30.0	1.00	0.60	18.0	1	18.0	1	18.0	1	18.0	1	18.0	1	18.0	
8	LATHE	1	5.5	85.0	6.5	0.50	0.10	0.3	1	0.3	1	0.3	1	0.3	1	0.3	1	0.3	PT
9	GRINDER	1	0.8	80.0	1.0	0.20	0.10	0.0									1	0.0	PT
10	DRILLING MACHINE	1	0.8	80.0	1.0	0.20	0.10	0.0									1	0.0	PT
11	ARC WELDER	1	10.2	100.0	10.2	0.20	0.10	0.2									1	0.2	PT
12	E/R CRANE	1	4.0	85.0	4.7	0.80	0.30	1.1									1	1.1	PT
13	GALLEY / LAUNDRY EQUIPMENT	1	30.0	100.0	30.0	0.60	0.10	1.8	1	1.8	1	1.8	1	1.8	1	1.8	1	1.8	PT
14	SCR UREA SUPPLY PUMP	2	2.0	85.0	2.4	0.80	1.00	1.9	1	1.9	1	1.9	1	1.9	1	1.9	1	1.9	
15	METHANOL LP PUMP FOR M/E	1	5.0	90.0	5.6	0.80	1.00	4.5	1	4.5	1	4.5	1	4.5					
16	METHANOL HP PUMP FOR M/E	1	5.0	95.0	5.3	0.80	1.00	4.2	1	4.2	1	4.2	1	4.2	1	4.2	1	4.2	
17	METHANOL FUEL TRANSFER PUMP	2	15.0	90.0	16.7	0.80	1.00	13.4	1	13.4	1	13.4	1	13.4	1	13.4	1	13.4	
18	GLYCOL WATER PUMP	2	5.0	90.0	5.6	0.80	1.00	4.5	1	4.5	1	4.5	1	4.5	1	4.5	1	4.5	
19	FGSS CONTROL & MONITORING (220V)	1	3.0	85.0	3.5	0.90	1.00	3.2	1	3.2	1	3.2	1	3.2	1	3.2	1	3.2	
20	N2 GENERATOR	1	3.0	85.0	3.5	0.90	1.00	3.2	1	3.2	1	3.2	1	3.2					
21	N2 GENERATOR FEED AIR COMPRESSOR	1	20.0	90.0	22.2	0.90	1.00	20.0	1	20.0	1	20.0	1	20.0					
22	BILGE PUMP FOR METHANOL	2	5.0	85.0	5.9	0.90	1.00	5.3							1	5.3	1	5.3	
TOTAL OF E/R AUXILIARIES (3)						TOTAL			134.9		134.9		134.9		112.5		113.8		
						TOTAL OF AFTER PT			132.8		132.8		132.8		110.4		110.4		
TOTAL OF E/R AUXILIARIES (1+2+3)						TOTAL			373.6		373.6		357.8		297.0		277.5		
						TOTAL OF AFTER PT			371.1		371.1		355.3		294.5		273.7		

DECK MACHINERY

NO.	ITEM	Q'TY	MOTOR CAPACITY			LOAD FAC.	DIV. FAC.	REQ. LOAD (KW)	NORMAL SEAGOING				MANEU-VERING		CARGO HANDLING		IN HARBOUR		PREF. TRIP
			OUTPUT (KW)	EFF'Y (%)	INPUT (KW)				Without Tank Clean		With Tank Clean								
1	STEERING GEAR (SEA GOING)	2	7.5	90.0	8.3	0.25	1.00	2.1	1	2.1	1	2.1							
	STEERING GEAR (MANEUVERING)	2	7.5	90.0	8.3	0.50	1.00	4.2					1	4.2					
2	RESCUE BOAT & LIFE RAFT HAND. CRANE	1	15.0	90.0	16.7	0.80	0.50	6.7			1	6.7							
3	LIFE BOAT DAVIT WINCH	1	11.0	95.0	11.6	0.80	1.00	9.3											
4	PROVISION DAVIT WINCH	1	2.2	95.0	2.3	0.80	1.00	1.9									1	1.9	
5	REF. PROVISION PLANT COMPRESSOR	2	4.6	90.0	5.1	0.80	0.50	2.0	1	2.0	1	2.0	1	2.0	1	2.0	1	2.0	PT
6	REF. PROVISION PLANT UNIT COOLER	3	0.1	90.0	0.1	0.80	0.50	0.0	3	0.1	3	0.1	3	0.1	3	0.1	3	0.1	PT
TOTAL OF DECK MACHINERY						TOTAL			4.2		10.9		6.3		2.1		4.0		
						TOTAL OF AFTER PT			2.1		8.8		4.2		0.0		1.9		

AIR COND HEATER

NO.	ITEM	Q'TY	MOTOR CAPACITY			LOAD FAC.	DIV. FAC.	REQ. LOAD (KW)	NORMAL SEAGOING				MANEU-VERING		CARGO HANDLING		IN HARBOUR		PREF. TRIP
			OUTPUT (KW)	EFF'Y (%)	INPUT (KW)				Without Tank Clean		With Tank Clean								
1	AIRCON. COMPRESSOR	2	42.6	90.0	47.3	0.80	0.50	18.9	2	37.9	2	37.9	2	37.9	2	37.9	2	37.9	PT
2	AIRCON. HANDLING UNIT FAN	1	18.0	90.0	20.0	0.80	1.00	16.0	1	16.0	1	16.0	1	16.0	1	16.0	1	16.0	PT
3	REF. PROVISION COMPRESSOR	2	6.3	85.0	7.4	0.80	1.00	5.9	1	5.9	1	5.9	1	5.9	1	5.9	1	5.9	PT
4	PACKAGE AIR COND FOR E.C.R	1	10.4	85.0	12.2	0.80	1.00	9.8	1	9.8	1	9.8	1	9.8	1	9.8	1	9.8	PT
5	PACKAGE AIR COND FOR W/H	1	4.9	85.0	5.8	0.80	1.00	4.6	1	4.6	1	4.6	1	4.6	1	4.6	1	4.6	PT
6	PACKAGE AIR COND FOR GALLEY	1	10.0	85.0	11.8	0.80	1.00	9.4	1	9.4	1	9.4	1	9.4	1	9.4	1	9.4	PT
TOTAL OF AIRCON & HEATER						TOTAL			83.6		83.6		83.6		83.6		83.6		
						TOTAL OF AFTER PT			0.0		0.0		0.0		0.0		0.0		

VENT FANS

NO.	ITEM	Q'TY	MOTOR CAPACITY			LOAD FAC.	DIV. FAC.	REQ. LOAD (KW)	NORMAL SEAGOING				MANEU-VERING		CARGO HANDLING		IN HARBOUR		PREF. TRIP
			OUTPUT (KW)	EFF'Y (%)	INPUT (KW)				Without Tank Clean		With Tank Clean								
1	ENGINE ROOM FAN (REVERSIBLE)	2	22.0	90.0	24.4	0.80	1.00	19.6	2	39.1	2	39.1	2	39.1	2	39.1	1	19.6	
2	ECR AIRCON FAN	1	7.2	80.0	9.0	0.80	0.30	2.2	1	2.2	1	2.2	1	2.2	1	2.2	1	2.2	
3	SANITARY EXHAUST FAN	2	0.8	80.0	1.0	0.80	1.00	0.8	2	1.6	2	1.6	2	1.6	2	1.6	2	1.6	
4	GALLEY EXHAUST FAN	1	0.8	80.0	1.0	0.80	0.30	0.2	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2	
5	BOW THRUSTER RM FAN (REV)	1	0.8	80.0	1.0	0.40	1.00	0.4	1	0.4	1	0.4	1	0.4	1	0.4			
6	CO2 ROOM EXH. FAN	1	5.5	80.0	6.9	0.50	1.00	3.4	1	3.4	1	3.4	1	3.4	1	3.4			
7	STEERING GEAR ROOM FAN	1	2.2	80.0	2.8	0.80	1.00	2.2	1	2.2	1	2.2	1	2.2	1	2.2	1	2.2	
8	GYMNASIUM EXH. FAN	1	0.8	80.0	0.9	0.40	1.00	0.4	1	0.4	1	0.4	1	0.4	1	0.4	1	0.4	
9	TANK CLEAN. GEAR RM. EXH. FAN	1	0.8	80.0	1.0	0.80	1.00	0.8			1	0.8	1	0.8	1	0.8	1	0.8	PT
10	PURIFIER RM. EXH. FAN	1	2.2	80.0	2.8	0.80	0.30	0.7	1	0.7	1	0.7	1	0.7	1	0.7	1	0.7	
11	H.P.U ROOM FAN	1	3.7	80.0	4.6	0.80	0.30	1.1	1	1.1	1	1.1	1	1.1	1	1.1			
12	BOSUN STORE EXH. FAN	1	2.2	80.0	2.8	0.80	1.00	2.2	1	2.2	1	2.2	1	2.2	1	2.2	1	2.2	
13	N2 GENERATOR ROOM EXH. FAN	1	0.8	80.0	1.0	0.80	0.30	0.2	1	0.2	1	0.2	1	0.2	1	0.2	1	0.2	
14	FPR FAN	2	5.5	80.0	6.9	0.80	1.00	5.5	2	11.0	2	11.0	2	11.0	2	11.0	1	5.5	
TOTAL OF VENT FANS						TOTAL			64.7		65.5		65.5		65.5		35.6		
						TOTAL OF AFTER PT			64.7		64.7		64.7		64.7		34.8		

CARGO MACHINERY SYSTEM

NO.	ITEM	Q'TY	MOTOR CAPACITY			LOAD FAC.	DIV. FAC.	REQ. LOAD (KW)	NORMAL SEAGOING				MANEU-VERING		CARGO HANDLING		IN HARBOUR		PREF. TRIP
			OUTPUT (KW)	EFF'Y (%)	INPUT (KW)				Without Tank Clean		With Tank Clean								
1	NO.1 HPP FOR COP	1	260.0	95.0	273.7	0.30	1.00	82.1	1	82.1	1	82.1	1	82.1					
	- DITTO -	1	260.0	95.0	273.7	0.90	1.00								1	246.3			PT
2	NO.2 HPP FOR COP	1	260.0	95.0	273.7	0.90	1.00	246.3					1	246.3	1	246.3			PT
3	NO.3 HPP FOR COP	1	260.0	95.0	273.7	0.90	1.00	246.3					1	246.3	1	246.3			PT
4	JACKET PUMP FOR CARGO PUMP H.P.P	1	2.5	80.0	3.1	0.80	1.00	2.5	1	2.5	1	2.5	1	2.5	1	2.5			
5	HYD. OIL TRANS PP FOR CARGO PUMP	1	1.3	80.0	1.6	0.50	1.00	0.8	1	0.8	1	0.8	1	0.8	1	0.8			
6	CARGO HOSE HANDLING CRANE	1	55.0	75.0	73.3	0.50	1.00	36.7							1	36.7			
7	HYD. POWER PACK FOR VRCS	2	1.8	85.0	2.1	0.30	1.00	0.6	1	0.6	1	0.6	1	0.6	1	0.6			
8	O.D.M.E SAMPLING PUMP	1	2.5	85.0	2.9	0.80	1.00	2.4			1	2.4							
9	B.W.T.S	2	60.0	100.0	60.0	0.80	1.00	48.0							2	96.0			
10	BALLAST PUMP	2	25.0	100.0	25.0	0.80	1.00	20.0							2	40.0			
11	INERT GAS GENERATOR	1	35.0	95.0	36.8	0.80	1.00	29.5							1	29.5			
TOTAL OF CARGO MACHINERY SYSTEM						TOTAL				86.0		88.4		578.6		945.0		0.0	
						TOTAL OF AFTER PT				86.0		88.4		86.0		206.1		0.0	

EM'CY CONSUMERS

NO.	ITEM	Q'TY	MOTOR CAPACITY			LOAD FAC.	DIV. FAC.	REQ. LOAD (KW)		EM'CY			
			OUTPUT (KW)	EFF'Y (%)	INPUT (KW)					AT BLACKOUT		AT FIRE	
1	STEERING GEAR	1	7.5	90.0	8.3	1.00	1.00	8.3		1	8.3	1	8.3
2	ENGINE ROOM FAN (REVERSIBLE)	1	22.0	90.0	24.4	0.80	1.00	19.6		1	19.6		
3	CO2 ROOM EXH. FAN	1	0.8	80.0	1.0	0.50	1.00	0.5		1	0.5		
4	EM'CY GEN. ROOM SUPP. FAN	1	5.5	80.0	6.9	0.80	1.00	5.5		1	5.5	1	5.5
5	EM'CY FIRE PUMP	1	16.2	90.0	18.0	0.80	1.00	14.4				1	14.4
6	EM'CY AIR COMPRESSOR	1	4.3	90.0	4.8	0.80	1.00	3.8		1	3.8		
7	G/E L.O PRIMING PUMP	2	0.9	80.0	1.1	0.80	1.00	0.9		2	1.8		
8	G/E D.O SUPPLY PUMP	1	1.3	80.0	1.6	0.80	1.00	1.3		1	1.3		
9	LOCAL FIRE FIGHTING PUMP	1	6.3	85.0	7.4	0.80	0.10	0.6				1	0.6
10	FRESH WATER HYD. PUMP	2	1.4	85.0	1.6	0.80	1.00	1.3		1	1.3	1	1.3
11	ELECTRIC WHISTLE	1	5.5	85.0	6.5	0.80	1.00	5.2		1	5.2	1	5.2
12	EM'CY TRANSFORMER	2	30.0	100.0	30.0	0.80	1.00	24.0		1	24.0	1	24.0
13	BATTERY CH. & DISCH. BOARD	1	1.5	100.0	1.5	0.50	1.00	0.8		1	0.8	1	0.8
14	EM'CY GEN. ROOM SUPP. FAN	1	5.5	80.0	6.9	0.80	1.00	5.5		1	5.5		
TOTAL OF EM'CY						TOTAL				77.6		60.1	