

ANNEXURE-1

PROJECT : REVAMPING AND UPGRADATION OF 4 NOS OF ESPs

OWNER : M/s RINL

PMC : M/S M.N.DASTUR & COMPANY (P) LTD.

LOCATION : VISAG

Heat Load Calculation Summary Sheet

S.no	Sheet No.	Area Description	Floor Area(sqft)	Height (Ft)	Equip. Load(W)	Occup. (Persons)	Room Design Temp. in deg. F	Room Design RH in %age	Fresh air ACPH	fresh air CFM	Dehumidified Unit CFM	Unit Load (TR)	Winter Load (KW)	Monsoon Heating(KW)	Humidifier (Kw)	Equipment Selection
A		ECR FOR UNIT 1-2														
1	1	ECP PANEL ROOM - SECOND FLOOR	848	15.42	6800	2	77.00	55.00	1.50	327	3680	9.2	-1.09	4.43	-0.91	a) 16.0 TR Package Unit AC with Air Cooled Condenser. 3 Nos (2W+1S) b) Heater - 4.5 kw x 3 Nos. c) humidifier - 3 kw x 1 No. d) Fresh Air Fan - 1000 CFM x 1 No.
2	2	ACP PANEL ROOM - SECOND FLOOR	1072	15.42	9000	2	77.00	55.00	1.50	413	5000	12.3	0.00	5.55	-1.15	
3	3	OFFICE ROOM - SECOND FLOOR	365	15.42	1000	2	77.00	55.00	1.50	141	1498	3.9	-1.90	2.64	-0.39	
4	4	AC PLANT ROOM - SECOND FLOOR	365	15.42	1500	0	77.00	55.00	1.50	141	1418	3.7	-1.27	2.18	-0.39	
		Total - A								881	11595	29.1	-4.3	14.8	-2.8	
B		ECR FOR UNIT 1-2														
5	5	SWITCHGEAR ROOM - GROUND FLOOR	1179	19.68	19120	2	82.40	55.00	1.50	580	5421	15.9	-2.72	7.22	-3.06	a) 11.0 TR Package Unit AC with Air Cooled Condenser. 3 Nos (2W+1S) b) Heater - 3 kw x 3 Nos. c) humidifier - 4.5 kw x 1 No. d) Fresh Air Fan - 700 CFM x 1 No.
6	6	AC PLANT ROOM-GROUND FLOOR	365	19.68	1500	0	82.40	55.00	1.50	180	1175	4.0	-4.63	3.07	-0.95	
		Total - B								580	6595	19.9	-7.3	10.3	-4.0	

ANNEXURE-2

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A		ECR FOR UNIT 3-4														a) 16.0 TR Package Unit AC with Air Cooled Condenser. 3 Nos (2W+1S) b) Heater - 4.5 kw x 3 Nos. c) humidifier - 3 kw x 1 No. d) Fresh Air Fan - 1000 CFM x 1 No.
1	1	ECP PANEL ROOM - SECOND FLOOR	848	15.42	6800	2	77.00	55.00	1.50	327	3680	9.2	-1.09	4.43	-0.91	
2	2	ACP PANEL ROOM - SECOND FLOOR	1072	15.42	9000	2	77.00	55.00	1.50	413	5000	12.3	0.00	5.55	-1.15	
3	3	OFFICE ROOM - SECOND FLOOR	365	15.42	1000	2	77.00	55.00	1.50	141	1498	3.9	-1.90	2.64	-0.39	
4	4	AC PLANT ROOM - SECOND FLOOR	365	15.42	1500	0	77.00	55.00	1.50	141	1418	3.7	-1.27	2.18	-0.39	
		Total - A								881	11595	29.1	-4.3	14.8	-2.8	
B		ECR FOR UNIT 3-4														a) 11.0 TR Package Unit AC with Air Cooled Condenser. 3 Nos (2W+1S) b) Heater - 3 kw x 3 Nos. c) humidifier - 4.5 kw x 1 No. d) Fresh Air Fan - 700 CFM x 1 No.
5	5	SWITCHGEAR ROOM - GROUND FLOOR	1179	19.68	20480	2	82.40	55.00	1.50	580	5628	16.3	-2.04	7.22	-3.06	
6	6	AC PLANT ROOM-GROUND FLOOR	365	19.68	1500	0	82.40	55.00	1.50	180	1198	4.0	-4.68	3.14	-0.95	
		Total - B								580	6826	20.3	-6.7	10.4	-4.0	

ANNEXURE-3

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Heat Load Calculation Summary Sheet

S.no	Sheet No.	Area Description	Floor Area(sqft)	Height (Ft)	Equip. Load(W)	Occup. (Persons)	Room Design Temp. in deg. F	Room Design RH in %age	Fresh air ACPH	fresh air CFM	Dehumidified Unit CFM	Unit Load (TR)	Winter Load (KW)	Monsoon Heating(KW)	Humidifier (Kw)	Equipment Selection
A		ECR FOR UNIT 5														a) 16.0 TR Package Unit AC with Air Cooled Condenser. 3 Nos (2W+1S) b) Heater - 4.5 kw x 3 Nos. c) humidifier - 3 kw x 1 No. d) Fresh Air Fan - 1000 CFM x 1 No.
1	1	ECP PANEL ROOM - SECOND FLOOR	848	15.42	3600	2	77.00	55.00	1.50	327	3066	8.2	-2.68	4.43	-0.91	
2	2	ACP PANEL ROOM - SECOND FLOOR	1072	15.42	5000	2	77.00	55.00	1.50	413	4234	11.0	-1.99	5.55	-1.15	
3	3	OFFICE ROOM - SECOND FLOOR	365	15.42	1000	2	77.00	55.00	1.50	141	1282	3.5	-2.00	2.41	-0.39	
4	4	AC PLANT ROOM - SECOND FLOOR	365	15.42	1500	0	77.00	55.00	1.50	141	1418	3.7	-1.27	2.18	-0.39	
		Total - A								881	10000	26	-8	15	-3	
B		ECR FOR UNIT 5														a) 11.0 TR Package Unit AC with Air Cooled Condenser. 3 Nos (2W+1S) b) Heater - 3 kw x 3 Nos. c) humidifier - 4.5 kw x 1 No. d) Fresh Air Fan - 700 CFM x 1 No.
5	5	SWITCHGEAR ROOM - GROUND FLOOR	1179	19.68	19120	2	82.40	55.00	1.50	580	5421	15.9	-2.72	7.22	-3.06	
6	6	AC PLANT ROOM-GROUND FLOOR	365	19.68	1500	0	82.40	55.00	1.50	180	1198	4.0	-4.68	3.14	-0.95	
		Total - B								580	6618	19.9	-7	10	-4	