

140651069

DRG. NO. 34566251124

SHT. NO.	DESCRIPTION	REVISION NO.
02	AUX. SUPPLY, HEATING & LIGHTING CIRCUIT	01
03	MOTOR CIRCUIT	01
04	CONTROL CIRCUIT	01
05	SIGNALLING CIRCUIT	01
06	ALARM & TRIP CIRCUIT	01
07	CT CKT. & INDICATOR DIAGRAM	01
08	TERMINAL BLOCKS	01
09	TERMINAL BLOCKS	01
10	LIST OF PARTS	01
11	BOM OF MARSHALLING BOX	01
12	FRONT & PLAN OF M.BOX	01
13	SIDE VIEW OF M.BOX	01

NOTES:

1. WHERE POSSIBLE ALL GEAR SHOWN IN OPEN OR DE-ENERGISED POSITION.
2. THE COLOUR OF THE CABLE TO BE USED FOR EACH CONNECTION IS INDICATED BY ANY OF THE LETTERS MARKED AS FOLLOWS R-RED, Y-YELLOW, B-BLUE, N-BLACK, G-GREEN, E-GREEN (FOR R,Y,B PHASE, DC SUPPLY, CONTROL SUPPLY AND EARTHING)
3. CONNECTION WITH GREY AND GREEN WIRES SHOULD BE KEPT PHYSICALLY SEPARATED FROM THE REMAINING WIRING.
4. CABLES TO BE USED FOR WIRING R,Y,B MARKED THUS * IND. 10SQ.MM, REMAINING R,Y,B,N,G & E ARE 2.5 SQ.MM SIZE PVC INSULATED 1100 VOLTS GRADE STRANDED COPPER CABLE.
5. LEADS MARKED FOR TRIP CIRCUITS ARE TO BE PREPARED WITH P.V.C. SLEEVING MARKED TRIP IN RED.
6. OVERLOAD RELAY SETTING FOR FAN 1.0 AMPS.
7. WIRE MARKING SHALL BE DONE WITH ENGRAVING TOOL.
8. IF SIEMENS MAKE CONTACTORS & THERMAL RELAYS ARE USED IN PLACE OF L&T MAKE THEN TERMINAL MARKING WILL BE AS PER SIEMENS.
9. MAKE OF EQUIPMENTS AS PER NTPC APPROVED BY JRS.
10. ALL T.B. SHALL BE STUD TYPE WITH RING TYPE S FOR CABLE.
11. ALL CT CABLES SHALL BE 4 SQ.MM.
12. CT NOT IN USED SHALL BE KEPT SHORTED.

INVENTORY NO.		SIGN AND DATE		REF. DRG. NO.																						
REV. DATE		REV. DATE		REV. DATE																						
ALTERED CHECKED APPROVED		ALTERED CHECKED APPROVED		ALTERED CHECKED APPROVED																						
ZONE		ZONE		ZONE																						
NTPC DRG. NO. 9549-501-PVE-N-03 PL. NO. :- CS-9549-501-2-FC-NDA-6207 ADDITIONAL INFORMATION W.D.NO. 71193P17700 STATUS OF DRAWING 'U' DISTRIBUTION OF PRINTS <table border="1"> <tr> <th>NO.</th> <th>REV.</th> <th>DATE</th> <th>BY</th> <th>CHKD.</th> <th>APPD.</th> <th>REMARKS</th> </tr> <tr> <td>1</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						NO.	REV.	DATE	BY	CHKD.	APPD.	REMARKS	1	2						4						
NO.	REV.	DATE	BY	CHKD.	APPD.	REMARKS																				
1	2																									
4																										
REV. DATE		REV. DATE		REV. DATE																						
06/08/2015		06/08/2015		06/08/2015																						
APPROVED		APPROVED		APPROVED																						
ZONE		ZONE		ZONE																						
DRG. REVISED AS PER CUSTOMER COMMENTS DATED 19.05.2015		DRG. REVISED AS PER CUSTOMER COMMENTS DATED 19.05.2015		DRG. REVISED AS PER CUSTOMER COMMENTS DATED 19.05.2015																						
TITLE		TITLE		TITLE																						
G.A. DIAGRAM OF COOLER CONTROL GEAR		G.A. DIAGRAM OF COOLER CONTROL GEAR		G.A. DIAGRAM OF COOLER CONTROL GEAR																						
DEPT. NO.		DEPT. NO.		DEPT. NO.																						
406		406		406																						
UN. NO.		UN. NO.		UN. NO.																						
BHM. C/M/F		BHM. C/M/F		BHM. C/M/F																						
BHARAT HEAVY ELECTRICALS LTD.		BHARAT HEAVY ELECTRICALS LTD.		BHARAT HEAVY ELECTRICALS LTD.																						
JHANSI		JHANSI		JHANSI																						
M/S NTPC LTD DALLAPALLI SUPER THERMAL POWER PROJECT-2X800MW		M/S NTPC LTD DALLAPALLI SUPER THERMAL POWER PROJECT-2X800MW		M/S NTPC LTD DALLAPALLI SUPER THERMAL POWER PROJECT-2X800MW																						
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT																						
45MVA, 23.5/11.5KV, 3PH, 50HZ, D/NAF/D/ANAN		45MVA, 23.5/11.5KV, 3PH, 50HZ, D/NAF/D/ANAN		45MVA, 23.5/11.5KV, 3PH, 50HZ, D/NAF/D/ANAN																						
COOLED UNIT TRANSFORMER		COOLED UNIT TRANSFORMER		COOLED UNIT TRANSFORMER																						
DRAWING NO.		DRAWING NO.		DRAWING NO.																						
34566251124		34566251124		34566251124																						
REV.		REV.		REV.																						
01		01		01																						
SHT. NO.		SHT. NO.		SHT. NO.																						
01		01		01																						
NO. OF SHT.		NO. OF SHT.		NO. OF SHT.																						
13		13		13																						
SIGNATURE NOT REQUIRED AS IT IS SYSTEM GENERATED DRAWING		SIGNATURE NOT REQUIRED AS IT IS SYSTEM GENERATED DRAWING		SIGNATURE NOT REQUIRED AS IT IS SYSTEM GENERATED DRAWING																						
SIZE A3		SIZE A3		SIZE A3																						

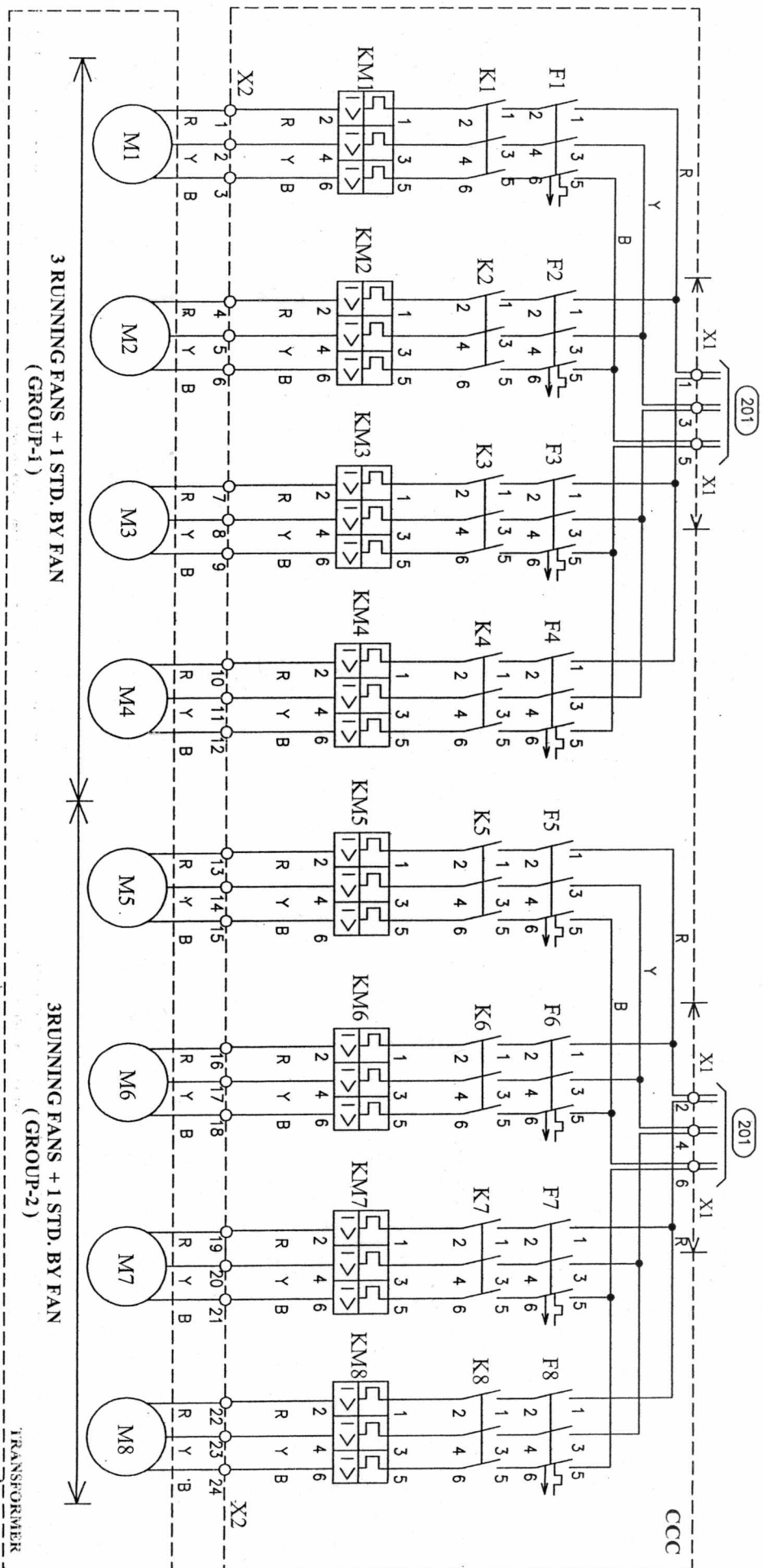
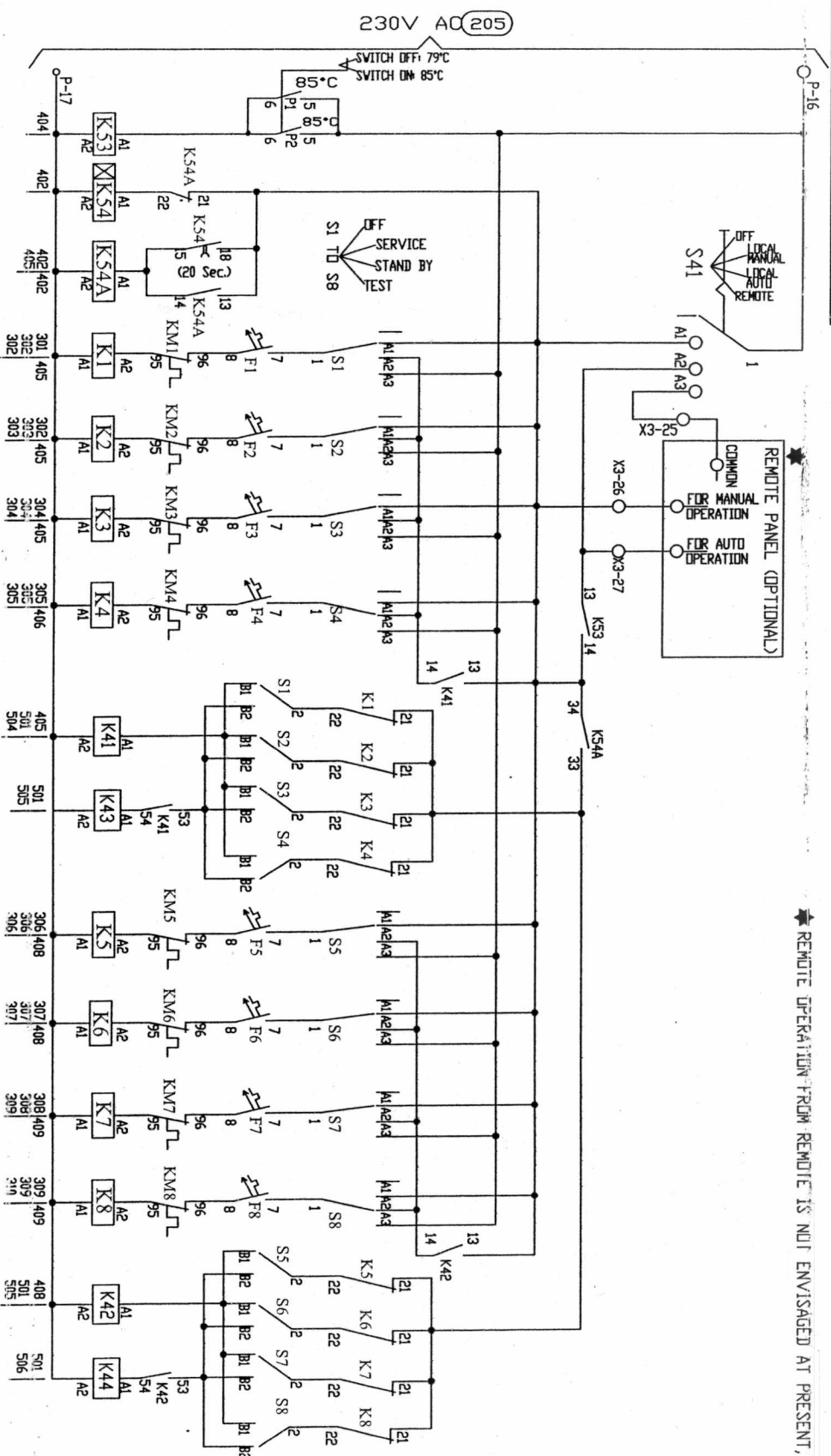
[illegible]

Diagram of the remote panel (optional) showing terminals 1A1, 1A2, 1A3, 1S2, and 1S1. Terminal 1A1 is connected to the 'OFF' position of switch S41. Terminal 1A2 is connected to the 'LOCAL' position. Terminal 1A3 is connected to the 'AUTO' position. Terminal 1S2 is connected to the 'REMOTE' position. Terminal 1S1 is connected to a common terminal, which is then connected to the 'FOR MANUAL OPERATION' and 'FOR AUTO OPERATION' terminals.



0	1	2	3
OFF	LOCAL MANUAL	LOCAL AUTO	REMOTE

$$\begin{array}{c} 3 \\ 0 \rightarrow 1 \\ 2 \end{array}$$

0	1	2	3
OFF	SERVICE	STANDBY	TEST

ADDITIONAL INFORMATION
W.D.NO.71193P17700



BHARAT HEAVY ELECTRICALS LTD.
JHANSI

	NAME	SIGN	DATE
DRN	BDS1		21/04/2015
CRD	BDS1		21/04/2015
DRD1			

REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED
		APPROVED			APPROVED
ZONE			ZONE		

REV	DATE	ALTERED	BDSI
01	06/08/2015	CHECKED	BDSI
ZONE	CONTROL	SUPPLY	WAS 110V AC
		APPROVED	DPR1

DEPT.-TNE	IN. TOL. DIM. C/M/F	SCALE	WEIGHT (KG)	REF. TO ASSY. NO.	LITER NO	NO. OF COUS
CODE-406		N.A.	N.A.	N.A.	N.A.	N

[illegible]

DRG REVISED AS PER CUSTOMER
COMMENTS DATED 19.05.2015

TITLE G.A. DIAGRAM OF COOLER CONTROL, GEAR (CONTROL CIRCUIT)	DRAWING NO.	34566251124
	SHEET NO. 04	NO. OF SHEET 13

SIGNATURE NOT REQUIRED AS IT IS SYSTEM GENERATED DRAWING **SIZE A3**

4211529954C DRG. NO. 30

503

504

505

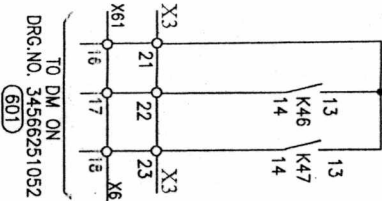
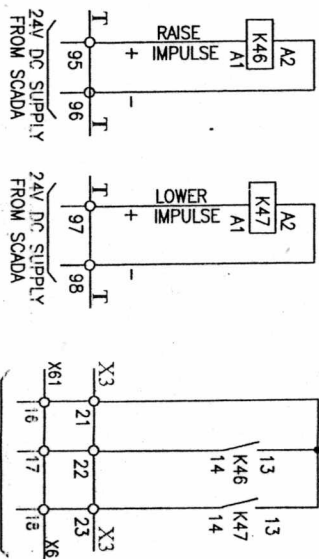
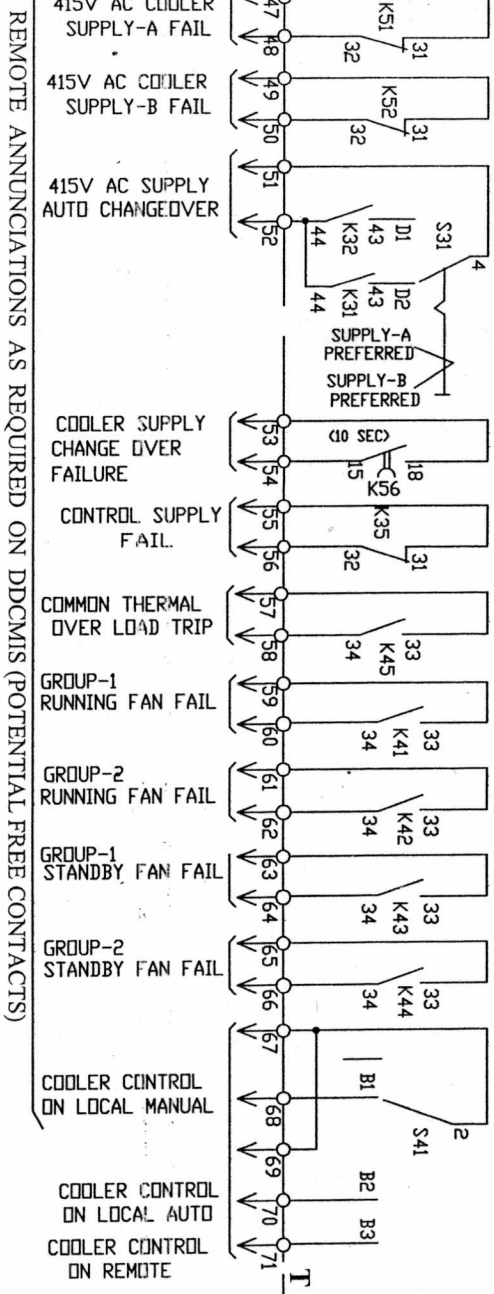
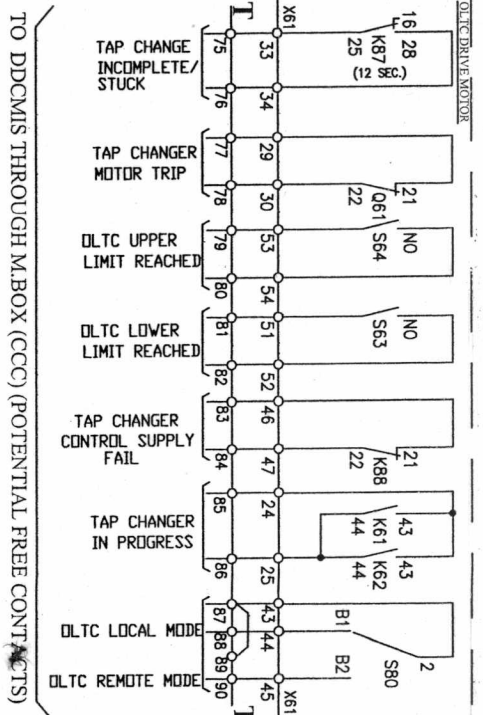
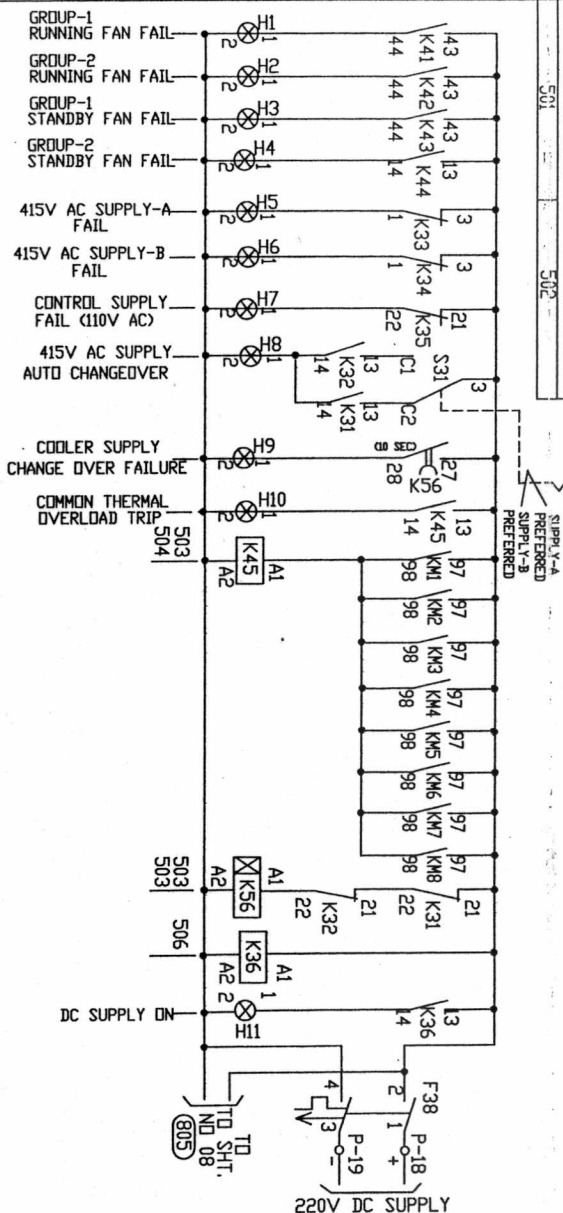
506

507

508

509

510



INVENTORY NO.	SIGN AND DATE	REF. DRG. NO.
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REV	DATE	ALTERED
01	06/08/2015	CHECKED
02	06/08/2015	APPROVED

REV	DATE	ALTERED
01	06/08/2015	CHECKED
02	06/08/2015	APPROVED

REV	DATE	ALTERED
01	06/08/2015	CHECKED
02	06/08/2015	APPROVED

REV	DATE	ALTERED
01	06/08/2015	CHECKED
02	06/08/2015	APPROVED

ADDITIONAL INFORMATION
W.D.NO.71193P17700



BHARAT HEAVY ELECTRICALS LTD.
JHANSI

DEPT.-TRE
DIN. C/W/F

SCALE
N.A.

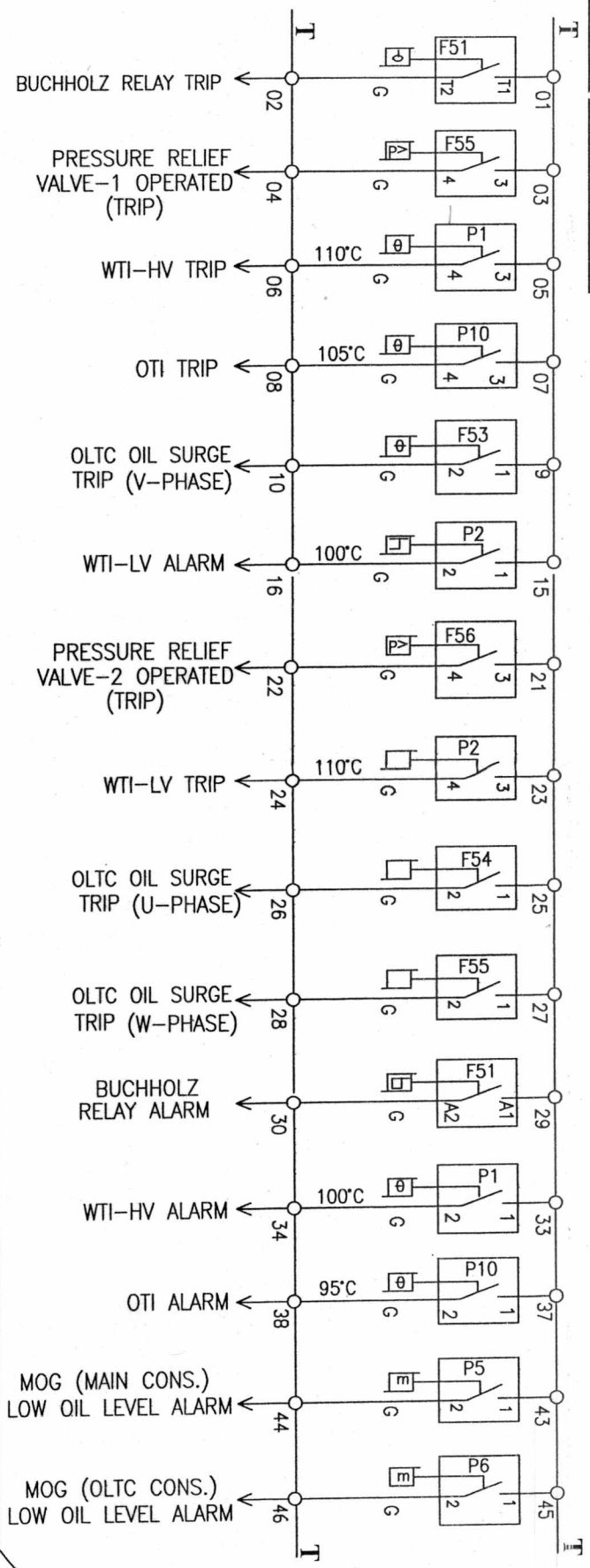
WEIGHT (KGS)
N.A.

REF. TO ASSY. NO.
N.A.

TITLE
G.A. DIAGRAM OF COOLER CONTROL GEAR
(SIGNALING CIRCUIT)

DRAWING NO.
34566251124

REV.
01

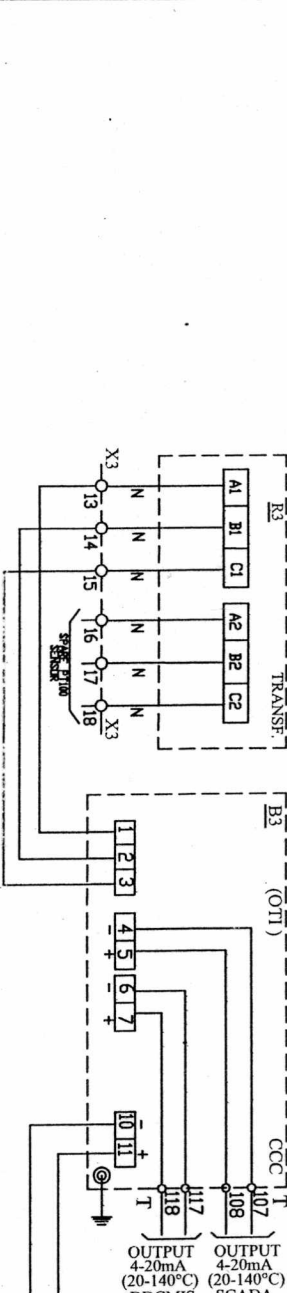
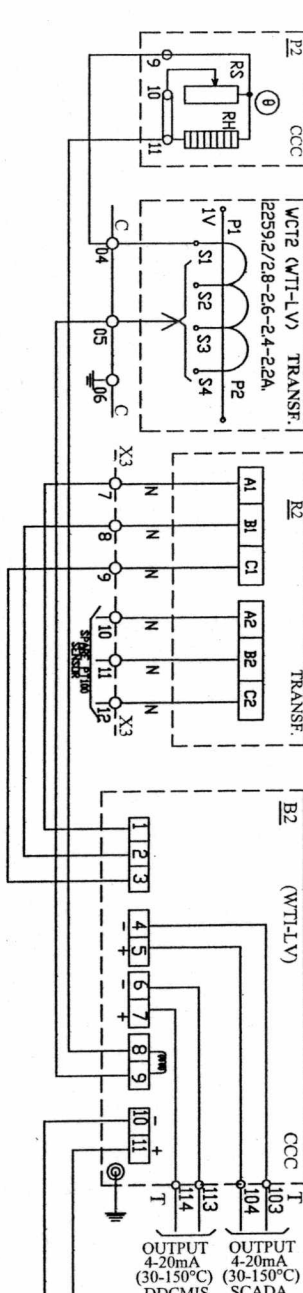
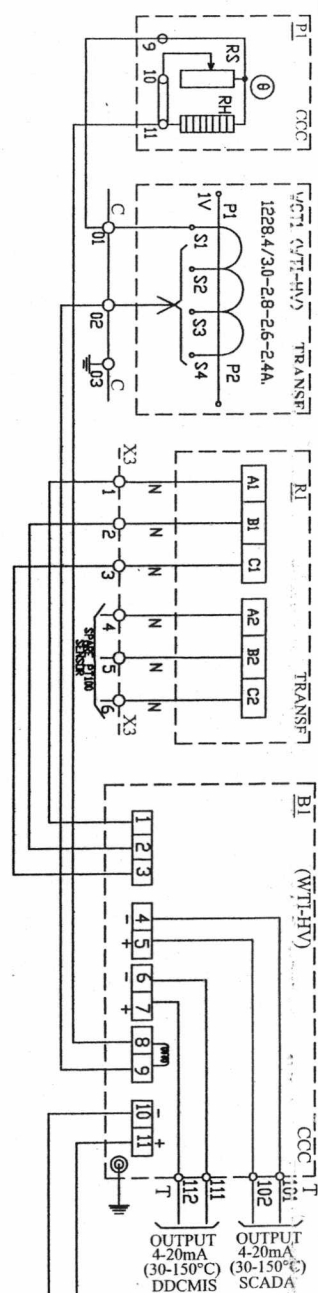
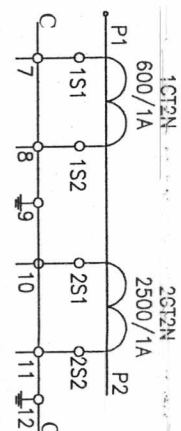
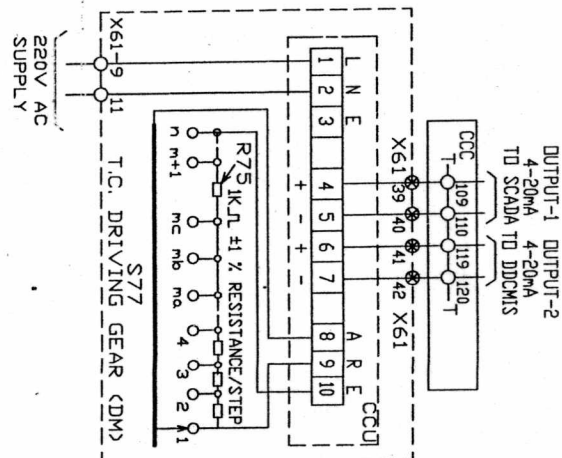


TO STRP/DDCMIS

NOTE:- OTI & WTI SETTINGS ARE TENTATIVE AND SAME SHALL BE FINALISED AFTER TEMP. RISE TEST.

INVENTORY NO.		SIGN AND DATE		REF. DRG. NO.																																		
ADDITIONAL INFORMATION W.D.NO.71193P17700 BHARAT HEAVY ELECTRICALS LTD. JHANSI <table border="1"><thead><tr><th>REV</th><th>DATE</th><th>ALTERED</th><th>BY</th><th>DATE</th><th>ALTERED</th><th>BY</th></tr></thead><tbody><tr><td>01</td><td>06/08/2015</td><td>CHECKED</td><td>BDST</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>APPROVED</td><td>DPRI</td><td></td><td></td><td></td></tr></tbody></table> DRG REVISED AS PER CUSTOMER COMMENTS DATED 19/05/2015 TITLE G.A DIAGRAM OF COOLER CONTROL GEAR (ALARM & TRIP CIRCUIT) <table border="1"><thead><tr><th>NAME</th><th>SIGN</th><th>DATE</th></tr></thead><tbody><tr><td>BDST</td><td></td><td>22/04/2015</td></tr><tr><td>BDST</td><td></td><td>22/04/2015</td></tr><tr><td>DPRI</td><td></td><td>03/07/2015</td></tr></tbody></table> DRAWING NO. 34566251124 REV. 01 SHT NO. 06 NO OF SHT 13						REV	DATE	ALTERED	BY	DATE	ALTERED	BY	01	06/08/2015	CHECKED	BDST						APPROVED	DPRI				NAME	SIGN	DATE	BDST		22/04/2015	BDST		22/04/2015	DPRI		03/07/2015
REV	DATE	ALTERED	BY	DATE	ALTERED	BY																																
01	06/08/2015	CHECKED	BDST																																			
		APPROVED	DPRI																																			
NAME	SIGN	DATE																																				
BDST		22/04/2015																																				
BDST		22/04/2015																																				
DPRI		03/07/2015																																				

LV-NEUTRAL CT

220V DC
SUPPLY
(504)

NOTE:- 1. FOR CT PARAMETER REFER RATING & DIAGRAM PLATE

ADDITIONAL INFORMATION
W.D.NO.71193P17700BHARAT HEAVY ELECTRICALS LTD.
JHANSI

NAME	SIGN	DATE
DRG	BDST	21/04/2015
CHK	BDST	21/04/2015
APP	DPRI	03/07/2015

REV	DATE	ALTERED	BDST
01	06/08/2015	CHECKED	BDST
		APPROVED	DPRI

DEPT-RE	UN. TOL.
CODE-406	DIK. C/M/F



SCALE

N.A.

WEIGHT (KG)

REF. TO ASSY. NO.

N.A.

ITEM NO.

N.A.

REV.

N.A.

DRG REVISED AS PER CUSTOMER
COMMENTS DATED 19.05.2015

TITLE

GADIAGRAM OF COOLER CONTROL GEAR
(CT CKT. & INDICATOR DIAGRAM)DRAWING NO.
34566251124

REV.

01

INVENTORY NO.	SIGN AND DATE	REF. DRG. NO.
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REV	DATE	ALTERED	CHECKED	APPROVED
ZONE				
REV	DATE	ALTERED	CHECKED	APPROVED
ZONE				
REV	DATE	ALTERED	CHECKED	APPROVED
ZONE				

DUMMY-TERMINAL BLOCK WITH OUT NO.

01	DUMMY	F51	2C	4C (POC)
02	BACHHOLZ RELAY TRIP			
03	DUMMY	F55	2C	4C (POC)
04	PRV-1 TRIP			
05	DUMMY	P1-3		
06	WTI-HV TRIP			
07	DUMMY	P1-4		
08	OTI TRIP			
09	DUMMY	P10-3		
10	OLTC OIL SURGE TRIP (V-PHASE)			
11	DUMMY	P10-4		
12	DUMMY	F53	2C	4C
13	SPARE			
14	WTI-LV ALARM			
15	DUMMY	P2-1		
16	DUMMY	P2-2		
17	SPARE			
18	DUMMY	P2-3		
19	DUMMY	P2-4		
20	PRV-2 TRIP			
21	DUMMY	F56	2C	4C (POC)
22	WTI-LV TRIP			
23	DUMMY	P2-3		
24	OLTC OIL SURGE TRIP (U-PHASE)			
25	DUMMY	F52	2C	4C
26	OLTC OIL SURGE TRIP (U-PHASE)			
27	OLTC OIL SURGE TRIP (W-PHASE)			
28	DUMMY	F54	2C	4C (POC)
29	BACHHOLZ RELAY TRIP			
30	DUMMY	F51	2C	4C (POC)
31	SPARE			
32	WTI-HV ALARM			
33	DUMMY	P1-1		
34	DUMMY	P1-2		
35	SPARE			
36	OTI ALARM			
37	DUMMY	P10-1		
38	DUMMY	P10-2		
39	SPARE			
40	DUMMY	P5	2C	4C
41	DUMMY	P6	2C	4C
42	COOLER SUPPLY-A FAIL			
43	COOLER SUPPLY-B FAIL			
44	SUPPLY CHANGE OVER			
45	SUPPLY CHANGE OVER-FAIL			
46	CONTROL SUPPLY FAIL			
47	COMMON OVER LOAD TRIP			
48	RUNNING TAN FAIL (GRUP-1)			
49	RUNNING TAN FAIL (GRUP-2)			
50	STANBY TAN FAIL (GRUP-1)			
51	STANBY TAN FAIL (GRUP-2)			
52	COOLER CONTROL LOCAL MANUAL			
53	COOLER CONTROL LOCAL AUTO			
54	COOLER CONTROL ON REMOTE			
55	SPARE			
56	SPARE			
57	SPARE			
58	SPARE			
59	SPARE			
60	SPARE			
61	SPARE			
62	SPARE			
63	SPARE			
64	SPARE			
65	SPARE			
66	SPARE			
67	SPARE			
68	SPARE			
69	SPARE			
70	SPARE			
71	SPARE			
72	SPARE			
73	SPARE			
74	SPARE			

TO STRP/DOCMIS

TO DOCMIS

TO TRANSF.

ADDITIONAL INFORMATION		BHARAT HEAVY ELECTRICALS LTD.		JHANSI	
W.D.NO.7193P17700		SCALE		WEIGHT (KGS) REF. TO ASSY. NO.	
REV		DATE		REV	
01		06/08/2015		01	
ZONE		DRC REVISED AS PER CUSTOMER COMMENTS DATED 19.05.2015		REV	
TITLE		GADIAGRAM OF COOLER CONTROL GEAR		DRAWING NO.	
(TERMINAL BLOCKS)		34566251124		01	
SHT NO		08		NO OF SHT	
13		NO OF SHT		13	
SIGNATURE NOT REQUIRED AS IT IS SYSTEM GENERATED DRAWING		SIZE		A3	

B1-1	1	R1	4C
B1-2	2		
B1-3	3		
SPARE	4		
SPARE	5		
B2-1	7	R2	4C
B2-2	8		
B2-3	9		
SPARE	10		
SPARE	11		
B3-1	13	R3	4C
B3-2	14		
B3-3	15		
SPARE	16		
SPARE	17		
SPARE	18		
K46-13	21	X61-16	DM
K46-14	22	17	1SC
K47-14	23	18	1SC (POC)
REMOTE PANEL (OPTIONAL)	24	SPARE	
	25	S41-A3	
	26	S41-A1	
	27	S41-A2	
	28	SPARE	
	29	SPARE	
	30	SPARE	

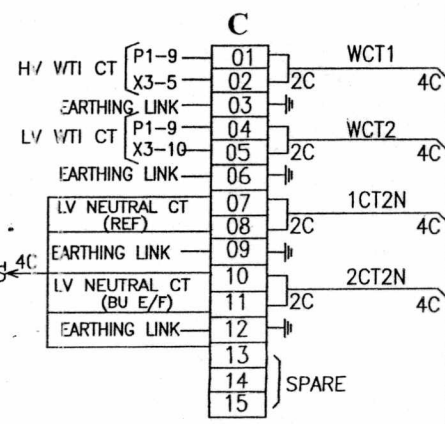
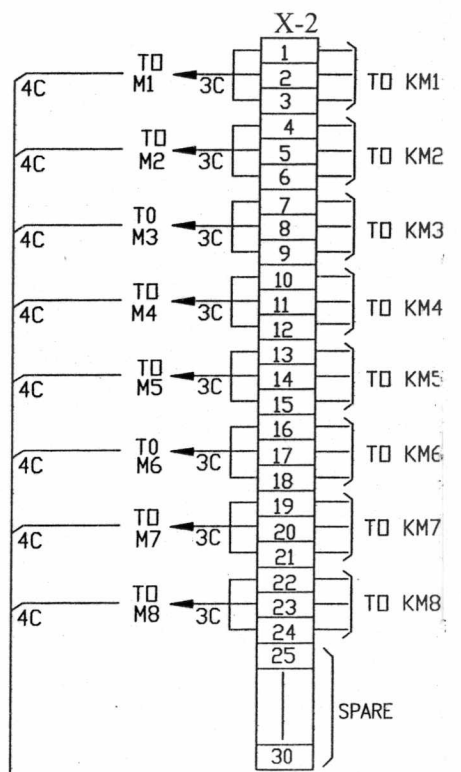
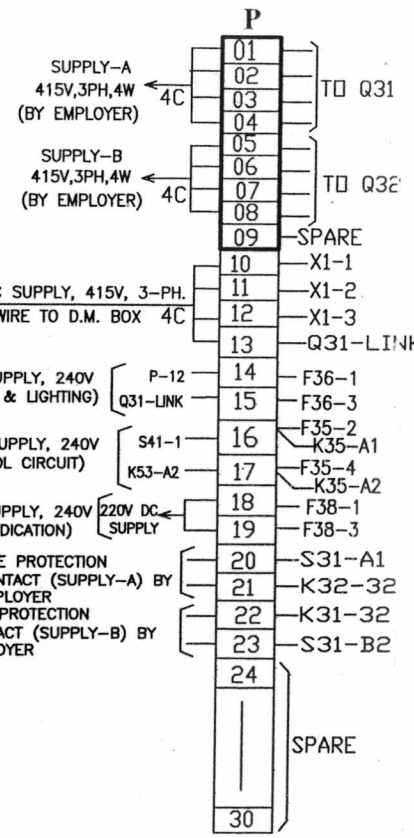
T	X61-33	75	DUMMY	34
		76	DUMMY	29
		77	DUMMY	30
		78	DUMMY	53
		79	OLTC UPPER LIMIT REACHED	54
		80	OLTC LOWER LIMIT REACHED	51
		81	OLTC LOWER LIMIT REACHED	52
		82	TAP CHANGER CONTROL SUPPLY FAIL	46
		83	TAP CHANGER IN PROGRESS	47
		84	OLTC IN LOCAL MODE	24
		85	OLTC IN REMOTE MODE	25
		86	OLTC IN REMOTE MODE	43
		87	OLTC IN REMOTE MODE	44
		88	OLTC IN REMOTE MODE	SPARE
		89	OLTC IN REMOTE MODE	45
		90	OLTC IN REMOTE MODE	45
		91	SPARE	
		92	SPARE	
		93	SPARE	
		94	SPARE	
		95	24V OLTC RAISE (SCADA)	K46-A1
		96	24V OLTC LOWER (SCADA)	K46-A2
		97	24V OLTC LOWER (SCADA)	K47-A1
		98	24V OLTC LOWER (SCADA)	K47-A2
		99	SPARE	
		100	SPARE	
		101	4-20 mA WTI-HV (SCADA)	B1-4
		102	4-20 mA WTI-LV (SCADA)	B1-5
		103	4-20 mA WTI-LV (SCADA)	B2-4
		104	4-20 mA WTI-LV (SCADA)	B2-5
		105	SPARE	
		106	SPARE	
		107	4-20 mA OTI (SCADA)	B3-4
		108	4-20 mA TAP POSITION (SCADA)	B3-5
		109	4-20 mA TAP POSITION (SCADA)	DM
		110	4-20mA WTI-HV (DDCMIS)	2C
		111	4-20mA WTI-LV (DDCMIS)	4C (POC)
		112	4-20 mA WTI-LV (DDCMIS)	B1-6
		113	4-20 mA WTI-LV (DDCMIS)	B1-7
		114	4-20 mA WTI-LV (DDCMIS)	B2-6
		115	4-20 mA WTI-LV (DDCMIS)	B2-7
		116	4-20 mA OTI (DDCMIS)	SPARE
		117	4-20 mA OTI (DDCMIS)	SPARE
		118	4-20 mA TAP POSITION (DDCMIS)	B3-6
		119	4-20 mA TAP POSITION (DDCMIS)	B3-7
		120	4-20 mA TAP POSITION (DDCMIS)	DM
		121	4-20 mA TAP POSITION (DDCMIS)	2C
		122	4-20 mA TAP POSITION (DDCMIS)	4C (POC)
		123	4-20 mA TAP POSITION (DDCMIS)	SPARE
		124	4-20 mA TAP POSITION (DDCMIS)	SPARE
		125	4-20 mA TAP POSITION (DDCMIS)	SPARE

POC- PART OF CABLE

TO DOCMIS

TO SCADA

TO SCADA/DOCMIS



TO TRANSFORMER

NOTES:-

1. TERMINAL DETAILS AS SHOWN IN SHEETS 8 & 9 SHALL BE ENGRAVED IN A PLATE AND SAME SHALL BE FIXED AT INSIDE DOOR OF COOLER CONTROL CABINET.
2. ALL TBS SHALL BE SUITABLE FOR RING TYPE LUGS & ALL INCOMING/ OUTING CABLE SHALL BE TERMINATED WITH RING TYPE LUGS.
3. CT TBS SHALL BE PROVIDED WITH EARTHING LINK & SHORTING FACILITY.

INVENTORY NO.		SIGN AND DATE		REF. DRG. NO.	
REV		DATE		ADDITIONAL INFORMATION	
ZONE		ZONE		W.D.NO.71193P17700	
REV		DATE		REV	
ZONE		ZONE		DATE	
				01 06/08/2015	
				APPROVED DPR	
				COMMENTS DATED 19.05.2015	
TITLE		DEPT-TRE		LN. TOL.	
G.A. DIAGRAM OF COOLER CONTROL GEAR		CODE-406		C/M/F	
(TERMINAL BLOCKS)		SCALE		WEIGHT (KG)	
		N.A.		N.A.	
DRAWING NO.		SHT NO.		NO OF SHT	
34566251124		09		13	
REV.		DATE		NO. OF	
01		20/04/2015		VAR	
				ITEM NO	
				02/07/2015	
				NO. OF	
				ITEM	
				N.A.	

SIGNATURE NOT REQUIRED AS IT IS SYSTEM GENERATED DRAWING SIZE A3

721152995436.0N.DRGD

LOCATION/ITEM NO.	QTY	DEVICE NO.	DESCRIPTION	TYPE	MAKE
M.BOX 01	002	G31 & G32	MCCB (40A), 36KA, 4 POLE 415V AC	DM-100 DC929/900	L&T/SIEMENS
M.BOX 02	002	K31 & K32	AIR BREAK CONTACTOR 415V, COIL 240V, 45A	MX70-ST19000	L&T/SIEMENS
M.BOX 03	002	K33 & K34	ASYMMETRY RELAY 415V AC UNDER VOLTAGE OPERATION AT 75%, AUTO RESET	DHLSI	MINILEC
M.BOX 04	002	K51 & K52	CONTACTORS, 240V AC, 2ND+2NC WITH ADD ON THMED BLOCK DEF DELAY TYPE J-30 SECOND+INC	D15CR22K+C320TPI	BOH
M.BOX 05	001	F36	HEATER CKT. BREAKER 2P, 16A, 240V, AC	BB20160C	L&T/SIEMENS
M.BOX 06	001	K35	AUX. CONTACTOR, 4A, 240V, 2ND+2NC	MX022E-C594020	L&T/SIEMENS
M.BOX 07	001	F35	CONTROL CKT. BREAKER 2P, 6A, 240V, AC	BB20060D	L&T/SIEMENS
M.BOX 08	001	S36	ROTARY SWITCH 2WAY WITH DEF, 6A, 440V	56-61025-B13	SALZER/KAYCEE
M.BOX 09	001	B11	THERMOSTAT SWITCH 30-85°C	STEM	GIRISH/VIKAS
M.BOX 10	002	E1 & E2	HEATERS, 75/80W, 240V		ASHOKA/EE/EQUIV.
M.BOX 11	002	SS1 & SS2	DOOR SWITCH 0.25A, 240V	901	IEC/P/L/ESSEN
M.BOX 12	001	E11	FLUORESCENT TUBE, 18W, 240V, WITH COVER		BAJAJ/PHILIPS/CHROMPTON
M.BOX 13	001	X55	PLUG AND SOCKET, 3PIN, 10A, 240V, AC, 2P+E	AP10+AS10	SCHINDER/ANCHOR/BAC
M.BOX 14	001	S31	SUPPLY SELECTOR, 2WAY-ND-DEF, 10A, 4P 440V	S10-61040-B13	SALZER/KAYCEE
M.BOX 15	008	F1 TO F8	FAN CIRCUIT BREAKER, 4P, 6A, 415V	BD40060C	L&T/SIEMENS
M.BOX 16	001	F38	SUPPLY CIRCUIT BREAKER, 6A, 2P, 220V DC	SSX520678C	SIEMENS/L&T
M.BOX 17	002	F33 & F34	CIRCUIT BREAKER, 2A, 3P, 415V AC	BB30020C	L&T/SIEMENS
M.BOX 18	001	F37	CIRCUIT BREAKER, 2A, 1P, 240V AC	BB10020C	L&T/SIEMENS
M.BOX 19	001	S41	COOLER CONTROL SELECTOR, 10A, 4P, 440V 3WAY WITH DEF	S10-61100-B13	SALZER/KAYCEE
M.BOX 20	002	K41 & K42	AUX. CONTACTOR, 230V, AC 4ND	MX004E-C594042	L&T/SIEMENS
M.BOX 21	008	S1 & S8	ROTARY CAM SWITCH 3WAY, 3P WITH DEF 10A, 440V	S10-61100-B13	KAYCEE
M.BOX 22	008	K1 TO K8	FAN MOTOR CONTACTORS, 230V AC, 12A, 415V	MX12-61100-B13	L&T/SIEMENS
M.BOX 23	001	K54	TIME DELAY RELAY 230V, AC 0.1s-10h 2-CHANCE OVER CONTACTS	2ASD15	GIC
M.BOX 24	004	K43, K44, K53 & K54	AUX. CONTACTOR, 230V, AC 3ND+1NC	MX031E-C594019	L&T/SIEMENS

SALZER MAKE MARKETED BY L&T

ADDITIONAL INFORMATION
W.O.NO.71193P17700

LOCATION/ITEM NO.	QTY	DEVICE NO.	DESCRIPTION	TYPE	MAKE
M.BOX 25	001	P10	OIL TEMP. INDICATOR		PRECIP/ PERFECT
M.BOX 26	001	P1 & P2	WINDING TEMP. INDICATOR FOR HV & LV		PRECIP/ PERFECT
M.BOX 27	004	X2, X3, P,T	TERMINAL BLOCKS (P-1T009-DEBB120) REMAINING DATA WITH COVER		ELMEV/ CONNECTWELL
M.BOX 28	001	XE	TERMINAL BLOCKS (1 TO 6)		ELMEV/ CONNECTWELL
M.BOX 29	001	X1	PHASE BAR TERMINAL BLOCK (1 TO 7)		ELMEV/ CONNECTWELL
M.BOX 30	001	C	TERMINAL BLOCKS (C-01 TO 85-0416T/COTS,EXCEPT C-03,06,09,12,15,18,21,33,36,60 & 69-E16)		ELMEV/ CONNECTWELL
M.BOX 31	002	B1 & B2	CURRENT CONVERTER UNIT FOR R1 & R2	ST605451	PRECIP/ PERFECT
M.BOX 32	001	B3	CURRENT CONVERTER UNIT FOR R3	ST605730	PRECIP/ PERFECT
M.BOX 33					
M.BOX 34	011	H1 TO H11	SIGNAL LAMP RED FOR INDICATION SUITABLE FOR 220V DC.	ELR220D	SIEMENS
M.BOX 35	008	KW1 TO KW8	FAN MOTOR THERMAL D/L RELAY (0.3-0.5A)	MNE-SS9414 10060	L&T/SIEMENS
M.BOX 36	002	K36 & K45	AUX. CONTACTOR, COIL 220V DC, 2ND+2NC	MX022E-C594029	L&T/SIEMENS
M.BOX 37	001	K56	TIME DELAY RELAY 220V, DC 0.1s-10h 2-CHANCE OVER CONTACTS	2ASD15	GIC
M.BOX 38	001	F55	CIRCUIT BREAKER, 10A, 1P, 240V AC	BB10100C	L&T/SIEMENS
M.BOX 39	002	K46 & K47	AUX. CONTACTOR, COIL 24V DC, 3ND+1NC	MX031E-C594028	L&T/SIEMENS
M.BOX 40	002	ET	ENGRAVED TERMINAL DETAIL PLATE		
M.BOX 41	001	F51	BUCHHOLZ DEVICE		
M.BOX 42	001	P5	LOW OIL LEVEL INDICATOR		
M.BOX 43	002	F55 & F56	PRESSURE RELIEF VALVE		
M.BOX 44	002	R1 & R2	DUPLEX PT 100 SENSOR UNITS FOR RV11		PRECIP/ PERFECT
M.BOX 45	001	R3	DUPLEX PT 100 SENSOR UNITS FOR ROT1		PRECIP/ PERFECT
M.BOX 46	008	M1 TO M8	FAN WITH MOTOR 0.135KW, 3PH, 50HZ, 415V AC		
M.BOX 47	001	T1N	CURRENT TRANSFORMER ON LV NEUTRAL END 2 CORE		BHEL
M.BOX 48	002	WC11 & WC12	V11 CURRENT TRANSFORMER ON HV & LV		BHEL
M.BOX 49	003	F52,F53,F54	DLTC OIL SURGE RELAY		



BHARAT HEAVY ELECTRICALS LTD.
JHANSI

NAME	SIGN	DATE
DR		21/04/2015
DB		21/04/2015
DRP1		03/07/2015

DEPT-TRE	IN. TO	SCALE	WEIGHT (KGS)	REF. TO ASSY. NO.
CODE-406	DM, C/M/F	N.A.	N.A.	N.A.



TITLE
GADDIAGRAM OF COOLER CONTROL GEAR

(LIST OF PARTS)

DRAWING NO.
34566251124

REV.
01

KEY TO DESIGNATION PLATES

INSCRIPTION				
REF.	A1	B1	B2	B3
S41	FAN SELECTOR SWITCH (S41)	OFF	LOCAL	REMOTE
S1	FAN F1 CONTROL (S1)	OFF	SERVICE	STANDBY
S2	FAN F2 CONTROL (S2)	OFF	SERVICE	STANDBY
S3	FAN F3 CONTROL (S3)	OFF	SERVICE	STANDBY
S4	FAN F4 CONTROL (S4)	OFF	SERVICE	STANDBY
S5	FAN F5 CONTROL (S5)	OFF	SERVICE	STANDBY
S6	FAN F6 CONTROL (S6)	OFF	SERVICE	STANDBY
S7	FAN F7 CONTROL (S7)	OFF	SERVICE	STANDBY
S8	FAN F8 CONTROL (S8)	OFF	SERVICE	STANDBY
S31	SUPPLY SELECTOR (S31)	SUPPLY-1	SUPPLY-2	SUPPLY-1
REF.	INSCRIPTION	0	1	2
S36	HEATER SELECTOR (S36)	AUTO	OFF	MANUAL

NOTES:-

- PANELS TO BE FLAT & FREE FROM HAMMER MARKS.
- PANELS ARE TO BE DRILLED & TAPPED TO SUIT ON ASSY. AS PER ARRANGEMENT SHOWN.
- MARSHALLING BOX IS TO BE WIRED AS PER G.A. & SCHEMATIC DIAGRAM OF MBOX DRG. NO. 34566251124 (SHT. 01 TO 10).
- ☐ INDICATE FOR SHIPPING DIMENSION OF M. BOX.
- MARSHALLING BOX IS TO BE PAINTED AS FOLLOWS:
(A) EXTERIOR PU EPOXY PAINT TO SHADE NO. RAL 5012(BLUE) ATLEAST 100 MICRON.
AS PER NTPC SPECIFICATION.
(B) INTERIOR- NON-YELLOWING FULL GLOSSY WHITE ATLEAST 100 MICRON.
AS PER NTPC SPECIFICATION.
- MARSHALLING BOX IS TO BE MADE SUITABLE FOR PROTECTION CLASS IP 55 OF IS 13947.
- MBOX WEIGHT APPROX. 375KG
- MARSHALLING BOX IS TANK MOUNTED.
- MARSHALLING PLATE SHALL BE PROVIDED FOR CRITICAL ACCESSORIES AND VTI (HV), VTI (LV) AND DTI ETC.
- GASKET USED IN MBOX SHALL BE OF NEOPRENE RUBBER.
- MARSHALLING BOX DEGREE OF PROTECTION - IP55.
- ACCESSORY TO BE PROVIDED ON SIDE WALLS.

LABELS FOR SIGNAL LAMPS

REF.	INSCRIPTION
H1	GROUP-1 RUNNING FAN FAIL
H2	GROUP-2 RUNNING FAN FAIL
H3	GROUP-1 STANDBY FAN FAIL
H4	GROUP-2 STANDBY FAN FAIL
H5	415V AC SUPPLY-A FAIL
H6	415V AC SUPPLY-B FAIL
H7	CONTROL SUPPLY (110V AC) FAIL
H8	415V AC SUPPLY CHANGEOVER
H9	CODLER SUPPLY CHANGEOVER FAIL
H10	COMMON THERMAL OVER LOAD TRIP
H11	220V DC SUPPLY ON

SIGN AND DATE

REF. DRG. NO.

INVENTORY NO.

ADDITIONAL INFORMATION
W.D.NO.71193P17700BHARAT HEAVY ELECTRICALS LTD.
JHANSI

APPROVED

DATE

BY

SIGN

DATE

NO. OF

ITEM

REV.

NO. OF

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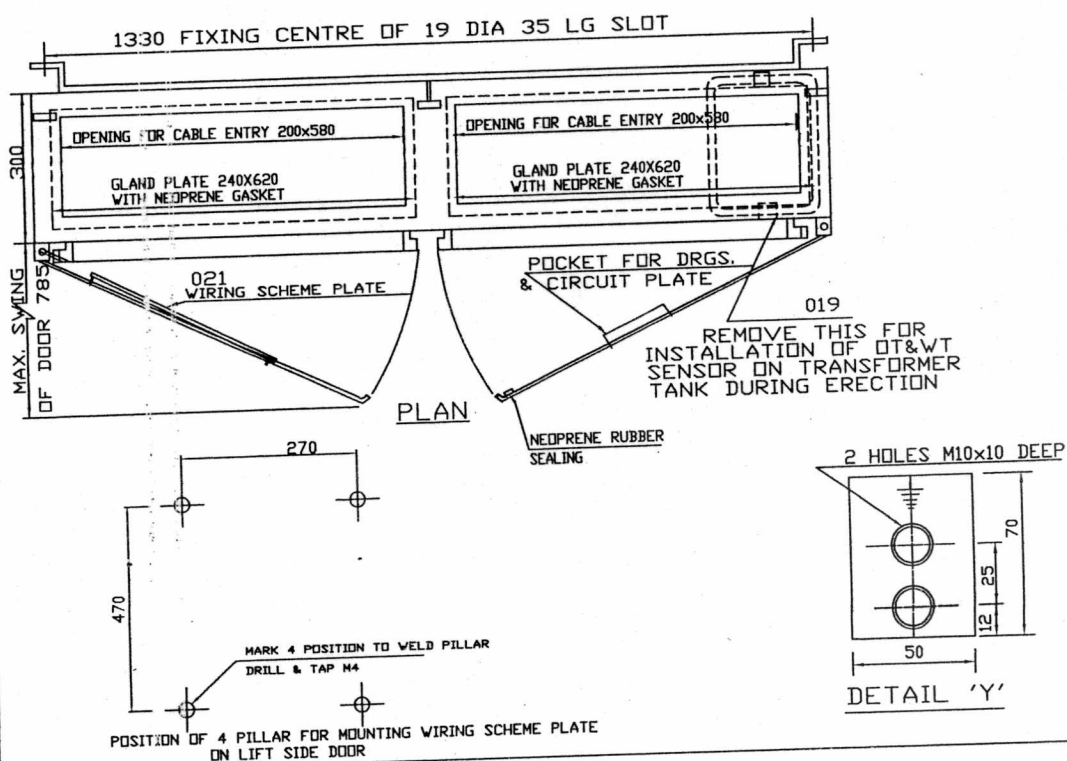
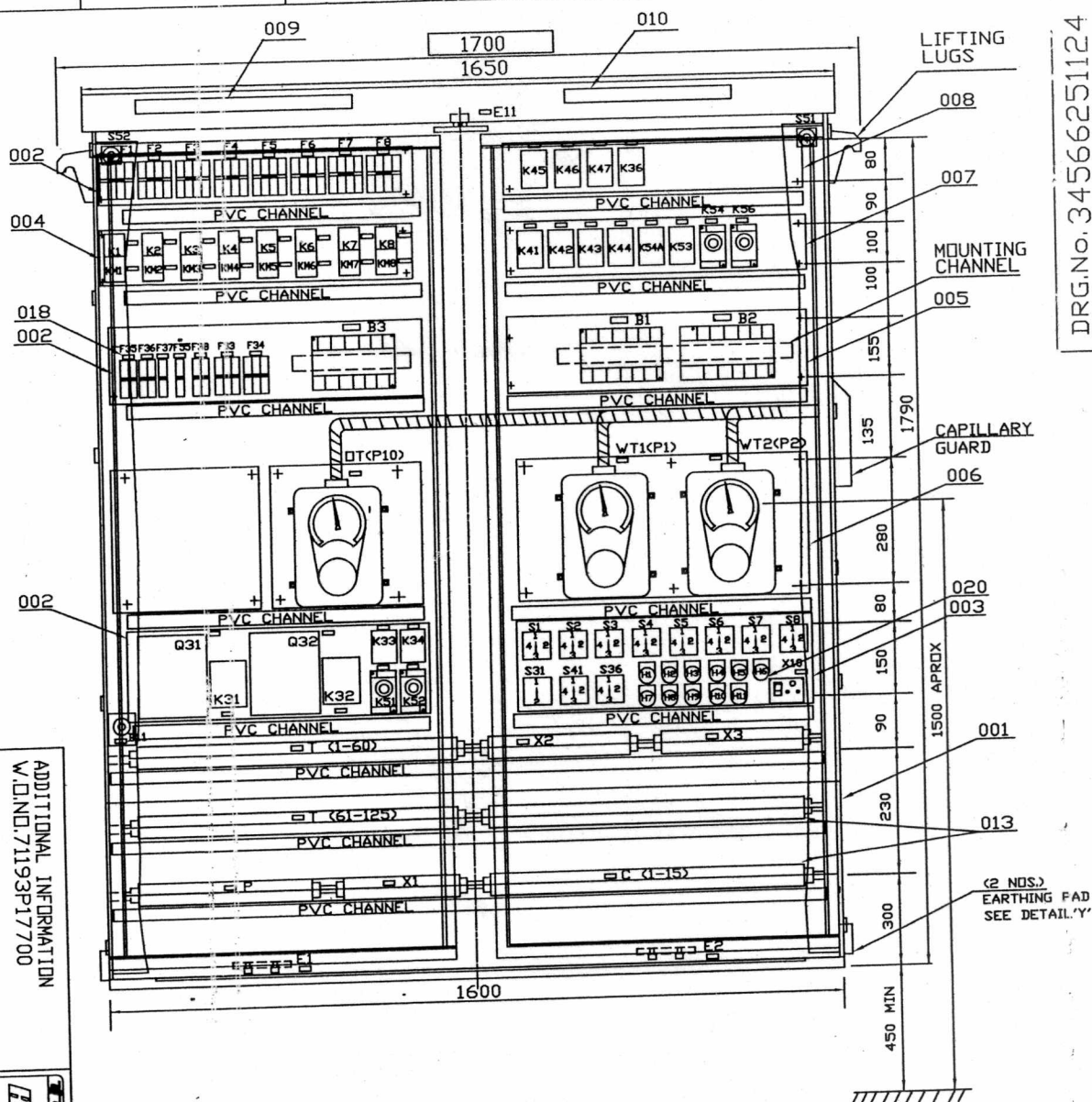
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DATE	UN. C/NO	NTS	350KG	APPROX	NA	NA	NA
CODE-406							
TITLE		DRAWING NO.			REV.		
GADIAGRAM OF COOLER CONTROL GEAR		34566251124			01		
(FRONT & PLAN OF M.BOX)							
		SHT NO 12			NO OF SHT 13		
SIGNATURE NOT REQUIRED AS IT IS SYSTEM GENERATED DRAWING							
		SIZE A					

[illegible]

SIGNATURE NOT REQUIRED AS IT IS SYSTEM GENERATED DRAWING **SIZE A3**

