

3-96-186-14633

DRAWING NO:

SHEET No.	DRAWING No.	Rev.	D E S C R I P T I O N
SHEET-01	3-96-186-14633	03	SOOT BLOWER MCC – LIST OF DRAWINGS
SHEET-02	3-96-186-14634	02	SOOT BLOWER SINGLE LINE DIAGRAM–NOTES
SHEET-03	3-96-186-14635	03	SOOT BLOWER SINGLE LINE DIAGRAM
SHEET-04	3-96-186-14636	03	SOOT BLOWER SINGLE LINE DIAGRAM
SHEET-05	3-96-186-14637	00	WALL BLOWER CONTROL SCHEME DIAGRAM
SHEET-06	3-96-186-14638	00	WALL BLOWER INTERCONNECTION DIAGRAM
SHEET-07	3-96-186-14639	01	LR BLOWER CONTROL SCHEME DIAGRAM
SHEET-08	3-96-186-14640	00	LR BLOWER INTERCONNECTION DIAGRAM
SHEET-09	3-96-186-14641	01	AIR HEATER BLOWER CONTROL SCHEME DIAGRAM
SHEET-10	3-96-186-14642	00	AIR HEATER BLOWER INTERCONNECTION DIAGRAM
SHEET-11	- - - - -	-	V O I D
SHEET-12	- - - - -	-	V O I D
SHEET-13	3-96-186-14643	00	INTER COMPARTMENT WIRING DIAGRAM IN SB MCC
SHEET-14	3-96-186-14644	00	INTER COMPARTMENT WIRING DIAGRAM IN SB MCC
SHEET-15	3-96-186-14645	00	INTER COMPARTMENT WIRING DIAGRAM IN SB MCC

N O T E

1. ALL CONTROL TERMINALS WILL BE SUITABLE FOR RECEIVING ATLEAST 1 NO. OF 2.5 SQ.MM. COPPER WIRE ON EACH SIDE.
2. POWER TERMINALS WILL BE SUITABLE FOR RECEIVING 2 NOS. OF 6 SQ.MM. COPPER WIRE.
3. CIRCUIT IS DRAWN FOR INITIAL CONDITIONS.
4. EQUIPMENT SHOWN INSIDE DOTTED LINES ARE AT LOCAL.
5. INTER COMPARTMENT LOOPING TO BE DONE BY MCC SUPPLIER
6. LOCAL START AND RETRACT PUSH BUTTONS ARE MOUNTED ON THE BLOWER TERMINAL BOX AS AN INTEGRAL PORTION OF WALL, LR & AH BLOWER.
7. SBMCC INCOMER CAN RECEIVE MAXIMUM SIZE OF 3C X 25 SQ.MM(AL) POWER CABLE.

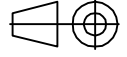
TATA CONSULTING ENGINEERS LIMITED
VENDOR DOCUMENT REVIEW STATUS

- ☒ A Drawing/Document approved as submitted. Proceed with fabrication/construction.
- ☐ B Drawing/Document approved subjected to comments noted. Proceed with fabrication/ construction considering our comments.
- ☐ C Our comments are noted on this marked up print.
- ☐ D Our comments are noted in memo attached to the forwarding transmittal letter No. TCE.5750A-EL-715-VDT-027.....Dated..09/01/2015.....
- ☐ E Correct original of this drawing/document to reflect our comments and resubmit for approval.
- ☐ F Correct original of this drawing/document to reflect our comments and resubmit for records.
- ☐ G Drawings/Documents of this category are for information only and not for approval. Information furnished on the drawing/document is noted.
- ☒ H Drawing/Document reviewed against our previous comments and other revisions highlighted and identified by the vendor.
- ☐ I Drawing/Document returned without review.
- ☒ J Print not enclosed.
- Approval conveyed herein neither relieves the Vendor/Contractor of his contractual obligations and his responsibilities for correctness of dimensions, materials of construction, weights, quantities, design details, assembly fits, performance requirements and conformity of the supplies with the Indian Statutory Laws as may be applicable, nor does it limit the purchaser's rights under the contract.

Reviewed by.....SKK.....Date.....09/01/2015.....

REV	DATE	ALTERED : 240614	REV	DATE	ALTERED : 070314
02	240614	CHD./APPD. :	01	070314	CHD./APPD. : Sd./KB-RD
ZONE	REVISED BASED ON CUSTOMER LETTER REF. TCE-5750A-EL-715-VDT-016 DATED 25-04-2014 & RECEIVED ON 10-05-2014.		ZONE	REVISED BASED ON CUSTOMER LETTER REF. TCE.5757A-EL-715-VDT-015 DATED 23-01-2014.	

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd. SURATGARH THERMAL POWER STATION STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.					
	Bharat Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPPALLI – 620014		DRN	NAME A.ThambuRaj	SIGNATURE Sd. / KB	DATE 16-11-13	NO. OF VAR
			CHD	K. Balaji	Sd. / KB	14-12-13	—
			APPD	R. Dileep	Sd. / RD	14-12-13	—
DEPT. : C & I		ALL DIMENSIONS ARE IN MM	SCALE NTS	WEIGHT (Kg)	REF TO ASSY / OLD DWG		ITEM NO
CODE : 392					—		No OF ITEMS
TITLE SOOT BLOWER MCC LIST OF DRAWINGS Sheet 01 of 15				CARD CODE U 01	DRAWING NO : 3-96-186-14633		REV 03

NOTES

- MCC SHALL BE SUITABLE FOR IP 54 DEGREE OF PROTECTION. SYSTEM PARTICULARS
a) SYSTEM VOLTAGE (AC) : 415V AC $\pm 10\%$, 50HZ $\pm 5\%$, 3Ph, 3 WIRE
b) FAULT LEVEL – 50KA (105KA PEAK) FOR 1 SEC
c) RATED CURRENT 6A CONTINUOUS
- SB MCC INCLUDING INCOMER & BUS COUPLER SHALL BE OF COMPARTMENTAL FULLY DRAWOUT TYPE AND DOUBLE FRONT EXECUTION SUITABLE FOR BOTTOM CABLE ENTRY HOWEVER, JAMMING RELAY MODULES WILL BE NON DRAWOUT TYPE. MCC SHALL BE DUST & VERMIN PROOF. SINGLE PIECE NEOPRENE GASKET OF 6.0 mm THICK SHALL BE PROVIDED IN ALL MATTING SURFACES.
- MCC SHALL BE FABRICATED BY CRCA SHEET STEEL OF FOLLOWING THICKNESS
a) LOAD BEARING MEMBER – 2.0 mm
b) GLAND PLATE – 3.0 mm C) OTHERS – 2.0 mm
- THE BUSBARS SHALL BE SUITABLE FOR 50 KA RMS FAULT LEVEL FOR 1 SEC. SHALL BE OF HIGH CONDUCTIVITY ALUMINIUM OR COPPER.
- POWER CONTACTORS SHALL HAVE 2NO + 2NC AUX. CONTACTS AND UTILISATION CATEGORY AC-4 FOR RDOL AND AC-3 FOR DOL STARTERS.
- OVER LOAD RELAYS SHALL BE OF HAND RESET TYPE . THE RANGE OF OVER LOAD RELAYS MAY DIFFER SLIGHTLY ACCORDING TO THE MAKE OF THERMAL OVER LOAD RELAYS USED IN THE MCC. OLR SHALL BE WITH BUILT-IN SINGLE PHASE PREVENTOR.
- MCC SHALL BE PAINTED WITH SHADE RAL 7032 (SIEMENS GREY) FOR EXTERIOR (SEMI GLOSSY FINISH) AND INTERIOR PAINT SHADE BRILLIANT WHITE (GLOSSY FINISH).
- THE WIRING SHALL BE CARRIED OUT WITH 1100 V GRADE HR PVC INSULATED STRANDED COPPER CONDUCTOR OF SIZE 2.5 SQ. MM FOR POWER AND C.T CIRCUIT AND 1.5 SQ.MM FOR CONTROL WITH T.C. LUGS IN ALL TERMINATIONS.
- CONTROL AND SELECTOR SWITCHES SHALL BE OF ROTARY TYPE.
- UNDRILLED CABLE GLAND PLATES SHALL BE SUPPLIED ALONG WITH THE PANEL.
- ONLY FEEDERS ARE PROVIDED AS SPARES AND NOT BLOWERS.
- AN EARTH BUS OF GALVANISED STEEL SIZE 75 X 12mm (MINIMUM SIZE) SUITABLE FOR SPECIFIED FAULT LEVEL SHALL BE PROVIDED AT THE BOTTOM THROUGHOUT THE LENGTH OF THE MCC.
- SEPARATE VERTICAL BUSBARS FOR FRONT AND REAR OF SUITABLE SIZE AND RATING SHALL BE PROVIDED. BUSBARS SHALL BE PVC SLEEVED AND COLOUR CODED AT REGULAR INTERVALS.
- FUSES SHALL BE OF HRC TYPE WITH OPERATION INDICATOR.
- TINNED COPPER LUGS FOR EXTERNAL CONNECTION ARE TO BE SUPPLIED ALONG WITH THE PANEL
- INDICATING LAMPS WILL BE OF CLUSTER LED TYPE.
- EARTH FAULT RELAY SHALL BE PROVIDED IN THE INCOMER CIRCUIT.
- MINIMUM AIR CLEARANCE IN AIR BETWEEN PHASES SHALL BE 25mm AND PHASE-EARTH 19mm FOR BUSBARS AND CABLE TERMINATIONS. FOR ALL OTHER COMPONENTS, THE CLEARANCES SHALL BE ATLEAST 10mm.
- CAGE CLAMP TYPE TERMINALS ARE PROVIDED FOR FIXED CONTROL TB'S.
- FOUNDATION BOLTS & NUTS, IF REQUIRED SHALL BE SUPPLIED ALONG WITH SBMCC.
- CABLE ALLEY WIDTH OF MCC WILL BE MINIMUM 300mm.
- OPERATING HEIGHT SHALL BE 300mm TO 1900mm.
- MULTIFUNCTION METER SHALL BE COMMUNICABLE DIGITAL TYPE COVERING CURRENT, VOLTAGE, KW, KWH, KVA, KVAR AND FREQUENCY.
- PANEL SHALL BE SUPPLIED WITH BASE FRAME OF ISMC-100 WITH THICKNESS OF 3mm.
- TWO SETS OF DOUBLE COMPRESSION NICKEL PLATED BRASS CABLE GLANDS FOR INCOMING POWER CABLES & FOR SPACE HEATER INCOMING SUPPLY.
- MOTORISED MCCB SHALL HAVE ELECTRICAL INTERLOCK, REMOTE OPERATION AND AUTO CHANGEOVER FACILITY.

LEGEND

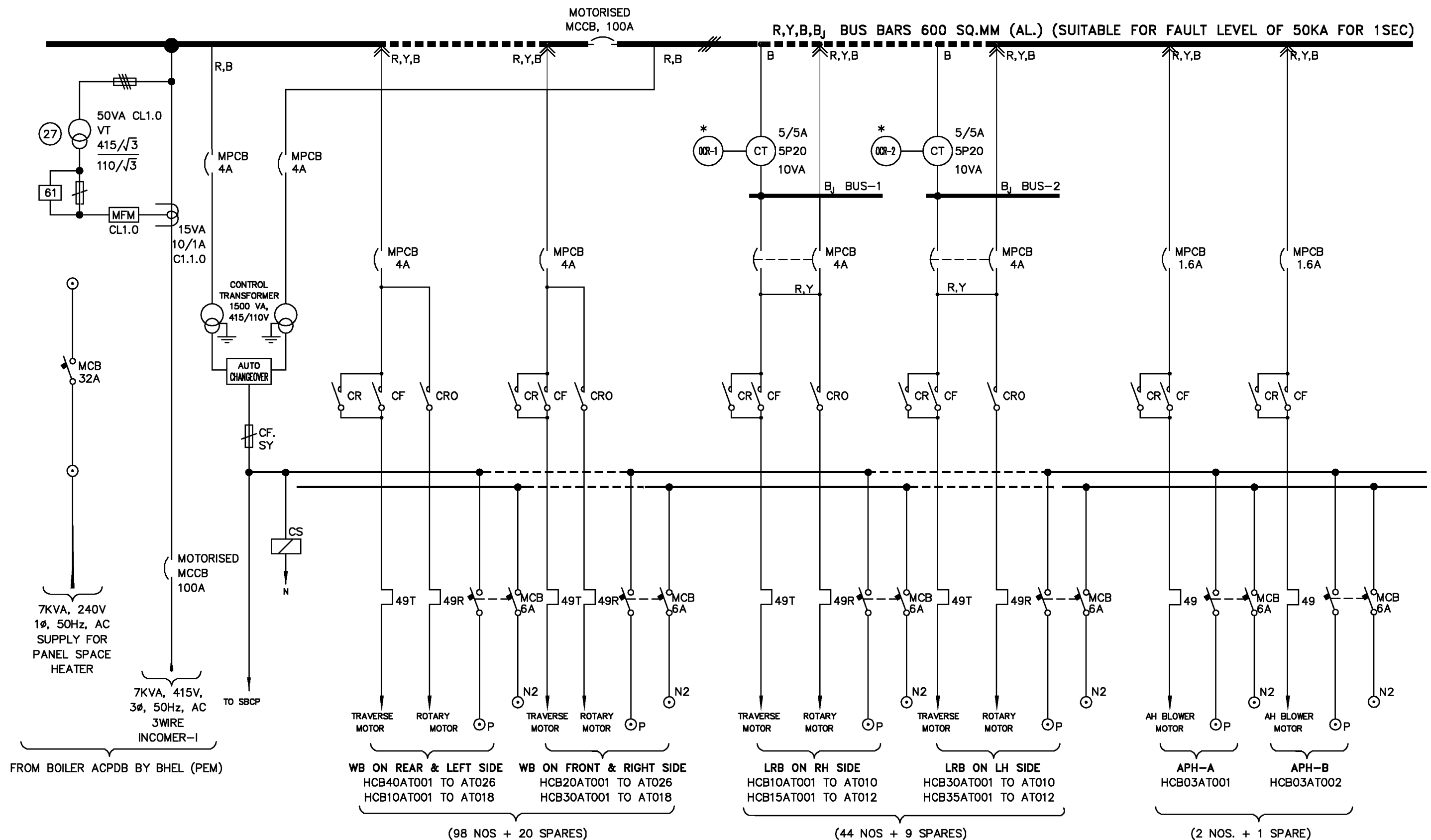
27	UNDER VOLTAGE RELAY
42	CONTACTOR FOR AH BLOWER
49	THERMAL OVERLOAD RELAY
49R	THERMAL OVER LOAD RELAY ROTARY
49T	THERMAL OVER LOAD RELAY TRAVERSE
61	FUSE FAILURE RELAY
74,RR RC	AUX. CONTACTORS
A	AMMETER
AMW,R1,RC	AUXILIARY CONTACTOR
ASS	AMMETER SELECTOR SWITCH
CC	CONTACTOR FOR CLOSE
CF	CONTACTOR FOR FORWARD
CO	CONTACTOR FOR OPEN
CR	CONTACTOR FOR REVERSE
CRO	CONTACTOR FOR ROTARY
CT	CURRENT TRANSFORMER
CS	CONTROL SUPPLY
F	CONTROL FUSE
LRPB	LOCAL RETRACT PUSH BUTTON
LSPB	LOCAL START PUSH BUTTON
LSTS LS-1	FORWARD END LIMIT SWITCH
LSTE LS-2	HOME POSITION LIMIT SWITCH
LSTR	ROTARY LIMIT SWITCH
MFM	MULTIFUNCTION METER
PF	POWER FUSE
PFR	POWER FUSE ROTARY
PFT	POWER FUSE TRAVERSE
PSS	POWER SUPPLY SWITCH
SBC	SOOTBLOWER CONTROLS SYSTEM
SV	SOLENOID VALVE
SBCP	SOOT BLOWER CONTROL PANEL
V	VOLT METER
VSS	VOLTMETER SELECTOR SWITCH

LEGEND

	SB CP TERMINALS
	SB MCC TERMINALS
	LOCAL TERMINALS
	POWER / AUX. CONTACTOR
	"NO" CONTACT OF CONTACTOR
	"NC" CONTACT OF CONTACTOR
	OFF DELAY TIMER
	"NO" CONTACT OF TIMER
	INDICATING LAMP (A-AMBER) (B-BLUE)
	SWITCH
	MCCB / MPCB
	MCB

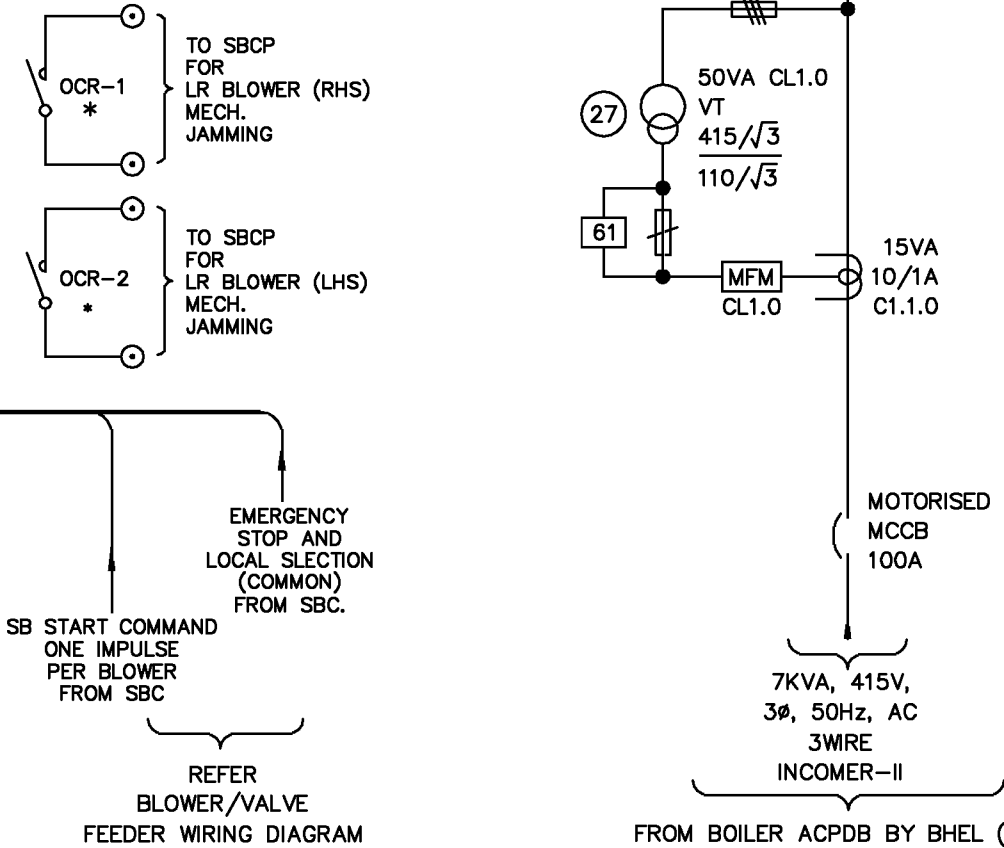
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02	240614	CHD./APPD. :	01	070314	CHD./APPD. : Sd./KB-RD
REVISED BASED ON CUSTOMER LETTER REF. TCE-5750A-EL-715-VDT-016 DATED 25-04-2014 & RECEIVED ON 10-05-2014.			REVISED BASED ON CUSTOMER LETTER REF. TCE.5757A-EL-715-VDT-015 DATED 23-01-2014.		

 TIRUCHIRAPPALLI	RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd.		DRN.	NAME A.ThambuRaj	SIGNATURE <i>சி.தேவசுந்தரம்</i>	DATE 16-11-13	SCALE NTS
	SURATGARH THERMAL POWER STATION		CHD.	K.Balaji	Sd. / KB	14-12-13	
	STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.		APPD.	R.Dileep	Sd. / RD	14-12-13	
DEPT. : C&I	TITLE		SHEET NO.	DRAWING NO :		REV	
CODE : 392	SOOT BLOWER SINGLE LINE DIAGRAM-NOTES		02/15	3-96-186-14634		02	



REV	DATE	ALTERED : <i>Dr. Dileep</i> 171214	REV	DATE	ALTERED : <i>Dr. Dileep</i> 240614	REV	DATE	ALTERED : <i>Dr. Dileep</i> 070314
03	171214	CHD./APPD. :	02	240614	CHD./APPD. : Sd./KB-RD	01	070314	CHD./APPD. : Sd./KB-RD
REVISED BASED ON CUSTOMER LETTER REF. TCE.5750A-EL-715-VDT-026 DATED 27-11-2014.			REVISED BASED ON CUSTOMER LETTER REF. TCE-5750A-EL-715-VDT-016 DATED 25-04-2014 & RECEIVED ON 10-05-2014.			REVISED BASED ON CUSTOMER LETTER REF. TCE.5757A-EL-715-VDT-015 DATED 23-01-2014.		

 RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd. SURATGARH THERMAL POWER STATION STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.	DRN.	NAME	SIGNATURE	DATE	SCALE
	CHD.	A.ThambuRaj	<i>Dr. Dileep</i> 161113	16-11-13	NTS
	APPD.	R.Dileep	Sd. / KB	14-12-13	
	APPD.	R.Dileep	Sd. / RD	14-12-13	
DEPT. : C&I	TITLE				REV
CODE : 392	SOOT BLOWER SINGLE LINE DIAGRAM				03
SHEET NO. 03/15	DRAWING NO : 3-96-186-14635				

[illegible]

DESCRIPTION	INCOMER FOR SPACE HEATER	INCOMER-I	INCOMER-II	WALL BLOWERS		LR BLOWERS		AH BLOWER
TAG No.				HCB40AT001 TO AT026 (REAR & LEFT) HCB10AT001 TO AT018 (REAR & LEFT) HCB20AT001 TO AT026 (FRONT & RIGHT) HCB30AT001 TO AT018 (FRONT & RIGHT)		HCB10AT001 TO AT010 (RH SIDE) HCB15AT001 TO AT012 (RH SIDE) HCB30AT001 TO AT010 (LH SIDE) HCB35AT001 TO AT012 (LH SIDE)		HCB03AT001 (APH-A) HCB03AT002 (APH-B)
FEEDER NO. DETAILS	1	1	1	98 + 20 SPARES		44 + 9 SPARES		2 NOS. + 1 SPARE
DRIVE DETAILS	—	—	—	TRAVERSE	ROTARY	TRAVERSE	ROTARY	
MOTOR CAPACITY IN KW	7 KVA	7 KVA	7 KVA	0.56	0.09	0.56	0.736	0.18
FULL LOAD CURRENT IN AMPS	—	—	—	1.36	0.64	1.4	1.65	0.56
O/L RELAY RANGE IN AMPS	—	—	—	0.9–1.5	0.45–0.75	0.9–1.5	1.0–2.0	0.45–0.75
MCCB/MPCB IN AMPS	32A (MCB)	100A	100A	4A	4A	4A	4A	1.6A
POWER CONTACTOR	—	—	—	16	16	16	16	16
CABLE SIZE	2CX10SQ.MM(AL) PC	3CX25SQ.MM(AL) PC	3CX25SQ.MM(AL) PC	REFER RESPECTIVE FEEDER WIRING DIAGRAM				

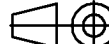
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REVISED BASED ON CUSTOMER LETTER REF. TCE.5750A—EL—715—VDT—026 DATED 27—11—2014.			REVISED BASED ON CUSTOMER LETTER REF. TCE—5750A—EL—715— VDT—016 DATED 25—04—2014 & RECEIVED ON 10—05—2014.			REVISED BASED ON CUSTOMER LETTER REF. TCE.5757A—EL—715— VDT—015 DATED 23—01—2014.		

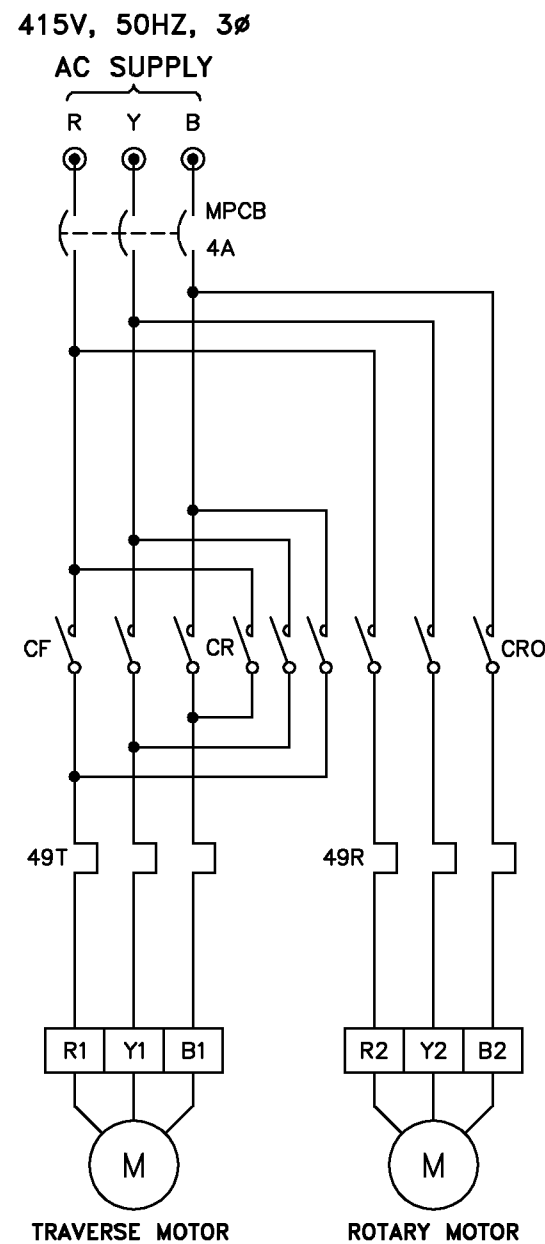
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DEPT. : C&I
CODE : 392

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd.
SURATGARH THERMAL POWER STATION
STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.

TITLE

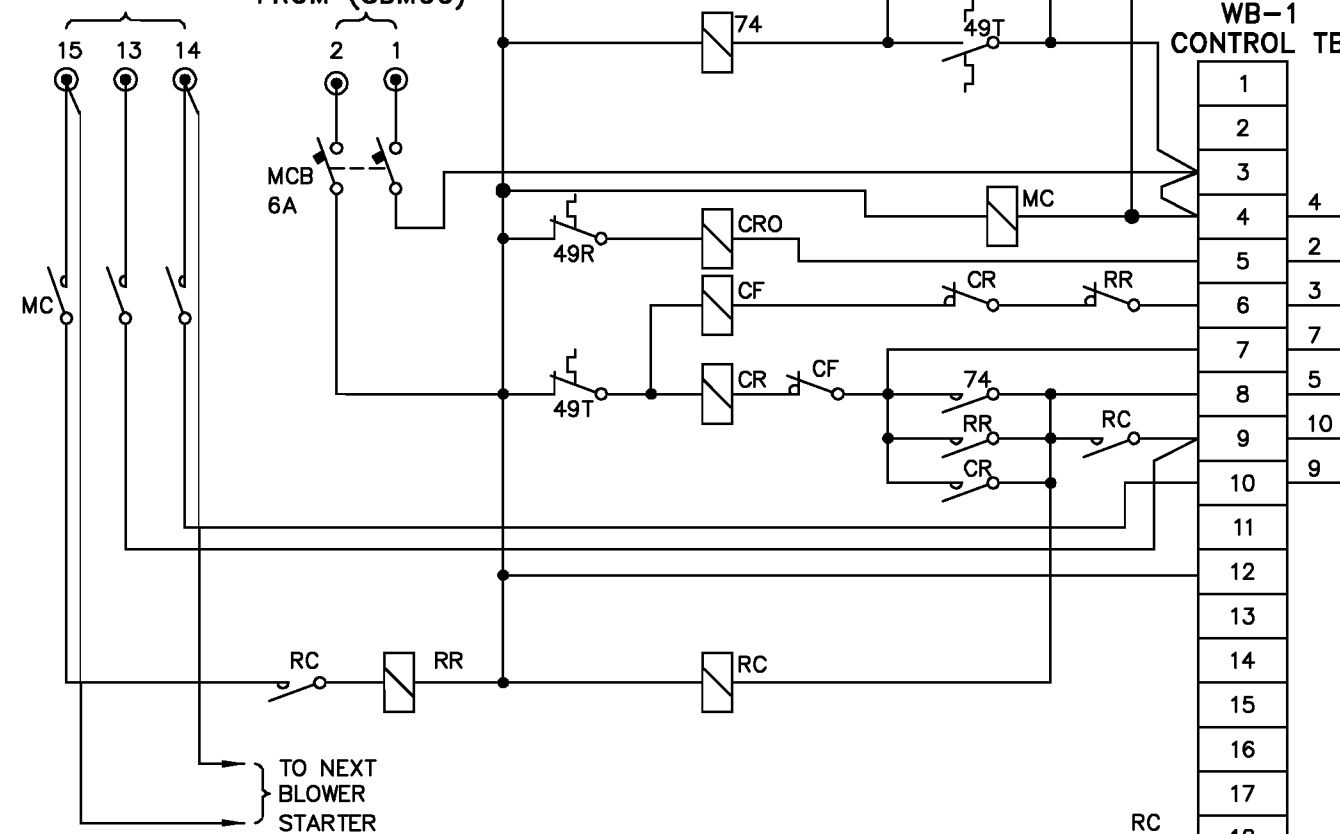
SOOT BLOWER
SINGLE LINE DIAGRAM

DRN.	NAME A.ThambuRaj		SIGNATURE <i>A. Thambu Raj</i>	DATE 16-11-13	SCALE
CHD.	K.Balaji		Sd. / KB	14-12-13	NTS
APPD.	R.Dileep		Sd. / RD	14-12-13	
SHEET NO.		DRAWING NO : 3-96-186-14636			REV 03
04/15					

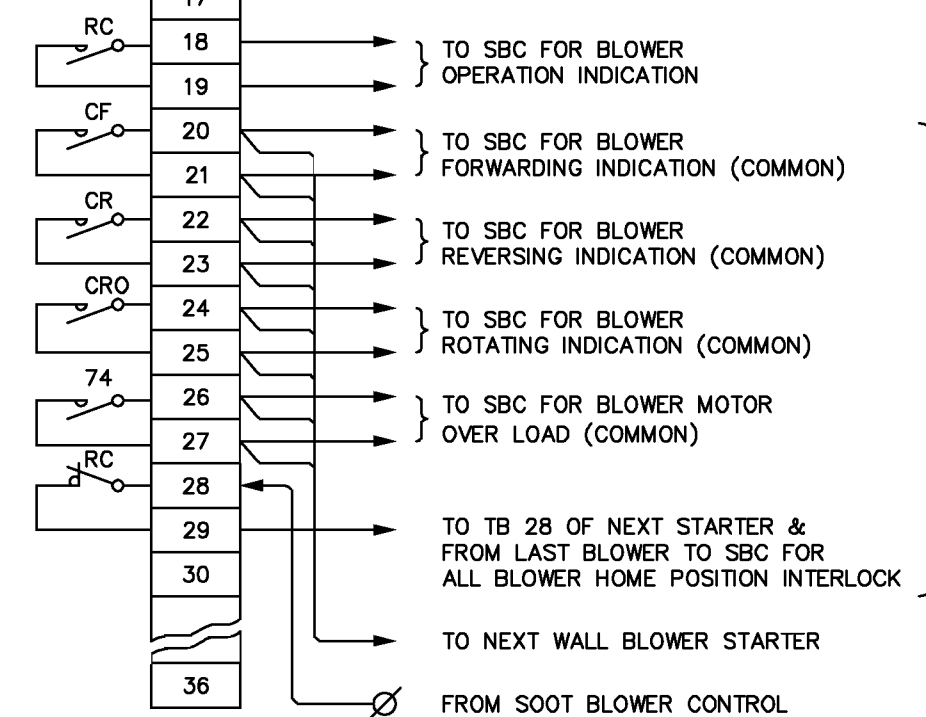
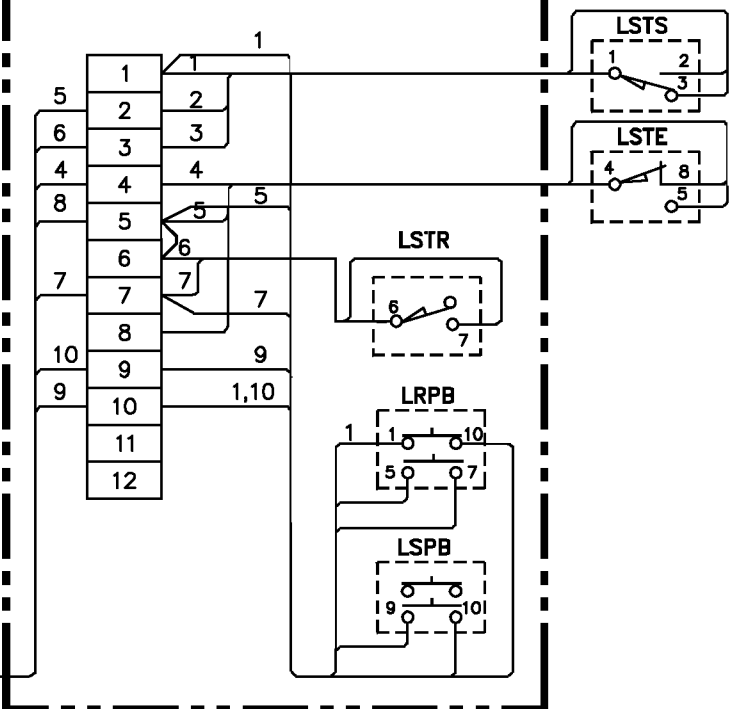


110V, 50HZ, 1 ϕ
IMPULSE

110V, 50HZ, 1 ϕ
CONTROL SUPPLY
FROM (SBMCC)



WALL BLOWER-1 JUNCTION BOX

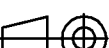


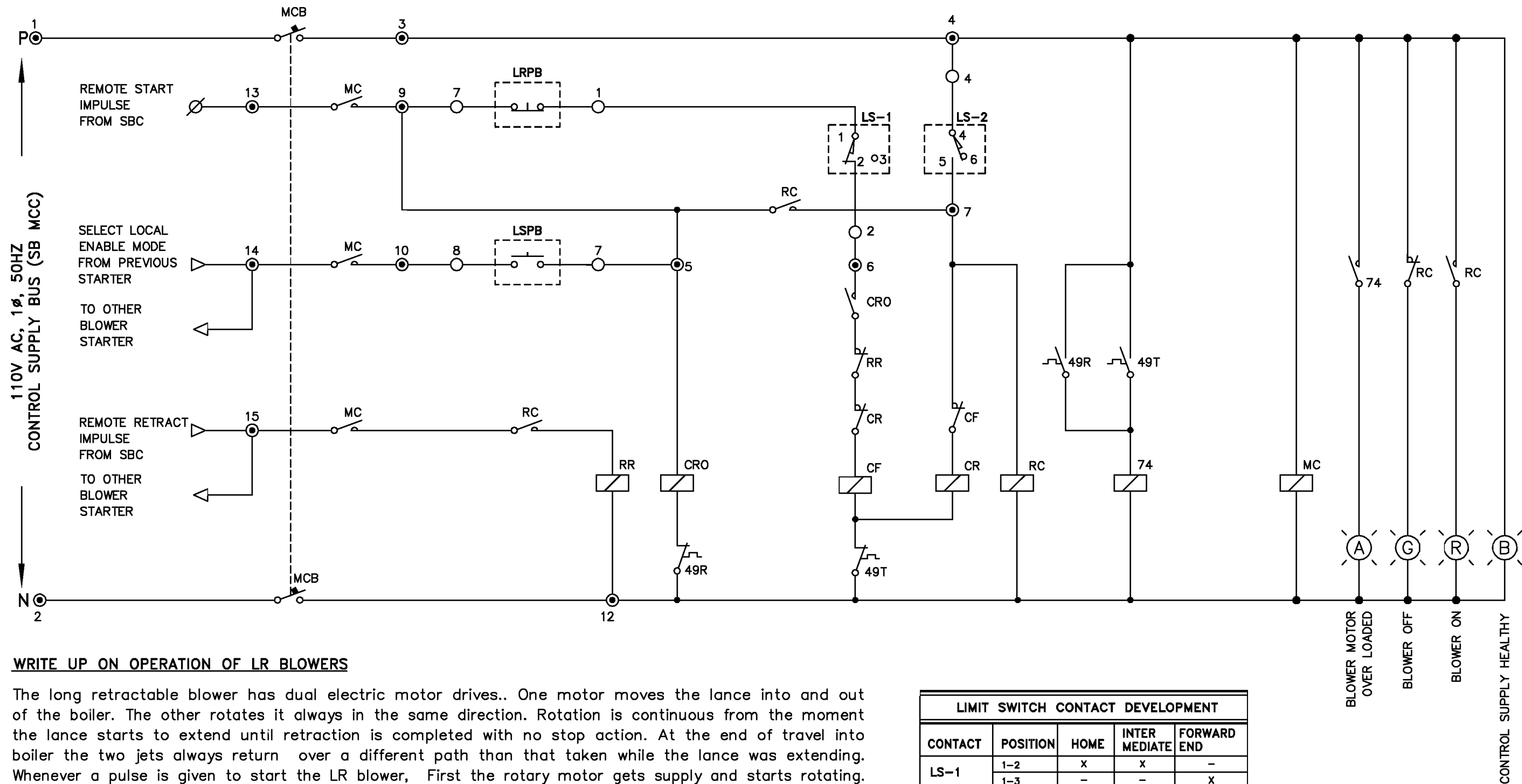
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		CHD./APPD. :

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DEPT. : C&I
CODE : 392

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd.
SURATGARH THERMAL POWER STATION
STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.

TITLE
WALL BLOWER
INTERCONNECTION DIAGRAM

DRN.	NAME A.ThambuRaj	SIGNATURE  161113	DATE 16-11-13	SCALE
CHD.	K.Balaji		14-12-13	NTS
APPD.	R.Dileep		14-12-13	
SHEET NO. 06/15		DRAWING NO : 3-96-186-14638		REV 00



WRITE UP ON OPERATION OF LR BLOWERS

The long retractable blower has dual electric motor drives.. One motor moves the lance into and out of the boiler. The other rotates it always in the same direction. Rotation is continuous from the moment the lance starts to extend until retraction is completed with no stop action. At the end of travel into boiler the two jets always return over a different path than that taken while the lance was extending. Whenever a pulse is given to start the LR blower, First the rotary motor gets supply and starts rotating. The "NO" contact of contactor "CRO" for rotary motor closes and the traverse motor starts and holds through limit switches LS-2 (4,5). The blower moves forward. At the end of the forward motion limit switch LS-1 opens (contacts 1,2) and the blower retracts. When the blower reaches the home position limit switch LS-2 (contact 4,5) opens and the blower stops.

NOTE:

LIMIT SWITCHES & PUSH BUTTONS ARE PART OF BLOWER.

LIMIT SWITCH CONTACT DEVELOPMENT				
CONTACT	POSITION	HOME	INTER MEDIATE	FORWARD END
LS-1	1-2	X	X	-
	1-3	-	-	X
LS-2	4-5	-	X	X
	4-6	X	-	-
X CONTACT CLOSED, - CONTACT OPEN				

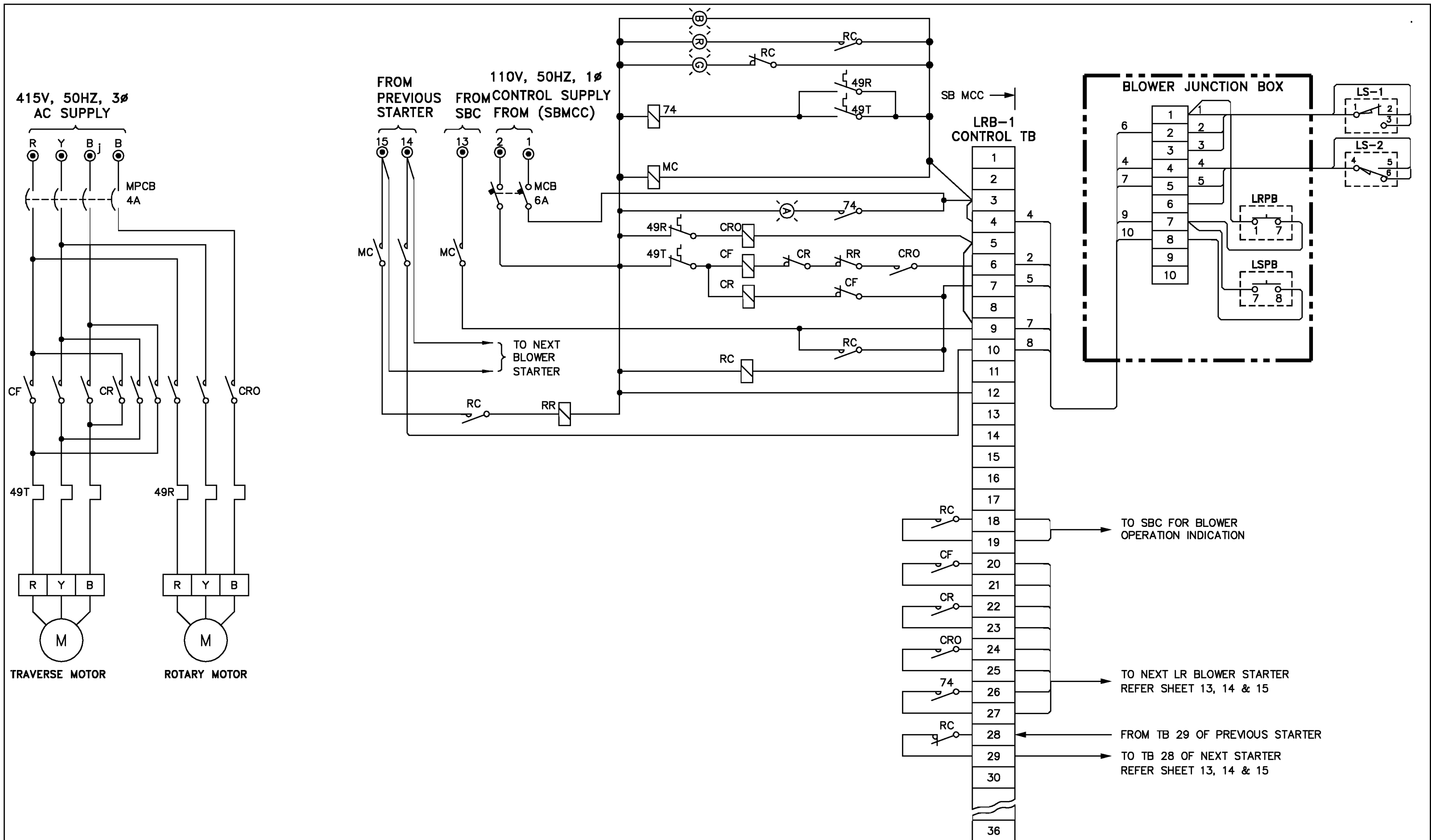
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01	240614	CHD./APPD. :
REVISED BASED ON CUSTOMER LETTER REF. TCE-5750A-EL-715-VDT-016 DATED 25-04-2014 & RECEIVED ON 10-05-2014.		

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DEPT. : C&I
CODE : 392

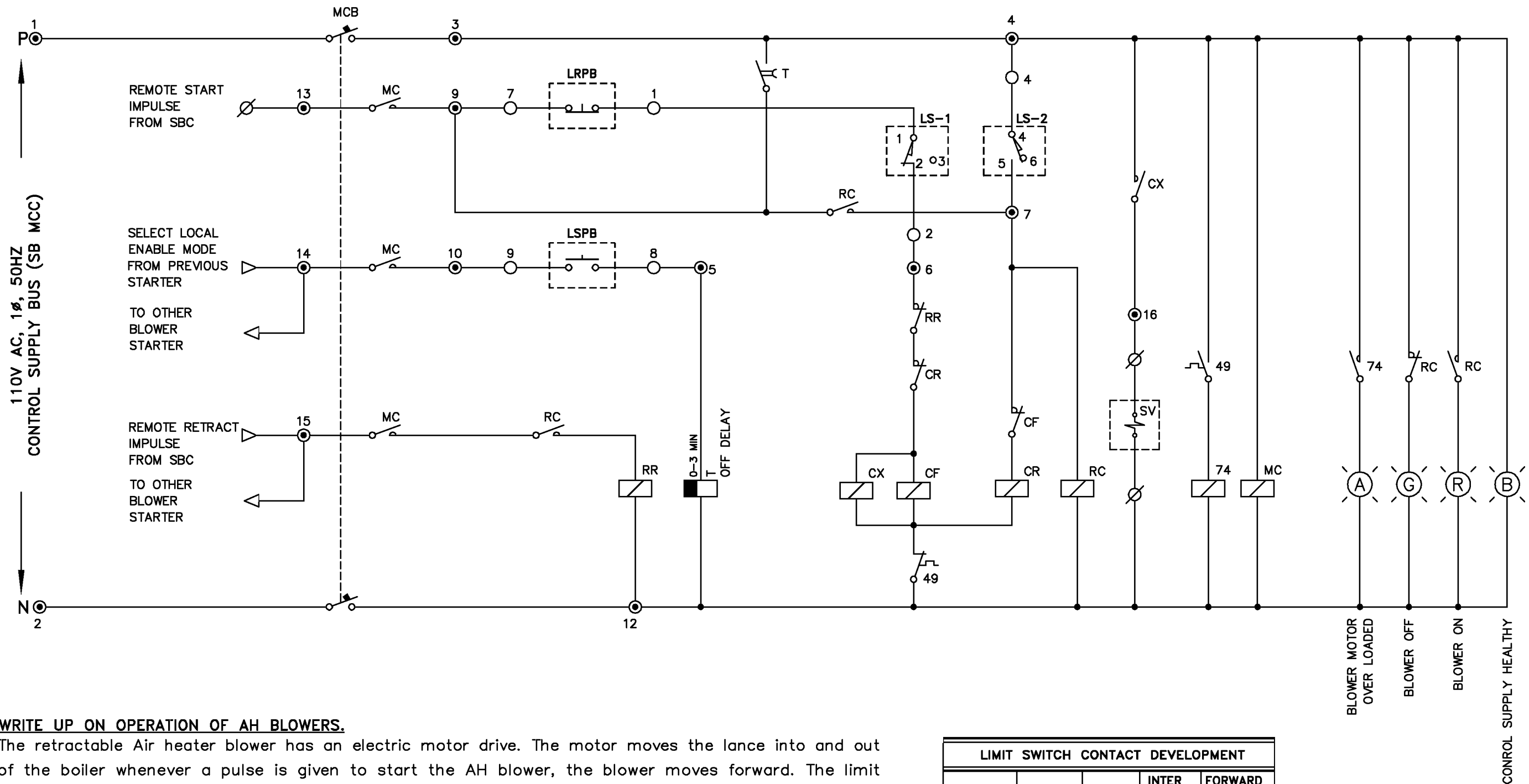
RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd.
SURATGARH THERMAL POWER STATION
STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.

TITLE
LONG RETRACTABLE BLOWER
CONTROL SCHEME DIAGRAM

DRN.	NAME	SIGNATURE	DATE	SCALE
CHD.	A.ThambuRaj	240614	16-11-13	NTS
APPD.	K.Balaji	Sd. / KB	14-12-13	
	R.Dileep	Sd. / RD	14-12-13	
SHEET NO.	DRAWING NO :		REV	
07/15	3-96-186-14639		01	



REV	DATE	ALTERED : CHD./APPD. :	DEPT. : C&I	CODE : 392	RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd. SURATGARH THERMAL POWER STATION STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.	TITLE LONG RETRACTABLE BLOWER INTERCONNECTION DIAGRAM	DRN.	NAME A.ThambuRaj	SIGNATURE 161113	DATE 16-11-13	SCALE NTS	REV
							CHD.	K.Balaji		14-12-13		
							APPD.	R.Dileep		14-12-13		
							SHEET NO. 08/15		DRAWING NO : 3-96-186-14640			00



WRITE UP ON OPERATION OF AH BLOWERS.

The retractable Air heater blower has an electric motor drive. The motor moves the lance into and out of the boiler whenever a pulse is given to start the AH blower, the blower moves forward. The limit switch LS-2 (contact 4,5) closes as soon as the blower starts moving, at the end of the forward motion, limit switch LS-1 opens (contacts 1,2) and the blower retracts. When the blower reaches the home position, the limit switch LS-2 (contact 4,5) opens and 4,6 closes and the blower stops, at any time blower can be retracted by pressing retract push button from remote pushbutton or local retract push button from the field. Steam blowing is enabled through solenoid operated valve. solenoid is operated during the forward motion only. There is no blowing during reverse motion.

NOTE

- SOLENOID VALVE (SV) IS SUPPLIED BY BHEL AT FIELD.
- LIMIT SWITCHES & PUSHBUTTONS ARE PART OF BLOWER.

LIMIT SWITCH CONTACT DEVELOPMENT				
CONTACT	POSITION	HOME	INTER MEDIATE	FORWARD END
LS-1	1-2	X	X	-
	1-3	-	-	X
LS-2	4-5	-	X	X
	4-6	X	-	-
X CONTACT CLOSED, - CONTACT OPEN				

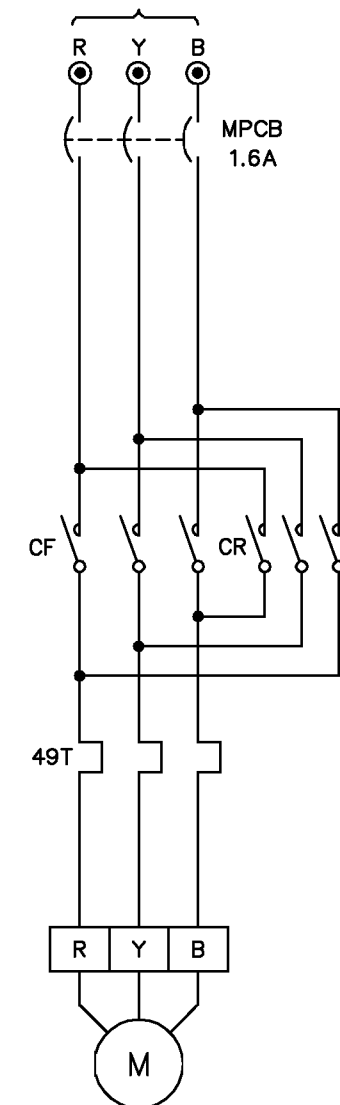
REV	DATE	ALTERED : 240614
01	240614	CHD./APPD. :
REVISED BASED ON CUSTOMER LETTER REF. TCE-5750A-EL-715-VDT-016 DATED 25-04-2014 & RECEIVED ON 10-05-2014.		

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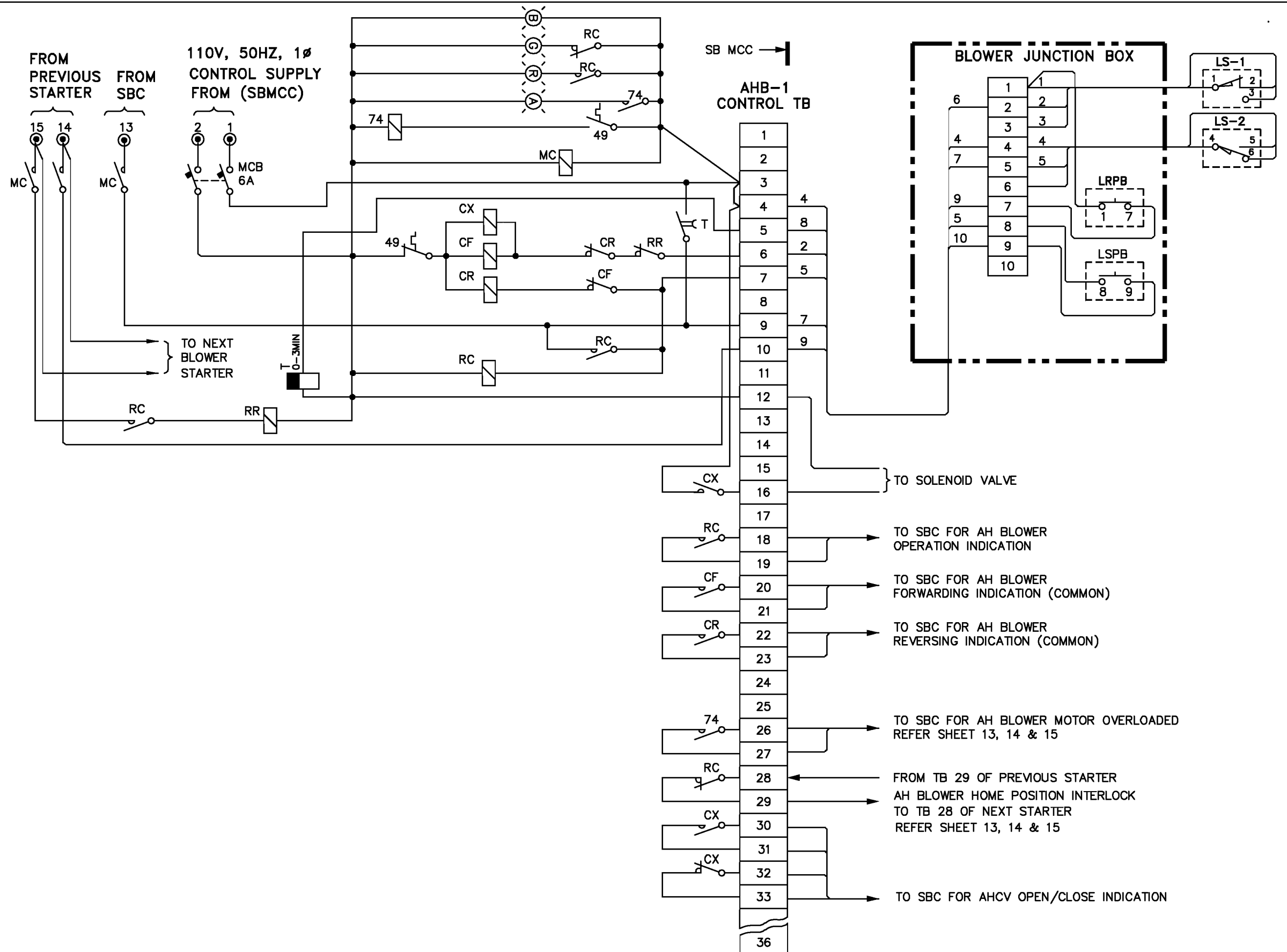
RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd. SURATGARH THERMAL POWER STATION STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.	
TITLE AIR HEATER BLOWER CONTROL SCHEME DIAGRAM	

DRN.	NAME	SIGNATURE	DATE	SCALE
CHD.	A.ThambuRaj	161113	16-11-13	NTS
APPD.	K.Balaji	Sd. / KB	14-12-13	
	R.Dileep	Sd. / RD	14-12-13	
SHEET NO. 09/15	DRAWING NO : 3-96-186-14641		REV 01	

415V, 50HZ, 3 ϕ
AC SUPPLY



TRAVERSE MOTOR
(0.18KW, FLC=0.56A)



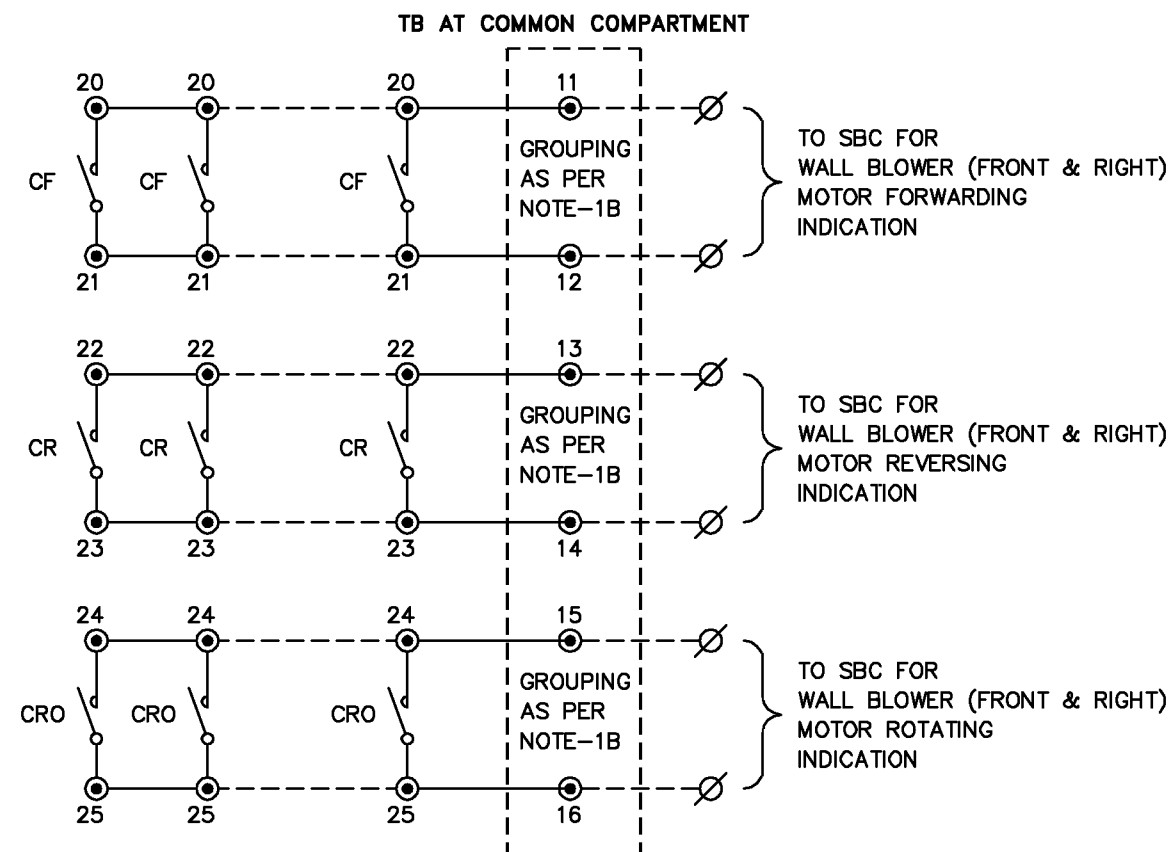
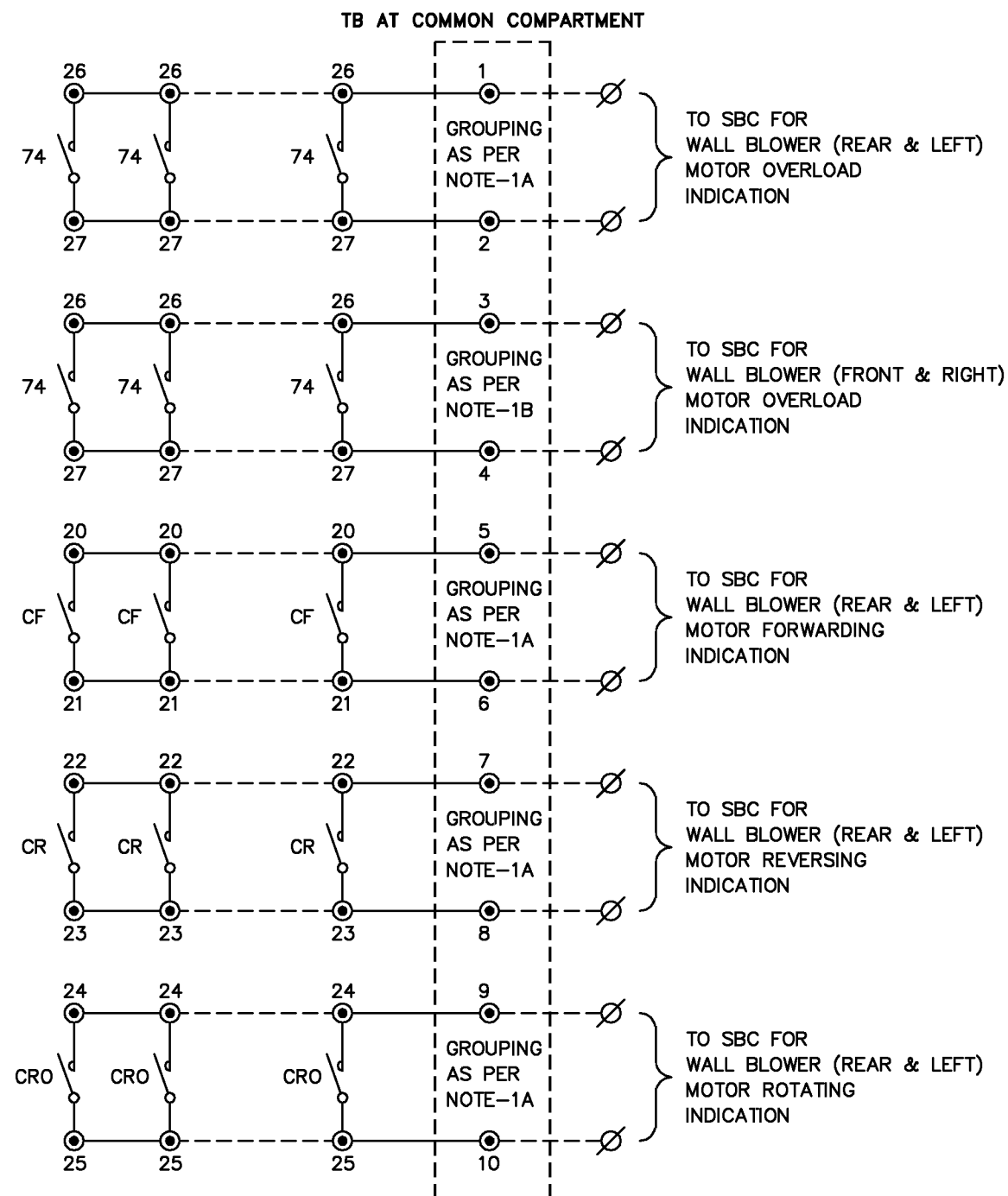
REV	DATE	ALTERED :
		CHD./APPD. :

बी एच ई एल BHEL TIRUCHIRAPPALLI
DEPT. : C&I
CODE : 392

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd.
SURATGARH THERMAL POWER STATION
STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.

TITLE
AIR HEATER BLOWER
INTERCONNECTION DIAGRAM

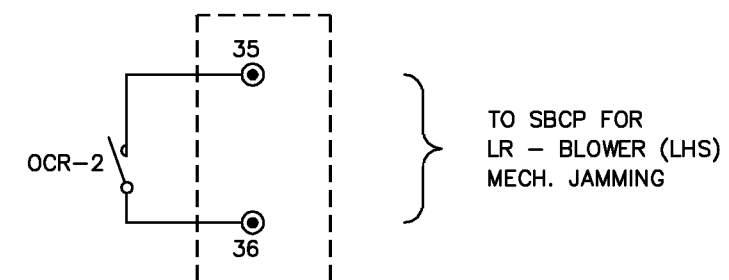
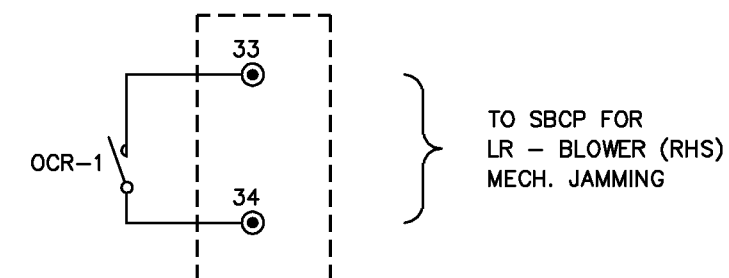
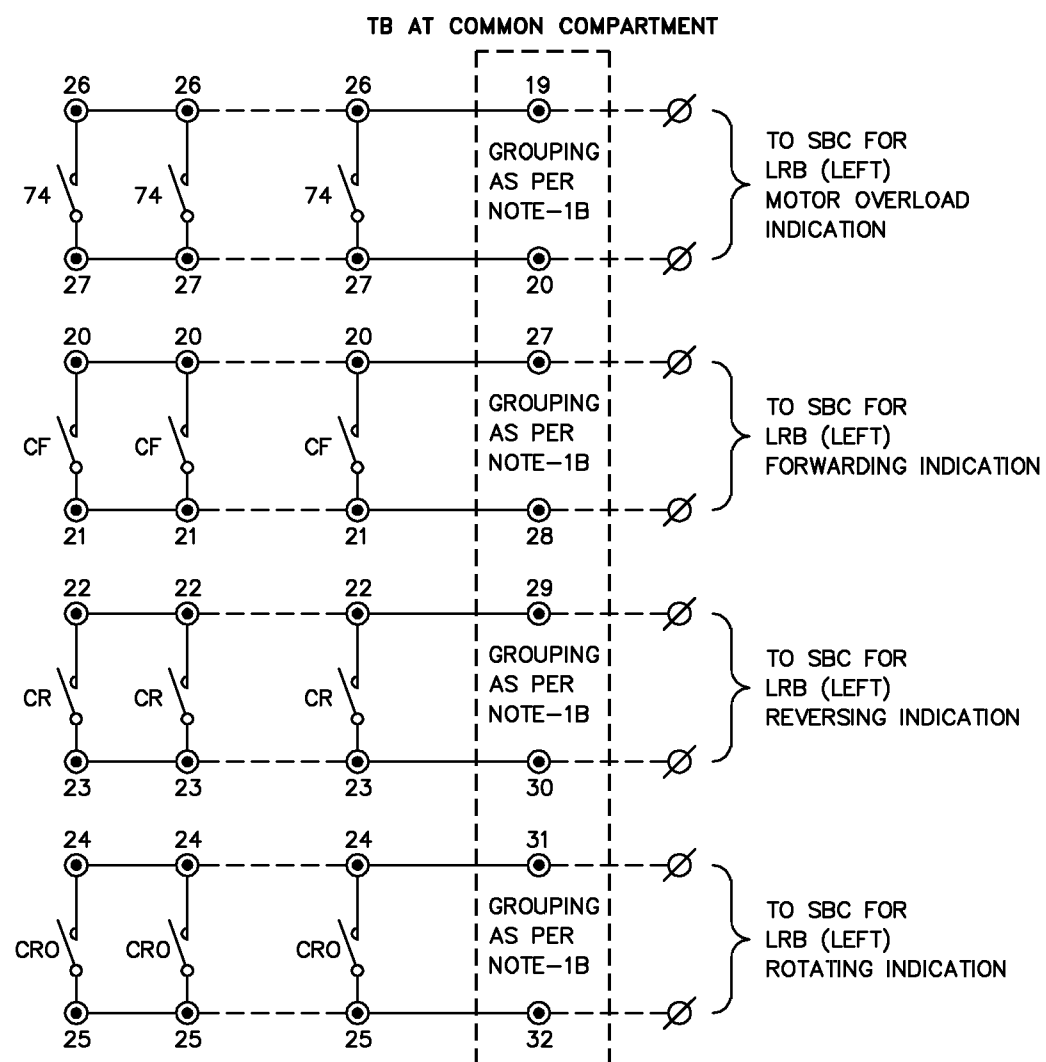
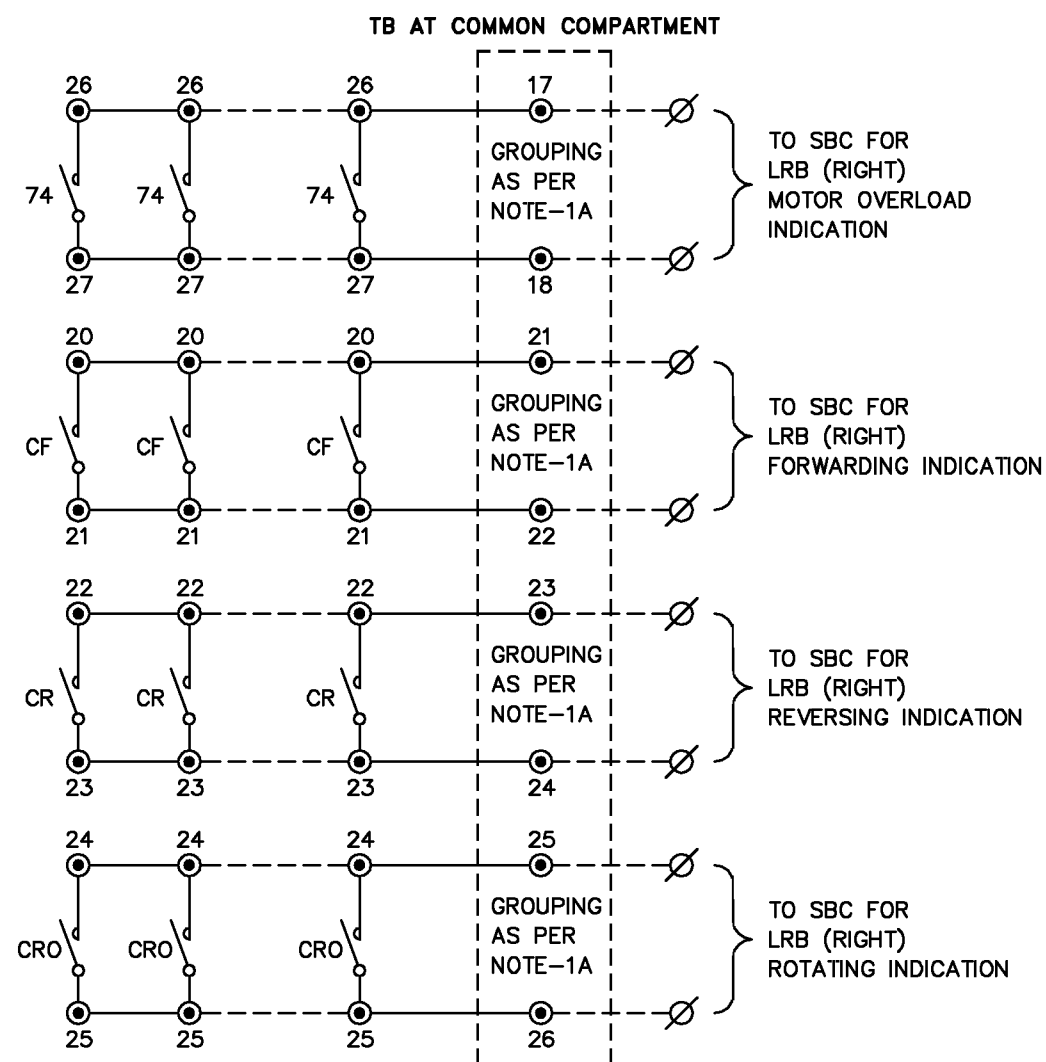
DRN.	NAME	SIGNATURE	DATE	SCALE
	A.ThambuRaj	<i>[Signature]</i>	16-11-13	NTS
CHD.	K.Balaji		14-12-13	
APPD.	R.Dileep		14-12-13	
SHEET NO. 10/15	DRAWING NO. : 3-96-186-14642	REV 00		



NOTE

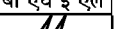
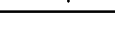
1. N/O CONTACT OF CONTACTOR "74"/CF/CR/CRO OF ALL WALL BLOWER SHALL BE PARALLELED AS FOLLOWS.
 - A. REAR & LEFT WALL BLOWER (HCB40AT001 TO AT026, HCB10AT001 TO AT018)
 - B. FRONT & RIGHT WALL BLOWER (HCB20AT001 TO AT026, HCB30AT001 TO AT018)

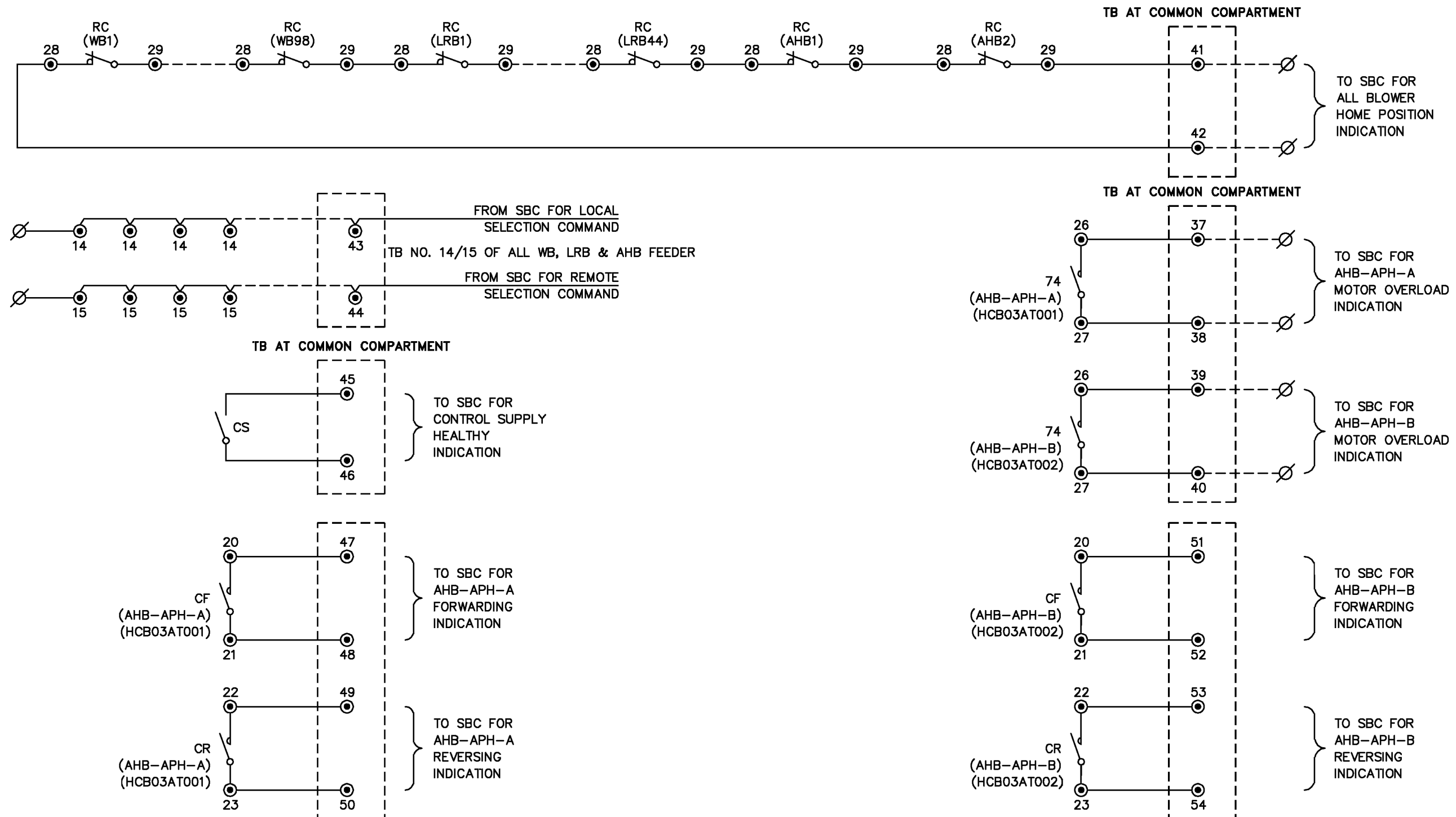
REV	DATE	ALTERED : CHD./APPD. :		RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd. SURATGARH THERMAL POWER STATION STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.	DRN.	NAME A.ThambuRaj	SIGNATURE 	DATE 16-11-13	SCALE NTS
					CHD.	K.Balaji		14-12-13	
			TIRUCHIRAPPALLI		APPD.	R.Dileep		14-12-13	
					SHEET NO. 13/15	DRAWING NO : 3-96-186-14643		REV 00	



NOTE

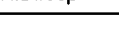
- N/O CONTACT OF CONTACTOR "74"/CF/CR/CRO OF ALL LR BLOWER SHALL BE PARALLELED AS FOLLOWS.
 - RIGHT LR BLOWER (HCB10AT001 TO AT010, HCB15AT001 TO AT012)
 - LEFT LR BLOWER (HCB30AT001 TO AT010, HCB35AT001 TO AT012)

			बी एच ई एल  TIRUCHIRAPPALLI		RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd. SURATGARH THERMAL POWER STATION STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.		DRN. A.ThambuRaj		NAME A.ThambuRaj		SIGNATURE  161113		DATE 16-11-13		SCALE		
REV			DATE		ALTERED : CHD./APPD. :		CHD.		K.Balaji				14-12-13		NTS		
							APPD.		R.Dileep				14-12-13				
			DEPT. : C&I		TITLE		SHEET NO.				DRAWING NO : 3-96-186-14644					REV	
			CODE : 392		INTER COMPARTMENT WIRING DIAGRAM IN SB MCC		14/15									00	



NOTE

1. TB NO. 14/15 OF ALL WB, LRB & AHB SHALL BE LOOPED.
2. N/C CONTACT OF "RC" CONTACTOR OF ALL WB, LRB & AHB FEEDERS SHALL BE CONNECTED IN SERIES.

REV DATE ALTERED : CHD./APPD. :			बी एच ई एल  TIRUCHIRAPPALLI	RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM Ltd. SURATGARH THERMAL POWER STATION STAGE-V, 2 X 660 MW, Cust. No. 1718 & 1719.	DRN. A.ThambuRaj CHD. K.Balaji APPD. R.Dileep	NAME A.ThambuRaj K.Balaji R.Dileep	SIGNATURE 	DATE 16-11-13 14-12-13 14-12-13	SCALE NTS
			DEPT. : C&I CODE : 392	TITLE INTER COMPARTMENT WIRING DIAGRAM IN SB MCC	SHEET NO. 15/15		DRAWING NO : 3-96-186-14645	REV 00	