

SCHEDULE OF EQUIPMENT

S.NO.	DESCRIPTION	SYMBOL	QTY.	DESIG.
1	160 MVAR, 220/132KV AUTO TRANSFORMER (3-PH)		02	
2	245KV, 1600A, 40KA/1s CIRCUIT BREAKER (3-PH)		02	52
3	245KV, 1600A, 40KA/1s HDB ISOLATOR WITH 2 E/S (3-PH)		02	
4	245KV, 1600A, 40KA/1s HDB ISOLATOR WITH 1 E/S (3-PH)		02	
5	245KV, 1600A, 40KA/1s TNDM HCB ISOLATOR W/O E/S (3-PH)		04	
6	245KV, 1600A, 40KA/1s CT (1-PH) WITH 120% EXTENDED CURRENT RATING		06	CT
7	216KV SURGE ARRESTER (1-PH)		06	LA
8	145KV, 1250A, 31.5KA/1s CIRCUIT BREAKER (3-PH)		02	52
9	145KV, 1250A, 31.5KA/1s HDB ISOLATOR WITH 2 E/S (3-PH)		02	
10	145KV, 1250A, 31.5KA/1s HDB ISOLATOR WITH 1 E/S (3-PH)		02	
11	145KV, 1250A, 31.5KA/1s TNDM HCB ISOLATOR W/O E/S (3-PH)		02	
12	145KV, 800A, 31.5KA/1s CT (1-PH) WITH 120% EXTENDED CURRENT RATING		06	CT
13	145KV, 4400pf CAPACITIVE VOLTAGE TRANSFORMER (1-PH)		06	CVT
14	120KV SURGE ARRESTER (1-PH)		06	LA

245KV, 1600A, CT (5 CORE)

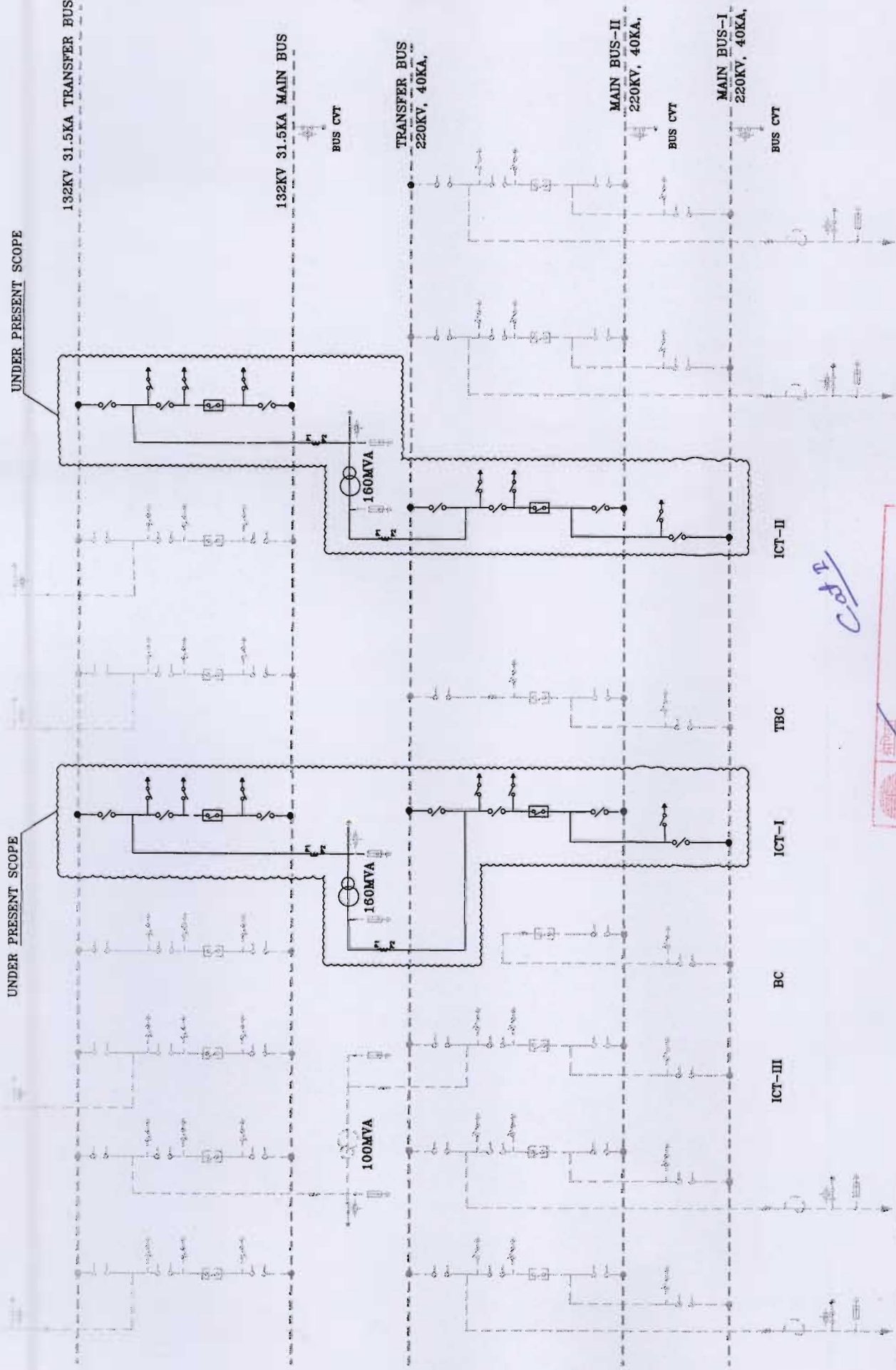
Core No.	Current Ratio	Accuracy Class	Output Burden VA	Min RCT in Ohms	Max RCT in Ohms	Max Im at kV (mA)	Purpose
1	1600-3000/1	PS	-	1600-800	8	25-50	BUS DIFF. CHECK
2	1600-3000/1	PS	-	1600-800	8	25-50	BUS DIFF. MAIN
3	1600-3000/1	PS	20	1600-800	8	25-50	METERING
4	1600-3000/1	PS	-	1600-800	8	25-50	TRANS. BACKUP LINE PROTIN
5	1600-3000/1	PS	-	1600-800	8	25-50	TRANS. DIFF. LINE PROTIN

145KV, 800A, CT (5 CORE)

Core No.	Current Ratio	Accuracy Class	Output Burden VA	Min RCT in Ohms	Max RCT in Ohms	Max Im at kV (mA)	Purpose
1	800-400/1	PS	-	800-400	8	25-50	BUS DIFF. CHECK
2	800-400/1	PS	-	800-400	8	25-50	BUS DIFF. MAIN
3	800-400/1	PS	20	800-400	8	25-50	METERING
4	800-400/1	PS	-	800-400	8	25-50	TRANS. BACKUP LINE PROTIN
5	800-400/1	PS	-	800-400	8	25-50	TRANS. DIFF. LINE PROTIN

REQUIREMENTS OF 145KV CAPACITIVE VOLTAGE TRANSFORMERS

S.NO.	PARTICULAR
1.	RATED PRIMARY VOLTAGE (KV RMS) 145
2.	TYPE SINGLE PHASE CAPACITOR VT
3.	NO. OF SECONDARIES 3
4.	RATED VOLTAGE FACTOR 1.2 CONTINUOUS 1.5-30 SECONDS
5.	PHASE ANGLE ERROR ±10 MINUTES (FOR METERING CORE)
6.	CAPACITANCE (PF) 8800 +10% -5%
7.	VOLTAGE RATIO 132/0.11 132/0.11 132/0.11
8.	APPLICATION DARY-I DARY-II DARY-III
9.	ACCURACY 3 P 3 P 0.2
10.	OUTPUT BURDEN (VA) (MINIMUM) 50 50 50



REF. DWG.:-

DWG NO. C/ENG/ER/TRFR & REAC/PUR/SLD/01. R0 - 220/132KV PURNEA(EXTN.) S/S



CUSTOMER: POWER GRID CORPORATION OF INDIA LTD.
PROVISION OF TRANSFORMERS AND REACTORS EASTERN AND NORTHERN REGION

JOB NO. 314
STATUS CONTRACT DISTRIBUTION

CC-CS/153-ER1/SS-1945/3/08/R/NOA-1/4737, DTD.08.08.13

BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION PROJECTS DIVISION

CARD CODE

SINGLE LINE DIAGRAM FOR 220/132KV PURNEA S/S EXTN.

NEXT SHEET No.

04

REV. 00

SCALE W.O. No. DRG. No. TB-3-366-316-001



REV.	DATE	SIGN.	NAME	DATE
		RK	RK	21.08.13
		MVK	MVK	21.08.13
		MK	MK	21.08.13

REV.	DATE	APPD.	CHD.	DATE	REV.	DATE	APPD.	CHD.	DATE

DEPT. TBEM

CODE 422

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COMPUTER DRG. PATH NAME :

- NOTES:
- SYSTEM 40KA/1s, 50 Hz, 3 PH, SOLIDLY EARTHED.
 - INDICATED CT/VT PARAMETERS ARE AS PER POWERGRID SPECIFICATION.
 - FOLLOWING IS THE SCOPE FOR 220/132 KV PURNEA S/S UNDER SUBJECT SCHEME.
-INSTALLATION OF 2 NOS 160 MVA, 220/132 KV TRANSFORMER ALONG WITH ASSOCIATED BAYS BY REPLACING OF EXISTING 2 NOS 100 MVA, 220/132 KV TRANSFORMER (COMMISSIONED IN 1986) AND ASSOCIATED BAYS.
 - REPLACED TRANSFORMERS AND BAY EQUIPMENTS SHALL BE TRANSPORTED AND PROPERLY PLACED AND STORED IN POWER GRID DESIGNATED STORES.

BHEL SCOPE
FUTURE/EXISTING

