



SYSTEM PARAMETERS :-

Sl.No.	DESCRIPTION OF PARAMETER	765kV SYSTEM	400kV SYSTEM	220kV SYSTEM	132kV SYSTEM	66kV SYSTEM	33kV SYSTEM
1	HIGHEST SYSTEM VOLTAGE	800kV	420kV	245kV	145kV	72.5kV	36kV
2	SYSTEM OPERATING VOLTAGE	765kV	400kV	220kV	132kV	66kV	33kV
3	RATED FREQUENCY	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
4	NO. OF PHASES	3	3	3	3	3	3
5	RATED INSULATION LEVELS I) FULL WAVE LIGHTNING IMPULSES WITHSTAND VOLTAGE (1.2/5.0microsec.) II) SWITCHING IMPULSES WITHSTAND VOLTAGE (250/2500microsec.) DRY & WET III) ONE MINUTE POWER FREQUENCY DRY WITHSTAND VOLTAGE (rms) IV) ONE MINUTE POWER FREQUENCY DRY & WET WITHSTAND VOLTAGE (rms)	±2100kVp  ±1550kVp 830kV	±1550kVp  ±1050kVp 630kV	±1050kVp  --- 460kV	650kVp  --- 275kV	325kVp  --- 140kV	170kVp  --- 70kV
6	CORONA EXTINCTION VOLTAGE	508kVrms	320kVrms	NA	NA	NA	NA
7	MAX. RADIO INTERFERENCE VOLTAGE FOR FREQUENCY BETWEEN 0.5 MHz AND 2 MHz	2500 micro volts AT 508kV RMS	1000 micro volts AT 296kV RMS	1000 micro volts AT 156kV RMS	500 micro volts AT 156kV RMS	NA	NA
8	MINIMUM CREEPAGE DISTANCE - FOR EQUIPMENT OTHER THAN INSULATOR STRING  MINIMUM CREEPAGE DISTANCE - FOR INSULATOR STRING	20000 MM  24800 MM	10500 MM  13020 MM	6125 MM  6820 MM	3625 MM  ---	1813 MM  ---	900 MM  ---
9	RATED SHORT CIRCUIT CURRENT FOR 1 SEC. DURATION	50kA	63kA	50kA	31.5kA	25kA (FOR 3 Sec.)	25kA (FOR 3 Sec.)
10	SYSTEM NEUTRAL EARTHING	EFFECT. EARTHED	EFFECT. EARTHED	EFFECT. EARTHED	EFFECT. EARTHED	EFFECT. EARTHED	EFFECT. EARTHED

CONDUCTOR DETAILS OF 400 KV SIDE:-	
a) MAIN BUS	QUAD ACSR BERSIMIS AT 15 M.
b) JACK BUS	QUAD MOOSE ACSR AT 22 M.
c) BAY EQPT INTERCONNECTION	4.5" IPS AL. TUBE AT 8 M / QUAD MOOSE ACSR
d) DROPPER / JUMPER	QUAD MOOSE ACSR
NO. OF STRINGS/PHASE:-	
a) FOR TENSION	2
b) FOR SUSPENSION	1
SUB CONDUCTOR SPACING:-	
EARTHWIRE:	
10.98 MM DIA GI WIRE	

BUS & BAY CURRENT RATING :		765kV	400kV	220kV
1.	BUS BAR	4000A	4000A	3000A
2.	LINE BAY	3150A	3150A	1600A
3.	ICT BAY	3150A	3150A	1600A
4.	BUS REACTOR BAY	3150A	3150A	--
5.	BUS COUPLER BAY	--	--	3000A
6.	TRANSFER BUS COUPLER BAY	--	--	1600A
7.	BUS SECTIONALIZER BAY	--	--	3000A

BILL OF QTY. FOR 400kV MAIN EQUIPMENTS (FAULT LEVEL 63ka for 1 sec) :

SL.NO	DESCRIPTION	UNIT	ACTUAL QUANTITY	SYMBOL	REMARKS
1	420kV, 3150A, 63KA CIRCUIT BREAKER (3-PH) WITH CLOSING RESISTOR (With Support Structure)	EA	01		
2	420kV, 3150A, 63KA CIRCUIT BREAKER (3-PH) W/O CLOSING RESISTOR & W/O CONTROLLED SWITCHING (With Support Structure)	EA	01		
3	420kV, 3000A, 63KA, 1-PH CURRENT TRANSFORMER WITH 120 % EXTENDED CURRENT RATING	EA	06		
4	420kV, 4400pF CAPACITIVE VOLTAGE TRANSFORMER(1-PH)	EA	03		
5	420kV, 3150A, 63KA ISOLATOR (3-PH) (DOUBLE BREAK) WITH 1 E/S	EA	05		
6	420kV, 3150A, 63KA LINE TRAP for 1 Sec 0.5mH	EA	02		
7	336kV SURGE ARRESTER (1-PH)	EA	03		
8	400kV BUS POST INSULATOR	EA	50		

CLEARANCE TABLE AS PER GTR :-

Sl.No.	DESCRIPTION	765kV SYSTEM	400kV SYSTEM	220kV SYSTEM	145kV SYSTEM	66kV SYSTEM	33kV SYSTEM
1	PHASE TO PHASE FOR CONDUCTOR-CONDUCTOR CONFIGURATION FOR ROD-CONDUCTOR CONFIGURATION	7600mm 9400mm	4000mm 4200mm	2100mm	1300mm	750mm	320mm
2	PHASE TO EARTH FOR CONDUCTOR-CONDUCTOR STRUCTURE FOR ROD-CONDUCTOR CONFIGURATION	4900mm 6400mm	3500mm	2100mm	1300mm	630mm	320mm
3	SECTIONAL CLEARANCE	10300mm	6500mm	5000mm	4000mm	3100mm	2800mm

OWNER	ISHANAGAR POWER TRANSMISSION LTD
DRG. TITLE	ELECTRICAL LAYOUT-PLAN
	TENDER LAYOUT