

DETAILS OF THE SUBSTATION EQUIPMENTS:

220kV Sub Station.

ISOLATORS :

a) 220 kV

[with earth switch – 01(BIMCO), without earth switch – 01(WS)]

Make : BIMCO / WS

Voltage : 220 kV

Current : 1250A

Type : Centre post rotating, Gang operated,

b) 33kV

[with earth switch – 01(BIMCO), with out earth switch – 01(WS)]

Make : IMCO / WS

Voltage : 33 kV

Current : 400A

Type : Centre post rotating, Gang operated,

CIRCUIT BREAKERS: (Single phase, Three No.s)

Make : ABB

Voltage : 245 kV

Current : 2000A

Type : SF 6

CAPACITIVE VOLTAGE TRANSFORMER/POTENTIAL TRANSFORMER :

R PHASE	Y PHASE	B PHASE
220 kV - CVT	220 kV - PT	220kV - CVT
Make : WS	BHEL	ABB
Voltage :220 v3 kv /110V	220 v3 kv /110V	220 v3 kv /110V

CURRENT TRANSFORMERS :

a) 220 kV (03 No.s)

Make : AEE
Voltage : 220 kV
Current : 200-100/1A
Type : Out door oil cooled Live tank

b) 33 kV (06 No.s)

Make : EPEC
Voltage : 33 kV
Current : 500/1A
Type : Outdoor oil cooled Live tank

LIGHTING ARRESTERS :

a) 220 kV side (03 No.s)

Make : WS Industries Ltd.,
Voltage : 198 kV
Current : 10kA

b) 33 kV (03 Nos.)

Make : WS Industries Ltd.,
Voltage : 30 kV
Current : 10

TRANSFORMER: 20MVA 2 Nos.

Make : NGEF
Voltage : 220 kV/33kV
Rating : 20 MVA
Tap changer : 1. Onload and 2. Off Load
Impedance : 3.03 Volts

DETAILS OF THE EQUIPMENTS 33kV SUBSTATION

ISOLATORS : (With Earth switches) 08 sets.

MAKE : BIMCO (KAUSHIK SWITCH GEARS) HYDERABAD

VOLTAGE/CURRENT : 33kV, 1250A With motor operated Mechanism

TYPE : Centre post rotating gang operated mechanism

Single phase 03 no's 33kV, 1250A Tandem isolators 04 sets

MAKE : GR Power switch gear ltd

VOLTAGE/CURRENT : 36kV, 1250A With out earth switches

TYPE : Lattice type Solid core

CIRCUIT BREAKER :

MAKE : a) ALIND (The aluminum industries India ltd) 03 Nos/ On load gears
(OLG)01No.

VOLTAGE/CURRENT : 36kV, 1600A

TYPE : Vacuum circuit breaker / outdoor type

b) Megawin/HBB/GEC

VOLTAGE/CURRENT : 11kV, 1250A

TYPE : Vacuum circuit breaker /Acuator/ outdoor type

CT'S

MAKE : A.E. (Automatic Electricals)

CURRENT : 33kV/500/1(INCOMING SIDE)

200/1A (OUT GOING SIDE)

PT'S

MAKE : A.E. (Automatic Electricals)

VOLTAGE : 33kV/ $\sqrt{3}$ /110/ $\sqrt{3}$ (SINGLE PHASE - 03 NOS)

LIGHTNING ARRESTORS (LA)

MAKE : W.S. Industries ltd

VOLTAGE/ CURRENT : 33kV, 10kA (SINGLE PHASE - 03 NOS)

5 MVA TRANSFORMER (2 Nos.) :

Make : Rima
Voltage : 33 kV/11kV
Rating : 5 MVA
Tap changer : Off load
Impedance : 7.1 % Volts

9 MVA TRANSFORMER (02 No.) :

Make : Alsthom & Atlanta Electricals
Voltage : 33 kV/6.4 /0.695kV
Rating : 9 MVA
Tap changer : On load
Impedance : 8.6%,20.9%,10.1%.

DETAILS OF THE EQUIPMENTS 11KV SUBSTATION

Transformers (22 Nos.)

kVA	No.s
3900	01
2500	01
2000	01
1000	04
630	03
500	07
400	02
250	03

Note : 11kV Circuit Breakers, Load break switches, Isolators and associated LT Panels for the above transformers.