

220KV GIS and Pothead yard of 186 MW Tato-I Hydro Electric Project, Arunachal Pradesh.		Technical Data Sheets
		Volume II Section-IV
		Pothead Yard Equipment

Sl. No.	Description	Units	To be filled by the Tenderer	Remarks (if any)
1.0	Pothead Yard Equipment			
A	Galvanised steel structure			
1.1	Name of manufacturer	-		
1.2	Applicable standards	-		
a.	For Properties of section	-		
b.	For Quality of steel	-		
c.	For fabrication and galvanisation	-		
1.3	Type of structure	-		
1.4	Minimum yield point stress	Kg/cm ²		
1.5	Ultimate tensile stress	Kg/cm ²		
1.6	Ultimate compressive stress	Kg/cm ²		
1.7	Ultimate bearing stress	Kg/cm ²		
1.8	Minimum thickness of steel	mm		
1.9	Maximum stress			
	Tension on net sectional area	Kg/cm ²		
	Compression on gross sectional area	Kg/cm ²		
	Shearing stress on bolts	Kg/cm ²		
	bearing stress on bolts	Kg/cm ²		
1.10	Factor of safety			
	Under normal operations	-		
	Under broken wire conditions	-		
1.11	Maximum ratio of slenderness, used in design			
	For leg members	-		
	Lattice members having calculated stress	-		
	Redundant members or members having nominal stresses	-		
	Members under tension only	-		
1.12	Quality of zinc used	-		
1.13	Weight of zinc coating per MT of structure weight	-		
1.14	Minimum thickness of zinc coating	mm		
1.15	Max. working stress employed in design	Kg/cm ²		
B	Isolator			
2.1	Make			
2.2	Place of manufacturer	-		
2.3	Applicable standard	-		
2.4	Rated continuous current	A		
2.5	Minimum make and break capability for capacitive and magnetising current	A		

220KV GIS and Pothead yard of 186 MW Tato-I Hydro Electric Project, Arunachal Pradesh.		Technical Data Sheets
		Volume II Section-IV
		Pothead Yard Equipment

2.6	Total operating time	s		
	(closing or opening cycle)			
2.7	Temperature rise	°C		
2.8	Clearance			
	a). live parts and ground	mm		
	b). between phases	mm		
	c). between fixed contact and blade in open position	mm		
2.9	Number of operations the isolator can withstand without deterioration of contacts	Nos.		
C	Earthing switch			
3.1	Rated short time withstand current. 1 s	kA		
D	CVT			
4.1	Manufacturer			
4.2	Place of manufacturer	-		
4.3	Type designation	-		
4.4	Applicable standards	-		
4.5	Number of CVT/PT			
	a). Line bays	Nos.		
	b). Bus coupler bays	Nos.		
4.6	Number of secondary core per CVTs/PTs			
	a). Line bays	Nos.		
	b). Bus coupler bays	Nos.		
4.7	Creepage distances			
	a). Total	mm		
	b). Protected	mm		
4.8	Primary winding one min. power frequency withstand voltage	kV		
4.9	1.2/50 micro sec. impulse voltage (positive and negative)	kV		
4.10	One min. power frequency wet and dry withstand voltage for bushing	kV		
4.11	Accuracy class/rated burden			
	for protection	-/ VA		
	for metering	-/ VA		
4.12	High frequency range (PLC) only in line	KHZ		
4.13	Capacitance (for CVT only)	pF		
E	Surge arresters			
5.1	Make/Type	-		

220KV GIS and Pothead yard of 186 MW Tato-I Hydro Electric Project, Arunachal Pradesh.		Technical Data Sheets Volume II Section-IV Pothead Yard Equipment
---	--	---

5.2	Place of manufacturer	-		
5.3	Applicable standards	-		
5.4	Rated voltage (Ur)	kV		
5.5	Maximum continuous operating voltage (Uc)	kV		
5.6	Nominal discharge current (8/20 μ s)	kA		
5.7	Pressure relief rated current	kArms		
5.8	High-current short duration test value (4/10 μ s)	kA		
5.9	Minimum thermal capability	kJ/kVuc		
5.10	Long duration currents			
	a). current peak	kA		
	b). virtual duration	micro. Sec.		
5.11	Power frequency follow up current which can be cut off			
	a). Current	amps		
	b). time in which it will be cut off	micro. Sec.		
5.12	Minimum dry power frequency spark) over voltage	KV(rms)		
5.13	Max. front of wave impulse spark over voltage	KV(peak)		
5.14	Virtual steepness of front for front of wave spark over	KV(/micro sec.)		
5.15	Protective ratio	No.		
5.16	Switching surge spark over voltage			
	a) maximum (peak)	kV		
	b) minimum (peak)	kV		
5.17	Residual voltage with waveform 8/20 p at discharge current i.e.2.5 kA15kA110 kA	kVpeak		
5.18	Corona ring provided	Yes/No		
F	Wave trap			
6.1	Make /Type	-		
6.2	Place of manufacturer	-		
6.3	Dynamic short-circuit withstand current	kApeak		
6.4	Rated inductance at power frequency	mH		
6.5	Rated band width	KHz		
6.6	Tapping loss	dB		
G	Line matching unit			
7.1	Make/Type	-		
7.2	Place of manufacturer			
7.3	Applicable standard			
7.4	Available band width	KHz		

220KV GIS and Pothead yard of 186 MW Tato-I Hydro Electric Project, Arunachal Pradesh.		Technical Data Sheets Volume II Section-IV Pothead Yard Equipment
---	--	---

H	Conductor			
8.1	Type	-		
8.2	Make	-		
8.3	Place of manufacturer	-		
8.4	Size	mm ²		
8.5	Applicable standard	-		
8.6	Current rating	A		
8.7	Short circuit current rating	A		
8.8	Material of conductor	-		
8.9	Weight of conductor / km	Kg/k.m		
8.10	Coefficient of linear expansion			
8.11	Ultimate tensile strength	Kgf/ mm ²		
8.12	Breaking load of conductor	Kgf/ mm ²		
I	Insulator			
9.1	Post insulator			
	-Make	-		
	-Place of manufacturer	-		
	-Applicable standard	-		
	-Length of creepage path	mm		
	-Failing load	Kgf		
9.2	-Guaranteed electro-thermo mechanical strength	Kgf/ mm ²		
	Strain insulator			
	-Applicable standard			
	-Length of creepage path	mm		
9.3	-Guaranteed electro-thermo mechanical strength	Kgf/ mm ²		
	Suspension insulator			
	-Applicable standard	-		
	-Material	-		
	-Weight	Kgf		
	-Ultimate tensile strength	Kgf/mm ²		
	-Guaranteed electro-thermo mechanical strength	Kgf/ mm ²		
	-Length of creepage path	mm		
J	Clamps			
	Type	-		
	Applicable standard	-		
	Material	-		
	Normal current rating	-		
	Ultimate strength	Kgf/ mm ²		
K	Earth wire/Lightning mast			
	Applicable standard	-		
	Material	-		
	Size	-		