

Project : Substation Package-‘A’ for extensions of 400kV Biharshariff S/S

Customer : Power Grid Corporation of India Limited

Mandatory Spares

Sl. No.	Item Description	Unit	Quantity
1	2	4	5
A)	Split bus arrangement for various substations in eastern region		
	Extension of 400 kV Biharshariff S/S		
1	420 kV Circuit Breaker		
i)	3150 A, 40 KA (No. of Pole)	no	1
ii)	Grading Capacitor	no	1
iii)	Rubber gaskets, 'O' rings and seals	set	1
iv)	Trip coils with resistor	nos	2
v	Closing coils with resistor	nos	1
vi	Terminal Pads & connectors	nos	2
vii)	Molecular filter	nos	2
viii	Corona rings	no	1
ix	Relays, Power contactors, switch fuse units, limit switches, push buttons, timers & MCB etc.	set	1
x	Pressure switches of each type	set	1
xi	Auxiliary switch assembly	set	1
2	400 kV Isolator		
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure		
a)	3150A, 40 KA, 2 E/S (no. of pole)	no	1
i)	Copper contact fingers for male & female contacts	set	2
ii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	1
iii)	Limit Switch	set	2
iv)	Terminal Pads & Connectors	nos	3
v	Corona shield rings	nos	3
3	400kV Current Transformer		
i)	3000A, 40kA, 120 % extended current rating	no	1
4	400 kV Capacitive Voltage Transformer		
	4400pF	no	1
5	Control & Protection		
i)	Common Spares		
a)	Power supply module for Bus Bar protection	No.	1
B)	Provision of transformers and reactors in eastern and northern region.		
	Extension of 400 kV Biharshariff S/S		
1	Bus Reactor		
i)	Buchholz relay (main tank) complete with float and contacts	Set	1
ii)	Local and remote WTI with sensing device and contact	Set	1
iii)	Oil temperature indicator with contacts and sensing device	No.	1
iv)	Bushing of each rating with metal parts and gaskets and lifting tools	Set	1
v)	Spare insulating oil to be handed over to POWERGRID after commissioning for O& M requirement	KL	10
2	420 kV Circuit Breaker		

i)	2000 A, 40 KA (No. of Pole)	no	1
ii)	Grading Capacitor	no	1
iii)	Rubber gaskets, 'O' rings and seals	set	1
iv)	Trip coils with resistor	nos	2
v)	Closing coils with resistor	nos	1
vi)	Terminal Pads & connectors	nos	2
vii)	Molecular filter	nos	2
viii)	Corona rings	no	1
ix)	Relays, Power contactors, switch fuse units, limit switches, push buttons, timers & MCB etc.	set	1
x)	Pressure switches of each type	set	1
xi)	Auxiliary switch assembly	set	1
3	400 kV Isolator		
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure		
a)	2000A, 40 KA, 1 E/S (no. of pole)	no	1
i)	Copper contact fingers for male & female contacts	set	2
ii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	1
iii)	Limit Switch	set	2
iv)	Terminal Pads & Connectors	nos	3
v)	Corona shield rings	nos	3
4	400kV Current Transformer		
i)	2000A, 40kA, 120 % extended current rating	no	1
5	336 kV Surge Arrester		
i)	Complete LA	No.	1
ii)	Surge counter/monitor	Nos.	5
6	Control & Protection		
i)	Reactor protection panel spares		
a)	Reactor differential protection relay	Set	1
b)	Reactor backup impedance relay	Set	1
c)	REF relay with non-linear resistor	Set	1