

Annexure -3 (Spare list of Suratgarh project)

S.NO.	DESCRIPTION	Qty	Unit
1	400kV isolators		
1.1	Complete set of gaskets	1	Set of each type
1.2	Drive motor with gear box	1	No. of each type
1.3	Male/female contact	1	No. of each type
1.4	Auxiliary contact & Limit switches	5	Nos. of each type
1.5	Open and Close coils	1	set of each type
1.6	Current carrying parts (fix & moving arm complete)	2	Sets of each type
2	400kV Circuit Breaker		
2.1	Auxiliary contactors indicating lamps, fuses etc. for electrical control circuit	2	Sets
2.2	SF6 density switch (of each type)	1	No.
2.3	Aux. switch block (of each type)	5	Nos.
2.4	Pressure switch for compressed air (if applicable) (of each type)	2	Nos.
2.5	Complete pole without closing resistor with operating Mechanism block	1	No.
2.6	Complete pole with closing resistor with operating Mechanism block	1	No.
2.7	Trip coils and closing coils (of each type)	2	Nos.
2.8	Gaskets (of each type)	1	Set
2.9	SF6 gas filling attachment (of each type)	1	Set
2.10	Auxiliary relay (of each type)	2	Nos.
2.11	Breaker Control switch (of each type)	1	No.
2.12	Breaker Selector switch (of each type)	1	No.
2.13	Insulator column (of each type)	1	No.
2.14	Special Tools for maintaining breaker	1	Set
2.15	50 Kg SF6 cylinder	1	No.
3	400kV CTs and CVTs		
3.1	Gaskets	1	Set of each type
3.2	Oil Level gauge	1	No. of each type
3.3	Insulator column	1	No. of each type
3.4	Complete CVT of each type & rating	1	each type and rating
3.5	Complete CT of each type & rating	1	each type and rating
4	400kV Lightning Arrester		
4.1	Flexible connecting strip between LAs and Surge Counter mandatory spares for 390kV LA	1	No.
4.2	Insulator column mandatory spares for 390kV LA	1	No.
4.3	Complete LA mandatory spares for 390kV LA	1	No.
4.4	Complete LA mandatory spares for 12kV LA	1	No.
5	400kV Insulators		
5.1	420kV Bus Post Insulator with Corona Rings	24	Nos.
5.2	420kV Post Insulator Without Corona Rings	3	Nos.
5.3	33kV Post Insulator Without Corona Rings	4	Nos.
5.4	Disc insulators	1	10 % of each type
6	Clamps, spacers and connectors including equipment terminal connectors	1	10 % of each type
7	Shunt Reactor		
7.1	Complete set of gaskets	1	Set
7.2	Bushings	1	No.
7.3	Dial Type Thermometer(Oil temp.)	1	No.
7.4	Magnetic Oil Level Gauge	1	No.
7.5	Complete set of wdg.Temp.indicating eqpt.	1	Set
7.6	Explosion vent diaphragms(if applicable)	1	No.
7.7	Valves of each type	1	No.
7.8	Buch.Relay	1	No.
7.9	Shunt reactor Oil in non returnable drums		10 % of total quantity
8	DC System	1	lot
8.1	220 Battery		
8.1.1	Connectors with Nuts & Bolts	1	3%
8.1.2	Vent plugs	1	3%
8.1.3	Cell container empty	4	Nos.
8.2	48V Battery		
8.2.1	Connectors with Nuts & Bolts	1	3%



S.NO.	DESCRIPTION	Qty	Unit
8.2.2	Vent plugs	1	3%
8.2.3	Cell container empty	4	Nos.
8.3	Battery Chargers		
8.3.1	Power supply unit	1	No. of each type
8.3.2	Control Fuses	2	Nos. of each type & rating
8.3.3	Power semiconductor	1	Set for Converter system
8.3.4	Cooling fan	1	No.
8.3.5	Semiconductor fuses of each rating	1	No.
8.3.6	Auxiliary Relays of each type	1	No.
8.3.7	Filter capacitor of each type and rating		10%
8.3.8	Filter choke	1	No.
8.3.9	Annunciation Window	1	Set
8.3.10	Electronic cards	2	Nos. of each type and rating which are
8.3.11	Contactors	1	One of each type and rating
8.3.12	MCCB	1	One of each type and rating
8.3.13	Single cell charger (Milky charger) - to charge battery up to capacity of 12 V, 150 AH	1	No
8.3.14	Float and boost charger to charge Coal Handling plant LOCO batteries of capacity up to 64 V, 100 AH	1	No
8.3.15	Float and boost charger to charge Bulldozer batteries of capacity up to 12 V, 200 AH	1	No
9	415V Switchgear		
9.1	Closing & tripping coils	4	set of each type
9.2	Fixed and moving contact assemblies of each breaker (4NC + 4NO)	2	set of each type
9.3	Spring charging motors	4	set of each type
9.4	Set of gasket	5	set of each type
9.5	Bus bar support insulators	10	Nos.
9.6	Aux. switch assembly, limit position switches, Local/Remote selector switch, breaker control switches & other switches	5	no. of each type
9.7	Auxiliary Relays	5	no. of each type
9.8	Fuses of each rating (control)	5	no. of each type
9.9	Sliding Control connectors (Male & Female)	100	Nos.
9.10	Control Transformers	1	nos. of each rating
9.11	Sliding Power contacts	6	nos. of each rating
9.12	Transducers	1	no. of each type
9.13	Indicating Lamp	4	no. of each type
9.14	Power contactor	4	nos. of each type and rating
9.15	Push button	4	nos. of each type
9.16	MCCB	4	nos. of each rating
9.17	Interposing relay	Lot 1	10% of the quantity or min. 1 no. whichever is higher (applicable for each switchgear)
9.18	Protection relay	1	no. of each make and type
9.19	Breaker (complete) with trolley	1	no. of each make, type and rating
9.20	Module	1	no. of each type and rating
9.21	PTs	3	nos. of each rating
9.22	CTs	3	nos. of each rating
9.23	Auxiliary contactor	2	nos. of each rating
9.24	Male/Female contacts	3	nos. of each type and rating
9.25	Plug & socket assembly for control circuit	10	nos. of each type and rating
9.26	Breaker handling trolley	2	nos. To handle each type and rating
9.27	Power fuses	10	nos. of each type and rating
10	cable drum	1	no. of each size of all cables