

MANDATORY SPARE FOR PARBATI-II HE PROJECT			
Item No.	Description	Unit	Quantity
A)	400 kV GIS		
1	Specified Spares Parts		
1.1	SF6 gas for use during operation and maintenance in non-returnable cylinders.	No.	32 cylinders (40 kg each)
1.2	Pump/compressor with motor for circuit breaker operating mechanism	Nos	2
1.3	Complete drive mechanism including motor for disconnect switches and grounding switches	No	1
1.4	Complete drive mechanism including motor for fast acting grounding switches	No	1
1.5	Trip Coils for circuit breakers	Nos	6
1.6	Closing Coils for circuit breakers	Nos	6
1.7	Rupture disc circuit breaker/potential transformer	No	1 no each
1.8	Spares for local control cabinet including MCB, fuses, time relay, auxiliary relay and terminals	Set	1
1.9	Valve of each type used in gas processing plant	Nos	2
1.10	Pressure switch	No	1
1.11	Gas density sensor	Nos	3
1.12	Gas density display unit	No	1
1.13	Windoscope/Observing window	Nos	2
1.14	Moving and fixed contact	Set	2
1.15	Support Insulator	Nos	3
1.16	SF6/Air bushings	No	1
1.17	Interrupter unit of circuit breaker	Set	1
1.18	Current transformer	Set	1
1.19	voltage transformer	Set	1
1.20	Gas tight bushing	Set	2
1.21	Return shaft and contact for disconnecting switch	Set	1
1.22	Return shaft and contact for grounding switch	Set	1
1.23	Return shaft and contact for fast acting grounding switch	Set	1
	Note : 1. A set is defined as the total number required for one bay. 2. Out of 2 sets , One set will be supplied by Alstom free of Cost.		
2	Special tools & devices		
2.1	Gas processing and filling unit with provision to check SF6 moisture and acidity content. Complete with all accessories and fittings	Units	2
2.2	Handling devices and tools for assembling and dismantling bays	Set	1
2.3	Handling devices and tools for assembling and dismantling enclosures	Set	1
2.4	Handling devices and tools for assembling and dismantling circuit breaker	Set	1
2.5	Tools for fitters and electricals installation	Set	1
2.6	Tools for cabling and wiring	Set	1

2.7	Transportable ladder, scaffolding, clings, scales etc.	Set	1
2.8	Equipment for pressure measurement and gas tightness testing.	Set	1
2.9	Pressure switch testing device	Set	1
2.10	Tools for oil pressure measurement	Set	1
3	Testing Equipment		
3.1	Micro OHM Meter for resistance measurement	No	1
3.2	Motorised Meggar, 5 kV	No	1
3.3	Meggar, 1 kV	No	1
3.4	Multimeter	Nos	2
	Note: Out of 2 sets , one Set will be supplied by Alstom free of cost.		
3.5	Air/Gas Humidity tester	Nos	2
3.6	Gas density meter	No	1
3.7	SF6 gas leakage detector	Nos	2
3.8	Ten(10) Nos. of vacuum probes with three(3) Nos. of portable vacuum meter	Set	1
B)	POTYARD		
1	420 kV, Capacitor Voltage Transformer	Nos.	1
2	420 kV, 1.0 mH, 4000 A, 40 kA Line Traps	Nos.	1
3	336 kV Gapless Metal-oxide Surge Arrester	Nos.	1
4	ACSR MOOSE Conductor	m	200
C)	PLCC system		
1	Line matching unit	No.	1
2	Power supply cards for PLCC panels	Nos.	6
3	Power supply cards for telephone exchanges	Nos.	4
4	Other cards of each type used in PLCC panels	Nos.	4
5	Other cards of each type used in telephone exchanges	Nos.	2
6	Micro phone for direct voice communication	Nos.	4
7	Telephone sets (receiving end)	Nos.	10
8	Telephone sets (sending end)	Nos.	10
9	Indicating lamps of each type	Nos.	3
10	Fuses of each type	Nos.	2