

ANNEXURE-A (PART-1)			
Mechanical - Mandatory Spares			
Sl.No.	ITEM/ DESCRIPTION	QUANTITY	Remarks
1.24.00	LIMESTONE & GYPSUM HANDLING		
1	Mechanical		
A	Paddle Feeder		
1	Rotor arm with Liners & Bolts	1 sets of each type	NA
2	Liners of rotor arms	2 sets of each type	
3	Gear box (including Paddle wheel, Travel drive, cable reel drive)		
i)	Complete assembly	1 set of each type	
ii)	Bearings	1 set of each type	
iii)	Oil Seals	2 nos. of each size	
iv)	Input shaft with pinion	2 sets of each type	
4	Hydraulic Power Pack		
i)	Rotor Pump with electric motor, coupling, valves & servo motor (mounted on pump)etc.	2 set of each type and rating	
ii)	Solenoid Valves complete with coils	2 set of each type and size	
iii)	Filter element (1 No. Pressure Filter + 1 No. Return Filter)	10 sets of each type	
iv)	Hydraulic Hoses	4 sets	
v)	Hydraulic Motor (for Paddle wheel)	2 nos of each type	
vi)	Hydraulic Motor (for Traverse Drive)	2 nos of each type	
vii)	Traverse pump with electric motor, coupling, valves (mounted on pump) & servo motor (mounted on pump)etc.	2 sets of each type	
viii)	Dust suppression pump and motor assembly	1 nos of each type	
ix)	Spray nozzles of dust suppression system	10 nos of each type	
x)	Cooler	1 nos of each type	
5	Carriage wheel assembly		
i)	Bearings	2 nos. of each type & size	
ii)	Plummer Block	2 nos. of each type & size	
iii)	Oil seals	2 nos. of each type & size	
iv)	Carriage wheel with shaft (without plummer blocks)	1 sets	
v)	Traverse drive assy including electric motor, gear box, coupling etc. Or Geared Motor as applicable	1 set	
vi)	Tension roller of paddle feeder trolley	1 set	
6.i)	All type of coupling (including those between electric motor and pump, between hydraulic motor and gear box and between gear box and paddle wheel & between carriage wheel and motor)	2 nos. of each type	
6.ii)	Coupling bolt with bushes / spider /inserts	2 sets of each size	
6.iii)	Rubber bush / spider / inserts	8 sets of each size	
7.i)	Brakes (if any)	2 sets of each type & size	
7.ii)	Brake shoe	4 sets of each type & size	
8	Cable reel drive		
i)	Complete drive unit assembly including motor, gear box, coupling etc.	1 sets of each type & rating	
ii)	Chain	2 nos.	
iii)	Plummer Block and bearings for cable reel drum	1 sets	
iv)	Cable guide assembly	1 set	
v)	Torque regulator unit	1 set	

vi)	Friction pads	2 set	
vii)	Spring stacks	2 set	
viii)	Oil seals	4 sets	
ix)	Eddy current/magnetic coupling	1 set of each type & rating	
x)	Spare Festoon hanger cum roller assembly(below CRD)	10 nos.	
xi)	Spare energy chain links	5% of population	
B)	IDLERS		
1.i)	35° Troughing idlers complete with base frame and mounting brackets etc.	2.5% of population of each type	As applicable
1.ii)	Rolls for (i) above	1% of population of each type	
2.i)	Troughing idlers complete with base frame & mounting brackets etc.(for belt feeder).	30% of population of each type	
2.ii)	Rolls for (i) above	30% of population of each type	
3.i)	35° impact idlers complete with mounting brackets and base frame etc.	25% of population of each type	
3.ii)	Rolls for (i) above	25% of population of each type	
4	35° troughing training idler complete with base frame and brackets etc. (if used)	10% of population of each type	
5	Transition idler complete as in (1) above	10% of population of each type	
6	Flat return idlers complete with mounting brackets etc.	2% of population of each type	
7	Flat return idlers complete with mounting brackets etc.(for belt feeders)	30% of population of each type	
8	Flat return trainer complete with mounting brackets etc.	10% of population of each type	
9	Belt cleaning spiral rubber disc return idler complete with mounting brackets etc.	20% of population of each type	
10.i)	Two roll 10 ° troughing return idler assy	2% of population of each type	
10.ii)	Rolls for (I) above	2% of population of each type	
11	SS idlers	25% of population of each type	
12	Any other type of idlers	10% of population of each type	
C)	CONVEYOR GEAR BOXES		
i)	Input shafts with pinion	1 set of each type and rating	As applicable
ii)	Oil seals	2 sets of each type and rating	
iii)	Bearings	1 set of each type and rating	
iv)	Hold back device	2 nos. of each type and rating	
v)	Cooling fan with cover	2 nos.of each type and rating	
vi)	Complete gear box assy with hold back device	1 set of each type and rating for population upto 10 nos.	
		2 set of each type and rating for population more than 10 nos.	
D)	CONVEYOR DRIVE AND CONVEYOR BELT		
a)	Gear Coupling		
i)	All type of drive couplings including gear Coupling	2 nos. of each type	As applicable
ii)	Bolts for gear coupling	2 sets of each size	
iii)	Seal kit for gear coupling (o-ring)	2 sets of each type	
b)	Fluid Coupling		
i)	Fluid Coupling complete	1 no. of each type and size	
ii)	Multi Disc assembly (for fluid coupling)	4 nos each type and size	
iii)	Resilient Drive plate assy.	1 no. of each type and size	
iv)	Bearings	1 no. of each type and size	
v)	Seal kit for fluid coupling	2 sets of each size	
vi)	Fusible plug	10 nos. of each size	

vii)	Complete actuator and engaging assembly (including motor, gear box etc.)	1 set of each type	
viii)	Oil Cooler assembly (if applicable)	1 set of each type	
ix)	Oil pump-motor set (if applicable)	1 set of each type	
x)	Oil filters	5 sets of each type	
xi)	Oil/Cooler valves (if applicable)	2 nos. of each type	
c)	Belting		
	Conveyor Belt		
i)	Main Conveyors	2 drum length of 250 m of each type, size and rating if total population of particular type, size and rating of conveyor is equal to or more than 2500 m	As applicable
		1 drum length of 250 m of each type, size and rating if total population of particular type, size and rating of conveyor is less than 2500 m	
ii)	Belt feeder & bunker seal belt, as applicable	One Complete length of each type	
d)	Brakes		
i)	Brakes	1 no of each size & type	As Applicable
ii)	Brake shoes	2 sets of each size	
E	PULLEYS		
i)	Pulleys complete with shaft excluding bearing & plummer blocks (complete with lagging)	1 no. of each type and size in pulley drum and shaft dia.(for population upto 10 Nos)	As Applicable
		2 no. of each type and size in pulley drum and shaft dia.(for population more than 10 Nos)	
ii)	Plummer Block complete with bearings & sleeves	2 no. each type and size	
iii)	SS Pulleys complete with shaft excluding bearing & plummer blocks (complete with lagging)	1 no. of each type and size in pulley drum and shaft dia.	
F)	BELT CLEANERS AND SKIRT BOARD		
i)	Modular segments for belt cleaner	5 %of total population of each type & size	As Applicable
ii)	Modular segments skirt rubber for skirt board	5 %of total population of each type & size	
iii)	Skirt Rubber	5 %of total population of each type & size	
iv)	Complete belt cleaner (internal / external)	2 %of total population of each type & size	
G)	IN-LINE MAGNETIC SEPARATORS		
i)	Cleated conveyor belt	1 set	As Applicable
ii)	Motor, gear box drive assy. complete	1 set	
iii)	Pulleys with plummer block & bearings	1 set of each size & type	
iv)	Sheaves	1 no. of each size & type	
v)	V-belts	2 no. of each size & type	
H)	Line Sampler		
i)	Plummer block	1 no. of each type and size	
ii)	Hammers	1 set of each type and size	
iii)	Liner plate	1 set	
iv)	Cutter lip	1 no.	
v)	Cutter seal	1 no.	
vi)	V-belts (for crusher)	1 sets	
vii)	Hammer pins	1 sets of each type and size	
viii)	Pulley	1 no. of each type and size	

ix)	Conveyor belt	1.2 times length of each type and rating	As Applicable
x)	Gear box assembly for conveyor	1 no. of each type and rating	
xi)	Gear box drive assy, for primary and secondary samplers	1 set of each type and rating	
xii)	Hydraulic pump with motor and coupling	1 set of each type	
xiii)	Hydraulic motor	1 set of each type	
xiv)	Hydraulic cylinder	1 set of each type	
xv)	Cylinder sealing kit	2 set of each type	
xvi)	Set of hoses	2 set of each type	
xvii)	Coupling with grid for primary sampler	2 sets	
xviii)	Screw conveyor gear box assembly	1 set	
I)	LIME CRUSHER		
i)	Plummer Block assembly complete including bearing, lock nut, lock washer etc.(DE+NDE)	2 set	As Applicable
ii)	Shaft seal	4 sets	
iii)	Hammer sets	10 sets or 750 Nos whichever is more (1 set means hammers required for one crusher)	
iv)	Rotor assembly complete consisting of rotor shaft & keys, End discs, Centre discs, distance rings, suspension bars, disc clamping nuts and shaft extension etc. but without hammers, bearings and pillow blocks	1 set	
v)	Cage bars/Perforated screen plates as applicable	4 sets	
vi)	Breaker plate	4 sets	
vii)	Liners	2 sets	
viii)	Suspension bars	4 set	
ix)	Kick-off plate	4 set	
x)	Screen plate upper & lower	4 no. each	
xi)	Tramp iron pick up plate	2 no. each	
xii)	Fluid coupling		
a	Fluid coupling complete	1 set	
b	Bearings	2 set	
c	Seal kit (sealing rings)	2 sets	
d	Fusible plugs	8 nos.	
e	Oil pump motor set (if applicable)	1 set of each type	
f	Oil filter	3 sets	
g	Complete actuator and engaging assembly (including motor, gear box etc.)	1 set	
h	Cooler assembly (if applicable)	1 no.	
i	Oil / Water valves	2 nos. of each type	
j	Gear Coupling/ other flexible coupling of crusher drive along with bolts and sealing kit, as applicable	2 sets	
l	Multi Disc assembly (for fluid coupling)	2 sets. of each type and rating	
m	Resilient Drive plate assy	2 sets. of each type and rating	
J)	VIBRATING (GRIZZLY/SCREENING) FEEDER		
i)	Bearings	2 no. of each type & size	
ii)	Seals	2 no. of each size	
iii)	Liners	1 sets.	
iv)	Screen plates	10 sets	

v)	Complete vibrating assembly consisting of all rotating parts including drive & driven unbalanced shafts including bearings,casing,spring,vibrating blocks,main shaft,sheave & unbalanced weights as applicable.	1 set of each type and rating and direction	As Applicable
vi)	Hoses (if applicable)	2 set	
vii)	Drive unit assembly (including electric motor, hydraulic pump, hydraulic motor, , flexible shaft, gear box, as applicable)	1 set	
viii)	Base springs, rubber pads	2 sets. of each type & size	
ix)	V belts	4 sets. of each type & size	
K)	ELECTRIC HOISTS		
i)	Brake linings	2 sets of each type	
ii)	Rope guide & rope tightner	1 no. of each type	
iii)	Limit switch	2 nos. of each type & size	
iv)	Gear box/gear set	2 sets of each type	
v)	Motor/geared motor	1 no of each type & rating	As Applicable
vi)	Drum bearing	1 set of each type & rating	
L)	FLAP GATES (INCLUDING THAT OF TRIPPERS)		
i)	Limit switch	8 nos. of each type & rating	
ii)	Actuator (complete with motor, gear box,limit switches etc.)	1 nos. of each type & rating	
iii)	Oil seals of Actuator	2 nos. of each type & rating	
iv)	Flap gate shaft	1 nos. of each type & rating	
v)	Pressure nut	12 nos. of each type & size	
M)	RACK & PINION GATE		
i)	Limit switch	2 no. of each type & size	As Applicable
ii)	Rollers with bearings	2 no. of each size	
iii)	Motor gear box assembly	1 set of each type	
iv)	Actuator (complete with motor, gear box, limit switches etc.)	1 nos of each type & rating	
N)	Sump Pump		
i)	Complete Pump Assembly with pump, motor, coupling base etc	1 set	As Applicable
ii)	Impeller with key & nut	2 set of each size & type	
iii)	Oil Seal	2 nos. of each size	
iv)	Coupling bolt with bushes	2 set of each type	
v)	Pump Shaft	2 nos. of each size	
vi)	Shaft Sleeve	2 sets of each size	
vii)	Bearing bush	2 sets of each size	
viii)	Set of bearings	2 sets	
O)	DUST SUPPRESSION, SERVICE WATER, POTABLE WATER, COOLING WATER		As Applicable for SW & PW System
a	Pump impeller with key & nut	1 set of each type & size	
b	Pump Shaft	1 no of each type & size	
c	Bearings	1 sets each type & size	
d	Wearing rings	2 sets of each type & size	
e	Shaft sleeve	2 sets of each type & size	
f	Bushings	2 sets of each type & size	
g	Coupling bolts & nuts (with bushes) 2 sets	1 sets each type & size	
h	Spray nozzles	50 nos. of each type & size	
i	Spray nozzles (for plain water dust suppression)	25 nos. of each type & size	
j	Solenoid valves	5 % of each type and size	
k	Globe valve / plug valves	10 % of each type and size	
l	Gate valve	2 nos. of each size	

m	Strainers	1 no. of each type	
n	Compressor		
i)	Air filter element	8 Nos.	
ii)	Oil filter	6 Nos.	
iii)	Discharge Check Valve	3 Nos.	
iv)	Oil Pump Parts (including distance ring, eccentric rings, Pump element, Pin, Key O, Ring) as applicable	2 Sets	
v)	Inlet Valve Assembly	2 Nos.	
vi)	Electronic regulator	3 Nos.	
P)	VENTILATION SYSTEM		
i)	V-Belt	1 set of each type	As Applicable
ii)	Pre-filter element of pressurizing fans	2 sets of each type	
iii)	Foundation Rubber pads	1 sets of each type & size	
iv)	Bearings	1 sets of each type & size	
v)	Plummer Blocks	1 set of each type & size	
Q)	TRAVELLING TRIPPER		
i)	Complete drive assembly including gear box, coupling, brake etc.	1 set	As Applicable
ii)	Complete internals of speed reducer (including input shaft, output shaft, gearset)	1 set of each size & type	
iii)	Bearings for reducer	2 sets	
iv)	Drive axle with wheels, plummer blocks, bearings etc.	1 set	
v)	Oil seals	2 nos. of each size	
vi)	Non-drive axle with wheels plummer blocks, bearings etc.	1 set of each type	
vii)	Flap gate actuator with motor, gear box, position / thrust switches	1 set of each type	
viii)	Chain assembly with sprockets	1 set of each type & size	
ix)	Festoon Roller assembly for flexible cable	4 Nos	
x)	Pulleys and plummer block bearings	1 no of each type	
xi)	Plummer block with bearing for cable reel drums	1 set of each type	
R	ELEVATOR		
a	Brake		As Applicable
1	Tool to brake	1 no.	
2	Fan	1 no.	
3	Magnetic coil with housing pads	2 Nos.	
4	Brake pads	6 Nos.	
5	Adjusting Sleeve	2 Nos.	
6	Fixed brake disc	2 Nos.	
b	Worm Gear		
1	Worm Gear	1 no.	
2	O' ring	2 nos. of each type	
3	Sealing ring	2 nos. of each type	
c	Door Front		
1	Bearing	2 Nos.	
2	Roller	3 Nos.	
3	Bushing	2 Nos.	
d	Limit Cams		
1	sensor	1 No.	
2	switch	2 Nos.	
3	switch arm	2 Nos.	
e	CAD		
1	Guide Roller	50 % of the total ones installed each type or minimum 1 no. whichever is higher	

2	Switch	1 no.	
f	Sliding Door		
1	Rollers	4 nos. of each type	
g	Machinery		
1	Guide roller	2 nos.	
2	Pinion	1 no.	
3	Rubber inserts	6 nos.	
4	Grove ring	6 nos.	
5	Brake motor	1 no.	
h	Cable trolley		
1	Ball bearing	2 nos. of each type	
s)	DUST EXTRACTION SYSTEM		
1	Fan Motor	1 nos. of each type & rating	As Applicable
2	Plummer Blocks	2 sets of each type	
3	Bearing of fans & motor	1 set of each type	
4	Pulley	2 nos of each type	
5	Belts	2 sets of each size	
6	Impeller and shaft of coal slurry disposal pump	1 set of each type	
7	Bearing of pumps	1 set of each type	
8	Pump Motor	1 nos of each type	
9	Motor terminal blocks with studs for all motors	1 set of each rating and type of motor	
10	Spray nozzle	10 nos of each type	
11	Solenoid valve with coil	2 nos of each type	
T)	BUCKET ELEVATOR		
1	Buckets	10 % of total population	As Applicable
2	Belt for bucket elevator	10 % of total population	
3	Linkages	20 % of total population	
Note	Only handing over of Mandatory spares to end user is covered under this contract		

ANNEXURE-A (PART-2)		
ELECTRICAL (AS APPLICABLE)		
S.No.	Item Description	Quantity
I	LT Switchgear:	
Ia	Part A:	
1	Complete breaker	10% of each type & rating(min 1 No)
2	Ammeter	2 Nos of each type, size & range
3	Voltmeter	2 Nos of each type, size & range
4	Relays	10 % of each type (min 2 Nos)
5	Bus bar support insulators	10 Nos.
Ib	Part B:	
1	Spring charging motors	3 Nos of each type & rating
2	Aux. Contact set	6 sets of each type & rating
3	Limit switches	10 Nos of each type.
4	Arc chutes	10% of each type & rating
5	Fixed contact set	3 Nos sets of each type & rating
6	Moving contact set	3 Nos sets of each type & rating
7	Arcing contact	3 Nos sets of each type
8	Charging spring	2 Nos of each type & rating
9	Current transformer	3 Nos of each type & ratio
10	Closing coil	6 Nos of each type & rating
11	Trip coil	6 Nos of each type & rating
12	CT for Bimetal O/L relays	3 Nos of each type & rating
13	Voltage transformer	3 Nos of each type & ratio
14	Control supply transformer	3 Nos of each type and rating
15	(a) Power contactor	2 Nos of each type & rating
16	(b) Coil of above contactor	2 Nos of each type & rating
17	Air break switches/ MCCBs	3 Nos of each type & rating
18	DP air break switches(DC)	3 Nos of each type & rating
19	Control & selector switches	3 Nos of each type & rating
20	Control fuses & neutral links	Total 50 Nos (Fuses) & 10 Nos (Neutral links), to cover all the ratings.
21	Indicating lamps	Total 30 Nos to cover all the types & ratings
22	Vertical bus bar dropper support insulators	25 Nos.
23	Bus duct flexible connectors (both transformer and switchgear end)	1 set for three phases of each type & size
24	(a) Primary disconnect in MCC (Bus bar end)(Male/female contact)	Total 15 Nos. proportionately divide for all ratings
25	(b) Secondary disconnect in MCC (Cable end)	Total 15 Nos. proportionately divide for all ratings
26	Push buttons	10 Nos of each type
27	Power fuses	Total 20% proportionately divide for all ratings (min 3 Nos)
28	Thermal Bimetal relays	Total 5%. proportionately divide for all ratings (min 1 No)
29	Current transducers	2 Nos of each type & rating
30	Voltage transducers	2 Nos of each type & rating
31	Busbar aluminium flat pieces	12 meters of each type & rating
32	Busbar angles/formed pieces for breaker	2 Nos. of each type
33	Terminal blocks	12 Nos of each type & rating
II	Electrical Actuators	1 no. of each type and rating
III	LIGHTING	
	LED Fixture	5 nos of each type and rating
Note Only handing over of Mandatory spares to end user is covered under this contract		

ANNEXURE-A (PART-3)		
CONTROL AND INSTRUMENTATION (AS APPLICABLE)		
SN	ITEM	QUANTITY
	MEASURING INSTRUMENTS	
1	All types of transmitters including sensors.	10% or 1 no. of each type and model, whichever is more.
2	Temp Elements	10% or 2 no. of each type, model & length, whichever is more.
2.1	RTDs of each type and length (with head assembly terminal block and nipple)	10 % or 2 nos of each type and length whichever is more)
2.2	Thermocouples of each type like K- type , R- type , metal etc *(with head assembly terminal block and nipple)	10 % or 2 nos of each type and length whichever is more)
2.3	Cold junction compensation boxes of each model (If applicable)	10 % or 2 nos whichever is more
2.4	Thermostatic units for each model of CJC Box (If applicable)	10 % or 2 nos whichever is more
2.5	Temperature Transmitters	10 % of each type and length
3	Limit Switches for isolation valves	2 nos of each type
4	Local indicators like temperature gauges, pressure gauges, differential pressure gauges, flow gauges , flow meters etc.	5 % or 1 nos of each make, model and type whichever is more (To be divided to various ranges in proportion to main of all make, model type, population.
5	Process actuated switch devices includes all types of pressure, differential pressure flow, temperature, differential temperature, level switches device.	5 % or 1 no. of each type and model whichever is more.
6	Any other instrument (Flow transmitter , Density meter) (as applicable)	10 % or 1 no. of each type and model whichever is more
	PROCESS CONNECTION PIPING (For Impulse Piping / Tubing and Air Supply Piping as Applicable)	
1	Valves of all types and models	10% or 1 no. of each type, class, size and model whichever is more.
2	2 way, 3way, 5way valve manifolds	10% or 1 no. of each type, class, size and model whichever is more.
3	Fittings	10% or 1 packet of each type, class, size and model whichever is more.
4	Purge meters	5% of each model or 1 no. whichever is more.
5	Filter regulators	20% of each model or 2 nos. whichever is more.
	CABLES	
1	Pre fabricated cable of each type.	10% of installed quantity
2	Pre fabricated cable connector of each type	10% or 1 no. of each type and model, whichever is more.
3	Other cables	5% of each type, pair and size of actual installed quantity
	24V – DC POWER SUPPLY SYSTEM	
1	AC/DC isolators, contactors, timers, relays	10% of each type and rating.
2	Fuses of each type and rating	200%

3	Fuse free Circuit breakers	5% of each type and rating.
4	Electronic modules of all types	10% of each type.
5	Cooling Fans	2 nos. of each type
6	Relays of all types including overload relays	10% of each type and rating.
	PLC CONTROL SYSTEM	
1	Power Supply Unit	1 nos. of each type and model
2	Electronic modules(I/O modules, communication modules and any other module used in the system)	10% or 1 no. of each type and model, whichever is more.
3	Central Processor Unit	1 nos. of each type and model.
4	Interconnecting Cables	10% of each type and size
5	Cooling Fan in PLC system / cabinet	2 Nos.
6	Indication lamps of all types	100%
7	1 Keyboard/ Mouse	
	1.1 Keyboard	2 nos of each type
	1.2 Mouse	2 nos of each type
8	2. Printers and their parts	
	2.1 colour laser printer	1 no
	2.2 Long term storage unit	1 no
	2.3 Blank CDs	10 boxes
9	3. HMIPIS devices	
	3.1 OWS with licensed software Loaded along with monitor	2 nos. of each type and model.
	3.2 Server for unit Lan or information work station	1 no.
	3.3 Network components like switch repeater hubs etc (As applicable)	2 nos of each type and model
	3.4 Control Units for LVS	1 no.
10	Cables and Connectors.	
	Prefab interconnecting cables with connectors	2 nos. of each type and length.
	System bus cable with connector	-do-
	I/O bus cable with connectors for remote I/O units	-do-
	Power Supply Modules & Power Packs for control system	10% of each type model and rating, whichever is more
11	Electronic modules of each type and model for control system (This shall include all type of cards like I/O cards, controller cards, CPU module or Card, logic cards etc.)	10% or 2 nos. of each type and model whichever is more
12	Bus coupler/Interface hardware and other communication devices.	10% of each type and model
13	Relays	10% of each type and rating
14	Batteries used for battery backup of RAMs.	10% of each type and model
15	Fuses	200%
	OTHER RELATED CONTROL AND INSTRUMENTATION SYSTEMS / EQUIPMENTS	
	Lime Feeders	
1	Motion monitor	10% or 2 nos. whichever is more.
2	Speed pick-up	10% or 2 nos. whichever is more.
3	Torque switch (if applicable)	10% or 2 nos. whichever is more.
4	Load Cell	10% or 2 nos. whichever is more.
5	Electronic cards & Power Supply cards	10% or 2 nos. whichever is more.
6	Clutch (if applicable)	10% or 2 nos. whichever is more.
7	Local indication lamps	200%
8	Panel meters	10% or 2 nos. whichever is more.
9	Limit switch assembly for lime-onbelt, no lime flow, shear pin failure, etc.	10% or 2 nos., whichever is more.

	CONTROL VALVES, ACTUATORS & ACCESSORIES (Following items shall be provided under this clause for all modulating control valves being supplied under this package)	
1	Pneumatic and electro-hydraulic actuator assembly	10% or 1 no. of each type, model and rating, whichever is more.
2	Valve trim (including cage, plug, stem, seat rings, guide bushings etc.)	1 set for each type of control valve.
3	Diaphragms, O' rings, seals etc. of all types make etc.	100%
4	Pressure Gauges of all types, make, rating etc.	10% or 2 nos. of each type whichever is more
5	Solenoid valves (if applicable)	10% or 2 nos. of each type whichever is more
6	Positioner units (complete unit) & accessories (link assembly)	10% or 1 no. of each type whichever is more
7	Pneumatic air-filter/Regulator of each type, make rating etc.	10% or 2 Nos., whichever is more
8	Air lock relays	10% or 2 nos. of each type whichever is more
	PNEUMATICS ISOLATION / BLOCK VALVES, ACTUATORS & ACCESSORIES (For all ON/OFF valves supplied under this package)	
1	Pneumatic actuator assembly	10% or 1 no. of each type, model and rating, whichever is more.
2	Diaphragms, O' rings, seals etc. of all types make etc.	100%
3	Limit switches (complete unit) & accessories (link assembly)	10% or 2 Nos., whichever is more
4	Pneumatic air-filter/Regulator of each type, make rating etc.	10% or 2 Nos., whichever is more
Note Only handing over of Mandatory spares to end user is covered under this contract		