

MANDATORY SPARES LIST

EXTERNAL COAL HANLING PLANT			UNIT EX WORKS PRICE	TOTAL EX WORKS PRICE	REMARK
	Name of Equipment	Quantity			
I. Mechanical Packages					
Sl. No.	Equipment/Package Name	Quantity			
1	Stacker-Reclaimer (Reversible type)				
1.1	Long Travel Mechanism				
1.1.1	Gear Box				
1.1.1.1	Complete Gear Box Unit	1 set			
1.1.1.2	Bearing	1 set			
1.1.1.3	Shrink Disk	2 sets			
1.1.1.4	Oil Seal	1 set			
1.1.2	Brake				
1.1.2.1	Friction Lining	2 sets			
1.1.2.2	Brake Drum	2 sets			
1.2	Slew Drive				
1.2.1	Complete set of Drive Gear Box Unit	1 set			
1.2.2	Friction Lining of Brake	1 set			
1.3	Bucket Wheel				
1.3.1	Complete set of Drive Gear Box Unit	1 set			
1.3.2	Coupling Assembly	1 set			
1.3.3	Shrink Disk	1 set			
1.3.4	Complete Bucket	1 no.			
1.3.5	Bucket Teeth	8 nos.			
1.4	PCRD				
1.4.1	Drive and Driven Sprocket with Chain	1 set			
1.5	CCRD				
1.5.1	Drive and Driven Sprocket with Chain	1 set			
1.6	Boom Conveyor				
1.6.1	Idlers				
1.6.1.1	Idler under central Chute	5 sets			
1.6.1.2	Troughing Roller	4 nos.			
1.6.1.3	Return Roller	2 nos.			
1.6.1.4	Impact Roller	20 nos.			
1.6.2	Pulley				
1.6.2.1	Drive Pulley	1 no.			
1.6.2.2	Bearing for Drive Pulley	2 nos.			
1.6.2.3	Tail Pulley	1 no.			
1.6.2.4	Bearing for Tail Pulley	2 nos.			
1.6.3	Gear Box				
1.6.3.1	Complete Gear Box Unit	1 set			
1.6.3.2	Bearing	1 set			
1.6.3.3	Shrink Disk	1 set			
1.6.3.4	Oil Seal	1 set			
1.6.4	Brake				
1.6.4.1	Friction Lining	1 set			
1.6.5	Fluid Coupling				
1.6.5.1	Complete set of Fluid Coupling	1 set			
1.6.5.2	Multi Disc Assembly	1 no.			
1.6.5.3	Resilient Driving Plate	1 no.			
1.6.5.4	Fusible Plug	6 nos.			
1.7	Boom Luffing/Hoisting				
1.7.1	Pressure Relief Valve	2 nos.			
1.7.2	Return Line Filter	2 nos.			
1.7.3	HP Hose for Power Oil	1 no. (one full length)			
1.8	Electrial & Electronic Items				
1.8.1	Drive Motor				
1.8.1.1	Long Travel Drive Motor	1 no.			
1.8.1.2	Slew Drive Motor	1 no.			
1.8.1.3	Bucket Wheel Drive Motor	1 no.			
1.8.1.4	Boom Conveyor Drive Motor	1 no.			
1.8.1.5	PCRD drive Motor	1 no.			
1.8.1.6	CCRD drive Motor	1 no.			
1.8.2	Brake/Rail Clamp				
1.8.2.1	Thruster Brake Actuator with Motor	1 no. for each application			
1.8.2.2	Rail Clamp Actuator with Motor	1 no.			
1.8.3	Carbon Brush Assembly for PCRD	1 set			
1.8.4	Carbon Brush Assembly for CCRD	1 set			
1.8.5	Position Limit Switch for Slew/Hoist/LT etc	5 nos.			
1.8.6	6.6 KV HRC Fuse for 6.6KV Isolator	1 set (3nos.)			

1.8.7	Thyristor Drive for Slewing				
1.8.7.1	Electronic Modules/Card	1 no. each Card/Modules used in the system			
1.8.7.2	Speed Sensor/Techo-generator	1 no.			
1.8.7.3	Semi-conductor Fuse for Power Thyristor	6 nos.			
1.8.8	Trailing Cable (for both Power & Control)	100% length of each type			
1.8.9	Local Control Station	1no. for each type			
1.8.10	Pendulum Limit Switch	1set each for CCRD & PCRD			
1.8.11	Belt Weigher	Item & Quantity same as indicated for Belt Weigher.			
1.8.12	Other Electrical Spares as applicable as per the Electrical List	Item & Quantity same as indicated in Electrical/Electronic & Instrumentation list.			
1.8.13	PLC Spares	Item & Quantity same as indicated in Electrical/Electronic & Instrumentation list.			
1.9	Intermediate Conveyor				
1.9.1	Idlers				
1.9.1.1	Idler under central Chute	5 sets			
1.9.1.2	Troughing Roller	4 nos.			
1.9.1.3	Return Roller	2 nos.			
1.9.1.4	Impact Roller	20 nos.			
1.9.2	Pulley				
1.9.2.1	Drive Pulley	1 no.			
1.9.2.2	Bearing for Drive Pulley	2 nos.			
1.9.2.3	Tail Pulley	1 no.			
1.9.2.4	Bearing for Tail Pulley	2 nos.			
1.9.3	Gear Box				
1.9.3.1	Complete Gear Box Unit	1 set			
1.9.3.2	Bearing	1 set			
1.9.3.3	Shrink Disk	1 set			
1.9.3.4	Oil Seal	1 set			
1.9.4	Brake				
1.9.4.1	Friction Lining	1 set			
1.9.5	Fluid Coupling				
1.9.5.1	Complete set of Fluid Coupling	1 set			
1.9.5.2	Multi Disc Assembly	1 no.			
1.9.5.3	Resilient Driving Plate	1 no.			
1.9.5.4	Fusible Plug	6 nos.			
2	Reserved				
3	Idlers				
3.1	Trough carrying Idlers complete with base boards & mounting brackets etc.				
3.1.1	2000 mm. Belt Width (35° troughing angle)	100 nos.			
3.1.2	For Reversible Belt Feeder/Belt Feeder (20° troughing angle)	10 nos.			
3.2	Flat type return idlers complete with mounting base boards & mounting bracket etc.				
3.2.1	2000 mm. Belt Width	30 nos.			
3.2.2	For Reversible Belt Feeder/Belt Feeder	5 nos.			
3.3	Return idlers complete with 10 deg. Troughing mounting base boards & brackets				
3.3.1	2000 mm. Belt Width	20 nos.			
3.4	Impact Idlers complete with mounting base boards and brackets etc.				
3.4.1	2000 mm. Belt Width (35° troughing angle)	50 nos.			
3.5	Trough carrying training idlers complete as 1-above.				
3.5.1	2000 mm. Belt Width (35° troughing angle)	30 nos			
3.5.2	For Reversible Belt Feeder/Belt Feeder (20° troughing angle)	5 nos.			
3.6	Flat return trainer complete with mounting base boards & mounting bracket etc.				
3.6.1	2000 mm. Belt Width	5 nos.			
3.6.2	For Reversible Belt Feeder/Belt Feeder	2 nos.			
3.7	Transition idlers complete with base boards & mounting brackets etc.				
3.7.1	2000 mm. Belt Width	10 nos.			
3.7.2	For Belt Feeder	2 nos.			
3.8	Rubber discs for impact idlers	10% of the Rubber disc as fitted on the Impact Idlers			
3.9	Rollers for the above idlers	20% of the Installed Quantity			
4	Conveyor Belt				

4.1	Belt	30% length of each type & rating of belt or thickness or one full length of the lowest conveyor whichever is higher			
4.2	Gear Box				
4.2.1	Gear box internals complete including input, output shafts and gears etc.	1(One) set of each type & rating for right hand & left hand			
4.2.2	Oil Seal	2(two) sets of each type & rating			
4.2.3	Bearings	2(two) sets of each type & rating			
4.2.4	Hold Back	1(one) set of each type & rating			
4.3	Conveyor Drive System				
4.3.1	Coupling (Flexible)	1no. of each type & rating.			
4.3.2	Coupling bolts(Pins with bushes)	2sets of each type & rating.			
4.3.3	Fluid Coupling				
4.3.3.1	Complete set of Fluid Coupling	1set for each type and size			
4.3.3.2	Multi Disc Assembly	1no.for each type and size			
4.3.3.3	Resilient Driving Plate	1no.for each type and size			
4.3.3.4	Fusible Plug and corrugated spacer rings	5nos. for each type and size			
4.3.4	Brakes				
4.3.4.1	Complete Brakes	1 no. for each type and size			
4.3.4.2	Brake Shoes	2 sets for each type and size			
4.4	Pulley Complete with Shaft (excluding bearing & Plummer Block)	1 no for each size of Pulley & Shaft Diameter			
4.5	Plummer block complete with bearing	2 nos for each type and size			
4.6	Rubber/nylon strip for belt cleaners and skirt board	25% of total quantity used			
4.7	Complete Belt Scrapper (Primary & Secondary)	1 set for each Conveyor			
4.8	Electrical Items				
4.8.1	Drive Motor	1 no. for each type and size			
4.8.2	Pull Cord Switches	15 nos.			
4.8.3	Belt Sway Switches	15 nos.			
4.8.4	Zero Speed Switches	5 nos.			
4.8.5	Local Control Station	1 no. for each type			
5	Magnetic Separator				
5.1	Drive Gear Box Complete unt	1 set			
5.2	V-belt	1 set			
5.3	Cleated rubber belts	4 nos.			
5.4	Drive & Non-drive Pulley	1 no. each type			
5.5	Bearing of Drive & Non-drive Pulley	1 set for each type & size			
5.6	Cooling Oil Pump	1 no.			
5.7	Cooling Oil flow control Valve	1 no.			
5.8	SS Cleat	10 nos.			
5.9	SS Bolt for Cleat	100 nos.			
5.10	Electrical Items				
5.10.1	Drive Motor	1 no.			
5.10.2	Insulating Stud of the Magnet	1set (2nos.)			
5.10.3	Power Diode for the Bridge Rectifier	2 nos.			
5.10.4	Semi-conductor Fuse for Power Diode	6 nos.			
5.10.5	Other Electrical Spares as applicable as per the Electrical List	Item & Quantity same as indicated in Electrical/ Electronic & Instrumentation list.			
8	Flap Gate				
8.1	Actuator	1 no. for each type/Stroke Length and Torque rating			
8.2	Position Limit/Torque Switch	15 nos.			
8.3	Seal Kit for Actuator	1 set for each type/Stroke Length and Torque rating			
8.4	Complete Solenoid Valve with coil	10 nos.			
8.5	Coils for Solenoid Valve	10 nos.			
8.6	Air Filter Regulator	5 nos.			
8.7	Local Control Station	1 no.			
10	Belt Weigher				
10.1	Load Cell	1 no. for each rating/size			
10.2	Tacho Unit	1 no.			
10.3	Electronic Modules/Card for Feed Rate Controller	1 no. each Card/Modules used in the system			
10.4	Special Fuse	2 nos. each type and rating			
12	DS System				
12.1	Bearing for pump	1 set of each size.			
12.2	Spray nozzles	10% of the total quantity used in the system for each types of bags.			
12.3	Sprinklers	10% of installed			
12.4	Drive Motor	1no for each rating			
12.5	Solenoid valve	10% of the total quantity used in the system for each types or minimum 2 nos. whichever is higher			

12.6	Coils	2 nos. of each type & rating			
12.7	Local Control Station	1 no. for each type			
13	Ventilation System				
13.1	Fan bearings	1 set of each size			
13.2	Bearings for pumps	1 set of each size			
13.3	V-Belt	1 set of each type.			
13.4	Nozzles	10% of each size.			
13.5	Local Control Station	1 no. for each type			
14	Electrical Hoist				
14.1	Bearings	1 set of each type & size			
14.2	Brake lining	1 set of each size			
14.3	Brake Coil	2 nos. of each type & size			
14.4	Limit switch	2 nos. of each type & size			
14.5	Local Control Station	1 no. each type			
14.6	Other Electrical Spares as applicable as per the Electrical List	Item & Quantity same as indicated in Electrical/ Electronic & Instrumentation list			