

***INVITATION TO BIDDERS***

**Tender.No.NCSC-0005/16**

**1. National Cement Share Company (NCSC)** invites eligible manufacturers or Suppliers (Bidders) to participate in the bid for the supply of:

**Different types of Cement Plant spare parts:**

- Annual spare parts consumption (Mechanical)
- Annual Spare parts consumption (Electrical)

**2.** The complete set of bidding document can be downloaded from our website [www.nationalcementsc.com/bids](http://www.nationalcementsc.com/bids) and or collected from Addis Ababa office:

**National Cement Share Company**

**Ethio-china Friendship Road Wellosefer**

**KT-12 Building 1<sup>st</sup> floor**

**Tel: +251114421928/+251252110070**

**Cell: +251930101966/+25130283483**

**E-mail: [abebe.alemayehu@nationalcementsc.com](mailto:abebe.alemayehu@nationalcementsc.com)**

**Or**

**[abdurehman.seid@nationalcementsc.com](mailto:abdurehman.seid@nationalcementsc.com)**

**Dire Dawa, Ethiopia**

Manufacturers/Suppliers may contact us directly through the above email and telephone for further information if any.

**3.** Bid offer must be sent to our email address: [foreign.purchase@nationalcementsc.com](mailto:foreign.purchase@nationalcementsc.com) protected by multiple passwords of management before the closing date i.e. September 30<sup>th</sup>, 2016

## **PARTONE**

### **INSTRUCTION TO BIDDERS**

1. Bid offer must be sent to our email address:

[foreign.purchase@nationalcementssc.com](mailto:foreign.purchase@nationalcementssc.com) protected by multiple passwords of management members before the closing date i.e. September 30<sup>th</sup>, 2016.

**National Cement Share Company**

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**KT-12 Building 1<sup>st</sup> floor**

**Tel: +251114421928/+251252110070**

**Cell: +251930101966/+25130283483**

**E-mail: [abebe.alemayehu@nationalcementssc.com](mailto:abebe.alemayehu@nationalcementssc.com)**

**or**

**[abdurehman.seid@nationalcementssc.com](mailto:abdurehman.seid@nationalcementssc.com)**

**Addis Ababa, Ethiopia**

Bidders may contact us directly through the above email and telephone for further information if any.

2. The bid document is comprised of:-

- Invitation
- Instruction to bidders
- General condition
- Bid Schedule
- Technical specification and bill of quantities.
- Contract of sale

3. Bidders shall examine the invitation to bid as well as all the attached specifications, instructions and bid schedules.

4. The bidder shall print or type his name on the bid schedule and each continuation sheet thereof on which he makes an entry.

5. The following documents shall be completed and included with each bid.

- Warranty (\_\_\_\_\_)
- Delivery time (\_\_\_\_\_)
- Origin (\_\_\_\_\_) or any other information

In addition, the bidder shall furnish illustrated literature; complete specification of the item with and facts to substantiate that the type of the items offered has been regularly sold for such use. The literatures, specifications and illustration shall be sufficient enough to permit complete technical analysis of the items bid upon and to check them against the technical specifications of this invitation to bid. The statement "COMPLIES WITH YOUR SPECIFICATION IN FULL" Will not meet the requirements of this invitation to bid.

6. Bids shall be submitted by the manufacturer or Supplier (Bidder) within 15 days after the first announcement of the tender on during office hours. Opening of the bids shall be on the 16<sup>th</sup> day after the first announcement of the tender on at 10:00AM local time in the presence of bidders or their representative who choose to attend National Cement Share Company in Dire dawa office.

## **PART TWO**

### **GENERAL CONDITIONS**

#### **1. APPOINTMENT OF AGENT**

- 1.1. Bids submitted by persons other than the manufacturer shall be accompanied by a certified letter from the manufacturer stating that the bidder is authorized agent of the said manufacturer.
- 1.2. All successful bidders may undertake to appoint an authorized agent, who has in his employ persons trained in the servicing of the manufacturer's products. The appointment of the agent shall be made in advance of the arrival of the products at the port of destination.

#### **2. SUPPLIER'S NAME AND SIGNING OF DOCUMENTS**

- 2.1. Each bid shall be the legal name of the supplier and shall be signed by an officer of the supplier.
- 2.2. Each bid shall have the bidders name and signature shall be shown on each sheet on which he makes an entry. Any changes shall be initialed by the person signing the bid.

#### **3. PRICE AND TERMS OF PAYMENT**

- 3.1. The bidder shall indicate the unit price of each item in his pro-forma invoice. All price shall be inclusive of all cost, taxes etc up to delivery place, i.e, FOB port of loading freight charges.
- 3.2. The bidder shall quote firm prices. Bids with estimated quotation shall be rejected. National Cement Share Company shall pay the actual cost up to the amount quoted. No amount in excess of the quoted price shall be paid by NCSC.
- 3.3. The price quoted shall be firm for at least 60 days from the date of the bid opening.
- 3.4. The unit price shall be shown for each item bid upon. In case of error in the extension of price, the unit price shall govern.

- 3.5. The bidder shall submit his quotation in US Dollar.
- 3.6. For conversion from foreign currency to Ethiopia Birr, for the purpose of price comparison, selling rate established by the National Bank of Ethiopia on the date of bid opening shall be used.

#### **4. DOCUMENTATION**

- 4.1. The supplier shall prepare and submit, by registered air mail, the documents stated herein under within 15 days of the loading of the Items on the ship to the buyer's bank through the supplier's bank.
  - 4.1.1.3 (Three) original and 4 (Four) copies of clean on board bill of lading issued in the name of the buyer and stating the port of embarkation and destination.
  - 4.1.2.4 (Four) original and 4 (Four) copies of suppliers invoice chamberized by the chamber of commerce of the country of origin.
  - 4.1.3.1 (One) original and 3 (three) copies of factory inspection certificate.
  - 4.1.4.1 (One) original and 1 (One) copy of chamberized certificate of origin.
  - 4.1.5.3 (Three) copies of original packing list.

#### **5. AWARD OF CONTRACT**

- 5.1. The bid award shall be made to the responsible bidder who complies with requirements in the bid documents and technical specifications and whose bid is most advantageous to the NCSC, price and other factors including the following points will be considered for evaluation.
  - a. Technical Evaluation
  - b. Non-Technical Evaluation
    - Warranty
    - Delivery
    - efficiency and Reliability
  - c. Price Evaluation
  - d. Sample for performance test
- 5.2. Prior to the expiration of the period of bid validity, the NCSC will notify the

successful bidder in writing by fax or mail that the bid has been accepted.

5.3. The notification of award will constitute the formation of the contract.

5.4. Conditions which were not stipulated in the offer shall not be accepted by NCSC.

## **6. PACKING, BOXING AND SHIPPING OF CONSIGNMENTS**

6.1. Processing, crating, packing and/or boxing of equipment components, parts and/or suppliers shall be in conformity with the standard commercial practice for export shipping unless otherwise specified. The unit price of each piece of equipment shall include these costs unless otherwise specified. Gross shipping weight, length, width and height shall be indicated for each unit.

6.2. Each unit of equipment and instrument each box of items and each shipping documents shall plainly marked as follows:

**National Cement Share Company**

**P.O.Box94**

**Tele: +251252110070/+251252123792**

**Fax: +251123796**

**Dire Dawa, Ethiopia**

**From: Supplier Name and Address**

6.3. Shipments of all items shall be by Ethiopian Shipping Lines only. If Ethiopian Shipping Lines do not call at port of embarkation or are not available to transport the goods within the delivery time required under the contract, shipment could be made by other international flag carriers exception to this may be only made up on presentation of letter of exemption from Ethiopian shipping lines.

## **7. VARIATION OF ORDERS**

The NCSC reserves the right to increase or decrease any item by 25% of the total quantity within the price validity period without change in the unit price.

## **8. INSPECTION**

- 8.1. The supplier shall furnish for each item of equipment and items, a manufacturer in section certificate, certifying that the item supplied complies with the specification set out in the technical specification of the bid documents and that the items are for the corresponding item supplied.
- 8.2. The supplier shall give notice to NCSC by fax that items are ready for shipment atleast10 days prior to the date of shipment.
- 8.3. Final inspection of the items included in the contract shall be made by the NCSC and the supplier or his representative at the delivery place. The delivery place is NCSC, Dire Dawa.

## **9. WARRANTY**

- 9.1. The supplier warrants all items furnished against defective materials and workmanship in accordance with requirements set in the technical specifications.
- 9.2. The supplier shall at his own expense (including all costs) and within 10 days after receipt of notification from NCSC provides replacement or replacement parts for items which prove defective from negligent workmanship faulty material during the warranty period, delivered to the final destination, i.e., NCSC.
- 9.3. The bidder is expected to state the minimum warranty period.

## **10. FINAL ACCEPTANCE**

- 10.1. Final acceptance of all items shall be subject to final in section by the NCSC and the supplier or his representative at NCSC.

Any item delivered but not meeting the specifications, shall not be accepted. Any cost incurred by the NCSC for subsequent inspection, Storage or assistance to the supplier shall be billed to the supplier for settlement.

## **11. DELIVERY TIME**

- 11.1. Delivery time shall be considered to have been complied with the following stage is meet by the supplier or his agent.
- 11.2. This stage of delivery shall be counted from the day when the confirmed letter of credit reaches the supplier bank in his country.
- 11.3. Delivery time, if stated in number of days, shall include Sundays and holidays.

## **12. TERMINATION OF CONTRACT**

- 12.1. The NCSC may write notice of default to the supplier terminate the whole or any part of this contract in anyone of the following circumstances:
  - a. If the supplier fails to make delivery of the items within the time specified in the offer or any extension thereof allowed by the NCSC in writing and/or:
  - b. If the Supplier fails any of the other provisions of this contractor so fails, in the opinion of the NCSC, to make progress as to endanger performance of this contract in accordance with its terms and, in either of these two circumstances, doesn't rectify such failure within 10 days after receipt of notice from the NCSC specifying such failure.

## **13. RIGHTS AND REMEDIES OF NCSC.**

The right and remedies of the NCSC provided to this invitation to bid shall not be exclusive and are in addition to any other right sand remedies provided by law.

## **14. LAW OF CONTRACT**

The content of this bid document shall constitute the terms, conditions and specification for the sale and purchase contract between the NCSC and the supplier and shall be deemed for all purposes to have been executed in Ethiopia and in all respects shall be subject to and constructed in accordance with the laws of



Ethiopia.

**PARTTHREE**  
**BIDSCHEDULE**

To: National Cement Share Company (NCSC)

**Dire Dawa**

Dear Sirs,

Having examined the Bid documents for the Supply of the items stated under your invitation to bid No. We, the undersigned here by submit the following offer for the items listed below NCSC in accordance with the terms of the bid document issued by NCSC.

S.No	Description of items to be supplied	Unit of Measure	Qty	FOB Basis		Origin
				U/P	T/P	

1. The above prices must be firm for 60 days from date of bid opening
2. State clearly delivery date:

Calendar days after the date of contract signing.

We undertake if the bid is accepted, to have all items delivered to FOB port of loading freight charges within calendar days from the date of contract signing. If our bid is accepted, we shall furnish the performance guarantee specified in the general conditions, within five days of receipt of notification of acceptance. In the event of litigation between us and the NCSC. We agree that Ethiopian courts shall have exclusive jurisdiction. We further agree to a bid by this bid for a period of 60 days from the date of bid opening.

We understand that you are not bound to accept this for any other bid you may receive.

\_\_\_\_\_  
Signature of the bidder

Date \_\_\_\_\_

## **PART FOUR**

### **TECHNICAL SPECIFICATION**

#### **1. ANNUAL SPARE PARTS REQUIREMENT (MECHANICAL)**

##### **1.1 Mechanical Spare Part List\_ Bucket Elevator**

<b>S.N</b>	<b>Equip. Name</b>	<b>Item - description</b>	<b>Specs / Drawing No.</b>	<b>UoM</b>	<b>ANN - REQU.</b>	<b>PART CATEGORY</b>
1	Bucket elevator	Chain Bucket Elevator	MODEL:NE200-34.8m-180t/h/ NCSC-3000-321-M01-007	set	0	
2		Sprocket head		set	1	Spare
3		Tail Wheel (Sprocket)	Bucket Elevator model:NE200-34.8m-180t/h	set	1	Spare
4	Bucket elevator	Chain Bucket Elevator	Type:NE100-17.100-110-right fixed, lifting height:17.100m, conveying capacity:110m <sup>3</sup> /h		0	
5	Bucket elevator	Chain Bucket Elevator			0	
6		LAG RUBBER STRIP DIAMOND PATTERN	(SEGMENTED TYPE), FOR B.E MODEL:N-TGD800	set	1	Spare

7	Bucket elevator	Belt Bucket Elevator	Type : X-TGD630-104000 ( right fixed) , Capacity:338m3/h Lifting Height : 104000mm, material bulk volume: 0.8t/m3		0	Spare
8		Bolts Bucket Fixing	bolt counter sunk with nut M16*65MM	pcs.	0	Spare
9		Bolts for Liner Fixing (lagging rubber)	bolt counter sunk with nut M12*40MM	Set	0	Spare
10		LAG RUBBER STRIP DIAMOND PATTERN	(SEGMENTED TYPE), FOR BUCKET ELEVATOR N-TGD630	set	1	Spare
11		Bucket	APD	pcs	15	Spare
12	Bucket elevator	Chain Bucket Elevator	MODEL:NSE500-35.58M-450T/HR		0	
13		Chain	NC-3000-511-M01-016,PITCH:125MM, C-C:35.58M, MODEL:NSE500-35.58M-450T/HR	set	1	Spare
14		Bucket	NC-3000-511-M01-016,PITCH:125MM,C-C:35.58M,	pcs.	25	Spare
15		SHAFT DRIVE(HEAD SHAFT)	NSE500-02-02-1,MAKER:HAVA	pcs.	1	Spare

16		SHAFT DRIVEN(TAIL SHAFT)	NSE500-08-04-1,MAKER:HAVA	pcs.	1	Spare
17		SPROCKET DRIVE	NSE400-02FT-04-03G,MAKER:HAVA	pcs.	2	Spare
18		SPROCKET TAIL	NSE400-09-504-12Z,MAKER:HAVA	pcs.	2	Spare
19	Bucket elevator	Chain Bucket Elevator	Bucket Elevator N-TGD400-43950 Bucket	Pcs	0	
20		Bucket	APD:NC-3000-521-M-002	PCS	25	Spare
21	Bucket elevator	Chain Bucket Elevator			0	
22		coupling rubber	NC-3000-611-M01-004	PCS	4	Spare
23		SHAFT DRIVE(HEAD SHAFT)	NE150-02-08	PCS	1	Spare
24		SHAFT DRIVEN(TAIL SHAFT)	NE150-06-02	PCS	1	Spare
25		SPROCKET DRIVE	NE150-02-11FT11.5Z51T	set	1	Spare
26		SPROCKET TAIL	NE100-06-04a	set	2	Spare
27		CHAIN	NC-3000-611-M01-002	Set	1	Spare
28		SLEEVE	NSE100-07Z51-06	Set	4	Spare
29		bucket	NC-3000-611-M01-001	PCS	50	Spare

### 1.2 Mechanical Spare Part List Fluid Coupling

S.No	Equip. Name	Item - description	Drawing #/Specs	UOM	ANN-REQU.	PART CATEGORY
1	Fluid coupling	MODEL:TD75		pcs	1	Spare
2	Fluid Coupling	model:CBD930/18 Boom Stacker	YOXIIZ400	pcs	1	Spare
3	FLUID COUPLING	Pan Conveyor SCD800x124123mm	YOX450	pcs	1	Spare
4	fluid coupling for material harrow driving	Bucket Elevator N- TGD400-43950 Bucket	YOXIIZ450	pcs	1	spare
5	fluid coupling		YOX 400 BTL100208	PCS	1	spare
6	FLUID COUPLING		YOX 400	pcs	1	spare
7	fluid coupling	MODEL:CGQ130/23.5	YOXF 400 (60mmDia; 35mmDia.	pcs	1	spare
8	COUPLING FLUID	type : CGQ130/24	YOXF 400 (60mmDia; 35mmDia.	pcs	1	spare
9	COUPLING FLUID	type:CGQ130/24 SIDE TYPE RECLAIMER	YOXF 400 (60mmDia; 35mmDia.	pcs	1	spare
10	fluid coupling	NE200-34.8m-180t/h/ NCSC-3000-321-M01- 007	YOX500	set	1	spare
11	fluid coupling	MODEL:N-TGD800	YOX 500 motor end shaft 75mm, GB end size 55mm	Unit	1	spare
12	fluid coupling	MODEL:X-TGD630- 104000	YOX500	Unit	1	spare
13	FLUID COUPLING		YOX 500	pcs	1	spare
14	FLUID COUPLING		YOX IIZ 500	pcs	1	spare

**1.3 Mechanical Spare Part List\_ Root blowers**

<b>S.N</b>	<b>Equip. Name</b>	<b>Item - description</b>	<b>Drawing #/Specs</b>	<b>UOM</b>	<b>ANN-REQU.</b>	<b>PART CATEGORY</b>
1	Three blades grouped roots blower	Type:JAS-150,direct connected, air Volume:27.8m3/min, air pressure:19.6kPa, rev:1450r/min	Type:JAS-150,direct connected, air Volume:27.8m3/min, air pressure:19.6kPa, rev:1450r/min	Pcs	1	STRATEGIC
2	Roots BLOWER	Type: MLG200-A Rating: 45kW Speed: 1900 RPM Press: 68.6kPa Make: CNBM		PCC	0	
3		Relief Valve (bypass valve)	Type: D341X-10/16ZB Size: DN100 Make: TVT	pcs.	4	spare
4		BEARING ROLLER CYLINDRICAL	NU 409 M, INNER RACE SEPARABLE	pcs.	4	spare
5		BEARING ROLLER CYLINDRICAL	NU 2310 EM	pcs.	8	spare
6		BEARING ROLLER SPHERICAL	22310 CA	pcs.	8	spare
7		PULLEY DRIVE SIDE		pcs	2	spare
8		PULLEY DRIVEN SIDE		pcs	2	spare
9		repair kit		set	4	spare
10	Roots blower (primary air fan)	Type: TLG350-A Capacity: 123 m3/min Rating: 4-90kW SN: 1073337 Pressure: 24 kPa Speed: 1170 RPM	Type: TLG350-A Capacity: 123 m3/min Rating: 4-90kW SN: 1073337 Pressure: 24 kPa Speed: 1170 RPM		0	

11		roots blower oil seal	Part # to be asked OEM	set	2	spare
12		blower bearing	Part # to be asked OEM	SET	2	spare
13		Timing gear	Part # to be asked OEM	sets	2	spare
14	Root blower	TYPE: TLG300C,74.4m <sup>3</sup> /min,78.4KPa		pcs	0	
15		roots blower oil seal	Part # to be asked OEM	set	2	spare
16		blower bearing	Part # to be asked OEM	sets	2	spare
17		Timing gear	Part # to be asked OEM	sets	2	spare
18		Lobes for roots blower	Part # to be asked OEM	set	0	
19	Root blower	LOB blower type	TYPE: MLG2508, VOLUME: 36.6m <sup>3</sup> /min, SPEED: 1450r/min, POWER: 4-75KW, PRESSURE: 78.4Kpa	Set	0	
20		BLOWER coupling type	521-BL38-BL38-07F1	Pcs	2	spare
21		coupling buffer type	521-BL38-CG01-38-08F1	Pcs	8	spare
22		Bearing DE end	BEARING ROLLER CYLINDRICAL NU 2313 EM	Pcs	16	spare
23		Bearing NDE end	BEARING ROLLER SPHERICAL 22313 CA	Pcs	16	spare
24		repair kit		set	8	spare

### 1.4 Mechanical Spare Part List Gear Box

S.N	Equip. Name	Item - description	Specs/ Drawing No.	UoM	ANN-REQU.	PART CATEGORY
1	Belt conveyor	Gear Box	DCY 224-31.5-2S,Transmission Ratio: 31.5,Center Distance: 384mm,Weight: 453kg	ASSY	1	Spare
2	Belt conveyor	Gear Box	ZSY280-31.5-2Z,RATIO:31.5,CENTER DISTANCE:650MM	ASSY	1	Spare
3	Belt conveyor	Gear Box	DCY-255-40-2S Trans. Ratio: 40 Center Distance: 305mm	ASSY	1	Spare
4	Stacker	Drive Gearbox for Traveling	KADS128-112MB4/Power:4Kw/speed:1480rpm/ratio:144	ASSY	1	Spare
5		Drive Gear Box for the Jib Arm Belt	YKSA340-25-2AT,RATIO:25,Power:37Kw,speed:1480RPM	ASSY	1	spare
6	B.Reclaimer	bogie drive gear box with motor	B4 DH6C, 4.5KW 380V 960RPM/4.54RPM; MOTOR1: Y132M2AJ123-6, 5.5KW 380V 3P 50HZ 960RPM; MOTOR2: YTPS90L-4,1.5KW 380V 3P 5-50HZ; POWER TRANSMISSION: ANJIFU TYPE: AJ123, I=9	ASSY	1	critical
7	Gear box	Chain drive gearbox	B4 DH 11C 11C,N1=1480rpm, N2 =14.33 rpm,45Kw	ASSY	1	critical
8	Gear box	Gear box for material harrow driving	B4DH 9D 11C, N1= 980 rpm, N2 =10.81 rpm	ASSY	1	spare



9	Gear box	Gearbox Cable reel		ASSY	1	spare
10	Belt conveyor	Gear Box	ZQ85-40-II-Z, Reduction Ratio:40	ASSY	1	Spare
11	Gear box-Clay Reclaimer	GEAR BOX for DRIVE BOGIE ASSY	B4 DH6C, 4.5KW 380V 960RPM/4.54RPM; MOTOR1: Y132M2AJ123-6, 5.5KW 380V 3P 50HZ 960RPM; MOTOR2: YTPS90L-4,1.5KW 380V 3P 5-50HZ; POWER TRANSMISSION: ANJIFU TYPE: AJ123, I=9	ASSY	1	critical
12	Gear box	Gear box for cable Reel	Type: YKFA430-224 i=224	ASSY	1	spare
13	Gear box	Gear box for scrapper chain drive	B4 DH 09C ,n1=980rpm,n2 =14.39 rpm :i=	ASSY	1	Spare
14	Belt conveyor	Drum Motor Drive		ASSY	1	Spare
15	Belt conveyor	Gear Box	DCY450-50-IVN, Transmission ratio:50	ASSY	1	Spare
16	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
17	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
18	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
19	Belt conveyor	Gear Box	ZQ 65-25-I, Transmission ratio: 25, center distance:650mm	ASSY	1	Spare
20	Belt conveyor	Gear Box	ZQ 750-31.5-I, Transmission ratio: 31.5, center distance: 750mm.	ASSY	1	Spare
21	Belt conveyor	Gear Box	DCY 180-31.5-1N, Transmission ratio: 31.5, center distance: 305mm	ASSY	1	Spare

22	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
23	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
24	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
25	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
26	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
27	Belt conveyor	Drum Motor Drive	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
28		Gear box for cable reel	Power= , N1 = rpm , N2= rpm	ASSY		Spare
29	GYPSUM RECLAIMER	GEAR BOX chain DRIVE ASSY	B4 DH09C, 27KW 380V 1480RPM/14.39RPM;	ASSY	1	Spare
30	Gear box	Gear box for cable reel	Power= , N1 = rpm , N2= rpm	ASSY		Spare
31	Belt conveyor	Gear Box	ZQ85-40-II-Z,RATION:40, center distance: 850	ASSY	1	Spare
32	Bucket elevator	Main Gearbox assy	B3SH10D N1: 1000 RPM N2: 12.78 RPM Rating: 30KW	ASSY	1	Spare
33		Auxiliary Gear box	Power= , N1 = rpm , N2= rpm	ASSY		Spare
34	Bucket elevator	Gear Box	B3SH05B ,N=100rpm , RI;14.41	ASSY	1	Spare

35	CHAIN CONVEYOR	Cycloidal	XWD8-43-11KW, Transmission ratio: 43, speed:1460RPM	ASSY	1	Spare
36	CHAIN CONVEYOR	Cycloidal	XWD7-47-7.5KW, Transmission ratio: 47, speed:1440RPM	ASSY	1	Spare
37	CHAIN CONVEYOR	Gear Box	Type: YKS 340 , Ratio 36.19 ,Jiansu,Reducer LTD	ASSY	1	Spare
38	CHAIN CONVEYOR	Cycloidal	XWD8-43-15KW, Transmission ratio: 43, speed:1460RPM	ASSY	1	Spare
39	CHAIN CONVEYOR	Cycloidal	XWD9-39-13KW, IR=59 , N=1460RPM , P=15KW	ASSY	1	Spare
40	BUCKET ELEVATOR	Gear box assy with drive	Model: B3DH10-D, POWER=90KW	ASSY	1	Spare
41		Gear box ASSY	JQLX400B, 400KW 970RPM RATIO:338 400KW , 970RPM	ASSY	1	stratagic
42	Auxiliary gearbox -	Auxiliary gearbox -	NGWD72-8	ASSY		
43	RM03a Separator	Gear box assy		ASSY	1	Spare
44	Screw Conveyor	Cycloidal	Type-XWD6-47-5,55KW,RR=47,1440RPM	ASSY		Spare
45	Screw conveyor	cycloidal	XWD-6-47-5,5.5 Kw,1440rpm	ASSY		Spare
46	Auxiliary gearbox -	Gear reducer assembly	ZSY280-31.5-2Z,RATIO:31.5,CENTER DISTANCE:650MM	ASSY	1	Spare
47	Cooler ESP	Drive gearbox emitting electrodes rappingh	Size : XWED0.18-8135A-2065	ASSY	4	Spare

48	Drag chain	cycloidal	Type : XWD5.5-7-1/71	ASSY	1	Spare
49	Drag chain	cycloidal	Type : XWD5.5-7-1/71	ASSY	1	Spare
50	Drag chain	Cycloidal	Type : XWD7.5-8-71, power : 7.5kW	ASSY	1	Spare
51	Clinker extraction belt conveyor	Drive gear reducer 441BC25,26&27	Type :ZQ85-40I-Z - 30 Kw/ Type:Y200L-4/ratio:31.4/	Power ASSY	1	Spare
52	Belt conveyor	Gearbox cycloidal	Type : WD-75-100-80×63.Power : 4 kW	ASSY	1	Spare
53	Belt conveyor	Gearbox cycloidal	Type : WD-75-100-80×63.Power : 4 kW	ASSY	1	Spare
54	Belt conveyor	Gearbox cycloidal	Type : WD-75-100-80×63.Power : 4 kW	ASSY	1	Spare
55	Belt conveyor	Gearbox cycloidal	Type : WD-75-100-80×63.Power : 4 kW	ASSY	1	Spare
56	Belt conveyor	Gearbox cycloidal	Type : WD-75-100-80×63.Power : 4 kW	ASSY	1	Spare
57	Reversible belt conveyor	Gearbox drive	Type: WD-11-11-1.0-500x750/ Dia.-500mm	ASSY	2	Spare
58	Separator	GEARBOX ASSEMBLY	B2SV07B, N1:1500RPM,N2:218.66RPM, POWER:160KW,S/N:4501253774.01.002	ASSY	1	Spare
59	Mill Main Gearbox GB01	Main Gearbox-	JQS4000.4000KW, RATIO:47,I/P 740	SPEED ASSY		Spare
60		Auxiliary Gear box	Type:MQ400, Ratio 94:1,N=980,P=55Kw	ASSY		
61	bucket elevator	GEARBOX ASSEMBLY	B3DH10B, 1500RPM, P2:60KWS/N:4501270202.05.001 ,MOTOR:Y280S-4; POWER:75KW	ASSY	1	Spare

62	bucket elevator	GEARBOX ASSEMBLY	B3DH05-B,N1:1500RPM,N2:34RPM,P2:22KW, S/N:45014491320.04.002,MOTOR MODEL:Y2-225S-4,37KW,1480RPM	ASSY	1	Spare
63	bucket elevator	GEARBOX ASSEMBLY	B3SH09-D,1000RPM, S/N:4501270202.04.003,MOTOR TYPE:Y225M-6,POWER:30kW	ASSY	1	Spare
64	Rotary packer	GEARBOX ASSEMBLY	Reducer with Adjustable speed motor, PN XLDH1.5-4-35	ASSY	2	Spare
65	Screw Conveyor	cycloidal	XWD8-43-15KW, Transmission ratio: 43, speed:1460RPM	ASSY	2	Spare
66	Belt conveyor	Gearbox cycloidal	Power= , N1 = rpm , N2= rpm	ASSY	4	Spare
67	Belt conveyor	Gearbox cycloidal	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
68	Belt conveyor	Gearbox cycloidal	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
69	Belt conveyor	Gearbox cycloidal	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
70	Belt conveyor	Gearbox cycloidal	Power= , N1 = rpm , N2= rpm	ASSY	1	Spare
71	Belt conveyor	Gearbox cycloidal	Internals	Set	2	Spare

<b>Mechanical Spare Part List_ Belt Conveyor</b>						
<b>S.N</b>	<b>Equip. Name</b>	<b>Item - description</b>	<b>Drawing #/Specs</b>	<b>UoM</b>	<b>ANN-REQU.</b>	<b>PART CATEGORY</b>
1	Belt Conveyor	Conveyeor Belt	NN-150 Belt B1000×5 (4.5+3.0)	Mtr	500	Spare
2	Belt Conveyor	Conveyeor Belt	ST-630,Belt B1000×5 (4.5+3.0)	Mtr	800	Spare
3	Belt Conveyor	Conveyeor Belt	NN-150 Belt B800×5 (4.5+3.0)	Mtr	500	Spare
4	Belt Conveyor	Conveyeor Belt	NN-150 Belt B650×5 (4.5+3.0)	Mtr	1000	Spare
5	Belt Conveyor	Conveyeor Belt	EP-100,Belt B800×5 (4.5+3.0)	Mtr	500	Spare
6	Belt Conveyor	Conveyeor Belt	EP-300,Belt B1000×5 (4.5+3.0)	Mtr	500	Spare
7	Belt Conveyor (Stacker)	Conveyeor Belt	EP-100 Belt B1000x4 (4.5+1.5)	Mtr	100	Spare

1.6 Mechanical Spare Part List_ V-Belts						
S.N	Equip. Name	Item - description	Σπεχσ / Δραωινγ Νο	YoM	ANN-PE ΘΥ.	ΠΑΡΤ ΧΑΤΕΓ ΟΡΨ
1	LST Hammer Crusher	V-belt (I set = 20pcs.)	8V4000	Pcs	60	Spare
2	Feed Roller	V-belt for feeder roller	8V4060/PHG 8V1600/3GROOVES (BANDED)	Pcs	3	Spare
	Model: PFC1609	BELT V TYPE	E8000	Pcs	35	Spare
3	FAN HIGH PRESSURE	BELT V TYPE	B1320/B52"	Pcs	100	Spare
4	three blades grouped roots blower	V-Belt	BELT V A70	Pcs	100	Spare
5	Roots Blower	V Belt	B88	Pcs	100	Spare
6	Roots blower (primary air fan)	V belt	SPC4000	Pcs	40	Spare
7	Clinker Crusher	V-Belts	D5600	Pcs	80	Spare
8	Loop Feeder	V-Belt		Pcs	4	Spare
9	Rotary packer spare part lists	V belt	B67	Pcs	500	Spare
10		V-belt	A46	Pcs	50	Spare
11		V-belt	Z1120	Pcs	50	Spare
12		V-belt	Z530	Pcs	50	Spare
13		V-belt	Z1100	Pcs	50	Spare

### 1.7 Mechanical Spare Part List\_ Air Slide Canvas

S.N	Equip. Name	Item - description	Specs/Drawing No.	UOM	ANN-REQU.	PART CATEGORY
1	Air slide	Canvas	Widthe 270 ,Thickness 6mm, Temp =180-200deg, Tnsilestrenght 360	Mtr	500	Critical
2	Air slide	Canvas	Width 370 ,,Thickness 6mm, Temp =180-200deg, Tnsilestrenght 360	Mtr	150	Critical
3	Air slide	Canvas	Width470,,Thickness 6mm, Temp =180-200deg, Tnsilestrenght 360	Mtr	250	Critical
4	Air slide	Canvas	Width 570 ,,Thickness 6mm, Temp =180-200deg, Tnsilestrenght 360	Mtr	250	Critical
5	Air slide	Canvas	Width 1700 , Thickness 6mm, Temp =180-200deg, Tnsilestrenght 360	Mtr	50	Critical
6	air slide fan	high pressure centrifugal fan	Type:XQ I No.5.4A ,0°,air volume : 1257 m3/h, total pressure : 6110 Pa,rev : 2840r/min, power : 5.5kW	Pcs	2	Spare parts
7	air slide fan	high pressure centrifugal fan	Type:XQ I No.5.4A ,0°,air volume : 1257 m3/h, total pressure : 6110 Pa,rev : 2840r/min, power : 5.5kW	Pcs	2	Spare parts



**1.8 Mechanical Spare Part List\_ Bag Filter**

<b>S.N</b>	<b>Equip. Name</b>	<b>Item - description</b>	<b>Specs/ Drawing No.</b>	<b>UOM</b>	<b>ANN-REQU.</b>	<b>PART CATEGORY</b>
1	FILTER BAG	HMC	130 x 1980	Pcs	1000	Spare
2	FILTER BAG	PPCS	130 x 2448	Pcs	1296	Spare
3	FILTER BAG	FGM128-8 (Cemetn mill)	130 x 3100	Pcs	4608	Spare
4	FILTER BAG	Dacron Card Felt	130 x 2448 (Coal)	Pcs	2784	Spare
5	FILTER BAG	Tetratex/PTFE	160 x 6000 (bag house)	Pcs	2500	Spare
6	FILTER BAG	LIFTING VALVE	60x160	Pcs	30	Spare
7	FILTER BAG	LIFTING VALVE	for this diaphragm SCXE353.060	Pcs	25	Spare
8	FILTER BAG	LIFTING VALVE	for this diaphragm SCG363A051	Pcs	25	Spare
9	FILTER BAG	LIFTING VALVE	for this diaphragm SCG353A047	Pcs	25	Spare
10	FILTER BAG	diaphragm and repair kit	SCG353A044	set	122	Spare
11	FILTER BAG	diaphragm and repair kit	SCG353A047	set	171	Spare
12	FILTER BAG	diaphragm and repair kit	SCG363A051	set	55	Spare
13	FILTER BAG	diaphragm and repair kit	SCXE353.060	set	308	Spare

**1.9 Mechanical Spare Part List\_ Comprosser**

<b>S.N</b>	<b>Equip. Name</b>	<b>Item - description</b>	<b>Specs/ Drawing No.</b>	<b>UOM</b>	<b>ANN-REQU.</b>	<b>PART CATEGORY</b>
1	<b>MODEL:LIUTECH LU132W-8</b>	Oil filter	6211473500	KIT	42	Spare
2		air filter	2205433806	KIT	21	Spare
3		oil separator	2205406521	KIT	14	Spare
4		Oil filter	6211473500	KIT	28	Spare
5		air filter	2205433806	KIT	14	Spare
6		oil separator	2205406521	KIT	7	Spare
7		Oil filter	6211473500	KIT	14	Spare
8		air filter	2205433806	KIT	7	Spare
9		kit valve un loader	2906056300	KIT	7	Spare
10		thermostatic valve kit	2205490592	KIT	7	Spare
11		pressure valve kit	2205490598	KIT	7	Spare
12		Air Filter Element, Part no	1630050199	Pcs	0	Spare
13		Oil Stop Valve Kit,	Part no 2205519788	Pcs	7	Spare
14		Mpv Service Kit,	Part no 2254490598	Pcs	0	Spare
15		Thermostatic Valve Kit,	Part no 2205526520	Pcs	0	Spare

16		Un loader Service Kit,	Part no 2906095700	Pcs	0	Spare
17		Hex. Nipple,	Part no 0686612600	Pcs	14	Spare
18		Bushing,	Part no 1604353300	Pcs	7	Spare
19		Bearing,	Part no 0508115801	Pcs	7	Spare
20		Circlip,	Part no 0335216000	Pcs	7	Spare
21		O-Ring,	Part no 0663210643	Pcs	7	Spare
22		Nozzle,	Part no 1604749701, for Compressor LU90- 132	Pcs	7	Spare
23		O-Ring,	Part no 0663311700	Pcs	7	Spare
24		O-Ring,	Part no 0663210978	Pcs	1	Spare
25		O-Ring,	Part no 0663211146	Pcs	7	Spare
26		Cylindrical Roller Bearing,	Part no 0506010009	Pcs	7	Spare
27		Bushing,	Part no 1604353300	Pcs	7	Spare
28		Shaft Seal,	Part no 1616601200	Pcs	7	Spare
29		O-Ring,	Part no 0663714700	Pcs	7	Spare
30		Hex. Nipple,	Part no 0686613000	Pcs	7	Spare

31		Oil Stop Valve,	Part no 2205519786	Pcs	7	Spare
32		Valve Body,	Part no 2205170485	Pcs	7	Spare
33		Piston,	Part no 1622104100	Pcs	7	Spare
34		Hex.	Part no 0686371601	Pcs	7	Spare
35		Spring,	Part no 1622079600	Pcs	7	Spare
36		Valve,	Part no 6210715500	Pcs	7	Spare
37		Spring,	Part no 1613235700	Pcs	7	Spare
38		Nipple,	Part no 1626060700	Pcs	7	Spare
39		Hex. Nipple,	Part no 0686371607	Pcs	7	Spare
40		Gasket seal,	Part no 1622097700	Pcs	7	Spare
41		Valve,	Part no 1622963900	Pcs	7	Spare
42		Gasket seal,	Part no 0661100039	Pcs	7	Spare
43		Gasket seal,	Part no 0661100025	Pcs	7	Spare
44		Gasket seal,	Part no 0661100044	Pcs	7	Spare
45		Nipple,	Part no 1079584019	Pcs	7	Spare
46		Gasket seal,	Part no 0661100039	Pcs	7	Spare

47		Flex. Coupling,	Part no 1613949900	Pcs	7	Spare
48		Rubber Buffer,	Part no 1615550900	Pcs	28	Spare
49		Spacer,	Part no 2205162000	Pcs	7	Spare
50		Pressure Difference Sensor,	Part no 2205462100	Pcs	7	Spare
51		Pipe Fitting,	Pipe Fitting, Part no 2205433503	Pcs	14	Spare
52		Filter Seat,	Part no 2205151401	Pcs	21	Spare
53		Check Valve,	Part no 0823005039	Pcs	7	Spare
54		Diesel Engine Net Filter,	Part no 2205406200	Pcs	21	Spare
55		Nipple,	Part no 2205150403	Pcs	7	Spare
56		Pressure Difference Sensor,	Part no 2205260640	Pcs	14	Spare
57		Scavenge line,	Part no 2205178536	Pcs	7	Spare
58		Oil Filter,	Part no 6211473550	Pcs	7	Spare
59		Oil Filter Nipple,	Part no 2205267604	Pcs	7	Spare
60		Plug,	Part no 2205152300	Pcs	7	Spare
61		O-Ring,	Part no 2205431425	Pcs	7	Spare
62		Oil Level Indicator,	Part no 1622365900	Pcs	7	Spare

63		Thermostatic Valve,	Part no 2205462901	Pcs	7	Spare
64		O-Ring,	Part no 2205431412	Pcs	7	Spare
65		O-Ring,	Part no 2205177553	Pcs	7	Spare
66		Y-Shape Filter,	Part no 2205442901	Pcs	7	Spare
67		Solenoid Valve,	Part no 2205404301	Pcs	7	Spare
68		Absorber,	Part no 2205101400	Pcs	28	Spare
69		O-Ring,	Part no 2205431432	Pcs	14	Spare
70		Plug,	Part no 2205178057	Pcs	14	Spare
71		O-Ring,	Part no 2205431432	Pcs	14	Spare
72		O-Ring,	Part no 2205431407	Pcs	35	Spare
73		O-Ring,	Part no 0663713800	Pcs	7	Spare
74		O-Ring,	Part no 2205431432	Pcs	7	Spare
75		O-Ring,	Part no 2205431432	Pcs	7	Spare
76		Filter,	Part no 2205160205	Pcs	7	Spare
77		Water Flow Switch,	Part no 2205444200	Pcs	7	Spare
78		Oil Cooler,	Part no 2205433324	Pcs	7	Spare

79		O-Ring,	Part no 2205431407	Pcs	21	Spare
80		O-Ring,	Part no 2205431432	Pcs	7	Spare
81		O-Ring,	Part no 0663713800	Pcs	7	Spare
82		Nipple,	Part no 2205161900	Pcs	7	Spare
83		Push-Button,	Part no 2205418900, LU132/LU132W	Pcs	7	Spare
84		Contacts,	Part no 2205414804, LU132/LU132W	Pcs	7	Spare
85		Controller,	Part no 1900520016, LU132/LU132W	Pcs	7	Spare
86		Transformer,	Part no 2205412602, LU132/LU132W	Pcs	7	Spare
87		Current Transformer,	Part no 2205410902, LU132/LU132W	Pcs	7	Spare
88		Contactoer,	Part no 2205419119, LU132/LU132W	Pcs	7	Spare
89		Contacts,	Part no 2205414701, LU132/LU132W	Pcs	7	Spare
90		Pressure Sensor,	Part no 1089962533, LU132/LU132W	Pcs	7	Spare

91		Contactors,	Part no 2205419109 , LU132/LU132W	Pcs	7	Spare
92		Contacts,	Part no 2205414702, LU132/LU132W	Pcs	7	Spare
93		Temperature Sensor,	Part no 1089057470, LU132/LU132W	Pcs	7	Spare
94		Cable,	Part no 1614812602, LU132/LU132W	Pcs	7	Spare
95		Display,	Part no 2205480905, LU132/LU132W	Pcs	7	Spare
96		Temperature Sensor,	Part no 2205414002, LU132/LU132W	Pcs	7	Spare
97		Pressure Sensor,	Part no 2205410100, LU132/LU132W	Pcs	7	Spare
98		Phase Sequence Protector,	Part no 2205483705, LU132/LU132W	Pcs	7	Spare
99		Transformer,	Part no 2205413200, LU132/LU132W	Pcs	7	Spare
100		Contactors,	Part no 2205419119, LU132/LU132W	Pcs	7	Spare
101		Contactors,	Part no 2205419109, LU132/LU132W	Pcs	7	Spare



**1.10 Mechanical Spare Part List\_ Rotary Air Lock**

S.N	Equip. Name	Item - description	Specification/ Drawing No.	UOM	ANN-REQU.	PART CATEGORY
1	BF10b rotary air locked valve	Rotary air locked valve	type : YJD-16,size : 300×300 mm,rev : 41r/min	Pcs	0	Spare
		Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
2	bag filter	BF11b rotary airlocked valve	type : YJD-16,size : 300×300 mm,rev : 41r/min	pcs	0	Spare
		Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	0	Spare
3	bag filter	BF12b rotary airlocked valve	type : YJD-16,size : 300×300 mm,rev : 41r/min	pcs	0	Spare
		Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
4	BF09b rotary airlocked valve	Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
5	BF06b rotary airlocked valve	rotary airlocked valve	Size : 320x320mm	Set	0	Spare
		Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
6	BF08b rotary airlocked valve	rotary airlocked valve	Size : 300x300mm,Power : 1.1KW	pcs	0	Spare
		Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
7	BF13a star discharging device	rotary air locked valve	type:YJD-10,power:1.1kW	pcs	0	Spare
		Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
8	BF14a star discharging device	rotary airlocked valve	type:YJD-10,power:1.1kW	pcs	0	Spare
		Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare

9	BF16a star discharging device	Rotary airlocked valve	type:YJD-10, power:1.1kW	pcs	0	Spare
		Cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
10	Twin Cyclone	Rotary air lock	Size :700*500 ,capcity 160m3/hr,	Set	1	Critical
		Cycliodal drive	Modle:BLY-22-71-3Kw	Pcs	2	Spare
11	BF32a star discharging device	rotary airlocked valve	type:YJD-10,power:1.1kW	pcs	2	Critical
		cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	8	Spare
12	BF14a star discharging device	rotary airlocked valve	type:YJD-10,power:1.1kW	pcs	1	Spare
		cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
13	321BF47b discharging device	discharging device	size : 240×240mm,power : 1.1kW	pcs	0	Spare
		cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
14	321BF48b discharging device	discharging device	size : 240×240mm,power : 1.1kW	pcs	0	Spare
		cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
15	BF16a Rotary air lock	Rotary air lock	type : YJD-10,size: 240×240mm, power : 1.1KW	pcs	1	Spare
		cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
16	Bag Filter	Rotary air lock	Norm : 600×600 mm, Power : 5.54 kW	pcs	2	Critical
		cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Critical
17	Bag Filter	TYPE	CHP81-88B	PCS		Spare
		Rotary air lock	Norm : 600×600 mm, Power : 5.5 kW	pcs	0	Spare
		cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare

18	Rotary air lock	Rotary air lock	Norm : 400×400 mm,	pcs	0	Spare
		cycliodal drive	Internal Componenets (Sprocker and bearings)	Set	1	Spare
19	star discharging device	Rotary air lock	type : YJD-16, size : 300×300 mm, capacity : 39 m3/h	PCS	0	Spare
		MOTOR GEARED	power:1.5KW	PCS	1	Spare
20	bag screw onveyor	MOTOR GEARED	MOTOR GEARED CYCLOIDAL, 5.5KW MODEL:XWD5-58-5.5, MOTOR:Y90L-4X4 5.5KW 1400RPM 380V 50HZ	pcs	0	Spare
		MOTOR GEARED for screw	MOTOR GEARED CYCLOIDAL, 5.5KW MODEL:XWD5-58-5.5, MOTOR:Y90L-4X4 5.5KW 1400RPM 380V 50HZ	pcs	1	Spare
			Internal Componenets (bearings and seals	Set	2	Spare
21	star discharging device	type	type : YJD-26, size : 400×400 mm, capacity : 72 m3/h	PCS	2	Spare
		Motor	power : 2.2 KW	PCS	1	Spare

1.11 Bearing List				
S.N	Usage	SKF DESIGNATION	Unit	Annual Requ.
1	For 611BF69a-72a bag filter screw conveyor cycloidal reducer and For 511BF38 rotary feeder geared motor	6210-2RS1/C3	PCS	6
2	required for 321BF32 rotary air lock	6307-2RS1/C3	PCS	10
3	For coal mill VRM roller bearing critical spare requirement	24152 CC/W33	PCS	0
4	For coal mill VRM roller bearing critical spare requirement	NU3184	PCS	0
5	For coal mill VRM triple gate pneumatic bearing spare requirement	GE 25 ES	PCS	6
6	For coal mill VRM triple gate pneumatic bearing spare requirement	1211K W/ SLEEVE	PCS	3
7	For belt conveyor head drum and grate cooler fan and motors bearing spares requirement	6316-2Z/C3	PCS	16
8	for divertor y bearing spares requirement	UCF212, WITH CASING	PCS	6
9	for divertor y bearing spares requirement	UC212, BEARING ONLY	PCS	10
10	for common PHSE loading belt bearing requirement	BALL BEARING 6211 (BZ)	pcs	4
11	For 511BF37 and BF38 cycloidal gearbox bearing replacement	6211NR W/ SP100 SNAP RING	PCS	4
12	For 441VV01, 321VV02 and other plantwide bearing replacement	UCF209	PCS	4
13	For coal crusher main rotor bearing replacement as per CBM	22330 CA/W33 C3	PCS	0
14	For 611BF69a-72a bag filter screw conveyor cycloidal reducer	BEARING BALL 6405	PCS	6

15	For 611BF69a-72a bag filter screw conveyor cycloidal reducer repair and spares requirement	BEARING ROLLER CYLINDRICAL BRASS CAGE RN309M	PCS	2
16	For cement mill main gearbox bearing critical spare requirem	22352CA/W33C3	PCS	0
17	For Aggregates Crusher impact hammer rotor bearing requireme	23238 CAK/W33C4	PCS	0
18	for cement mill auxiliary gear box bearing spare	32040 XA	PCS	0
19	for cement mill auxiliary gear box bearing spare	roller tapered 32224	PCS	2
20	for cement mill auxiliary gear box bearing spare requiremen	roller tapered 30318	PCS	0
21	For NTGD400 bucket elevator head bearing requirement	22230 CC/W33	PCS	0
22	For NTGD630 bucket elevator head bearing requirement	23136 CC/W33	PCS	0
23	For NTGD630 & 800 bucket elevator tail bearing requirement	23122 CC/C3W33	PCS	0
24	For NTGD800 bucket elevator head bearing requirement	23140 CC/W33	PCS	0
25	for PHSE high speed conveyor belt drum bearing requirement	BEARING FLANGE SQUARE UCF205 W/ HOUSING	PCS	4
26	for PHSE high speed conveyor belt drum bearing requirement	BEARING UC205 BEARING ONLY	PCS	4
27	For cooler grate fans replacement requirement.	ROLLER BEARING NU 316	PCS	0
28	For variable speed fluid coupling ready spare requirement for 321FN33 & 321FN19	NU228 ECM/C3	PCS	2
29	For variable speed fluid coupling ready spare requirement for 321FN33 & 321FN19	NU232 ECM/C3	PCS	2
30	For variable speed fluid coupling ready spare requirement for 321FN33 & 321FN19	6044M	PCS	2

31	For variable speed fluid coupling ready spare requirement for 321FN33 & 321FN20	NU2216 EM	PCS	2
32	for plantwide tensioner pulley bearing requirement	22220CA	PCS	8
33	for plantwide belt snup pulley bearing requirement	6220 2RS	PCS	5
34	For VRM triple gate piston bearing replacement requirement	BEARING ROLLER SPHERICAL 22216	PCS	8
35	For VRM triple gate piston bearing replacement requirement	BEARING ROLLER SPHERICAL 22216 CK/W33	PCS	8
36	For 331-FN35 dust collector induced fan impeller bearing	BEARING BALL SELF ALIGNING 2219	PCS	0
37	For clinker hammer crusher rotor bearing requirement	23152CCK/C3 W33	PCS	2
38	For clinker hammer crusher rotor bearing requirement	AH3152	PCS	2
39	For workshop lathe machine bearing replacement requirement.	Deep grove ball bearing 61926 (chinese STD)	PCS	0
40	for coal screw conveyor L21SC14&15 bearing requirement	YAR216-2F	PCS	4
41	For packing plant drum bearing requirement	6403	PCS	2
42	For belt conveyor rollers bearing requirement	BEARING BALL DEEP GROOVE 6204 2Z	PCS	30
43	For limestone apron feeder side roller bearing and oil seal	22213 CA	PCS	16
44	For limestone apron feeder side roller bearing and oil	22206 CA	PCS	20
45	for rotary feeder cycloidal geared motor bearing requirement	BEARING ROLLER CYLINDRICAL N206 ECP	PCS	6

46	for rotary feeder cycloidal geared motor bearing requirement	N 307 ECP	PCS	6
47	for loading belt geared motor and IST apron feeder input gear box bearing requirement	6313-2Z/C3/6313 2R	PCS	10
48	For clinker weigh feeder gearbox and plant wide geared motor maintenance requirement	6016 2Z/C3	PCS	4
49	For side type reclaimers boom hoist and motor bearing replacement requirement	6305-2RS1/C3	PCS	10
50	For cooler hydraulic cylinder plain bearing and rod end repl	GE100 ES-2RS	PCS	0
51	For limestone crusher bearing replacement requirement.	AOH 24172	PCS	2
52	For limestone crusher bearing replacement requirement.	24172ECCK30J/C3W33	PCS	2
53	FOR COAL SCRE PUMP BEARING CRITICAL SPARE PART REQUIREMENT	7322 BECBM	PCS	8
54	For LST weighfeeder pulley bearing replacement and other pla	UCFC215 WITH CAING	PCS	0
55	For LST weighfeeder pulley bearing replacement and other pla	UC215 BEARING ONLY	PCS	0
56	For LST weighfeeder bearing replacement requirement.	BEARING Y-TYPE YET215	PCS	2
57	For PHSE bag discharging belt drum bearing requirement	6209 2Z	pcs	10
58	For LST weight feeder bearing spares requirement	YSA 215-2FK	PCS	4
59	For 511FN40, fan, 221 BC 01-1st bend pulley, bearing replacement requirement	22232 CC/C3W33	PCS	0
60	For 321-VV01 AND 441VV01, 321VV02 diverter valve requirement	YET209	PCS	6

61	For 231HC02 gypsum crusher main shaft bearing spare requirement	22340 CA/W33	PCS	0
62	for plant wide electrical motor bearing replacement req't	6309-2RS1/C3	PCS	16
63	for common PHSE bag unloading conveyor roller bearing	BEARING PILLOW BLOCK TYPE WITH HOUSING UCP209	PCS	4
64	For VRM triple gate pistorn bearing replacement requirement	BEARING KNUCKLE PLAIN GE40ES	PCS	3
65	For coal mill gearbox bearing replacement requirement.	22324 C	PCS	2
66	For coal mill gearbox bearing replacement requirement.	22236 CA/C3	PCS	2
67	For coal mill gearbox bearing replacement requirement.	23224 CA/W33 C3	PCS	3
68	Coal mill and Kiln main Gear box	32226 J2	PCS	4
69	For coal mill gearbox bearing replacement requirement.	NU 2226EM	PCS	2
70	For coal mill gearbox bearing replacement requirement.	NU 2322 EM	PCS	2
71	For coal mill gearbox bearing replacement requirement.	NU 330 M	PCS	2
72	For bridge re-claimer sprocket bearing replacement requirement	23024 CA/W33	PCS	4
73	241BC06/07/09 ,231BC04/05/ AND PLANTWIDE DRUM BEARING	1312	PCS	18
74	For 331BE01 gearbox bearing replacement requirement	32312 BJ2	PCS	2
75	For coal weigh feeder bearing replacement requirement.	YSA 210-2FK	PCS	4



76	FOR 511FN71 ,521FN63AND 231 FN17 AND OTHER PLANTWIDE FAN BEARING	2316	PCS	6
77	for Kiln main drive motro bearing replacement requirement	6324 C3	pcs	2
78	for Kiln main drive motor bearing replacement requirement	6224A	pcs	2
79	for Kiln main drive motor bearing AND plant wide motor bearing	6212 2Z		2
80	For raw mill bag house cyclone rotary airlock feeder bearing	UCF210	PCS	6
81	for VRM main gear box requirement	22338MBC3	PCS	3
82	for plant wide electrical motor bearing replacement req't	6319SKF	PCS	4
83	for 211BC03,4,6&7 tail drum brg and grate cooler fan and motors spares requirement	1316	PCS	12
84	For plant wide snub pulley brg and common pack house rotary feeder spares requirement	1310	PCS	8
85	For 431EP24S drag chain tail support brg spares	1311	PCS	2
86	For 221 RE 03 bridge re-claimer drive side brg spare requirement	23038 CA/W33	PCS	0
87	For 221BC08 gear box 2rd stage bearing spare requirement	32230 J2	PCS	0
88	for 221ST02 stacker jip belt BC02 bearing spares requirement	22224 E	PCS	0
89	For 241RE03&04 coal & gypsum re-claimer drive side brg and grate cooler fan and motors bearing	Single row deep grove ball bearing 6322	PCS	6
90	for clinker pan conveyor tail drum brg spare requirement	22216 CA\W33	PCS	2
91	For 321 BE40 head drum brg spares requirement	22226 E	PCS	0
92	Bag House drag chain/ Belt drum	22222 CA\W33	PCS	6

93	For clinker deep bucket conveyor roller maintenance	6207 2Z	PCS	10
94	For 331BE01 gearbox bearing replacement requirement	32317 J2	PCS	2
95	Gas analyzer and VFD fan	626ZZ	PCS	4
96	Kiln HTD	24156 CC/W33	PCS	0
97	Kiln HTD	29428-E	PCS	0
98	Kiln HTD	23044 CC/W33	PCS	0
99	For grate cooler fan and motors bearing spares requirement	NU322 EC/C3	PCS	12
100	For grate cooler fan and motors bearing spares requirement	6318 C3	PCS	12
101	For ID fan,circulation and waste gas fan bearing spares requirement	22240CC/C3W33	PCS	2
102	For grate cooler fan and motors bearing spares requirement	6314	PCS	12
103	for divertor valve bearing replacement and plant wide spares requirement	UC207 , BEARING ONLY	PCS	13
104	for divertor valve bearing replacement and plant wide spares requirement	UCF207, WITH CASING	PCS	13
105	Packing Screw convoyer and Damper bearings	UC216	PCS	18
106	for re-clamer low speed traveling motor spair requirement	51109	PCS	2
107	for compresor motor bearing requirement	NU205 E	PCS	4
108	Rotary Air lock ,Compressor Motor, re-claimer low speed travling motor	NU206	PCS	10
109	FOR ESP RAPING MOTOR BEARING REPLACEMENT	6202 2RS	PCS	6
110	for all motor bearing spair requirement	6215 2Z	PCS	4
111	for plant wide motor bearing spair requirement	6216 2Z	PCS	2
112	for plant wide motor bearing spair requirement	6218 2Z	PCS	2

113	for plant wide motor bearing spair requirement	6310 2Z C3	PCS	2
114	for plant wide motor bearing spair requirement	6317ZZ	PCS	2
115	for plant wide motor bearing spair requirement	6315 2Z	PCS	2
116	for plant wide motor bearing spair requirement	6214 2Z	PCS	2
117	for plant wide motor bearing spair requirement	6311	PCS	2
118	coal screw convoye (bering only)	FYJ 80 TF	PCS	8
119	coal screw convoyer (bering and housing)	UCFC216	PCS	4
120	for packing plant screw conveyor bearing spares	BEARING SQUARE FLANGED UC214, BEARING ONLY	PCS	2
121	for packing plant screw conveyor bearing spares	UFC214	PCS	2
122	for clinker silo top 431FN34 fan bearing replacement require	22320 CA/C3	PCS	4
123	for L21FN30 bearing replace requirement	6312 2Z C3	PCS	2
124	Need for 441BC 28 oil gearbox bearing replacment	6200 ZZ	PCS	4
125	For RM VRM roller bearing critical spares requirements	23192 CA/W33	PCS	1
126	For RM VRM roller bearing critical spares requirements	NNU4192M	PCS	1
127	for plantwide motor bearing spair requirement	6201E-2RS	PCS	2
128	FOR COMMON PACKER SPARE PART REQUIREMENT	8224	PCS	0
129	For 431-FN25 bearing replacement requirement.	22244 CK/W33	PCS	0
130	for plant wide motor bearing spair requirement	6208	PC	6
131	For VRM classifier main shaft bearing requirement. Critical Spare since it cannot be monitored by CBM tool during running.	29340E	pc	1

132	For 321FN19 ID Fan variable speed fluid coupling ready spare	6334 M C3	PC	2
133	For 321-FN19 variable speed fluid coupling critical spare re	QJ328 N2/P6	pc	4
134	For VRM main gear box requirement	230668MBC3	PCS	2
135	For VRM main gear box requirement	32244A	PCS	4
136	For VRM main gear box requirement	23144BMBC3	PCS	2
137	For VRM main gear box requirement	NU2244	PCS	2
138	Packing Impeller bearing	6308 ZZ	pcs	187
139	FOR PACKER , BF ROTARY AIR LOCK MOTORS MAINTENANCE REQ	6206 2RS	PCS	38
140	For limestone apron feeder central guidance roller bearing	22210CA	PCS	30
141	FOR 521 BL28-43 BLOWERS BEARING SPARE REQUIREMENTS	BEARING ROLLER CYLINDRICAL NU 2313 EM	PCS	4
142	FOR 521 BL28-43 BLOWERS BEARING SPARE REQUIREMENTS	BEARING ROLLER SPHERICAL 22313 CA	PCS	4
143	For plant wide weigh feeders rollers repair requirement	6205 2RS1	PCS	40
144	For stacker snub pulley bearing and other plant wide requirement	22212CK	PCS	0
145	FOR 331BL28 HOMOSILO BLOWER BEARING	NU409	PCS	4
146	For PHSE sheave pulley bearing for electric hoist	4306	PCS	2
147	to be replace for cement mill auxiliary gear box input shaft	30312	PCS	2
148	For 331BE01 bucket elevator fluid coupling reconditioning re	6026	PCS	2

149	FOR HOMOGNIZING SILO BLOWER BEARING SPARE PART REQUIREMENT	BEARING ROLLER CYLINDRICAL NU 2310 EM	PCS	2
150	for plant wide electrical motor bearing replacement req't	6306	PCS	6
151	for plant wide electrical motor bearing replacement req't	6203	PCS	8
152	for plant wide electrical motor bearing replacement req't	6304 2RS	PCS	15
153	for plant wide electrical motor bearing replacement req't	6408	PCS	12
154	For cement mill modified weigh feeder drive bearing replacement	6406 C3	PCS	0
155	White metal for 321FN11.M01 and 321RM03.M01 motors	Drawing No.APD- 321MS01-MS01-01-F1	Set	2
156	White metal for 511BM17 &18.M01 motors	Drwaing No.	Set	1

General Consumable Spare Parts			
S.N	Description	unit	Req
1	ELECTRODE WELDING 6013 2.5MM PER KG	PKT	200
2	ELECTRODE WELDING 6013 3.2MM 5KG PER PKT	PKT	200
3	ELECTRODE WELDING 6013 4.0MM 5KG PER PKT	PKT	200
4	ELECTRODE WELDING CAST OK92.58 3.2MM PER PKT	PKT	80
5	ELECTRODE WELDING CAST OK92.58 4MM 1.9KG PER PKT	PKT	80
6	ELECTRODE WELDING OK61.30 3.2MM 4.1KG PER PKT	PKT	80
7	ELECTRODE WELDING OK68.81 4MM 1.8KG PER PKT	PKT	80
8	ELECTRODE WELDING OK83.50 4MM PER KG	PKT	80
9	ELECTRODE WELDING OK68.81 3.2MM 4.1KG PER PKT	PKT	80
10	ELECTRODE WELDING OK48.03 3.2MM 5.7KG PER PKT	PKT	80
11	ELECTRODE WELDING E308 3.2MM KG PER PKT	PKT	80
12	ELECTRODE WELDING OK86.28 4.0MM PER KG	PKT	80
13	ELECTRODE WELDING OK86.28 3.2MM PER KG	PKT	80
14	ELECTRODE WELDING OA4804 2.8MM PER KG	PKT	80
15	ELECTRODE WELDING EUTECTRODE XHD646 PER KG/ISO 9002	PKT	80
16	ELECTRODE GOUGING OK21.03 4.0MM PER KG	PKT	80
17	ELECTRODE GOUGING OK21.03 3.2MM PER KG	PKT	80
18	ELECTRODE WELDING E4303 4.0MM PER KG	PKT	80
19	ELECTRODE WELDING E308-16 3.2MM PER KG	PKT	80
20	ELECTRODE WELDING OK67.45 PER KG	PKT	80
21	ELECTRODE WELDING OK83.50 PER KG	PKT	80
22	ELECTRODE WELDING OA56 2.8MM PER KG	PKT	80
23	ELECTRODE WELDING OK84.78 4.0MM PER PKT	PKT	80
24	ELECTRODE WELDING OK75.75	PKT	80
25	ELECTRODE WELDING OK48.03 4MM 5.7KG PER PKT	PKT	81
26	Loxreal 83-54 = (Loctite-270) For thread locking	Pcs	5
27	Loxreal 53-11 = (Loctite-641),For Retaining	Pcs	5

28	Loxal 53-14 = ( Loctite 542),For Thread sealing	Pcs	5
29	Loxal 58-14 = (Loctite-574), For Liquid gasketing	Pcs	5
30	Loxal 59-10 (Oil resistant)	Pcs	5
31	Loctite sealants 5398	Pcs	5
32	CLEANER Spray WD-40	Pcs	50
33	Grinding disk 4 "	Pcs	500
34	Grinding disk 9"	Pcs	500
35	Cutting disk 4 "	Pcs	500
36	Cutting disk 9 "	Pcs	500
37	Sand paper P 60	Pcs	50
38	Sand paper P 80	Pcs	50
39	Gasket Maker	Pcs	1000
40	Silcon Maker		
41	Gasket Paper 0.5mm	M2	10
42	Gasket Paper 1mm	M2	10
43	Gasket Paper 2mm	M2	10
44	Gasket Paper 4mm	M2	10
45	Gasket Paper 6mm	M2	10
<b>Flat Sheet</b>			
1	BAR ANGLE MS 10MMT 100MM 160MM 6ML	PCS	30
2	BAR ANGLE MS 10MMT 75MM 175MM 6ML	PCS	30
3	BAR ANGLE MS 10MMT 100MM 100MM 6ML	PCS	30
4	BAR ANGLE MS 10MMT 130MM 130MM 6ML	PCS	30
5	BAR ANGLE MS 8MMT 75MM 75MM 6ML	PCS	30
6	BAR ANGLE MS 6MMT 60MM 60MM 6ML	PCS	30
7	BAR FLAT MS 3MMT 30MMW 6ML	PCS	30
8	BAR ANGLE MS 8MMT 80MM 80MM 6ML	PCS	30
9	BAR FLAT MS 3MMT 60MMW 6ML	PCS	30
10	PLATE MS 16MMT 1M 2M	PCS	50
11	PLATE MS 30MMT 1M 2M	PCS	50
12	PLATE MS 6MMT 1M 2M	PCS	50

13	PLATE MS 3MMT 1M 2M	PCS	50
14	PLATE MS 10MMT 1M 2M	PCS	50
15	PLATE MS 20MMT 1M 2M	PCS	50
16	PLATE MS 12MMT 1M 2M	PCS	50
17	PLATE MS 8MMT 1.25M 2.5M	PCS	50
18	PLATE MS 24MMT 1.25M 2.5M	PCS	50
19	PLATE MS 40MMT 1.25M 2.5M	PCS	50
20	CHANNEL U 200M*70MM*20MM*2.2ML	PCS	50
21	CHANNEL U 140MM*60MM*7MM*6ML	PCS	50
22	CHANNEL U 125MM*62MM*5MM*6ML	PCS	40
<b>Fastener</b>			
1	BOLT ALLEN COUNTERSUNK HEAD M06 * 020MM FT 8.8	PCS	200
2	BOLT ALLEN COUNTERSUNK HEAD M06 * 030MM FT 8.8	PCS	200
3	BOLT ALLEN COUNTERSUNK HEAD M06 * 050MM FT 8.9	PCS	200
4	BOLT ALLEN COUNTERSUNK HEAD M08 * 025MM FT 8.8	PCS	200
5	BOLT ALLEN COUNTERSUNK HEAD M08 * 030MM FT 8.8	PCS	200
6	BOLT ALLEN COUNTERSUNK HEAD M08 * 070MM FT 8.8	PCS	200
7	BOLT ALLEN COUNTERSUNK HEAD M10 * 030MM FT 8.8	PCS	200
8	BOLT ALLEN COUNTERSUNK HEAD M10 * 035MM FT 8.8	PCS	200
9	BOLT ALLEN COUNTERSUNK HEAD M10 * 050MM FT 8.8	PCS	150
10	BOLT ALLEN COUNTERSUNK HEAD M10 * 070MM FT 8.8	PCS	150
11	BOLT ALLEN COUNTERSUNK HEAD M12 * 030MM FT 8.8	PCS	200
12	BOLT ALLEN COUNTERSUNK HEAD M12 * 040MM FT 8.8	PCS	200
13	BOLT ALLEN COUNTERSUNK HEAD M12 * 050MM FT 8.8	PCS	200
14	BOLT ALLEN COUNTERSUNK HEAD M12 * 060MM FT 8.8	PCS	200
15	BOLT ALLEN COUNTERSUNK HEAD M12 * 080MM FT 8.8	PCS	150
16	BOLT ALLEN COUNTERSUNK HEAD M12 * 0100MM FT 8.8	PCS	100
17	BOLT ALLEN COUNTERSUNK HEAD M12 * 120MM FT 8.8	PCS	100
18	BOLT ALLEN COUNTERSUNK HEAD M14* 050MM FT 8.8	PCS	100
19	BOLT ALLEN COUNTERSUNK HEAD M14* 080MM FT 8.8	PCS	100



20	BOLT ALLEN COUNTERSUNK HEAD M16 * 050MM FT 8.8	PCS	200
21	BOLT ALLEN COUNTERSUNK HEAD M16 * 060MM FT 8.8	PCS	200
22	BOLT ALLEN COUNTERSUNK HEAD M16 * 070MM FT 8.8	PCS	200
23	BOLT ALLEN COUNTERSUNK HEAD M16 * 080MM FT 8.8	PCS	200
24	BOLT ALLEN COUNTERSUNK HEAD M20 * 060MM FT 8.8	PCS	200
25	BOLT ALLEN COUNTERSUNK HEAD M20 * 070MM FT 8.8	PCS	200
26	BOLT ALLEN COUNTERSUNK HEAD M20 * 080MM FT 8.8	PCS	200
27	BOLT ALLEN COUNTERSUNK HEAD M20 * 090MM FT 8.8	PCS	200
28	BOLT ALLEN COUNTERSUNK HEAD M24 * 090MM FT 8.8	PCS	200
29	BOLT ALLEN COUNTERSUNK HEAD M24 * 100MM FT 8.8	PCS	200
30	BOLT ALLEN COUNTERSUNK HEAD M28 * 120MM FT 8.8	PCS	200
31	BOLT ALLEN COUNTERSUNK HEAD M24 * 120MM FT 8.8	PCS	50
32	BOLT ALLEN COUNTERSUNK HEAD M24 * 160MM FT 8.8	PCS	50
33	BOLT ALLEN COUNTERSUNK HEAD M28 * 160MM FT 8.8	PCS	50
34	BOLT ALLEN SOCKET HEAD M06 * 020MM FT 8.8	PCS	200
35	BOLT ALLEN SOCKET HEAD M06 * 030MM FT 8.8	PCS	200
36	BOLT ALLEN SOCKET HEAD M06 * 040MM FT 8.8	PCS	200
37	BOLT ALLEN SOCKET HEAD M06 * 050MM FT 8.8	PCS	200
38	BOLT ALLEN SOCKET HEAD M06 * 060MM FT 8.8	PCS	200
39	BOLT ALLEN SOCKET HEAD M08 * 030MM FT 8.8	PCS	200
40	BOLT ALLEN SOCKET HEAD M08 * 040MM FT 10.9	PCS	200
41	BOLT ALLEN SOCKET HEAD M08 * 050MM FT 8.8	PCS	200
42	BOLT ALLEN SOCKET HEAD M08 * 060MM FT 8.8	PCS	200
43	BOLT ALLEN SOCKET HEAD M08 * 070MM FT 8.8	PCS	200
44	BOLT ALLEN SOCKET HEAD M08 * 080MM FT 8.8	PCS	200
45	BOLT ALLEN SOCKET HEAD M10 * 020MM FT 10.9	PCS	200
46	BOLT ALLEN SOCKET HEAD M10 * 030MM FT 8.8	PCS	200
47	BOLT ALLEN SOCKET HEAD M10 * 040MM FT 8.8	PCS	200
48	BOLT ALLEN SOCKET HEAD M10 * 050MM FT 10.9	PCS	200
49	BOLT ALLEN SOCKET HEAD M10 * 070MM FT 8.8	PCS	200
50	BOLT ALLEN SOCKET HEAD M10 * 080MM FT 8.8	PCS	200

51	BOLT ALLEN SOCKET HEAD M10 * 090MM FT 8.8	PCS	200
52	BOLT ALLEN SOCKET HEAD M10 * 100MM FT 8.8	PCS	200
53	BOLT ALLEN SOCKET HEAD M10 * 140MM FT 8.8	PCS	200
54	BOLT ALLEN SOCKET HEAD M12 * 030MM FT 8.8	PCS	200
55	BOLT ALLEN SOCKET HEAD M12 * 040MM FT 8.8	PCS	200
56	BOLT ALLEN SOCKET HEAD M12 * 050MM FT 8.8	PCS	200
57	BOLT ALLEN SOCKET HEAD M12 * 060MM FT 8.8	PCS	200
58	BOLT ALLEN SOCKET HEAD M12 * 070MM FT 8.8	PCS	200
59	BOLT ALLEN SOCKET HEAD M12 * 080MM FT 8.8	PCS	200
60	BOLT ALLEN SOCKET HEAD M12 * 090MM FT 8.8	PCS	200
61	BOLT ALLEN SOCKET HEAD M12 * 100MM FT 8.8	PCS	200
62	BOLT ALLEN SOCKET HEAD M12 * 120MM FT 8.8	PCS	200
63	BOLT ALLEN SOCKET HEAD M14 * 035MM FT 8.8	PCS	200
64	BOLT ALLEN SOCKET HEAD M14 * 040MM FT 8.8	PCS	200
65	BOLT ALLEN SOCKET HEAD M14 * 050MM FT 8.8	PCS	200
66	BOLT ALLEN SOCKET HEAD M14 * 060MM FT 8.8	PCS	200
67	BOLT ALLEN SOCKET HEAD M14 * 070MM FT 8.8	PCS	200
68	BOLT ALLEN SOCKET HEAD M14 * 080MM FT 8.8	PCS	200
69	BOLT ALLEN SOCKET HEAD M14 * 100MM FT 8.8	PCS	200
70	BOLT ALLEN SOCKET HEAD M14 * 120MM FT 8.8	PCS	200
71	BOLT ALLEN SOCKET HEAD M16 * 025MM FT 8.8	PCS	200
72	BOLT ALLEN SOCKET HEAD M16 * 030MM FT 8.8	PCS	200
73	BOLT ALLEN SOCKET HEAD M16 * 040MM FT 8.8	PCS	200
74	BOLT ALLEN SOCKET HEAD M16 * 050MM FT 8.8	PCS	200
75	BOLT ALLEN SOCKET HEAD M16 * 060MM FT 8.8	PCS	200
76	BOLT ALLEN SOCKET HEAD M16 * 070MM FT 8.8	PCS	200
77	BOLT ALLEN SOCKET HEAD M16 * 080MM FT 8.8	PCS	200
78	BOLT ALLEN SOCKET HEAD M16 * 090MM FT 8.8	PCS	200
79	BOLT ALLEN SOCKET HEAD M16 * 100MM FT 8.8	PCS	200
80	BOLT ALLEN SOCKET HEAD M16 * 120MM FT 8.8	PCS	200
81	BOLT ALLEN SOCKET HEAD M16 * 150MM FT 10.9	PCS	200

82	BOLT ALLEN SOCKET HEAD M16 * 200MM FT 8.8	PCS	200
83	BOLT ALLEN SOCKET HEAD M18 * 050MM FT 8.8	PCS	200
84	BOLT ALLEN SOCKET HEAD M18 * 060MM FT 8.8	PCS	200
85	BOLT ALLEN SOCKET HEAD M18 * 070MM FT 8.8	PCS	200
86	BOLT ALLEN SOCKET HEAD M18 * 080MM FT 8.8	PCS	200
87	BOLT ALLEN SOCKET HEAD M18 * 100MM FT 8.8	PCS	200
88	BOLT ALLEN SOCKET HEAD M18 * 120MM FT 8.8	PCS	200
89	BOLT ALLEN SOCKET HEAD M20 * 030MM FT 8.8	PCS	200
90	BOLT ALLEN SOCKET HEAD M20 * 040MM FT 8.8	PCS	200
91	BOLT ALLEN SOCKET HEAD M20 * 050MM FT 8.8	PCS	200
92	BOLT ALLEN SOCKET HEAD M20 * 060MM FT 8.8	PCS	200
93	BOLT ALLEN SOCKET HEAD M20 * 070MM FT 8.8	PCS	200
94	BOLT ALLEN SOCKET HEAD M20 * 080MM FT 8.8	PCS	200
95	BOLT ALLEN SOCKET HEAD M20 * 100MM FT 8.8	PCS	200
96	BOLT ALLEN SOCKET HEAD M20 * 120MM FT 8.8	PCS	200
97	BOLT ALLEN SOCKET HEAD M20 * 140MM FT 10.9	PCS	200
98	BOLT ALLEN SOCKET HEAD M24 * 050MM FT 8.8	PCS	200
99	BOLT ALLEN SOCKET HEAD M24 * 060MM FT 8.8	PCS	200
100	BOLT ALLEN SOCKET HEAD M24 * 080MM FT 8.8	PCS	200
101	BOLT ALLEN SOCKET HEAD M24 * 100MM FT 8.8	PCS	200
102	BOLT ALLEN SOCKET HEAD M24 * 120MM FT 8.8	PCS	200
103	BOLT ALLEN SOCKET HEAD M30 * 075MM FT 8.8	PCS	200
104	BOLT ALLEN SOCKET HEAD M30 * 090MM FT 8.8	PCS	200
105	BOLT HEX & NUT W/ WASHER M24*120MM GR8.8	Pcs	50
106	BOLT HEX HEAD & NUT 12*30MM FT 8.8	Pcs	200
107	BOLT HEX HEAD & NUT 3/8*30MM FT 8.8	Pcs	100
108	BOLT HEX HEAD & NUT M06*40MM FT 8.8	Pcs	100
109	BOLT HEX HEAD & NUT M08*120MM FT G8.8	Pcs	100
110	BOLT HEX HEAD & NUT M08*30MM FT G2.0	Pcs	100
111	BOLT HEX HEAD & NUT M08*30MM FT G8.8	Pcs	100
112	BOLT HEX HEAD & NUT M08*35MM FT G8.8	Pcs	100

113	BOLT HEX HEAD & NUT M08*40MM FT G8.8	Pcs	100
114	BOLT HEX HEAD & NUT M08*60MM FT G8.8	Pcs	100
115	BOLT HEX HEAD & NUT M08*70MM FT G8.8	Pcs	100
116	BOLT HEX HEAD & NUT M08*90MM FT G8.8	Pcs	100
117	BOLT HEX HEAD & NUT M10*130MM FT 8.8	Pcs	300
118	BOLT HEX HEAD & NUT M10*30MM FT 8.8	Pcs	300
119	BOLT HEX HEAD & NUT M10*30MM FT 8.8	Pcs	300
120	BOLT HEX HEAD & NUT M10*40MM FT 8.8	Pcs	300
121	BOLT HEX HEAD & NUT M10*45MM FT 8.8	Pcs	300
122	BOLT HEX HEAD & NUT M10*50MM FT 8.8	Pcs	300
123	BOLT HEX HEAD & NUT M12*40MM FT 8.8	Pcs	300
124	BOLT HEX HEAD & NUT M12*60MM FT 8.8	Pcs	300
125	BOLT HEX HEAD & NUT M14*50MM FT 8.8	Pcs	300
126	BOLT HEX HEAD & NUT M14*50MM FT 8.8	Pcs	300
127	BOLT HEX HEAD & NUT M16*1.5*50MM FT 8.8	Pcs	300
128	BOLT HEX HEAD & NUT M16*50MM FT 8.8	Pcs	300
129	BOLT HEX HEAD & NUT M16*80MM FT 8.8	Pcs	300
130	BOLT HEX HEAD & NUT M16*80MM FT 8.8	Pcs	300
131	BOLT HEX HEAD & NUT M17*50MM FT 8.8	Pcs	300
132	BOLT HEX HEAD & NUT M18*100MM FT 8.8	Pcs	300
133	BOLT HEX HEAD & NUT M18*100MM FT 8.8	Pcs	300
134	BOLT HEX HEAD & NUT M18*30MM FT 8.8	Pcs	300
135	BOLT HEX HEAD & NUT M18*50MM FT 8.8	Pcs	300
136	BOLT HEX HEAD & NUT M18*60MM FT 8.8	Pcs	300
137	BOLT HEX HEAD & NUT M18*70MM FT 8.8	Pcs	300
138	BOLT HEX HEAD & NUT M18*75MM FT 8.8	Pcs	300
139	BOLT HEX HEAD & NUT M19*50MM FT 8.8	Pcs	300
140	BOLT HEX HEAD & NUT M20 * 100MM	Pcs	300
141	BOLT HEX HEAD & NUT M20 * 120MM	Pcs	300
142	BOLT HEX HEAD & NUT M20*70MM FT 8.8	Pcs	300
143	BOLT HEX HEAD & NUT M22*140MM FT 8.8	Pcs	300

144	BOLT HEX HEAD & NUT M22*50MM FT 8.8	Pcs	300
145	BOLT HEX HEAD & NUT M24*50MM FT 8.8	Pcs	300
146	BOLT HEX HEAD M06 * 020MM FT 8.8	Pcs	300
147	BOLT HEX HEAD M06 * 030MM FT 8.8	Pcs	300
148	BOLT HEX HEAD M06 * 040MM FT 8.8	Pcs	300
149	BOLT HEX HEAD M06 * 050MM FT 8.8	Pcs	300
150	BOLT HEX HEAD M06 * 060MM FT 8.8	Pcs	300
151	BOLT HEX HEAD M06 * 070MM FT 8.8	Pcs	300
152	BOLT HEX HEAD M06 * 080MM FT 8.8	Pcs	300
153	BOLT HEX HEAD M06 * 090MM FT 8.8	Pcs	300
154	BOLT HEX HEAD M08 * 020MM FT G8.8	Pcs	300
155	BOLT HEX HEAD M08 * 030MM FT G8.8	Pcs	300
156	BOLT HEX HEAD M08 * 040MM FT 8.8	Pcs	300
157	BOLT HEX HEAD M08 * 050MM FT 8.8	Pcs	300
158	BOLT HEX HEAD M08 * 060MM FT 8.8	Pcs	300
159	BOLT HEX HEAD M08 * 070MM FT 8.8	Pcs	100
160	BOLT HEX HEAD M08 * 080MM FT 8.8	Pcs	100
161	BOLT HEX HEAD M08 * 090MM PT 8.8	Pcs	50
162	BOLT HEX HEAD M08 * 100MM FT 8.8	Pcs	50
163	BOLT HEX HEAD M08 * 120MM PT 8.8	Pcs	50
164	BOLT HEX HEAD M10 * 020MM FT 8.8	Pcs	50
165	BOLT HEX HEAD M10 * 030MM FT 8.8	Pcs	100
166	BOLT HEX HEAD M10 * 040MM FT 8.8	Pcs	100
167	BOLT HEX HEAD M10 * 050MM FT 8.8	Pcs	50
168	BOLT HEX HEAD M10 * 060MM FT 8.8	Pcs	50
169	BOLT HEX HEAD M10 * 070MM PT 8.8	Pcs	100
170	BOLT HEX HEAD M10 * 080MM FT 8.8	Pcs	100
171	BOLT HEX HEAD M10 * 090MM FT 8.8	Pcs	100
172	BOLT HEX HEAD M10 * 100MM FT 8.8	Pcs	100
173	BOLT HEX HEAD M10 * 120MM PT 8.8	Pcs	100
174	BOLT HEX HEAD M10 * 130MM PT 8.8	Pcs	100

175	BOLT HEX HEAD M12 * 020MM FT 8.8	Pcs	100
176	BOLT HEX HEAD M12 * 025MM FT 8.8	Pcs	100
177	BOLT HEX HEAD M12 * 030MM FT 8.8	Pcs	100
178	BOLT HEX HEAD M12 * 040MM FT 10.9	Pcs	100
179	BOLT HEX HEAD M12 * 050MM FT 8.8	Pcs	100
180	BOLT HEX HEAD M12 * 060MM FT 8.8	Pcs	100
181	BOLT HEX HEAD M12 * 070MM FT 8.8	Pcs	100
182	BOLT HEX HEAD M12 * 080MM FT 8.8	Pcs	100
183	BOLT HEX HEAD M12 * 090MM FT 8.8	Pcs	100
184	BOLT HEX HEAD M12 * 100MM FT 8.8	Pcs	100
185	BOLT HEX HEAD M12 * 120MM PT 8.8	Pcs	100
186	BOLT HEX HEAD M12 * 140MM PT 8.8	Pcs	100
187	BOLT HEX HEAD M14 * 040MM FT 10.9	Pcs	100
188	BOLT HEX HEAD M14 * 050MM FT 8.8	Pcs	100
189	BOLT HEX HEAD M14 * 060MM PT 8.8	Pcs	100
190	BOLT HEX HEAD M14 * 070MM PT 8.8	Pcs	100
191	BOLT HEX HEAD M14 * 080MM PT 8.8	Pcs	100
192	BOLT HEX HEAD M14 * 090MM PT 8.8	Pcs	100
193	BOLT HEX HEAD M14 * 100MM PT 8.8	Pcs	100
194	BOLT HEX HEAD M14 * 120MM PT 8.8	Pcs	100
195	BOLT HEX HEAD M14 X 40MM 42CRMO	Pcs	100
196	BOLT HEX HEAD M16 * 030MM FT 8.8	Pcs	100
197	BOLT HEX HEAD M16 * 040MM FT 8.8	Pcs	100
198	BOLT HEX HEAD M16 * 050MM FT S/S	Pcs	100
199	BOLT HEX HEAD M16 * 060MM FT 10.9	Pcs	100
200	BOLT HEX HEAD M16 * 070MM FT 10.9	Pcs	100
201	BOLT HEX HEAD M16 * 080MM FT 8.8	Pcs	100
202	BOLT HEX HEAD M16 * 090MM FT 8.8	Pcs	100
203	BOLT HEX HEAD M16 * 100MM FT 8.8	Pcs	100
204	BOLT HEX HEAD M16 * 120MM FT 8.8	Pcs	100
205	BOLT HEX HEAD M16 * 140MM PT 8.8	Pcs	100

206	BOLT HEX HEAD M16 * 180MM PT 8.8	Pcs	100
207	BOLT HEX HEAD M16 * 250MM PT 8.8	Pcs	100
208	BOLT HEX HEAD M16 X 120MM 42CRMO	Pcs	100
209	BOLT HEX HEAD M16 X 70MM 42CRMO	Pcs	100
210	BOLT HEX HEAD M18 * 050MM FT 8.8	Pcs	100
211	BOLT HEX HEAD M18 * 060MM FT 8.8	Pcs	100
212	BOLT HEX HEAD M18 * 070MM PT 8.8	Pcs	100
213	BOLT HEX HEAD M18 * 080MM PT 8.8	Pcs	100
214	BOLT HEX HEAD M18 * 090MM FT 8.8	Pcs	100
215	BOLT HEX HEAD M18 * 100MM FT 8.8	Pcs	100
216	BOLT HEX HEAD M18 * 120MM FT 8.8	Pcs	100
217	BOLT HEX HEAD M18 * 200MM PT 8.8	Pcs	100
218	BOLT HEX HEAD M20 * 040MM FT 8.8	Pcs	100
219	BOLT HEX HEAD M20 * 050MM FT 8.8	Pcs	100
220	BOLT HEX HEAD M20 * 060MM FT 8.8	Pcs	100
221	BOLT HEX HEAD M20 * 070MM FT 8.8	Pcs	100
222	BOLT HEX HEAD M20 * 080MM FT 8.8	Pcs	100
223	BOLT HEX HEAD M20 * 090MM PT 8.8	Pcs	8
224	BOLT HEX HEAD M20 * 100MM PT 10.9	Pcs	10
225	BOLT HEX HEAD M20 * 120MM FT 8.8	Pcs	10
226	BOLT HEX HEAD M20 * 140MM PT 8.8	Pcs	20
227	BOLT HEX HEAD M20 * 150MM PT 8.8	Pcs	20
228	BOLT HEX HEAD M20 * 160MM PT 8.8	Pcs	20
229	BOLT HEX HEAD M20 * 180MM PT 8.8	Pcs	10
230	BOLT HEX HEAD M20 * 200MM PT 8.8	Pcs	15
231	BOLT HEX HEAD M20 * 265MM PT 8.8	Pcs	10
232	BOLT HEX HEAD M20 * 290MM PT 8.8	Pcs	50
233	BOLT HEX HEAD M20*70 42CRMO W/ NUT	Pcs	Req
234	BOLT HEX HEAD M22 * 080MM PT 8.8	Pcs	10
235	BOLT HEX HEAD M22 * 090MM PT 8.8	Pcs	10

236	BOLT HEX HEAD M22 * 100MM PT 8.8	Pcs	10
237	BOLT HEX HEAD M22 * 340MM PT 8.8	Pcs	10
238	BOLT HEX HEAD M24 * 050MM FT 8.8	Pcs	10
239	BOLT HEX HEAD M24 * 070MM FT 8.8 W/ NUT	Pcs	10
240	BOLT HEX HEAD M24 * 080MM PT 8.8	Pcs	10
241	BOLT HEX HEAD M24 * 090MM PT 10.9	Pcs	10
242	BOLT HEX HEAD M24 * 100MM PT 8.8	Pcs	30
243	BOLT HEX HEAD M24 * 110MM PT 8.8	Pcs	30
244	BOLT HEX HEAD M24 * 120MM PT 8.8	Pcs	30
245	BOLT HEX HEAD M24 * 150MM PT 10.9	Pcs	30
246	BOLT HEX HEAD M24 * 180MM PT 8.8	Pcs	30
247	BOLT HEX HEAD M24 * 200MM PT 10.9	Pcs	30
248	BOLT HEX HEAD M24 * 250MM PT 8.8	Pcs	30
249	BOLT HEX HEAD M24 * 280MM PT 8.8	Pcs	30
250	BOLT HEX HEAD M24 * 380MM PT 8.8	Pcs	30
251	BOLT HEX HEAD M30 * 080MM FT 8.8	Pcs	10
252	BOLT HEX HEAD M30 * 090MM PT 8.8	Pcs	10
253	BOLT HEX HEAD M30 * 120MM PT 8.8	Pcs	10
254	BOLT HEX HEAD M33 * 100MM PT 8.8	Pcs	10
255	BOLT HEX HEAD M33 * 120MM PT 8.8	Pcs	10
256	BOLT HEX HEAD M33 * 120MM PT 8.8	Pcs	10
257	BOLT HEX HEAD M33 * 130MM PT 8.8	Pcs	5
258	BOLT HEX HEAD M36 * 120MM FT 8.8	Pcs	5
259	BOLT HEX HEAD M36 * 120MM PT 8.8	Pcs	5
260	BOLT HEX HEAD M36 * 150MM PT 8.8	Pcs	5
261	BOLT HEX HEAD M36 * 180MM PT 10.9	Pcs	5
262	BOLT HEX HEAD M36 * 200MM PT 10.9	Pcs	5
263	BOLT HEX HEAD M36 * 210MM PT 8.8	Pcs	50
264	BOLT HEX HEAD M38 * 160MM FT 8.8	Pcs	50
265	BOLT HEX HEAD W/ NUT M42 4.5 130MML GR8.8	Pcs	20



<b>FITTING</b>			
1	Fitting Union, 3/4", Galvanize	Pcs	20
2	Fitting Union, 1", Galvanize	Pcs	20
3	Fitting Union, 01.25", Galvanize	Pcs	20
4	Fitting Union, 1.50", Galvanize	Pcs	20
5	Fitting Union, 2", Galvanize	Pcs	20
6	Fitting Union, 02.50", Galvanize	Pcs	20
7	Fitting Union, 03", Galvanize	Pcs	20
8	Fitting Elbow 90 Equal, 1/2", Galvanize	Pcs	20
9	Fitting Elbow 90 Equal, 3/4", Galvanize	Pcs	20
10	Fitting Elbow 90 Equal, 1.0", Galvanize	Pcs	20
11	Fitting Elbow 90 Equal, 01.25", Galvanize	Pcs	20
12	Fitting Elbow 90 Equal, 1.50", Galvanize	Pcs	20
13	Fitting Elbow 90 Equal, 2.0", Galvanize	Pcs	20
14	Fitting Elbow 90 Equal, 2.50", Galvanize	Pcs	20
15	Fitting Elbow 90 Equal, 3.0", Galvanize	Pcs	20
16	Fitting T.90 Equal, 1/2", Galvanize	Pcs	20
17	Fitting T.90 Equal, 3/4", Galvanize	Pcs	20
18	Fitting T.90 Equal, 1.0", Galvanize	Pcs	20
19	Fitting T.90 Equal, 01.25", Galvanize	Pcs	20
<b>Cir clip</b>			
	Description	unit	Req
1	Circlip External, 26 x 1.2mm.	Pcs	30
2	Circlip External, 28 x 1.5mm.	Pcs	30
3	Circlip External, 29 x 1.5mm.	Pcs	30
4	Circlip External, 30 x 1.5mm.	Pcs	30
5	Circlip External, 32 x 1.5mm.	Pcs	10
6	Circlip External, 34 x 1.5mm.	Pcs	10
7	Circlip External, 35 x 1.5mm.	Pcs	10
8	Circlip External, 36 x 1.75mm.	Pcs	10
9	Circlip External, 38 x 1.75mm.	Pcs	10

10	Circlip External, 40 x 1.75mm.	Pcs	10
11	Circlip External, 42 x 1.75mm.	Pcs	10
12	Circlip External, 45 x 1.75mm.	Pcs	10
13	Circlip External, 48 x 1.75mm.	Pcs	10
14	Circlip External, 50 x 2mm.	Pcs	10
15	Circlip External, 52 x 2mm.	Pcs	10
16	Circlip External, 58 x 2mm.	Pcs	10
17	Circlip External, 60 x 2mm.	Pcs	10
18	Circlip External, 62 x 2mm.	Pcs	10
19	Circlip External, 65 x 2.5mm.	Pcs	10
20	Circlip External, 68 x 2.5mm.	Pcs	10
21	Circlip External, 72 x 2.5mm.	Pcs	10
22	Circlip External, 75 x 2.5mm.	Pcs	5
23	Circlip External, 78 x 2.5mm.	Pcs	5
24	Circlip External, 80 x 2.5mm.	Pcs	5
25	Circlip External, 82 x 2.5mm.	Pcs	5
<b>vulcanizing material</b>			
1	Repair Rubber Strip With PLY, Width =100 mm,(TIP TOP PArt.No.531 5738)	Box	8
2	Repair Rubber Strip With PLY, Width =150 mm,(TIP TOP PArt.No.531 5745)	Box	8
3	Repair Rubber Strip Without PLY, Width =100 mm,(TIP TOP PArt.No.531 7736)	Box	8
4	Repair Rubber Strip Without PLY,Width =150 mm,(TIP TOP PArt.No.531 7743)	Box	8
5	Flexco Bolt Size 1.5 "	Pcs	500
6	Flexco Bolt Size 2 "	Pcs	500
7	MTR rubber 5 KG roller thickness 1 mm (part no 5161009).	roll	10
8	Heating solution 1 KG cans ( part no 5161054).	Can	20
9	Cleaning fluid 800 ml cans ( part no 5959022)	Can	10
10	Tungsten carbide disk 175 mm dia K 18 ( part no 5952555 ).	Psc	4
11	SC 2000 - with hardener, GLUE,(TIP TOP Art.No.525 2028)	Pcs	20
12	Drum Lagging (Coating) Rema Grip 60 - Abrasion Resistance, W = 950 mm,Thickness = 12 mm.	MT	20

13	Drum Lagging (Coating) Rema Grip 60 - Abrasion Resistance, W = 1400 mm, Thickness = 12 mm.	MT	20
14	Drum Lagging (Coating) Rema Grip 60 - Abrasion Resistance, W = 1600 mm, Thickness = 12 mm.	MT	20
15	Drum Lagging (Coating) Rema Grip 60 - Abrasion Resistance, W = 2000 mm, Thickness = 12 mm.	MT	10
16	Drum Lagging (Coating) Rema Grip 65 - Abrasion Resistance, W = 1200 mm, Thickness = 12 mm.	MT	15
17	Drum Lagging (Coating) Remaline 60 - Abrasion Resistance, W = 1500 mm, Thickness = 12 mm.	MT	10

O-ring			
Sr.No	Description	unit	Req
1	Open O-Ring ,d 4 mm,PVC.	Pcs	10
2	O-Ring ,D 5 x T 2 mm, Rubber	Pcs	10
3	O-Ring, D 6.8 x T 1.9 mm, Rubber	Pcs	10
4	O-Ring ,D 7 x T 1.5 mm, Viton	Pcs	10
5	O-Ring ,D 7 x T 1.75 mm, Rubber	Pcs	10
6	O-Ring ,D 7.5 x T 2 mm, Rubber	Pcs	10
7	O-Ring ,D 9 x T 1.8 mm, Viton	Pcs	10
8	O-Ring ,D 9 x T 2 mm, Rubber	Pcs	10
9	O-Ring ,D 9.5 x T 2 mm, Viton	Pcs	10
10	O-Ring ,D 10 x T 2 mm, Rubber	Pcs	10
11	O-Ring ,D 10 x T 3 mm, Rubber	Pcs	10
12	O-Ring ,D 11.4 x T 2.7 mm, Rubber	Pcs	10
13	O-Ring ,D 12 x T 4 mm, Rubber	Pcs	10
14	O-Ring ,D 12.3 x T 2.4 mm, Rubber	Pcs	10
15	O-Ring ,D 14 x T 2.5 mm, Rubber	Pcs	10
16	O-Ring ,D 14.3 x T 2.4 mm, Rubber	Pcs	10
17	O-Ring ,D 15 x T 04 mm, Viton	Pcs	10

18	O-Ring ,D 15 x T 3.5 mm, Viton	Pcs	10
19	O-Ring, D 16 x T 2 mm, Rubber	Pcs	10
20	O-Ring ,D 17 x T 2.5 mm, Viton	Pcs	10
21	O-Ring ,D 17.5 x T 2.5 mm, Rubber	Pcs	10
22	O-Ring ,D 19 x T 2 mm, Rubber	Pcs	10
23	O-Ring ,D 20 x T 3.5 mm, Viton	Pcs	10
24	O-Ring ,D 22 x T 1.5 mm, Rubber	Pcs	10
25	O-Ring ,D 22 x T 2.5 mm, Rubber	Pcs	10
26	O-Ring ,D 22 x T 3 mm, Rubber	Pcs	10
27	O-Ring ,D 21 x T 2 mm, Rubber	Pcs	10
28	O-Ring ,D 24 x T 3 mm, Rubber	Pcs	10
29	O-Ring ,D 25 x T 1.5 mm, Rubber	Pcs	10
30	O-Ring ,D 25 x T 2 mm, Rubber	Pcs	10
31	O-Ring ,D 27 x T 2 mm, Rubber	Pcs	10
32	O-Ring ,D 28 x T 2 mm, Rubber	Pcs	10
33	O-Ring ,D 28 x T 4 mm, Rubber	Pcs	10
34	O-Ring ,D 29 x T 3 mm, Rubber	Pcs	10
35	O-Ring ,D 30 x T 6 mm, Rubber	Pcs	10
36	O-Ring ,D 33 x T 2.5 mm, Rubber	Pcs	10
37	O-Ring ,D 35 x T 1.5 mm, Rubber	Pcs	10
38	O-Ring ,D 35 x T 2.5 mm, Rubber	Pcs	10
39	O-Ring ,D 35.2 x T 3 mm, Rubber	Pcs	10
40	O-Ring ,D 40 x T 2 mm, Rubber	Pcs	10
41	O-Ring ,D 40 x T 3.25 mm, Rubber	Pcs	10
42	O-Ring ,D 41 x T 2 mm, Rubber	Pcs	10
43	O-Ring ,D 41 x T 5 mm, Rubber	Pcs	10
44	O-Ring ,D 45 x T 1.5 mm, Rubber	Pcs	10
45	O-Ring ,D 46 x T 5.7 mm, Rubber	Pcs	10
46	O-Ring ,D 47 x T 4.9 mm, Rubber	Pcs	10
47	O-Ring ,D 47 x T 5 mm, Rubber	Pcs	10
48	O-Ring ,D 50 x T 4 mm, Rubber	Pcs	10

49	O-Ring ,D 52 x T 3 mm, Rubber	Pcs	10
50	O-Ring ,D 52 x T 4 mm, Rubber	Pcs	10
51	O-Ring ,D 53 x T 3 mm, Rubber	Pcs	10
52	O-Ring ,D 55 x T 3 mm, Rubber	Pcs	10
53	O-Ring ,D 56 x T 3 mm, Rubber	Pcs	10
54	O-Ring ,D 60 x T 02 mm, Rubber	Pcs	10
55	O-Ring ,D 60 x T 3 mm, Rubber	Pcs	10
56	O-Ring ,D 60 x T 3.5 mm, Rubber	Pcs	10
57	O-Ring ,D 60 x T 4 mm, Rubber	Pcs	10
58	O-Ring ,D 62 x T 3 mm, Rubber	Pcs	10
59	O-Ring ,D 64 x T 3 mm, Rubber	Pcs	10
60	O-Ring ,D 65 x T 3.5 mm, Rubber	Pcs	10
61	O-Ring ,D 68 x T 4 mm, Rubber	Pcs	10
62	O-Ring ,D 70 x T 02 mm, Rubber	Pcs	10
63	O-Ring ,D 70 x T 2.5 mm, Rubber	Pcs	10
64	O-Ring ,D 70 x T 3 mm, Rubber	Pcs	10
65	O-Ring ,D 70 x T 7 mm, Rubber	Pcs	10
66	O-Ring ,D 74 x T 3 mm, Rubber	Pcs	10
67	O-Ring ,D 74 x T 4 mm, Rubber	Pcs	10
68	O-Ring ,D 75 x T 2.5 mm, Rubber	Pcs	10
69	O-Ring ,D 77 x T 2 mm, Rubber	Pcs	10
70	O-Ring.D 80 x T 5 mm. Rubber	Pcs	10
71	O-Ring ,D 84 x T 3 mm, Rubber	Pcs	10
72	O-Ring ,D 85 x T 5 mm, Rubber	Pcs	10
73	O-Ring ,D 85 x T 7 mm, Rubber	Pcs	10
74	O-Ring ,D 90 x T 4 mm, Rubber	Pcs	10
75	O-Ring ,D 90 x T 5 mm, Rubber	Pcs	10
76	O-Ring ,D 90 x T 7 mm, Rubber	Pcs	10
77	O-Ring ,D 94 x T 3 mm, Rubber	Pcs	10
78	O-Ring ,D 98 x T 3 mm, Rubber	Pcs	10
79	O-Ring ,D 100 x T 3 mm, Rubber	Pcs	10

80	O-Ring ,D 101 x T 2.62 mm, Rubber	Pcs	10
81	O-Ring .D 101,19xT 3,53 mm.Rubber	Pcs	10
82	O-Ring ,D 102 x T 3.5 mm, Rubber	Pcs	10
83	O-Ring ,D 105 x T 3 mm, Rubber	Pcs	10
84	O-Ring ,D 107.3 x T 5.33 mm, Rubber	Pcs	10
85	O-Ring ,D 110 x T 4 mm, Rubber	Pcs	10
86	O-Ring ,D 112 x T 4 mm, Rubber	Pcs	10
87	O-Ring .D 113,97xT 2,62 mm.Rubber	Pcs	10
88	O-Ring ,D 115 x T 3 mm, Rubber	Pcs	10
89	O-Ring ,D 115 x T 4 mm, Rubber	Pcs	10
90	O-Ring .D 117x T 3.5 mm.Rubber	Pcs	10
91	O-Ring ,D 120 x T 3 mm, Rubber	Pcs	10
92	O-Ring ,D 120 x T 4 mm, Rubber	Pcs	10
93	O-Ring ,D 120 x T 5 mm, Rubber	Pcs	10
94	O-Ring ,D 125 x T 02 mm, Rubber	Pcs	10
95	O-Ring ,D 125 x T 3 mm, Rubber	Pcs	10
96	O-Ring ,D 125 x T 4 mm, Rubber	Pcs	10
97	O-Ring ,D 125 x T 4 mm, Vition	Pcs	10
98	O-Ring ,D 125.6 x T 2 mm, Rubber	Pcs	10
99	O-Ring ,D 130 x T 3.5 mm, Rubber	Pcs	10
100	O-Ring ,D 130 x T 5 mm, Rubber	Pcs	10
101	O-Ring ,D 130 x T 6 mm, Vition	Pcs	10
102	O-Ring ,D 130 x T 7 mm,Rubber	Pcs	10
103	O-Ring.D 133x T 2,62 mm. Rubber	Pcs	10
104	O-Ring ,D 135 x T 5 mm, Rubber	Pcs	10
105	O-Ring ,D 140 x T 3 mm, Rubber	Pcs	10
106	O-Ring ,D 140 x T 5 mm, Rubber	Pcs	10
107	O-Ring .D 142x T 3,53 mm.Rubber	Pcs	10
108	O-Ring ,D 145 x T 7 mm, Rubber	Pcs	10
109	O-Ring ,D 145.4 x T 5.33 mm, Vition	Pcs	10
110	O-Ring .D 145,72x T 2,62 mm. Rubber	Pcs	10

111	O-Ring ,D 150 x T 4 mm, Vition	Pcs	10
112	O-Ring ,D 150 x T 5 mm, Rubber	Pcs	10
113	O-Ring ,D 150 x T 6 mm, Rubber	Pcs	10
114	O-Ring .D 158,34x T 3,53 mm. Rubber	Pcs	10
115	O-Ring ,D 170 x T 2 mm, Rubber	Pcs	10
116	O-Ring ,D 170 x T 3 mm, Rubber	Pcs	10
117	O-Ring ,D 170 x T 4 mm, Vition	Pcs	10
118	O-Ring ,D 170 x T 5 mm, Vition	Pcs	5
119	O-Ring ,D 179.2 x T 5.7 mm, Rubber	Pcs	5
120	O-Ring ,D 183 x T 3.5 mm, Rubber	Pcs	5
121	O-Ring .D 190,09x T 3,53 mm.Rubber	Pcs	5
122	O-Ring ,D 192 x T 2 mm, Rubber	Pcs	5
123	O-Ring .D 195,00 X T 3,55 mm. Rubber	Pcs	5
124	O-Ring ,D 196,52 x T 2,62 mm.Rubber	Pcs	5
125	O-Ring ,D 200 x T 4 mm, Vition	Pcs	5
126	O-Ring ,D 200 x T 6.99 mm, Vition	Pcs	5
127	O-Ring .D 202,79 x T 3,53 mm.Rubber	Pcs	5
128	O-Ring ,D 205 x T 5 mm, Vition	Pcs	5
129	O-Ring ,D 215 x T 6 mm, Rubber	Pcs	5
130	O-Ring ,D 217 x T 5.5 mm, Rubber	Pcs	5
131	O-Ring .D 221,84 x T 3,53 mm.rubber	Pcs	5
132	O-Ring ,D 227.9 x T 6.99 mm, Vition	Pcs	5
133	O-Ring ,D 228 x T 2,62 mm.Rubber	Pcs	5
134	O-Ring ,D 234 x T 6.99 mm, Rubber	Pcs	5
135	O-Ring ,D 235 x T 7 mm, Vition	Pcs	5
136	O-Ring .D 240,89 x T 3,53 mm.Rubber	Pcs	5
137	O-Ring ,D 270 x T 4 mm, Rubber	Pcs	5
138	O-Ring .D 278,99 x T 3,53 mm.Rubber	Pcs	5
139	O-Ring .D 281,3 x T 2,62 mm.Rubber	Pcs	5
140	O-Ring ,D 290 x T 4 mm, Rubber	Pcs	5
141	O-Ring ,D 290 x T 5 mm, Rubber	Pcs	5

142	O-Ring ,D 300 x T 3 mm, Rubber	Pcs	5
143	O-Ring ,D 300 x T 4 mm, Vition	Pcs	5
144	O-Ring ,D 400 x T 4 mm, Rubber	Pcs	5
145	Oil Seal 20x42x7	Pcs	10
146	Oil Seal 25x40x7	Pcs	5
147	Oil Seal 25x52x7	Pcs	5
148	Oil Seal 25x62x7	Pcs	5
149	Oil Seal 30x40x7	Pcs	5
150	Oil Seal 30X42X7	Pcs	5
151	Oil Seal 30x62x7	Pcs	5
152	Oil Seal 35X50X7	Pcs	5
153	Oil Seal 35x72x10	Pcs	5
154	Oil Seal 36x52x7	Pcs	5
155	Oil Seal 40X52X7	Pcs	5
156	Oil Seal 40x62x6	Pcs	5
157	Oil Seal 40x80x8	Pcs	5
158	Oil Seal 40x90x8	Pcs	5
159	Oil Seal 45X60X10	Pcs	5
160	Oil Seal 45x62x7	Pcs	5
161	Oil Seal 50X35X8	Pcs	5
162	Oil Seal 50X60X10	Pcs	5
163	Oil Seal 50X65X8	Pcs	5
164	Oil Seal 50X70X10	Pcs	5
165	Oil Seal 50x72x8 Viton	Pcs	5
166	Oil Seal 50x90x10	Pcs	5
167	Oil Seal 50x110x12	Pcs	5
168	Oil Seal 55x72x10	Pcs	5
169	Oil Seal 58x75x10 Viton	Pcs	5
170	Oil Seal 60X80X10	Pcs	2
171	Oil Seal 60X85X10	Pcs	5
172	Oil Seal 60x110x12	Pcs	5



173	Oil Seal 65x100x10	Pcs	5
174	Oil Seal 65x85x10	Pcs	5
175	Oil Seal 70x125x12	Pcs	5
176	Oil Seal 70x90x10	Pcs	10
177	Oil Seal 72X55X10	Pcs	5
178	Oil Seal 72x 95x10 Viton	Pcs	5
179	Oil Seal 75x130x12	Pcs	5
180	Oil Seal 80X100X10	Pcs	5
181	Oil Seal 80x125x10	Pcs	5
182	Oil Seal 90X110X12	Pcs	5
183	Oil Seal 90x120x12 Viton	Pcs	5
184	Oil Seal 90x140x11	Pcs	5
185	Oil Seal 95x110x12	Pcs	5
186	Oil Seal 95X170X13 Viton	Pcs	5
187	Oil seal 100x120x 12	Pcs	5
188	Oil Seal 105X130X12	Pcs	5
189	Oil Seal 105X130X13	Pcs	5
190	Oil Seal 105X140X12	Pcs	5
191	Oil Seal 105X140X13	Pcs	5
192	Oil seal 105x160x12	Pcs	5
193	Oil Seal 110X130X12	Pcs	5
194	Oil Seal 120X150X12 Viton	Pcs	5
195	Oil Seal 125x150x12	Pcs	5
196	Oil Seal 130x170x12	Pcs	5
197	Oil Seal 140x170x12	Pcs	5
198	Oil Seal 150X180X13	Pcs	5
199	Oil Seal 160x190x15	Pcs	5
200	Oil Seal 180X210X15 Viton	Pcs	5
201	Oil Seal 200X230X15 Viton	Pcs	8
202	Oil Seal 240x270x15	Pcs	5
203	Oil Seal 260x300x20	Pcs	5

204	Oil Seal 300x340x16	Pcs	5
205	Oil Seal 350x394x20	Pcs	5
206	V Cap Seal 170x15	Pcs	5
207	V Cap Seal 200X13	Pcs	5
208	V Cap Seal 100x12	Pcs	5
209	V Cap Seal 110x10	Pcs	5
210	V Cap Seal 120x12	Pcs	5
211	V Cap Seal 130x12	Pcs	5
212	V Cap Seal 140x12	Pcs	5
213	V Cap Seal 160x15	Pcs	5
214	V Cap Seal 170x15	Pcs	5
215	V Cap Seal 47x7	Pcs	5
216	V Cap Seal 55x10	Pcs	5
217	V Cap Seal 62x10	Pcs	5
218	V Cap Seal 72x10	Pcs	5
219	V Cap Seal 80x12	Pcs	5
220	V Cap Seal 90x10	Pcs	5
221	V Cap Seal 140x12	Pcs	5

**Sheet Metal**

<b>Sr. No</b>	<b>Description</b>	<b>unit</b>	<b>Req</b>
1	Flat, Sheets, 05mm,Teflon.	MT2	4
2	Flat, Sheets, 01mm,St-37.	MT2	60
3	Flat, Sheets, 01.5mm,St-37.	MT2	60
4	Flat, Sheets, 02mm,St-37.	MT2	60
5	Flat, Sheets, 03mm,St-37.	MT2	30
6	Flat, Sheets, 04mm,St-37.	MT2	30
7	Flat, Sheets, 05mm,St-37.	MT2	30
8	Flat, Sheets, 06mm,St-37.	MT2	30
9	Flat, Sheets, 08mm,St-37.	MT2	20

10	Flat, Sheets, 10mm,St-37.	MT2	20
11	Flat, Sheets, 12mm,St-37.	MT2	20
12	Flat, Sheets, 15mm,St-37.	MT2	12
13	Flat, Sheets, 16mm,St-37.	MT2	6
14	Flat, Sheets, 20mm,St-37.	MT2	6
15	Graphite Sheets Reinforced With Inconel Wire - 0.5 mm	Pcs	5
16	Graphite Sheets Reinforced With Inconel Wire - 1 mm	Pcs	5
17	Graphite Sheets Reinforced With Inconel Wire - 2 mm	Pcs	5
18	Graphite Sheets Reinforced With Inconel Wire - 3 mm	Pcs	5
19	Gasket Rubber, 1000 x 1000 x 1mm.	Pcs	5
20	Packing Seal Rubber, Flat, 1.5 mm.	Pcs	5
21	Gasket Rubber, 1000 x 1000 x 2mm.	Pcs	5
22	Gasket Rubber, 1000 x 1000 x 3mm.	Pcs	5
23	Gasket Rubber, 1000 x 1000 x 5mm.	Pcs	5
<b>Fitting Bush</b>			
	<b>Description</b>	<b>unit</b>	<b>Req</b>
1	Fitting Bush, 001/8", Galvanize	Pcs	50
2	Fitting Bush, 003/8", Galvanize	Pcs	50
3	Fitting Bush, 001/4", Galvanize	Pcs	50
4	Fitting Bush, 001/2", Galvanize	Pcs	50
5	Fitting Bush, 3/4", Galvanize	Pcs	50
6	Fitting Bush, 01.0", Galvanize	Pcs	30
7	Fitting Bush, 1.25", Galvanize	Pcs	20
8	Fitting Bush, 001.5", Galvanize	Pcs	20
9	Fitting Bush, 002", Galvanize	Pcs	20
10	Fitting Bush, 2.5", Galvanize	Pcs	20
11	Fitting Bush, 3.0", Galvanize	Pcs	10
12	Fitting Bush, 4.0", Galvanize	Pcs	5
13	Fitting Nipple, 001/8", Steel	Pcs	50
14	Fitting Nipple, 003/8", Steel	Pcs	50

15	Fitting Nipple, 001/4", Steel	Pcs	50
16	Fitting Nipple, 1/2", Galvanize	Pcs	50
17	Fitting Nipple, 3/4", Galvanize	Pcs	50
18	Fitting Nipple, 1.0", Galvanize	Pcs	30
19	Fitting Nipple, 1.25", Galvanize	Pcs	30
20	Fitting Nipple, 1.50", Galvanize	Pcs	30
21	Fitting Nipple, 2.0", Galvanize	Pcs	30
22	Fitting Nipple, 2.5", Galvanize	Pcs	20
23	Fitting Nipple, 3.0", Galvanize	Pcs	20
24	Fitting Nipple, 004", Galvanize	Pcs	10
25	Fitting Union, 1/4", Galvanize	Pcs	20
26	Fitting Union, 1/2", Galvanize	Pcs	20
27	Fitting Union, 3/4", Galvanize	Pcs	20
28	Fitting Union, 1", Galvanize	Pcs	20
29	Fitting Union, 01.25", Galvanize	Pcs	20
30	Fitting Union, 1.50", Galvanize	Pcs	20
31	Fitting Union, 2", Galvanize	Pcs	20
32	Fitting Union, 02.50", Galvanize	Pcs	20
33	Fitting Union, 03", Galvanize	Pcs	20
34	Fitting Elbow 90 Equal, 1/2", Galvanize	Pcs	20
35	Fitting Elbow 90 Equal, 3/4", Galvanize	Pcs	20
36	Fitting Elbow 90 Equal, 1.0", Galvanize	Pcs	20
37	Fitting Elbow 90 Equal, 01.25", Galvanize	Pcs	20
38	Fitting Elbow 90 Equal, 1.50", Galvanize	Pcs	20
39	Fitting Elbow 90 Equal, 2.0", Galvanize	Pcs	20
40	Fitting Elbow 90 Equal, 2.50", Galvanize	Pcs	20
41	Fitting Elbow 90 Equal, 3.0", Galvanize	Pcs	20
42	Fitting T.90 Equal, 1/2", Galvanize	Pcs	20
43	Fitting T.90 Equal, 3/4", Galvanize	Pcs	20
44	Fitting T.90 Equal, 1.0", Galvanize	Pcs	20
45	Fitting T.90 Equal, 01.25", Galvanize	Pcs	20

46	Fitting T.90 Equal, 01.5", Galvanize	Pcs	20
47	Fitting T.90 Equal, 2", Galvanize	Pcs	20
48	Fitting T.90 Equal, 2.5", Galvanize	Pcs	20
49	Fitting T.90 Equal, 3.0", Galvanize	Pcs	20
50	Fitting T.90 Equal, 4.0", Galvanize	Pcs	20
51	Fitting Reducer, 0.25"/0.5, Galvanize	Pcs	20
52	Fitting Reducer, 0.5"/0.75, Galvanize	Pcs	20
53	Fitting Reducer, 0.75"/1, Galvanize	Pcs	20
54	Fitting Reducer, 1"/1.25, Galvanize	Pcs	20
55	Fitting Reducer, 1.25"/1.5, Galvanize	Pcs	20
56	Fitting Reducer, 1.5"/1.75, Galvanize	Pcs	20
57	Fitting Reducer, 1.75"/2, Galvanize	Pcs	20
58	Straight Push - In With Male Thread	Pcs	20
59	Quick connection 4 mm/ 1/4"	Pcs	20
60	Quick connection 6 mm/ 1/8"	Pcs	20
61	Quick connection 6 mm/ 1/4"	Pcs	20
62	Quick connection 8 mm/ 1/8"	Pcs	20
63	Quick connection 8 mm/ 1/4"	Pcs	20
64	Quick connection 10 mm/ 1/4"	Pcs	20
65	Quick connection 10 mm/ 1/2"	Pcs	20
66	Quick connection 12 mm/ 1/2"	Pcs	20
67	Quick connection 12 mm/ 3/8"	Pcs	21
68	Hose Dia 6	Mtr	20
69	Hose Dia 8	Mtr	20
70	Hose Dia 10	Mtr	20
71	Hose Dia 12	Mtr	20

**Mechanical Spare Part List\_ Specific**

S.N	Equip. Name	Item - description	Specs/ Drawing No	UoM	ANN-REQ U.	PART CATEGORY
1				assy	0	
2		Hammer	APD:NC-3000-211-M01-001	pcs	100	spare
3		Hammer shafts	APD:NC-3000-211-M01-001	pcs	10	spare
4		Strike plate	GA:LY2022.7-9 POS#37	pcs	4	spare
5		Tooth plate	GA:LY2022.7-16 POS#38	pcs	4	spare
6		Pulley for rotor drive side	DWG:	pcs	1	spare
7		Pulley for feeder roller	DWG:	pcs	1	spare
8		Coupling	DWG:	pcs	1	spare
9		Hydraulic Nut	MODEL:HMV 76E	pcs	2	spare
10		Bearing (drive pulley)	SPHERICAL ROLLER 23232 C3/W33	pcs	2	TOOLS
11		PLUMMER BLOCK		Pcs	2	spare
12		Liners LST crusher wall	Liner 2 # LY2022.1-3/ DWG:LY2028.1	pcs	2	spare
13			Liner # 2 (left)LY2022.1-4	pcs	1	spare
14			Liner # 2 (right)LY2022.1-5	pcs	1	spare
15			Liner # 3 (left)LYD2022.1-7	pcs	1	spare

16			Liner 3 # (right) LYD2022.1-8	pcs	1	spare
17			Liner # 4 (left)LYD2022.1-9	pcs	1	spare
18			Liner 4 # (right) LYD2022.1-10	pcs	1	spare
19			Liner # 5 (left)LYD2022.1-11	pcs	1	spare
20			Liner # 5 (right)LYD2022.1-12	pcs	1	spare
21			Liner # 6 (left)LYD2022.1-13	pcs	1	spare
22			Liner 6 # (right)LYD2022.1-14	pcs	1	spare
23			Liner 7 # LY2022.1-15	pcs	8	spare
24			Liner # 8 (left)LYD2022.1-16	pcs	1	spare
25			Liner 8 # (right)LYD2022.1-17	pcs	1	spare
26			Liner 9 #LYD2022.1-18	pcs	4	spare
27			Liner 10 #LYD2022.1-21	pcs	12	spare
28			Liner 11 # (left)LY2022.1-23	pcs	1	spare
29			Liner 11 # (right)LY2022.1-24	pcs	1	spare
30			Liner 12 # (left)LY2022.1-25	pcs	1	spare
31			Liner 12 # (right)LY2022.1-26	pcs	1	spare
32			Liner 13 # (left)LY2022.1-27	pcs	1	spare
33			Liner 13 # (right)LY2022.1-28	pcs	1	spare
34			Liner 14 # (left)LY2022.1-31	pcs	1	spare
35			Liner 14 # (right)LY2022.1-32	pcs	1	spare
36			Liner 15 #LY2022.1-33	pcs	2	spare

			16 # liner (left)LY2022.1-34	pcs	2	spare
			16 # liner (left)LY2022.1-35	pcs	2	spare
			Liner 16 # (right)LY2022.1-36	pcs	2	spare
			Liner 17 # (right)LY2022.1-47	pcs	2	spare
			Liner 17 # (left)LY2022.1-48	pcs	2	spare
			Liner 18 # (left)LYD2022.1-51	pcs	1	spare
			Liner 18 # (right)LYD2022.1-52	pcs	1	spare
	Belt conveyer	Belt conveyer	Type : TD75 trough type,size : B1000×18400	assy	0	
	Belt conveyer	type : TD75 trough type Specification: Size B1000×20300	Type : TD75 trough type Specification: Size B1000×20300	assy	0	
		coupling		PCs	1	spare
	bag filter	typePPCS64-5 air:22300 m3/h,filtering area : 310 m2			0	
		bearing		pcs	2	spare
	centrifugal fan	centrifugal fan	type : 9-19No12.5D,air volume : 27757 m3/h,air pressure : 4028 Pa,rotating direction : clockwise45,rev : 960 r/min	set	1	
		bearings		pcs	2	spare
	bag filter	air box pulse bag filter	type : HMC-48,air	pcs	1	



			volume : 2100-3200m <sup>3</sup> /h,filtering area : 36m <sup>2</sup>			
		bearing		pcs	2	spare
		bearing		pcs	2	spare
	bag filter	air box pulse bag filter	type : HMC-48,air volume : 2100-3200m <sup>3</sup> /h,filtering area : 36m <sup>2</sup>		1	
		bearing		pcs	2	spare
	bag filter	air box pulse bag filter	HMC-48, air volume : 2100-3200m <sup>3</sup> /h,filtering area : 36m <sup>2</sup>		1	
		bearing		pcs	2	spare
		bearing		pcs	2	spare
						spare
						spare
	Gallery fan	gallery fan	Type : air volume : 20000m <sup>3</sup> /h,full pressure : 200Pa,Rev:1450r/m in	set	1	
	Manual butterfly valve	manual butterfly valve	Nominal diameter : DN400	set	1	
	Belt conveyer	Belt conveyer	Type : TD75 trough,size : B1000×310500	assy	0	
		Bearing For Drive Drum		PCS	2	Spare
		Bearing for Driven Drum		PCS	2	Spare

		Electro-hydraulic thruster	Type : Ed 80/6 Rated Thrust : 800N Input Power : 330W Phase No : 3 Voltage = 220/380V Ins CLS = Stroke = 60MM I = 2.46/1.42	PCS	1	Spare
	Lime stone Belt conveyor	type : TD75 trough type,size : B1000×188 100,conveying capacity : 630t/h,conveying speed : 1.6 m/s			1	
		Drive Drum	head $\phi$ 630mm	pcs	1	spare
		Driven Drum	Tail $\phi$ 500mm	pcs	1	spare
		Bearing For Drive Drum		PCS	2	spare
		Bearing for Driven Drum		PCS	2	spare
		type : TD75, trough type,size : B1000×823 00.conveying capacity : 130t/h,conveying speed : 1.6 m/s		assy	0	
		Drive Drum	head $\phi$ 630mm	pcs	1	spare
		Driven Drum	Tail $\phi$ 500mm	pcs	1	spare
	Belt Conveyor	type : TD75 trough type,size : B1000×144 50,conveying capacity			1	

		: 630t/h,conveying speed : 1.6 m/s				
		Drive Drum	head $\phi$ 630mm	pcs	1	spare
		Driven Drum	Tail $\phi$ 500mm	pcs	1	spare
		Drive Drum Bearings		pcs	2	spare
		Driven drum Bearings		pcs	2	spare
		Take Up pulley		pcs	2	spare
		Take up pulley Bearings		pcs	2	spare
		type : TD75 trough type,size : B1000×243 000,conveying capacity : 630t/h, conveying speed : 1.6 m/s			1	
		Drive Drum	head $\phi$ 800mm	pcs	1	spare
		Driven Drum	Tail $\phi$ 500mm	pcs	1	spare
	bag filter	air volume : 6900m <sup>3</sup> /h,filtering area : 93m <sup>2</sup> ,filtering speed : 1.0-1.5m/min			1	
		lifting valve (pnuematic cylinder)	60 x 160	pcs	3	spare

		bearing		pcs	1	spare
		fan for underground	type : T40-11:7A,air volume : 20000m3/h,full pressure : 200Pa,Rev:1450r/m in	set	1	spare
		bearings		Pcs	2	spare
		bearings		pcs	2	spare
	Gypsum Apron Feeder			assy	0	
		Head sprocket		PCS	2	spare
		Tail(take up) sprockets		PCS	2	spare
		apron feeder support roller bearing	BEARING BALL 6206 Z SKF	pcs	110	spare
	Belt Conveyor	type : TD75, Size : B800×40750mm, capacity : 150t/h	type : TD75, Size : B800×40750mm,capacit y : 150t/h	assy	0	
		Drive Drum Bearings		PCS	2	spare
		Driven drum Bearings		PCS	2	spare
		Take Up pulley		PCS	1	spare
		Take up pulley Bearings		PCS	2	spare
		type : TD75,Size : B80			0	

		0×122700mm,capacity : 250t/h,speed : 1.25 m/s				
		Drive Drum Bearings		PCS	2	spare
		Driven drum Bearings		PCS	2	spare
		Take up pulley Bearings		PCS	2	spare
	Belt Conveyor	Type : TD75, Size : B800×85050mm, capacity : 250t/h, speed : 1.25 m/s, inclantion : 8.2061°	Type : TD75, Size : B800×85050mm, capacity : 250t/h,speed : 1.25 m/s, inclantion : 8.2061°	assy	0	
	air box pulse bag filter	type : PPCS64-4,capacity : 16740 m3/h,filtering area : 186 m2	type : PPCS64-4,capacity : 16740 m3/h,filtering area : 186 m3	assy	0	
		lifting valve (pnuematic cylinder)	60 x 160	Pcs	4	spare
		Bag cage	130 X 2448	Pcs	10	spare
	BF06a screw conveyer	screw conveyor	Size : Φ300mm,conveying capacity : 30m3	Pcs	1	spare
		bearing		Pcs	2	spare
		cycliodal drive		Pcs	1	spare
	BF06b rotary airlocked valve	rotary airlocked valve	Size : 320x320mm	Pcs	1	spare

		bearing		Pcs	2	spare
		cycliodal drive		Pcs	1	spare
		bearing		pcs	2	spare
		bearing		pcs	2	spare
		type:DT II , size:B1000×39950,cap acity:500t/h,belt speed:1.25m/s		assy	0	
		Drive Drum	head $\phi$ 630mm	pcs	1	spare
		Driven Drum	Tail $\phi$ 500mm	pcs	1	spare
		gearebox	type:ZQ75,reduction ratio :i=40	unit	1	critical
		DIVERTER VALVE		assy	0	
		Hydraulic Seal (piston)	SEAL HYDRAULIC 40MM 50MM 6MM UHS	pcs	2	spare
		Hydraulic Seal (piston rod)	SEAL HYDRAULIC 28MM 35.5MM 5MM UHS	pcs	2	spare
		O-Ring	O-RING 46MMID 3MMT	pcs	2	spare
		Type: Groove type DT II ,Size : B1000×129 60mm,Spacing between leading roller and tail roller : 12.96m,Capacit y : 500 t/h		assy	0	

		Drive Drum	head $\phi$ 630mm	pcs	1	spare
		Driven Drum	Tail $\phi$ 630mm	pcs	1	spare
		Drive Drum Bearings		pcs	2	spare
		Driven drum Bearings		pcs	2	spare
		gearebox	type:ZQ75,reduction ratio :i=40	unit	1	spare
		Take up pulley Bearings		pcs	2	spare
		Endless weigh feeder belt clay & basalt	AR 800MMW NN 200/3 3TC 2BC 5.6M,50MM CORR SIDE	Pcs	2	CAPEX
		BEARING (FOR PULLEY)		Pcs	4	CAPEX
		BEARING (FOR PULLEY)		pcs	4	CAPEX
	Belt Conveyor	type:DT II ,size:B800×1 12000,capacity:300t/h ,belt speed:1.25m/s		assy	0	spare
		Drive Drum	head $\phi$ 630mm	pcs	1	spare
		Driven Drum	Tail $\phi$ 500mm	pcs	1	spare
		type:RCY(C)-8,rated hanging up height:250mm ,outline size:2350×1280×796 mm		assy	0	spare

		Transmission Chain	CHAIN ROLLER 16-B1	mtr	2	spare
		type :HMC-96,air volume :6500m3/h, resistance:<1200Pa,filtering air speed :1.6m/min, total filtering area:72m2			0	
		bearing		pcs	2	spare
		bearing		pcs	2	spare
	air box pulse bag filte	type :JLPM3A-90, air volume :6900m3/h, total filtering area : 93m2,net filtering area : 62m2		assy	0	spare
		bearing		pcs	2	spare
	Air box pulse bag filter	JLPM4A-120, air volume:8930m3/h,filtering area:124m2, filtering air speed:1.2m/min		assy	0	spare
		bearing		pcs	2	spare
	Tripple gate				0	
		SEAL OIL (Damper)	90MM 125MM 12MM TB VITON MATERIAL	PCS	6	spare



		Hydraulic pump PUMP GEAR	11ML/REV 25MPA, HYDRAULIC STATION SN: DD09033	PCS	1	spare
		Oil filter		PCS	1	spare
		Input shaft and mating pinion	POS.41 CODE: SP2249.09.35, DWG: SP22110.03.010	set	1	MAAG Gear box
	Auxiliary Gearbox GB02	Gearbox		ASSY	1	
		coupling		PCS	1	
	Grinding Sprinklers	spray nozzle qty:3,water spraying capacity:1~10t/h, spraying water pressure:0.3 Mpa		Set	3	spare
		Accumulators bladder	APD: NC-3000-321-M01-009	pcs	12	spare
		ROD TENSION VRM	JB/T5000 POS#13 ,PN:SP22102.03.01 DWG: SP22105.03.02	set	3	spare
		Oil Filter		pcd	6	spare
		Relief Valve		pcd	8	spare
		Accumulator		pcs	5	spare
		PUMP GEAR	11ML/REV 25MPA, HYD.STATION SN: DD09033	pcd	1	spare

	main gearbox oil station			assy	1	spare
	double cyclone dust collecto	diameter:2-Φ5600mm, processing air volume: 500000 (max.550000) m3/h		assy	0	
	CS10a1~a2 rotary discharger	Rotary Valve	size:700×500mm,cap:160m3/h, WITH MOTOR type:BLY-22-71	set	1	critical
		Bearing		pcs	4	spare
				assy	0	
		coupling drive side		pcs	1	spare
		Tube heat exchanger for raw mill fan bearing	OP=1mpa TP=1.25mpa HT area=3m2	pc	1	spare
		Tube heat exchanger for motor bearing	p=0.63mpa HT area=6m2	pc	1	spare
		pump for raw mill fan bearing oil station		pc	1	spare
		pump for motor bearing oil station		pc	1	spare
	FN11c expansion joint	expansion joint	type : FZB-40F	pc	1	spare
				assy	0	
		IMPELLER FAN with shaft	TYPE:3500 DI BB24	assy	1	strategic
		coupling drive side		Set	1	spare

		coupling driven side		Set	1	spare
		Tube heat exchanger for fan bearing	OP=1mpa TP=1.25mpa HT area=3m2	pc	1	spare
		tube heat exchanger for fan motor bearing	p=0.63mpa HT area=6m2	pc	1	spare
		pump for bearing oil station		pc	1	spare
		pump for motor bearing oil station		pc	1	spare
	FN19a fan inlet regulation valve	regulation valve		Set	1	spare
	FN19c expansion joint	expansion joint	type : FZB-40F	pc	1	spare
	hydraulic couple	type:YOTGCD1050		assy	1	
		GET VALVE	GET VALVE 1", 1" Threaded Gate Valve	pcs	2	spare
	hydraulic coupler			assy	0	
	FN33c expansion joint	expansion joint	type : FZB-40F	pc	1	spare
	chain conveyer	type : FU270-18.73-X1- left fixed,capacity : 50m3/h,chain speed : 17m/min,power : 11kW		Unit	0	

		GEARED MOTOR	Power:11kW	PCS	1	spare
		sprocket head		Set	1	spare
		sprocket tail		Set	1	spare
		chain		Set	1	spare
		rail flat bar		set	1	spare
	CV34a~CV37a rigid impeller feeder		size : 400×400mm	PCS	1	spare
	chain conveyer		type : FU270-26.08-X1- right fixed,capacity : 50m3/h,chain speed : 17m/min	assy	0	
		geared motor	Power : 15kW	pcs	1	spare
		sprocket head		set	1	spare
		sprocket tail		set	1	spare
		chain		set	1	spare
		rail flat bar		set	1	spare
					0	
		geared motor	power : 15kW	pcs	1	Spare
		sprocket head		set	1	Spare

		sprocket tail		set	1	Spare
		chain		set	1	Spare
		rail flat bar		set	1	Spare
		bearings		set	1	Spare
		oil seal		set	1	Spare
					0	
		BEARING BALL (Inboard) for fluid coupling	6026 C3	pcs.	2	Spare
		Oil Seal (Inboard) for fluid coupling	125MM 160MM 12MM TC DOUBLE LIPS VM	pcs.	2	Spare
		BEARING ROLLER SPHERICAL Tail side	23122 CC/W33	pcs.	2	Spare
		BEARING ROLLER SPHERICAL head side	23140 CC/W33	PCS	2	Spare
		bucket		pcs	20	Spare
	Root blower	type:JAS-150,direct connected, air volume:27.8m <sup>3</sup> /min, air pressure:19.6kPa,rev:1 450r/min		Set	1	

		Driven Pulley_1	APD:331-BL05-BL05-02F1	pcs	1	Spare
		Drive Pulley_2	APD:331-BL05-BL05-02F1	pcs	1	Spare
		repair kits		set	1	Spare
		canvass	6MMT 570MMW 3ML	mtr	10	Spare
	centrifugal fan for chute	type:XQ I №5.4A,clock wise rotating0°,air volume:595m3/h,air pressure:6862Pa,rev:2840r/min			1	
		bearing		Pcs	2	Spare
	SQ19d air slide (homo bin discharging)	air slide	size:B500mm	mtr		Spare
		type:XQ I №5.4A,air volume:595m3/h,full pressure:6862Pa,rev:2840r/min		assy	1	
		impeller with shaft	for fan type:XQ I №5.4A,	assy		Spare
		plate type flowmeter	capacity:30~350t/h,precision:±0.5%~±1%	set	1	
						Spare
		plate type flowmeter	capacity:30~350t/h,precision:±0.5%~±1%	set	1	Spare
		canvass	6MMT 5700MMW 25ML	MTR		Spare

		type:XQ I №5.4A,air volume:595m3/h,full pressure:6862Pa,rev:2 840r/min			1	
		impeller with shaft	for fan type:XQ I №5.4A,	assy		Spare
		Type: MLG200-A Rating: 45kW Speed: 1900 RPM Press: 68.6kPa Make: CNBM			0	
		PULLEY DRIVE SIDE		pcs	1	Spare
		PULLEY DRIVEN SIDE		pcs	1	Spare
		repair kit		set	4	Spare
		type:T35No8A,flowrate: 25280m3/h,full pressure:345 Pa			0	
		Impeller with shaft	TYPE:T35No8A,flowrate:25280 m3/h,pressure:345 Pa	pcs	1	Spare
	BUCKET ELV				0	
		oil seal for fluid coupling	SEAL OIL 130MM 160MM 15MM TC VITON	pcs.	2	Spare
		oil seal for fluid coupling	SEAL OIL 120MM 150MM 14MM TC VITON	pcs.	2	Spare
		oil seal for fluid coupling	SEAL OIL 110MM 140MM 15MM TC VITON	pcs.	2	Spare
	Steel reinforced Belt					Spare

		bucket		pcs	15	Spare
		BEARING		PCS	2	Spare
		flap valv	size : 800×800mm,circulation capacity : 260t/h	PCS	1	
	Kiln Feed Rotary Air Lock	preheater system at kiln inlet	type : C5 preheater with KSF calciner	assy	0	
		DAMPER SINGLE FLAP C1,C2,C3	APD: CGJ0806-S-A03JX-17/36	PCS	1	Spare
		bearings Flap Shaft End		PCS	4	Spare
	high pressure fan	high pressure centrifugal fan	type : XQ I 5.4A ( clockwis90°) air volume : 1257m3/h,air pressure : 6110Pa,rev : 2840r /min	assy	1	
		Repair Kit		assy	1	
		solenoid Valve repair Kit	type : Capacity 100L size : mm working pressure : 0.8Mpa power : 0.022kW	Set	21	
	KILn	Pinion gear		PCS	1	Critical
	main Gearbox oil station			assy	1	
		low pressure pump	????	pcs	1	Spare



		Tube heat exchanger	p=0.63mpa HT area=8m2	pcs	1	Spare
		guage pressure		pcs	2	Spare
		Oil Filter		Pcs	1	Spare
		Non Return Valve		Pcs	1	Spare
	Auxiliary gearbox -	Gear reducer assembly	KC275A	unit	1	Spare
		Coupling	KC275A	pcs	1	Spare
		Clutch coupling	KC275A	pcs	1	Spare
		Bearing Liners white metal	KC275A	set	2	Spare
	Thrust roller	Thruster GUIDE ROLLER CONICAL FLS	GUIDE ROLLER CONICAL 13093488 KD-3281 HTD SPARES	pc	1	Spare
	Hydraulic station for thrust roller	High pressure pump	pump PN:8 HTD SPARES	pc	1	Spare
		Pump seals for Hydraulic thruster	HTD PART #	set	3	Spare
		Pressure releaf valve	HTD PART #	pc	2	Spare
		repair kit for Hydraulic cylender	HTD PART #	set	1	Spare
		Check valve	HTD PART #	pc	2	Spare

		Hydraulic cylinder for thruster	HTD PART #	pc	2	Spare
		Tertiary Air duct		Assy	1	
	Kiln tyre cooling fan Pier II an			ASSY	0	
		bearings		pcs	4	Spare
		Impeller with shaft but without bearings		ASSY	1	Spare
		Burner operating Valve train		set	1	Spare
		Spares for valve train		set	1	
	Cooler Water spray	Pump	PUMP WATER SPRAY MODEL:CDL8 FLOW:8M3/HR HEIGHT:75M, POWER:3KW,SPEED:2900RPM,WITH MOTOR	Ass	1	Critical
	Roots blower (primary air fan)			Assy	0	
		roots blower oil seal	Part # to be asked OEM	set	2	Spare
		blower bearing	Part # to be asked OEM	pcs	8	Spare
		Timing gear	Part # to be asked OEM	sets	8	Spare

		V belt driving	Part # to be asked OEM	sets	8	Spare
		Lobes for roots blower	Part # to be asked OEM	set	4	Spare
		GRATE COOLER PLATES AND FIXATION BOLTS		ASSY	0	
	CC06s grease station system			assy	1	
	Hydraulic Drive			assy	1	
		Hydraulic Cylinder	Type: 3300 t2 Pressure: 25 Mpa C050153-4 Piston Rod Dia: 65mm	pcs	2	Spare
		Hydraulic pump(Main)	????	pcs	2	Spare
		Heat exchanger plate type	OP=1mpa TP=1.25mpa HT Area=15m2	pcs	1	Spare
		Hydraulic Cylinder repair kit	PISTON SEAL REPAIR KIT MODEL: C050153-4	set	4	Spare
		coupling		pcs	2	Spare
		coupling rubber		pcs	8	Spare
	CC06r water srpay system	Pump		Sst	1	Spare
		Nozzel		Set	2	Spare
	Cooler Blaster	Piston	PISTON BLASTER ASSEMBLY CODE: AB05-1001.03	pcs	4	Spare

		O-Ring	O-RING PISTON CODE: AB05-1001.04	pcs	4	Spare
		Rubber Pad	PAD RUBBER CODE: AB05-1001.06	pcs	4	Spare
		Gasket	GASKET COVER PLATE CODE: AB05-1001.07	pcs	4	Spare
		Exhaust Valve	VALVE QUICK EXHAUST ASSEMBLY DWG: MMF/G/15-0105.06	pcs	4	Spare
		Rubber Diaphragm	DIAPHRAGM RUBBER CODE: QE-1005.01	pcs	8	Spare
		O-Ring	O-RING 40MMID 3MMT CODE: QE-1005.02	pcs	8	Spare
				assy	1	
		Cooler ESP MODEL: BS930EP		ASSY	0	
		Supporting Insulator with seals		set	1	Spare
		Bush fittings to all rapping hammers		set	1	Spare
		Packing for stuffing box and rapping shaft		set	1	Spare
		Drive gearbox collecting electrodes rapping		pcs	4	Spare
		Drive gearbox emitting electrodes rapping	size : XWED0.18-8135A-2065	pcs	4	Spare
		Drive gearbox collecting electrodes rapping		pcs	4	Spare

		Drive gearbox emitting electrodes rappingg		pcs	4	Spare
		Rapping shaft		set	1	Spare
		Rapping hammers		set	1	Spare
		DRAG chain conveyer	size : 270×21990mm.chainrev : 13.5m/min,capacity : 40m3 /h	ASSY	0	
		rail flat bar		mtr	44	Spare
		chain conveyor	152.4MMP 50MMW 8MMT, APD: 431-EP24-CD01-15F1	Mtr	88	Spare
		bearing		pcs	4	Spare
		sprocket head	RC100 45T DUPLEX 400BHN	pcs	2	Spare
		gearbox drive		pcs	1	Spare
		sprocket tail	RC100 17T DUPLEX 400BHN	pcs	2	Spare
		Transmission Chain	20A DUPLEX RC100 31.75P	MTR	5	Spare
	Cooler ESP Fan (VFD)			ASSY	0	
		Bearings and seals	22244CC/W3	pcs	2	Spare
		Pan Conveyor SCD800x124123mm		ASSY	0	
		CHAIN DBC	APD:NC-3000-431-M01-009, PITCH:250MM,CLINKER PAN CONVEYOR	MTR	500	Spare

		ROLLER CARRIER DBC	05MMOD 90MML, APD: 431- DB27-RL01-14F1	pcs	200	Spare
		Coupling ridged	Type:LK11 , Nominal Torque 315000 N.m	pcs	1	Spare
		RAIL		MTR	80	Spare
	belt conveyo	Clinker extraction belt conveyor		ASSY	0	
		Drive Drum Bearing		pcs	2	Spare
		Driven drum Bearing		pcs	2	Spare
		Clinker extraction belt conveyor		ASSY	0	
		Drive Drum		pcs	1	Spare
		Driven Drum		pcs	1	Spare
		Drive Drum Bearing		pcs	2	Spare
		Driven drum Bearing		pcs	2	Spare
		Groove type Norm : B800×7760mm ,Capacity : 150 t/h,Belt speed : 1.0m/s		ASSY	0	
		bearing drum		pcs	2	Spare
		Drive Drum Bearing		pcs	1	Spare

		Driven drum Bearing		pcs	1	Spare
		Groove type Norm : B1200×6260m m Capacity : 600 t/h.Belt speed : 1.0m/s		ASSY	0	
		bearing drum		pcs	2	Spare
		Groove type Norm : B1200×6260m m Capacity : 600 t/h.Belt speed : 1.0m/s		ASSY	0	Spare
		gearbox cycloidal	Type : WD-75-100- 80×63.Power : 4 kW	pcs	1	Spare
		bearing drum		pcs	4	Spare
		coupling		pcs	1	Spare
		Groove type Norm : B1200×6260m m Capacity : 600 t/h.Belt speed : 1.0m/s		ASSY	0	
		gearbox cycloidal	Type : WD-75-100- 80×63.Power : 4 kW	pcs	1	Spare
		bearing drum		pcs	4	Spare

		coupling		pcs	1	Spare
			Groove type ,Norm : B650×26350mm,Capa city : 150t/h		0	
			Geared Drive sytem	Set	2	Spare
				ASSY	0	511 BM17&18 BALL MILL
	Main Gearbox GB01	BEARING ROLLER SPHERICAL	22352CA/W33C3	set	2	Spare
		Bush bearing white metal	FOR GB MODEL:JQS4000.4000KW,RA TIO:47,I/P SPEED 740	set	1	Spare
		heat exchanger plate type	Model: BR 037 Operating Pressure: 1.0MPa Operating Temperature: 80degC Heat Transfer Area: 50SQ.M Test Pressure: 1.6MPa Net.Wt.: 150kg	pc	1	Spare
		oil filter element	MODEL: SLQ-80LT 50M3/HR 0.12MPA	pc	2	Spare
		Low pressre pump	PUMP GEAR ASSY 100LI/MIN 0.4MPA, TYPE: LB-100 FOR MODEL: GDRZ-B-2.5*2/100	pc	8	Spare
	BM17/18a&b Main Mill Motor	Tube heat exchanger for mill motor oil station	MODEL:GLCW- 6,pressure:0.63Mpa	pcs	1	Spare



		FILTER ELEMENT OIL		pcs	2	Spare
		oil filter		pcs	1	Spare
		GUAGE PRESSURE		pcs	4	Spare
		guage temperture		pcs	4	Spare
	Slide shoe bearing	Slide Shoe Bearing	GEARBOX MODEL:JQS4000-441	set	1	Spare
		Water Hose		mtr	10	Spare
	BM17/18c&d Lubrication System	heat exchanger tube type	MODEL:GLCW-6,AREA:20m2,PRESSURE:0.63Mpa	pcs	2	Spare
		PUMP HIGH PRESSURE	PUMP HIGH PRESSURE AXIAL PISTON 2.5ML/REV 31.5MPA, 1500RPM MODEL: MCY14-1B	pcs	10	Spare
		pump low pressure	PUMP GEAR ASSY 100LI/MIN 0.4MPA, TYPE: LB-100 FOR MODEL: GDRZ-B-2.5*2/100	pcs	8	Spare
		FILTER ELEMENT OIL	MODEL: SWQ-25C 5M3/HR 0.15MPA	pcs	2	Spare
		oil filter	MODEL: SWQ-25C 5M3/HR 0.15MPA	pcs	4	Spare
		GUAGE PRESSURE		pcs	2	Spare
		guage temperture		pcs	2	Spare

		Liner	Intermideate Liner	Set	1	Spare
		Motor Lubrication station	Pump	Pcs	2	Spare
			Filter	Pcs	2	Spare
			Heat exchanger	Pcs	2	Spare
	Root blower			Assy	0	
	Fan				0	521FN59,61,63,65
		IMPELLER TYPE		Pcs	2	Spare
		Bearing DE SUPPORT		Pcs	4	Spare
		Bearing NDE SUPPORT		Pcs	4	Spare
		Coupling type		Pcs	4	Spare
		Coupling Buffer		Pcs	32	Spare
	DIVERTOR			Assy	0	521VV03-04
		PUSH ROD TYPE	nhz	Pcs	1	
	Rotary Feeder			Assy	0	
		Model	Type: RGY400, POWER 2.2kw, Capacity:120t/hr, inlet size 400x400	Pcs	2	Spare

	FAN			Assy	0	
		IMPELLER TYPE	9-28No.11.2D 45°, SPEED: 960r/min,	Pcs	1	Spare
		Bearing DE SUPPORT		Pcs	4	Spare
		Bearing NDE SUPPORT		Pcs	4	Spare
	Rotary packer spare part lists			Assy	0	611PM25-28 Roto Packer
		FLASHBOARD	PN: BHYW-8C-07-06	PCS	64	Spare
		BUMP ROD	PN: BHYW-8C-07-08-05	PCS	64	Spare
		IMPELLER	PN: BHYW-8C-05-03	PCS	64	Spare
		TUBE RUBBER	PN: BHYW-8C-06-07	PCS	64	Spare
		SPRING TORSIONAL	PN: BHYW-8C-07-06	PCS	64	Spare
		SPRING	PN: BHYW-8C-07-12, ROTOPACKER	PCS	64	Spare
		SPRING DISCHARGING PIPE , CHINA	PN: BHYW-8C-06-10	PCS	64	Spare
		DISCHARGING PIPE PULL SPRING	PN: BHYW-8C-06-10	PCS	64	Spare
		SPRING CLIP	PN: BHYW-8C-06-06, ROTOPACKER	PCS	64	Spare

		SHELF SUPPORTING BAG	PN: BHYW-8B-07-09, ROTOPACKER	PCS	64	Spare
		WHEEL PRESS BAG RUBBER	PN: BHYW-8B-07-14-2, ROTOPACKER	PCS	64	Spare
		LOCK PIECE	PN: BHYW-8C-06-04, ROTOPACKER	PCS	64	Spare
		LOCK WHEEL	PN: BHYW-8C-07-09, ROTOPACKER	PCS	64	Spare
		NIPPLE DISCHARGE PORT	PN: BHYW-8C-05-16, ROTOPACKER	PCS	64	Spare
		AIR OUTLET AIR MOUTH	PN: BHYW-8C-05-16, ROTOPACKER	PCS	64	Spare
		ROD PULL MAGNETIC	PN: BHYW-8C-07-15, ROTOPACKER	PCS	64	Spare
		COVER SEAL BOX	PN: BHYW-8C-02-07-03, ROTOPACKER	PCS	64	Spare
		TUBE AIR INLET	PN: BHYW-8C-02-07-04, ROTOPACKER	PCS	64	Spare
		DISCHARGE CEMENT HOPPER AIR MOUTH	PN: BHYW-8C-05-18, ROTOPACKER	PCS	64	Spare
		WHEEL GUIDING	PN: BHYW-8C-10-02, ROTOPACKER	PCS	64	Spare
		ARM ROCKER	PN: BHYW-8C-07-08-03, ROTOPACKER	PCS	64	Spare
		SPOUT DISCHARGE CEMENT	PN: BHYW-8C-05-15, ROTOPACKER	PCS	64	Spare
		SHAFT BLOCK HOOK	PN: BHYW-8C-07-13, ROTOPACKER	PCS	64	Spare
		SLEEVE ROCKER ARM	PN: BHYW-8C-07-08-02, ROTOPACKER	PCS	64	Spare

		SHAFT ROCKER ARM	PN:BHYW-8C-07-08-01, ROTOPACKER	PCS	64	Spare
		SEAT EAR	PN:BHYW-8C-06-08, ROTOPACKER	PCS	64	Spare
		GIRDER PRESS	PN:BHYW-8C-05-19, ROTOPACKER	PCS	64	Spare
		SEAT FLASHBOARD	PN:BHYW-8C-07-01, ROTOPACKER	PCS	64	Spare
		CRANK ARM	PN:BHYW-8C-07-02, ROTOPACKER	PCS	64	Spare
		PLATE SPRING	PN: BHYW-8C-06-01, ROTOPACKER	PCS	64	Spare
		SLEEVE SHORT SHAFT	PN:BHYW-8C-05-09, ROTOPACKER	PCS	64	Spare
		SHAFT RIGHT	PN:BHYW-8C-05-11, ROTOPACKER	PCS	64	Spare
		SCREW LIMIT	PN:BHYW-8C-07-11, ROTOPACKER	PCS	64	Spare
		SPACER GASKET PLATE	PN: BHYW 8C-05-20, ROTOPACKER	PCS	64	Spare
		SHELF TIGHTENING BAG	PN: BHYW-8B-07-14-1, ROTOPACKER	PCS	64	Spare
		LOCK HOOK	PN: BHYW-8C-07-10, ROTOPACKER	PCS	64	Spare
		SLEEVE LONG SHAFT	PN:BHYW-8C-05-13, ROTOPACKER	PCS	64	Spare
		PULLEY SHEAVE	PN:BHYW-8C-05-07, ROTOPACKER	PCS	64	Spare
		GEMEL	PN:BHYW-8C-07-08-04, ROTOPACKER	PCS	64	Spare

		CROSS TIE-IN	PN:BHYW-8C-06-12, W/ PIN SHAFT ROTOPACKER	PCS	64	Spare
		REDUCER WITH ADJUSTABLE SPEEDMOTOR	PN:XLDH1.5-4-35, ROTOPACKER	assy	4	Spare
		Bearing DE Support	UCFC216	Pcs	8	Spare
		Bearing NDE Support	UCFC217	Pcs	8	Spare
		Bearing Middle Support	6216-2Z	Pcs	12	Spare
		MOTOR GEARED	MOTOR GEARED CYCLOIDAL, 5.5KW MODEL:XWD5-58-5.5, MOTOR:Y90L-4X4 5.5KW 1400RPM 380V 50HZ	pcs	1	Spare
					0	
	COALVRM	GEARBOX ASSY	MODEL: JLQX400B,	ASSY	0	CAPEX
	Main gearbox oil station			Set	0	
		low pressure pump		pcs	1	spare
		Heat exchanger tube type		pc	1	spare
	Hydraulic tensioning system	Hydraulic cylinder	SIZE: 200/110,OTTHER DETAILS:Pressure: 31.5MPa, Stroke: 550mm,SN: 1350,Hydraulic Station Model: Y3000,	assy	1	spare
	Coal Screw Pump			Ser	0	

	Circulation pump (self-priming pump without base)	Motor Type	Type:Y2-220S-2- B5 G1,POWER: 75KW,	SET	0	
		MOTOR DRIVE END BEARING NO.	6314-S	PCS	1	spare
		MOTOR NONDRIVE ND BEARING NO.	6317-S	PCS	1	spare
		PUMP TYPE	MODEL: 2G200WFB-BD4,POWER: 75KW, SPEED:2970RPM, FLOW RATE:180-220m <sup>3</sup> /hr, Height: 65-55m, Suction: 6M	SET	1	spare
	Domestic pump (Self-priming pump without foundation)	Motor Type	Type:Y2-250M-2- B5, POWER: 55KW, SPEED: 2965RPM	SET	0	
		MOTOR DRIVE END BEARING NO.	6313-S	PCS	1	spare
		MOTOR NONDRIVE ND BEARING NO.	6313-S	PCS	1	spare
		PUMP TYPE	MODEL: 2G100WFB-E3, POWER: 55KW, SPEED:2965 RPM, FLOW RATE:100m <sup>3</sup> /hr, Height: 75m, Suction: 6M	SET	1	spare
	Fire pump (Self-priming pump without foundation)	Motor Type	Type:Y2-315S-2- B5, POWER: 110KW, SPEED: 2975RPM	SET	0	critical spare

		MOTOR DRIVE END BEARING NO.	6317-S	PCS	1	spare
		MOTOR NONDRIVE ND BEARING NO.	6319-S	PCS	1	spare
		PUMP TYPE	MODEL: 2G250WFB-E1, POWER: 110KW, SPEED:2975 RPM, FLOW RATE:180-310m <sup>3</sup> /hr, Height: 70-80m, Suction: 6M	SET	1	spare
	Multi Stage centrifugal pump	Model:S3K80-90/3E, Head 142met, Discharge=100M3/hr Maker: rovatti pompe(ITALY)	Model:S3K80-90/3E, Head 142met, Discharge=100M3/hr Maker: rovatti pompe(ITALY)	Asse	2	critical spare



## **2. ANNUAL SPARE PART REQUIREMENT (ELECTRICAL)**

<b>1.1. Electrical Spare Part List_ SUBSTATION AND MCC ROOM</b>			
<b>S.N</b>	<b>Description</b>	<b>UNIT</b>	<b>Qty</b>
1	Transformer Type S11-M-250KVA, 6KV : 0.4KV,250KVA	pcs	<b>1</b>
2	SF6 Circuit BREAKER ABB Type LTB170D1,operating device type FSA1,145KV,2000A,Insulation level 275/650KV	SET	<b>1</b>
3	132kV DISCONNECTOR GW4-145III,145kV,1250A	set	<b>1</b>
4	Disconnecter with earthing COELME CBD C56500/C56501,145KV,1250A,IK=31.5KA	set	<b>1</b>
5	CURRENT TRANSFORMER LVQB-145,150/10.5/0.5/10P30/10P30 30VA	pcs	<b>3</b>
6	CURRENT TRANSFORMER ABB type IMB 145,145KV,480A,Insulation level 275/650KV	pcs	<b>3</b>
7	LIGHTNING ARRESTER Metal-Oxide Gapless Surge Arrester YH10W – 125 / 320	set	<b>1</b>
8	Surge Arrester ARRESTER EXLIM Q120 – E145,Class 10K Ur 120KV Uc 145KV Short Circuit current 65KA Make. ABB AB, Sweden	set	<b>1</b>
9	Differential protection relay-Transformer Terminal ABB RET543 relay,220VDC	pcs	<b>1</b>
10	Measurement and Control /Feeder terminal ABB REF545 relay,220VDC	pcs	<b>1</b>
11	feeder protection relay ABB REF615 relay, 220VDC	pcs	<b>1</b>

12	Line Protection relay ABB REL650,220VDC	pcs	1
13	Backup protection relay ABB REJ525B, 110-220VDC	pcs	1
14	Ressetting relay for tripping ABB RK 723007-AP,220VDC	pcs	1
15	FAULT/tripping relay ABB SPER 1C1 FAULT,40-265VDC	PCS	1
16	Relay ABB RK 723007-AP,220VDC	PCS	1
17	Transformer tap changer intelligent Controller CZK-100B intelligent controller	pcs	1
18	Onload Tap Changer with motor drive mechanism MAE 10193	pcs	1
19	Circuit breaker 3WT8,2000 A-380 V, SIEMENS	pcs	1
20	Circuit breaker 3WT8,3200 A-380 V, SIEMENS	pcs	1
21	Energy Meter Acuvim II energy meter	pcs	1
22	DC pannel Controller PSM-	pcs	1
23	DC pannel rectifier Emerson HD22010-3	pcs	1
24	Battery 12V lead acid sealed type	pcs	90
25	Battery Voltmeter PZ195-4X1	pcs	2
26	Battery Ammeter PA1951-4X1	PCS	1
27	Capacitor Voltage transformer ABB CPB 145,Primary 145KV/secondary 110V,insulation level275/650KV	pcs	3
28	High Voltage Shunt Capacito EX-7L-7.2/3-34KVAR-1W	pcs	3
29	High Voltage Shunt Capacitor EX-7L-7.2/3-50KVAR-1W	pcs	3

30	High Voltage Shunt Capacitor EX-7L-7.2/3-100KVAR-1W	pcs	<b>3</b>
31	High Voltage Shunt Capacitor EX-7L-7.2/3-134KVAR-1W	pcs	<b>3</b>
32	High Voltage Shunt Capacitor EX-7L-7.2/3-150KVAR-1W	pcs	<b>3</b>
33	High Voltage Shunt Capacitor EX-7L-7.2/3-334KVAR-1W	pcs	<b>3</b>
34	Discharge Coil TYPE:JDZJ-6 0.5/6P	pcs	<b>5</b>
35	Overvoltage protection TYPE:ZL-TBP1-C/6	pcs	<b>1</b>
36	Expulsion fuse installation matched with capacitor	pcs	<b>48</b>
37	Vaccum contactor JCZ5-7.2/200D AC220V	pcs	<b>2</b>
38	Over voltage protection for CT ZL-CTB-A	pcs	<b>2</b>
39	Over voltage protection for CT ZL-CTB-B	pcs	<b>2</b>
40	Relay Weidmuller (DRM 570220LT) coil voltage: 220Vdc contact Rating: 5A/250Ac	pcs	<b>10</b>
41	Multi-Parameter meter BOER PMW 2000H	pcs	<b>5</b>
42	Multi-Parameter meter BOER PMW 300-U	pcs	<b>2</b>
43	Temperature & Humidity Controller	pcs	<b>5</b>
44	Protection Relay ABB Relay REF615D	pcs	<b>2</b>
45	Protection Relay ABB Relay REM615	pcs	<b>2</b>
46	Protection Relay ABB Relay RET615	pcs	<b>1</b>
47	Current Transformer BH-0.66 Ratio:100/5	pcs	<b>2</b>
48	Current Transformer LZZBJ9-10A Ratio:100/5 CL:0.5/5p10	pcs	<b>2</b>
49	Current Transformer LZZBJ9-10A Ratio:150/5 CL:0.5/5p10	pcs	<b>2</b>

50	Current Transformer LMZBJ9-10A Ratio:150/5 CL:0.5/0.5/5p10/5p10	pcs	<b>2</b>
51	Current Transformer LZZBJ9-10C2 Ratio:250/5 CL:0.5/5p10/5p10	pcs	<b>2</b>
52	Voltage Transformer JDZX9-6 CL:0.5/6P Ratio:6000/V3:100/V3:100/V	pcs	<b>2</b>
53	Voltage Transformer sc9-50/6.3 Ratio:6.3/0.4KV 50KVA	pcs	<b>1</b>
54	Fuse XRNP-7.2/0.5-50-1	pcs	<b>5</b>
55	Fuse XRNP-7.2/5-50-1	pcs	<b>3</b>
56	Lighting Arresters ZL-TBP1-A/6	pcs	<b>12</b>
57	Earthing switch JNEX12-31.5/80	pcs	<b>2</b>
58	Zero Transformer LXX-Ø120	pcs	<b>4</b>
59	Zero Transformer LXX-Ø180	pcs	<b>1</b>
60	Zero Transformer LXX-Ø240	pcs	<b>1</b>
61	NEON lamps DXN8B-Q3	pcs	<b>4</b>
62	NEON lamps DXN8B-Q3 Equiped with ES	pcs	<b>10</b>
63	Resonance Elminator ZH-WTXA	pcs	<b>1</b>
64	Componset control RVT-6 AC 220V	pcs	<b>1</b>
65	Voltage Sensor DXN8B-12/140A1	pcs	<b>3</b>
66	Voltage Detector DXN8B-Q1	pcs	<b>2</b>
67	Unbalanced Current Transformer RM4-UA32 MW	pcs	<b>2</b>
68	Series Reactor CKSC-60/7/3-6%	pcs	<b>2</b>
69	BRUSH CARBON 25*32*60MM CH17 MV MOTOR 2500KW 6.3KV SRM-YRKK800	pcs	200

## 1.2. Electrical Spare Part List\_ MOTORS

SN	Description	UNIT	Qty
1	BRAKE TYPE:ED-50/6 0.21KW 0.48A	SET	1
2	MOTOR TYPE:YS7114 0.25KW 0.83A 1400RMP MOUNTING:B5	SET	1
3	BRAKE TYPE: Ed 80/6 0.33KW	SET	1
4	MOTOR 0.37KW 1.12A 400V 1430RMP MOUNTING:B5	SET	2
5	MOTOR TYPE:J80M1-4 0.55KW 1.51A 400V 1390RPM MOUNTING:B3	SET	1
6	MOTOR TYPE:VB-1076-W 0.7KW 2.14A 960RPM MOUNTING:B3	SET	1
7	MOTOR TYPE:90S-4 1.1KW 2.8A 400V 1400RPM MOUNTING:B5	SET	2
8	MOTOR TYPE:YEJ90L-6 1.1KW 3.2A 400V 910RPM MOUNTING:B5	SET	1
9	MOTOR TYPE:K21R 100 L2 1.5KW 4.2A 2950RPM MOUNTING:B5	SET	1
10	MOTOR TYPE:Y2-100L1-4 2.2KW 5.06A 1440RPM MOUNTING:B5	SET	1
11	MOTOR TYPE:Y2-112M-6 2.2KW 5.06A 932RPM MOUNTING:B5	SET	1
12	MOTOR TYPE:Y2-100L2-4 3KW 6.8A 1420RPM MOUNTING:B5	SET	1
13	MOTOR TYPE:HM2-100L-2 3KW 6.8A 2880RPM MOUNTING:B3	SET	1
14	MOTOR 4KW 8.8A 1400RPM MOUNTING:B5	SET	1

15	MOTOR TYPE:Y112M-2 4KW 8.2A 2880RPM MOUNTING:B3	SET	1
16	MOTOR TYPE:Y132MAJ123-6 5.5KW 12.6A 960RPM MOUNTING:B3	SET	1
17	Y2-180M-4	SET	1
18		SET	1
19	Y132M	SET	1
20	MOTOR TYPE:Y2-160M-4 11KW 22.2A 400V 1460RPM MOUNTING:B5	SET	1
21	MOTOR TYPE:ZD1 51-4 13KW 30A 400V 1400RPM MOUNTING:B5	SET	1
22	MOTOR TYPE:Y180L-6 15KW 31.6A 400V 970RPM MOUNTING:B3	SET	1
23	MOTOR TYPE:Y180M-4 18.5KW 36.5A 400V 1470RPM MOUNTING:B3	SET	1
24	MOTOR TYPE:YP200L-4 30KW 56.8A 400V 1470RPM MOUNTING:B3	SET	1
25	MOTOR TYPE:YP2-280S-6 45KW 86A 400V 990RPM MOUNTING:B3	SET	1
26	MOTOR TYPE:Y2-225M-4 45KW 84.3A 400V 1480RPM MOUNTING:B3	SET	1
27	MOTOR TYPE:Y280M-4 90KW 164A 400V 1490RPM MOUNTING:B3	SET	1
28	MOTOR TYPE:Y-280M-2 90KW 159.5A 400V 2970RPM MOUNTING:B3	SET	1
29	MOTOR 132KW 240A 400V 1490RPM MOUNTING:B3	SET	1
30	MOTOR TYPE:YR355M2-8 132KW 257A 400V 740RPM MOUNTING:B3	SET	1
31	MOTOR TYPE:Y2-355M1-6 160KW 291.4A 400V 1490RPM MOUNTING:B3	SET	1

### 1.3. Electrical Spare Part List\_ Breakers

SN	Description	UNIT	Qty
1	Vaccum Breaker Evolis IEC 62271-100ED11 Voltage:6000V Current:1600A/31.5KA	pcs	1
2	Vaccum Breaker Evolis IEC 62271-100ED11 Voltage:6000V Current:1250A/31.5KA	pcs	1
3	Vaccum Breaker Evolis IEC 62271-100ED11 Voltage:6000V Current:630A/31.5KA	pcs	2
4	C65H-DC C6A,50Hz,250dc	pcs	30
5	Circiut Breaker schnieder C65H-DC,10A	pcs	0
6	Circiut Breaker schnieder C65H-DC,16A	pcs	0
7	Circiut Breaker schnieder C65H-DC,40A	pcs	5
8	C65H-DC (2 contact) C6A,50Hz,250dc	pcs	15
9	C65H-DC (3 contact) C6A,50Hz,250dc	pcs	10
10	SIEMENS 3VL160N 3PMA-100	pcs	7
11	THREE PHASE CIRCIUT BREAKER SCHNEOIDER TYPE=C65NC10	Pcs	1
12	SIEMENS 3VL160N 3PMA-160A	pcs	3
13	SIEMENS 3VL160N 3PMA 63A	pcs	10
14	Type: Shneider C65N D25(Three Phase)	pcs	15

15	SIEMENS 3VL400N 3PMA-315A	pcs	1
16	SIEMENS 3VL250N 3P MA 250A	pcs	2
17	ABB 10A three phase circuit breaker	Pcs	4
18	ABB 2A single phase circuit breaker	Pcs	4
19	Type: Shneider C65N D6(Three Phase)	Pcs	10
20	Type: Shneider C65N D6(Single phase)	Pcs	15
21	Type: Shneider C65N D16(Three Phase)	Pcs	10
22	STARTER MOTOR 8-13A 400V SIEMENS PN: 3VU1340-1NL00	pcs	20
23	SIEMENS 3RV1021-1EA10 2.5-4A	pcs	18
24	SIEMENS 3RV1021-4DA 20-25A	pcs	10
25	SIEMENS 3RV1021-1AA10 1.1-1.6A	pcs	15
26	SIEMENS 3RV1021-1CA10 1.8-2.5A	pcs	5
27	SIEMENS 3RV1021-4CA10 17-22A	pcs	6
28	SIEMENS 3RV1021-1GA10 4.5-6.3A	pcs	10
29	SIEMENS 3RV1021 1JA10 7-10A	pcs	10
30	SIEMENS 3RV1021 4AA10 11-16A	pcs	8
31	SIEMENS 3UA5040-1E 2.5-4A	pcs	15
32	SIEMENS 3UA5840-2E 25-40A	pcs	5
33	SCHNEIDER LRD12 Current Range 5.5A - 8A	Pcs	20
34	SCHNEIDER LRD14 Current Range 5A - 10A	Pcs	5



35	SCHNEIDER Differential thermal overload relay TYPE = LRD10 Thermal protection adjustment range = 4...6 A	Pcs	3
36	SCHNEIDER Thermal Overload Type LRD08 Current Range 2.5A -4A	Pcs	6
37	SCHNEIDER Overload relay LRD 12; Current rating 5.5-8Amp(Telemecaniqu)	Pcs	6
38	SIEMENS 3UA4840-2F 32-50A	pcs	2
39	SIEMENS 3UA5040-1C 1.6-2.5A	pcs	3
40	SIEMENS 3UA5240-1G 4-6.3A	pcs	10
41	SIEMENS 3UA5640-2E 2. 20-40A	pcs	2
42	SIEMENS 3UA5540-2C	pcs	1
43	SIEMENS 3UA5040-1A 1-1.6A	pcs	6
44	SIEMENS 3UA5540-2A 11-16A	pcs	8
45	SIEMENS 3UA5540-2C 20-25A	pcs	5
46	SIEMENS 3UA5540-2B 12-20A	pcs	3
47	SIEMENS 3UA5540-1J 7-10A	pcs	5

## 2.4 Electrical Spare Part List\_ DCS

SN	Description	UNIT	Qty
1	S7 400 CPU 416-3;SIEMENS 416-3XR05-0AB0 V5.31	pcs	1
2	S7 300 CPU 315-2DP; SIEMENS 315-2AG10-0AB0 V2.6	pcs	1
3	S7 300 CPU 315-2DP; SIEMENS 315-2AH14-0AB0 V3.3	pcs	1
4	S7 300 CPU 314; SIEMENS 314-1AG13-0AB0 V2.6	pcs	1
5	S7 300 CPU 313C; SIEMENS 313-5BF03-0AB0 V2.6	pcs	2
6	CPU (Central Processing Unit);SIEMENS S7 200, CPU 222 CN AC/DC/RELAY, 212-1BB23-0XB8	pcs	3
7	CPU (Central Processing Unit);SIEMENS S7 200, CPU 226 CN AC/DC/RELAY, 216-2BD23-0XB8	pcs	2
8	CPU (Central Processing Unit);SIEMENS S7 200, CPU 224 CN AC/DC/RELAY, 214-1BD23-0XB8	pcs	1
9	CPU (Central Processing Unit);SIEMENS S7 200, CPU 224 CN AC/DC/RELAY, 214-1BD23-0XB0	pcs	1
10	CPU (Central Processing Unit);SIEMENS S7 200, CPU 224 CN AC/DC/RELAY, 214-1AD23-0XB8	pcs	1
11	Schneider Electric, Twido, TWDLCAA24DRF,Base unit AC, 14 IN DC, 10 Out Rly, Power:100-240VAC 50HZ Input:24VDC Output:240VAC/30VDC	pcs	3
12	Universal Rack,UR2,9 slots 6ES7 400-1JA01-0AA0	pcs	1
13	S7 400 Power Supply Module;SIEMENS, PS 407 10A, 407-0KA02-0AA0	pcs	2
14	S7 300 Power Supply Module;SIEMENS, PS 307 5A, 307-1EA00-0AA0	pcs	2
15	S7 300 Power Supply Module;SIEMENS, PS 307 2A, 307-1BA00-0AA0	pcs	1
16	Input/Output Power Supply Module;SIEMENS, Input: 120/230VAC 6EP1 334-3BA00	pcs	2
17	Input/Output Power Supply Module;SIEMENS, Input: 120/230VAC 6EP1 336-3BA00	pcs	2
18	LogolpowerSupply;SIEMENS, 6EP1332-1SH42	pcs	1
19	LogolpowerSupply;SIEMENS, 6EP1332-1SH51	pcs	1
20	CPU Battery,3.6V,1.9Ah, 6ES7 971-0BA00	pcs	8
21	Digital Input (DI) Module;SIEMENS, DI16XDC24V ,321-1BH02-0AA0	pcs	10
22	Digital Input (DI) Module;SIEMENS, DI32XDC24V ,321-1BL00-0AA0	pcs	1

23	Digital Output (DO) Module;SIEMENS,DO8XRelay 322-1HF01-0AA0	pcs	1
24	Digital Output (DO) Module;SIEMENS, DO32XDC24V/0.5A,322-1BL00-0AA0	pcs	1
25	Analog Input (AI) Module;SIEMENS,AI8X12Bit 331-7KF02-0AB0	pcs	5
26	Analog Input (AI) Module;SIEMENS,AI8XRTD 331-7PF01-0AB0	pcs	1
27	Analog Input (AI) Module;SIEMENS,AI8XRTD 331-7PF11-0AB0	pcs	1
28	Analog Output (AO) Module;SIEMENS, AO8X12Bit,332-5HF00-0AB0	pcs	4
29	Analog Output (AO) Module;SIEMENS, AO8X12Bit,333-5HF00-0AB0	pcs	7
30	Analog Output (AO) Module;SIEMENS, AO4X12Bit,331-5HD00-0AB0	pcs	1
31	Communication Processor CP 443-1;SIEMENS 6GK7 443-1EX20-0XE0 V1.0	pcs	1
32	Interfacing Module, IM 153 ;SIEMENS, 153-2BA02-0XB0	pcs	5
33	Interfacing Module, IM 365 ;SIEMENS, 365-0BA01-0AA0	pcs	1
34	PROFIBUS OLM(Optical Link Module);S.No. S MAB 4105064	pcs	2
35	PROFIBUS Connector, 6ES7 972-0BA12-0XA0	pcs	8
36	Network Switch;308FX2 -N-ST	pcs	1
37	Memory Card;MC SRAM 16MB 6ES7 952-1AS00-0AA0	meter	4
38	Memory Card;MICRO MEMORY CARD 128KB 6ES7 953-8LG11-0AA0	meter	3
39	Memory Card;MICRO MEMORY CARD 64KB 6ES7 953-8LF20-0AA0	meter	5
40	Memory Card;MICRO MEMORY CARD 128KB 6ES7 953-8LG30-0AA0	meter	1
41	Isolator;MSC 300 G, MSC-301-C0C0, Supply: 24VDC, Input: 4 - 20mA, Output: 4 -20mA	pcs	30
42	Isolator;MSC 300 G, MSC-302-10C0, Supply: 24VDC, Input: 4 - 20mA, Output: 4 -20mA	pcs	10
43	Glass Fuse ;Size: Ø=5mm, L=20mm; rating: 5A, 250V	pcs	300
44	Glass Fuse ;Size: Ø=5mm, L=20mm; rating: 0.2A, 250V	pcs	300
45	Signal Module;SIEMENS, EM 222 CN, Relay, 222-1HF22-0XA8	pcs	10
46	Signal Module;SIEMENS, EM 222 CN, Relay, 222-1HF22-0XA0	pcs	1
47	Signal Module;SIEMENS, EM 223, AC/DC/Relay, 223-1PL22-0XA8	pcs	1
48	Signal Module;SIEMENS, EM 223, AC/DC/Relay, 223-1PL22-0XA0	set	1
49	Signal Module;SIEMENS, EM 223, DC/Relay, 223-1PH22-0XA0	set	1
50	Signal Module;SIEMENS, EM 223, DC/Relay, 223-1PH22-0XA8	set	1
51	Signal Module;SIEMENS, EM 231, AI4X12Bit, 231-0HC22-0XA0	set	1

52	Signal Module;SIEMENS, EM 231, AI4X12Bit, 231-7PD22-0XA8	set	1
53	Signal Module;SIEMENS, EM 235, AI4/AO1X12Bit, 235-0KD22-0XA8	set	1
54	Signal Module;SIEMENS, EM 232, AO2X12Bit, 232-0HB22-0XA0	set	1
55	Signal Module;SIEMENS, EM 277, PROFIBUS DP, 277-0AA22-0XA0	set	1
56	Relay;Type: OMRON MY2N-J, 8 Pin Contact: 2NO + 2NC, 5A; Coil: 28VDC	pcs	250
57	Relay;Type: OMRON MY2N-J, 8 Pin Contact: 2NO + 2NC, 5A; Coil: 220VAC	pcs	250
58	Relay;Type: OMRON MY4N-J, 14 Pin Contact: 4NO + 4NC Coil: 220VAC	pcs	50
59	Programmable text display;TD220-S	pcs	3
60	SIEMENS, SIMATIC S7 TD200, 6ES7 272-0AA30-0YA1	pcs	1
61	Maglis XBT	pcs	1
62	PRO-FACE , AGP3600-T1-D24, Model,3280024-14	pcs	1
63	Touch Screen Operator Panel; SIEMENS TOUCHPANEL, TP177A, 6AV6 642-0AA11-0AX1	set	1
64	Touch Screen Operator Panel;SIMATIC MULTIPANEL, MP277, 10" touch 1P-6AV6643-0CD01-1AX1,S-C-X8B98246	set	1
65	Touch Screen Operator Panel;MT8100iV	pcs	1
66	HMI DELTA ELECTRONIC: DOP-BO5S100	set	1
67	UPS,SURT15KHUXICH, 15kVA, 380VAC	set	1
68	UPS,SURT10000UXICH, 10kVA, 220VAC	set	1
69	Valve Regulated Lead-Acid Battery, NP38-12 12V 38AH	pcs	64
70	Valve Regulated Lead-Acid Battery, NP24-12 12V 24AH	pcs	160
71	Instrument cable;DJYVP-0.5-1x3x1.0	m	500
72	Instrument cable;DJYVP-0.5-1x2x1.0	m	500
73	Instrument power supply cable;KVV-0.5-4x2.5	m	500
74	Control cable;KVV-0.5-7x1.5	m	500
75	Profibus cable	m	500
76	Fiber cable with connector	m	500
77	Cable control thermal sheilded 450DEGC 1MMx3WIRE	m	1000

### 2.5 Electrical Spare Part List\_ INSTRUMENTS

SN	Description	Unit	Qty	Remark
1	RTD PT100 3-WIRE 2ML , SENSOR DIA: 3.2-2MM, SENSOR LENGTH: 6-8MM, PN: WZP WITH SPRING	Pcs	6	RTD,Pt100 TREST ROLLER temp. sensor
2	Model-WZP-230, -200-450 Ć, Pt100	Pcs	5	RTD,Pt100 MV LRS temp. sensor
3	Model-WZP-231, Pt101	Pcs	5	RTD,Pt100 MV OIL STATION temp. sensor
4	Model-WZP2-231, 0-200 Ć, Pt100	Pcs	10	RTD,Pt100 motor Bearing temp. sensor
5	Model-WZPK-335A, -20-450 Ć, Pt100, L=1500mm	Pcs	24	RTD,Pt100 VRM roller temp. sensor
6	Model-WZPM-201, 0-200 Ć, Pt100, L=1500mm	Pcs	16	RTD,Pt100 VRM & CM Bearing temp. sensor
7	SENSOR TEMP RTD PT100 W/ HEAD 0-150DEGC 6MM*60MM	Pcs	3	RTD,Pt100 Bearing temp. sensor
8	TRANSMITTER TEMP MULTIPLEX XMRT, 0-450DEGC, 4-20MA ABB TYPE: TH202	Pcs	5	multiplex temperature transmitter
9	AS-25K30HG 0.065KW 220V 40S 4-20mA	Pcs	3	Motorized Actuator
10	B+RS160/K10H 1600NM 220V 40S 4-20mA	Pcs	1	Motorized Actuator
11	B+RS800/F125HG 8000NM1KW 380V 50HZ 4-20mA 50%DUTY	Pcs	1	Motorized Actuator
12	TYPE:DY-J31T 250NM 4-20mA	Pcs	1	Motorized Actuator
13	B+RS400KB5HG 125HG 4000NM 0.40KW 220V 50HZ 4-20mA	Pcs	1	Motorized Actuator

14	GAMX-2005 220VAC	Pcs	5	Motorized Actuator ELECTRONICS CARD
15	GAMX-S518s 380VAC	Pcs	3	Motorized Actuator ELECTRONICS CARD
16	T2004AP2A	Pcs	1	ESP CONTEROLER ELECTRONICS CARD
17	GS-QD-C2	Pcs	1	KILN CAMERA CONTEROLER ELECTRONICS CARD
18	DR_4524	Pcs	3	AC to DC power converter
19	MY4N-J24VDC 14PIN WITH BAZEMENT	Pcs	30	DC voltage relay
20	MY4N-J220VAC 14PIN WITH BAZEMENT	Pcs	31	DC voltage relay
21	K003721 01BBFSKV005	Pcs	3	Weigh feeder Interface ELECTRONICS board
22	SENSOR INDUCTIVE SLOT SC3, MODEL: SC3, 5-G-NO, PN: 045585S, UO=8V, UB=5..25V, F=0..300HZ	Pcs	10	Weigh feeder speed sensor
23	PN:Z6FC3/200KG	Pcs	5	Load cell 0-200KG
24	PN:Z6FD1/100KG	Pcs	5	Load cell 0-100KG
25	PN:Z6FC3/50KG	Pcs	5	Load cell 0-50KG
26	Minebea CBE1-10k cap:80.07N	Pcs	2	Load cell 0-10KG
27	PRESSURE TRANSMITTER KYB600 0-1MPA 4-36VDC 4~20mA	Pcs	10	pressure transmitter
28	pressure transmitter 2600T 0-10kPa, 4-20mA ABB	Pcs	1	pressure transmitter
29	pressure transmitter 2600T -1000-100Pa, 4_20mA ABB	Pcs	2	pressure transmitter

30	pressure transmitter 2600T 0-1500Pa 4-20mA ABB	Pcs	1	pressure transmitter
31	pressure transmitter 2600T -15-0.1kPa 4-20mA	Pcs	1	pressure transmitter
32	pressure transmitter 2600T -10-0.1kPa 4-20mA ABB	Pcs	2	pressure transmitter
33	pressure transmitter 2600T 0-30kPa 4-20mA ABB	Pcs	1	pressure transmitter
34	TRANSMITTER TEMP TH202, 0-700DEGC 4-20MA ABB TYPE: TH202	pc	2	TEMP transmitter
35	TRANSMITTER TEMP TH202, 0-1200DEGC 4-20MA ABB TYPE: TH202	pc	3	TEMP transmitter
36	TRANSMITTER TEMP MULTIPLEX TH202, 0-150DEGC 4-20MA ABB TYPE: TH202	pc	3	TEMP transmitter
37	TRANSMITTER PRESSURE 2600T, 0-1MPa 4-20MA 10-45VDC ABB	pc	3	pressure transmitter
38	TRANSMITTER PRESSURE 2600T, -500..100PA 4-20MA 10-45VDC ABB	pc	3	pressure transmitter
39	TRANSMITTER PRESSURE 2600T, -7500..100PA 4-20MA 10-45VDC ABB	pc	3	pressure transmitter
40	LEVEL SENSOR L2000	Pcs	5	LEVEL SENSOR
41	proximity sensor;XSA-V11801,Ue 24-240V,Ie=5--200mA	Pcs	10	speed sensor
42	solenoid coil;SAZN,AC 220V,58mA, 6.0VA	Pcs	40	solenoid coil
43	solenoid valve;SAZN model:4M210-08,Max pressure 1.0MPa	set	40	solenoid valve
44	solenoid coil;SCG353A047,Air 0.35~8.5bar, pipeG2 1/2 ,ORE 52mm	pcs	40	solenoid coil
45	solenoid valve;AirTAC model:4V310-10,pressure 1.5~8Kgf/cm2	set	50	solenoid valve

46	COIL SOLENOID 220VAC, PN: MFJ12-27YC	set	6	solenoid coil
47	COIL SOLENOID 220VAC PN: MFJ12-54YC	set	6	solenoid coil
48	SENSOR PROXIMITY, BI 15U-Q20-AP6X2 10~30VDC 200mA	Pcs	6	SENSOR PROXIMITY
49	THERMOCOUPLE TYPE R 1ELEMENT*2C 0..1300DEGC, SS446 25MM*1150MML + PROTECTION TUBE 45MM*1150MML M20*1.5	Pcs	10	THERMOCOUPLE
50	THERMOCOUPLE TYPE R 1ELEMENT*2C 0..1200DEGC, SS446 25MM*1150MML + PROTECTION TUBE 45MM*1150MML M20*1.5	Pcs	10	THERMOCOUPLE
51	THERMOCOUPLE TYPE K 1ELEMENT*2C 0..1100DEGC, SS446 25MM*1150MML + PROTECTION TUBE 45MM*1150MML M20*1.5	Pcs	10	THERMOCOUPLE
52	THERMOCOUPLE TYPE K 1ELEMENT*2C 0..700DEGC, SS446 25MM*1150MML	Pcs	6	THERMOCOUPLE
53	<b>LOAD CELL TYPE WL250 ST-S CAPACITY-1000KG</b>	<b>Pcs</b>	<b>4</b>	<b>LOAD CELL</b>
54	FLOW SWITCH TYPE:YXQ-80 II DI:80MM	PCS	3	CM FLOW METTER
55	PRESSURE DIFERENTIAL SWITCH TYPE:YWK-50 0-0.2MPa	PCS	5	PRESSURE DIFERENTIAL SWITCH
56	PRESSURE DIFERENTIAL SWITCH TYPE:520/7DD 0.025-0.25MPa	PCS	5	PRESSURE DIFERENTIAL SWITCH
57	WEIGH BIN CONTROLLER	pcs	2	for homo silo and fine coal bin
58	PRESSURE TRANSMITTER 0-25MPA	PCS	2	for VRM and coal mill Hydraulic tension. Also for grate cooler oil station
59	ROTARY WEIGH FEED CONTROLLER	PCS	1	for fine coal rotary feeder
60	SPEED SENSOR	PCS	1	for fine coal rotary feeder
61	REMOTE CONTROL for LEVEL SENSOR RADAR	PCS	3	for homo silo, proportion silo and cement silo
62	oil station level switch	pcs	4	for all oil station



## 2.6 Electrical Spare Part List\_PM

SN	Description	UNIT	Qty	Remark
1	Current transformer:BH-0.66,(50/5)	pcs	12	
2	Current transformer:BH-0.66,(75/5)	pcs	2	
3	Current Transformer LZZBJ9-10A Ratio:100/5 CL:0.5/5p10	pcs	12	
4	Current Transformer LZZBJ9-10A Ratio:150/5 CL:0.5/5p10	pcs	12	
5	Current transformer; BH-0.66, ( 200/5 )	pcs	6	
6	Current transformer; BH-0.66, ( 300/5 )	pcs	9	
7	Current transformer:BH-0.66,(400/5)	pcs	9	
8	Current transformer:BH-0.66,(500/5)	pcs	3	
9	Current transformer:BH-0.66,(2000/5)	pcs	3	
10	PMW100 ,0-50A ammeter	pcs	5	
11	Current meter:PMW100 - I- A (0-100A)	pcs	10	
12	Current meter:PMW-100 - I -( 0-150A )	pcs	3	
13	PMW300 , 0-200A ammeter	pcs	3	
14	Current meter:PMW300 - I- A (0- 250A)	pcs	2	
15	Current meter:PMW300-U (0- 300A )	pcs	2	
16	Current meter:PMW300 - I- A ( 0- 400A)	pcs	3	
17	Current meter:PMW2000 ,AC220V(2000/5A)	pcs	2	

**2.7 Electrical Spare Part List\_ Drives cooling fan**

<b>SN</b>	<b>Description</b>	<b>UNIT</b>	<b>Qty</b>	<b>Remark 1</b>
1	Cooling fan for ACS800-01-0030-3+P901 Ser. No.3103003501	pcs	2	
2	Cooling fan for ACS800-01-0100-3+P901, Ser. No.3112204428	pcs	2	
3	Cooling fan for ACS800-01-0165-3+P901, Ser. No.3093402091	pcs	2	
4	Cooling fan for ACS800-04-0260-3+P901	pcs	2	
5	Cooling fan for ACS800-04-0170-3+P901, Ser. No.8134400148	pcs	2	
6	Cooling fan for ACS510-01-072A-4, Ser. No. 3100403324	pcs	2	
7	Cooling fan for ACS800-04-0320-3+P901, Ser. No. 1111303893	pcs	2	
8	Cooling fan for ACS800-04-0400-3+P901, Ser. No. 1110804339	pcs	2	
9	Cooling fan for ACS800-01-0020-3+P901, Ser. No.3111000183	pcs	2	
10	Cooling fan for DCS800-S02-2000-05, Ser. No.1289163A11195230	pcs	2	

## 2.8 Electrical Spare Part List\_VFD

SN	Description	UNIT	Qty	Remark
1	INVERTER ACS350-03E-04A1-4	pcs	1	
2	INVERTER ACS350-03E-15A6-4	pcs	1	
3	INVERTER ACS350-03E-08A8	pcs	1	
4	INVERTER ACS800-01-0060-03+P901	pcs	1	
5	INVERTER PSTB570-600-70	pcs	1	
6	INVERTER ACS800-04-0260-3+P901	pcs	1	
7	INVERTER ACS510-01-09A4-4,                      Input 380..480V	pcs	1	
8	INVERTER FR-E740-1.5K-CHT	pcs	1	
9	INVERTER FR-E740-3.7K-CHT	pcs	1	
10	INVERTER ACS510-01-072A-4,                      input 380..480V/72A	pcs	1	
11	INVERTER ACS800-04-0320-3+P901	pcs	1	
12	INVERTER PST300-600-70	pcs	1	
13	INVERTER ATS48D38Q	pcs	1	
14	INVERTER ACS800-01-0020-3+P901	pcs	1	
15	INVERTER Altivar 302	pcs	1	
16	INVERTER Altivar 31(AS Altivar 302)	pcs	1	

### 2.9 Electrical Spare Part List Contactor

SN	Description	Qty	ANU CON	Remark 1
1	power contactor 3TF4022-OXOM,4 Kw ( 2NC+2NO 220 V coil supply SIEMENS made	PCS	30	
2	power contactor 3TF4422-OXOM, 15KW 220 V coil supply SIEMENS made	PCS	30	
3	contactor:3TF4222-OXMO ( 2NC+2NO)7.5 Kw coil voltage : 220V 50/60Hz SIEMENS made	PCS	30	
4	contactor:3TF5122-OXMO 75KW ( 2NC+2NO)coil voltage : 220V 50/60Hz SIEMENS made	PCS	2	
5	contactor: 3TF4511-OX ( 1NC+1NO)18.5 Kw coil voltage : 220V 50/60Hz	PCS	30	32 ON Packing spout 18.5 Kw
6	contactor:3TF4322-OXMO ( 2NC+2NO)11 Kw coil voltage : 220V 50/60Hz	PCS	30	
7	Power contactor : 3TF5022 -OXMO 55 KW SIEMENS made	PCS	1	
8	contactor:3TF4922-OXMO 45KW ( 2NC+2NO)coil voltage : 220V 50/60Hz SIEMENS made	PCS	8	
9	contactor:3TF4522-OXMO 18.5KW ( 2NC+2NO)coil voltage : 220V 50/60Hz	PCS	20	

10	power contactor 3TF5222-OXOM, 90KW 220 V coil supply SIEMENS made	PCS	10	
11	contactor:3TF4622-OXMO ( 2NC+2NO)22Kw coil voltage : 220V 50/60Hz SIEMENS made	PCS	10	
12	contactor:3TF5322-OXMO ( 2NC+2NO)132kw coil voltage : 220V 50/60Hz SIEMENS made	PCS	2	
13	contactor:3TF4822-OXMO ( 2NC+2NO)37kw coil voltage : 220V 50/60Hz SIEMENS made	PCS	4	
14	SCHNEIDER CONTACTOR TYPE=LC1 D09...C POWER=4KW	PCS	20	
15	SCHNEIDER Power contactor; LC-D18N , 7.5Kw ( Coil Voltage = 230- 220 v)	PCS	20	
16	Power contactor :Telemecanique LC1D2510 11 KW	PCS	20	
17	SCHNEIDER Power contactor; LC1D32M7C 15 KW	PCS	20	
18	SCHNEIDER Power contactor: Schneider LC1D38 22KW	PCS	10	
19	SCHNEIDER Power contactor: LC1D65C 30KW	PCS	5	
20	SCHNEIDER Power contactor: LC1D80C 37KW	PCS	5	
21	SCHNEIDER Power contactor; LC1D15000M5C 75KW	PCS	1	
22	Vaccum contactor JCZ5-7.2/200D AC220V	PCS	2	
23	AC VACCUM CONTACTOR TYPE=CKJ313-630A/1140V	PCS	1	
24	Auxillary Contacts:LADN20	PCS	20	

**2.10 Electrical Spare Part List\_FUSE**

<b>SN</b>	<b>Description</b>	<b>UNIT</b>	<b>Qty</b>	<b>Remark 1</b>
1	170M6813 Busmann 690V 900A	pcs	12	
2	170M3817 Busmann 690V 315A	pcs	12	
3	170M1567 Busmann 690V 100A	pcs	12	
4	170M8554 Busmann 690V 1250A	pcs	12	
5	170M5810 Busmann 690V 500A	pcs	12	
6	170M6812 Busmann 690V 800A	pcs	12	
7	170M6814 Busmann 690V 1000A	pcs	12	
8	170M1565 BUSSMAN 690V 63A	pcs	12	

<b>2.11 Electrical Spare Part List SELECTORS, PUSH BUTTONS</b>				
<b>SN</b>	<b>Description</b>	<b>UNIT</b>	<b>Qty</b>	<b>Remark</b>
1	Two Way Selector Switch Type=SHNEIDER ZB2-BE101C(NO-Normally open) 240V,3A	pcs	40	
2	Three Way Selector Switch Type=SHNEIDER ZB2-BE101C(NO-Normally open) 240V,3A	Pcs	40	
3	3-ways selector 220VAC PN:LAY3 REMOTE/LOCAL/MAINTENNACE	PCS	15	
4	2-ways selector TYPE:ZB2-BE101C	PCS	20	
5	SWITCH PUSH BUTTON GREEN PN:LA39-G11/G CIP	PCS	40	
6	SWITCH PUSH BUTTON RED PN:LA39-G11Z/R	PCS	40	
7	Indicator Shneider(white) XB2-BVMD1LC 220Vdc	pcs	15	
8	Schneider button indicator Type=XB2-BVB3LC (RED) Voltage=24V	Pcs	20	
9	Schneider button indicator Type=XB2-BVB3LC (YELLOW) Voltage=24V	Pcs	20	
10	Indication lamp; XB2 - BVB 3LC / Yellow AC 220V	PCS	15	
11	Indication lamp; XB2 - BVB 3LC / Yellow AC 220V	PCS	15	
12	Indicator lamp XB2-BVB 5LC (LED 24VDC)	PCS	10	
13	Indication lamp; AD16-16B /Green AC220v	PCS	35	
14	Emergency push button; ZB2-BE102C ( NC ,240V , 3A/10A )	PCS	20	

**2.12 Electrical Spare Part List\_ CABLES**

<b>SN</b>	<b>Description</b>	<b>UNIT</b>	<b>Qty</b>	<b>Remark 1</b>
1	Power Cable; YJV-1KV 3*4+1*2.5 mmSq	Meter	600	
2	Power Cable YJV-1KV 5*4 mmSq	Meter	400	
3	Power Cable; YJV-1KV 5* 6 mmSq	Meter	500	
4	Power Cable YJV-1KV 3*10+ 1*6mmSq	Meter	400	
5	Power Cable Cable; YJV-1KV 3* 16 + 1*10 mmSq	Meter	500	
6	Power Cable YJV-1KV 5*16mmSq	Meter	500	
7	Power Cable YJV-1KV 3*25+ 2*16mmSq	Meter	500	
8	Power Cable; YJV-1KV 3*35+1*16 mmSq	Meter	500	
9	Power Cable; YJV-1KV 3*50+2*25 mmSq	Meter	500	
10	YJV-1KV 3*70+ 2*35mmSq	Meter	300	
11	Power Cable Cable; YJV-1KV 3* 95 + 2* 50 mmSq	Meter	300	
12	Cable; YJV-1KV 3* 120 + 2* 70 mmSq	Meter	400	
13	Power Cable YJV-1KV 3*150+ 2*95mmSq	Meter	300	
14	Power Cable YJV-1KV 3*185+ 2*95mmSq	Meter	300	
15	Power Cable YJV-1KV 3*240+ 2*120mmSq	Meter	300	



**2.13 Electrical Spare Part List\_ LIGHTS**

<b>SN</b>	<b>Description</b>	<b>UNIT</b>	<b>Qty</b>	<b>Remark</b>
1	FIXTURE FLOOD LED LIGHT 200W,220VAC	set	<b>700</b>	
2	Fixture FLOOD LED LIGHT 50W,220VAC	set	<b>200</b>	
3	LAMP METAL HALIDE 100W 220VAC with FIXTURE	set	<b>100</b>	
4	FIXTURE ROAD LAMP METAL HALIDE 150W 220VAC	set	<b>100</b>	
5	FIXTURE ROAD LAMP HPS 250W 220VAC	set	<b>200</b>	

### 2.14 Electrical Spare Part List\_ Consumable

SN	Description	UNIT	Qty	Remark
1	copper wire, 0.20mm <sup>2</sup>	kg	30	
2	copper wire, 0.25mm <sup>2</sup>	kg	30	
3	copper wire, 0.30mm <sup>2</sup>	kg	30	
4	copper wire, 0.35mm <sup>2</sup>	kg	50	
5	copper wire, 0.40mm <sup>2</sup>	kg	60	
6	copper wire, 0.45mm <sup>2</sup>	kg	60	
7	copper wire, 0.50mm <sup>2</sup>	kg	60	
8	copper wire, 0.55mm <sup>2</sup>	kg	60	
9	copper wire, 0.60mm <sup>2</sup>	kg	100	
10	copper wire, 0.65mm <sup>2</sup>	kg	100	
11	copper wire, 0.70mm <sup>2</sup>	kg	100	
12	copper wire, 0.75mm <sup>2</sup>	kg	150	
13	copper wire, 0.80mm <sup>2</sup>	kg	100	
14	copper wire, 0.85mm <sup>2</sup>	kg	100	
15	copper wire, 0.90mm <sup>2</sup>	kg	100	
16	copper wire, 0.95mm <sup>2</sup>	kg	100	
17	copper wire, 1.00mm <sup>2</sup>	kg	100	
18	copper wire, 1.05mm <sup>2</sup>	kg	100	
19	copper wire, 1.10mm <sup>2</sup>	kg	100	
20	copper wire, 1.15mm <sup>2</sup>	kg	100	
21	copper wire, 1.20mm <sup>2</sup>	kg	100	
22	copper wire, 1.25mm <sup>2</sup>	kg	50	
23	copper wire, 1.30mm <sup>2</sup>	kg	100	
24	copper wire, 1.35mm <sup>2</sup>	kg	100	
25	copper wire, 1.40mm <sup>2</sup>	kg	200	

26	copper wire, 1.45mm <sup>2</sup>	kg	100	
27	Insulation Paper, 0.15mm	Meter	50	
28	Insulation Paper, 0.2mm	Meter	100	
29	Insulation Paper; 0.25mm	Meter	100	
30	Insulation Paper; 0.30mm	Meter	100	
31	Insulation Paper; 0.40mm	Meter	100	
32	Insulation Paper; 0.50mm	Meter	100	
33	Insulating tube; 1mm	Meter	100	
34	Insulating tube; 2mm	Meter	100	
35	Insulating tube ; 3mm	Meter	100	
36	Insulating tube; 4mm	Meter	100	
37	Insulating tube; 5mm	Meter	100	
38	Insulating tube; 6mm	Meter	100	
39	Insulating tube ; 8mm	Meter	100	
40	Insulating tube; 10mm	Meter	100	
41	Insulating tube ;12mm	Meter	100	
42	Insulating tube ; 14mm	Meter	100	
43	Insulating tube; 16mm	Meter	100	
44	Sand Paper; 1/2mm	Pcs	50	
45	Sand Paper ; 1mm	Pcs	20	
46	Sand Paper ; 1 1/2mm	Pcs	20	
47	Sand Paper ; 2	Pcs	10	
48	Soldering Iron; 100w	Pcs	1	
49	Soldering Iron ; 200w	Pcs	1	
50	Soldering wire; 1mm	Roll	10	
51	Soldering wire ; 1.5mm	Roll	10	
52	Soldering wire ; 2mm	Roll	10	
53	Cotton Bandage; 20mm	Roll	10	
54	Cotton Bandage; 40mm	Roll	10	
55	cable lug 10mm <sup>2</sup>	pcs	50	

56	cable lug 12mm <sup>2</sup>	pcs	50	
57	cable lug 16mm <sup>2</sup>	pcs	50	
58	cable lug 25mm <sup>2</sup>	pcs	50	
59	cable lug 35mm <sup>2</sup>	pcs	50	
60	cable lug 50mm <sup>2</sup>	pcs	50	
61	cable lug 70mm <sup>2</sup>	pcs	50	
62	cable lug 95mm <sup>2</sup>	pcs	50	
63	cable lug 120mm <sup>2</sup>	pcs	50	
64	cable lug 150mm <sup>2</sup>	pcs	30	
65	cable lug 185mm <sup>2</sup>	pcs	30	

**2.15 Electrical Spare Part List\_ GAUGE**

<b>SN</b>	<b>Description</b>	<b>UNIT</b>	<b>Qty</b>	<b>Remark</b>
1	GAUGE PRESSURE 0-10MPA M20*1.5 BOTTOM 100MM DIA OIL FILLED	PCS	10	GAUGE PRESSURE
2	GAUGE PRESSURE 0-40MPA M20*1.5 BOTTOM 100MM DIA OIL FILLED	PCS	10	GAUGE PRESSURE
3	TYPE:M091222521 GAUGE PRESSURE 0-0.6MPA 100MM DIA OIL FILLED	PCS	5	GAUGE PRESSURE
4	GAUGE PRESSURE 0-1MPA 10MM DIA OIL FILLED	PCS	10	GAUGE PRESSURE
5	TYPE:M090912189 GAUGE Tmprature 0-100DEGC 100MM DIA OIL FILLED	PCS	5	GAUGE TEPM
6	GAUGE PRESSURE 0-1.6MPA 10MM DIA	PCS	5	GAUGE PRESSURE
7	GAUGE PRESSURE 0-10MPA 10MM DIA OIL FILLED	PCS	10	GAUGE PRESSURE

**PARTFIVE**  
**CONTRACT OF SALE**

This contract is entered in to this \_\_\_\_\_ day of \_\_\_\_\_ between **National Cement Share Company (NCSC)P.O. Box 94, Tel. +0251252110070/+251252123792, Fax+251252123796 Dire Dawa** (here in after called the “**Buyer**”) on one part ;

***And***

M/S (here in after called the" **Supplier**") on the other part and witness that,

**WHEREAS**, The buyer is interested in the procurement of  
Specified in this agreement.

**WHEREAS**, The Supplier has expressed its ability and willingness to supply all  
the items according to the technical specification and contract.

**WHEREAS, the** supplier has sufficiently equipped to give service, provide items  
and perform all necessary obligations undertaken according to the provision of  
this contract.

Now, **THEREFORE**, on the basis of this fundamental understanding both buyer  
and supplier hereby agree as follows.

**ARTICLEI**  
**SUPPLY ANDCONCLUSIVEPRICE**

I-1. The Supplier undertakes to supply the buyer

S.No	Description of items to be supplied	Unit of Measure	Qty	FOB Basis		Origin
				U/P	T/P	

14.1. I-2. The buyer consents to effect the total value of the items delivered at NCSC value in US Dollar ( ) to the supplier within Five days after delivery of all items.

**ARTICLE II**  
**DELIVERY**

The delivery of all items shall be completed within days from the date of contract signing however, for pp bag as it is one year contract it should be on partial shipment.

**ARTICLE III**  
**WARRANTY**

IV-1. The supplier warrants that all items supplied under this contract are as per the specifications. The supplier further warrants that all items supplied under this contract have no defect arising from material or poor workmanship.

IV-2. The supplier warrants replacing any defective item which doesn't comply with the original offer or beyond the agreed but stag rate at its own expense within ----- days after it has been verified by both parties of any discrepancy.

**ARTICLE V**  
**FINAL ACCEPTANCE**

V-1. The supplier shall effect in section and hand over all items in perfect condition to the satisfaction of the buyer, at no extra cost.

V-2. Items delivered but not meeting specification shall not be accepted until the specifications are complied with fully. Any cost incurred by the buyer for subsequent sections, storage or assistance be given to the supplier shall be billed to the supplier for settlement.

**ARTICLE VI**  
**LIQUIDATED DAMAGE**

VI-1. For each day of delay in the delivery of any item beyond the delivery date agreed, the supplier shall pay liquidated damage, in the amount of 0.1% of the total cost of the undelivered item per day for a maximum of 30 days after which time the buyer shall have the right to terminate the contract.

**ARTICLE VII**  
**FORCE MAJEURE**

Neither the supplier nor the buyer shall be responsible for delays or non-performance arising from force majeure specified in the Ethiopian Civil Code 1960. However, a party whose performance is prevented by force majeure shall immediately inform the other party in writing and negotiate for every necessary arrangement.

**ARTICLE VIII**  
**DISPUTES AND ARBITRATION**

- VIII-1. Any dispute arising between the buyer and the supplier in connection with this contract shall be settled amicably.
- VIII-2. Any dispute which can't be settled amicably by both parties will be referred to an arbitration committee.
- VIII-3. The arbitration committee shall be composed of one representative from each and both parties shall elect a third arbitrator who shall be chairman of the committee.
- VIII-4. The location of the Arbitration committee shall be at Dire Dawa
- VIII-5. If either party fails to agree by the decision of the arbitration committee the other party reserves to take court action.



**ARTICLEIX**  
**INTERPRETATION**

The contents of this contract shall constitute the terms, conditions and specifications for the sale and purchase between the buyer and supplier shall be deemed for all purposes to have been executed in Ethiopia and in all respects shall be subject and be construed in accordance with the law of Ethiopia.

**ARTICLEX**  
**AMENDMENT**

No variation or modification of the terms and conditions of this contract shall be made unless both parties sign a written statement

**ARTICLEXI**  
**DOCUMENTS CONSTITUTING ENTIRE AGREEMENT**

This contract, the supplier's offer, the buyer's bid document and the buyer's letter of award constitutes the entire agreement .In case of any contradiction between the provision of this contract and other documents; the provision of this contract prevails.

**ARTICLEXII**  
**EFFECTIVE DATE**

This contract shall have enforceable effect after both parties have affixed their signatures through their legal representatives.

**SIGNATURE AND SEAL**

**On behalf of the Supplier**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**On behalf of the Buyer**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**WITNESS**

**Name**

**Signature**

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_