OSWAL ENGINEERS

AN ENGINEERING UNIT

MANUFACTURING

- **Online Bulk Sampling System for Limestone, Coal etc.**
- **Powder Sampling System for Raw Meal, Cement etc.**
- **High Efficiency Rotary Air Locks for various applications.**
- **Cyclone Modifications**
- **Kiln Seals (Inlet & Outlet)**
- **Other various jobs as per drawing.**

GA-72-73, RIICO INDUSTRIAL AREA
BIJAINAGAR – 305 624, DIST. AJMER (RAJASTHAN) INDIA
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sujan27@rediffmail.com

OSWAL ONLINE BULK SAMPLING SYSTEM

In the present scenario, Cement Plants are installed with very big capacities to the tune of 3000 to 7000 TPD. A small variation in raw material quality even for small duration may results in big variation of cement quality. To reduce the variation in cement quality, various efforts are being made right from mining to cement grinding. For consistent quality, the foremost requirement is consistent quality of raw mix, which can be achieved by proper formation of raw material stockpile.

Now it is being controlled by installation of CROSS BELT ANALYSER on feeding belt of raw material stockpile, which gives continuous feed back about the quality of limestone stockpile being formed. Since this is very costly equipment, costing around Rs. 2.35 crores and the regular replacement cost is also around Rs. 7.00 to 10.00 lacs per annum, as an alternative we have developed BULK SAMPLING SYSTEM, which takes the sample of limestone being fed to stockpile at an interval of 0-10 minutes and in a hour 12 to 20 samples are being collected and they are further sub-divided, crushed and found in powder formation. The final sample weighing around 2 to 5 kgs. Which gives the complete representative sample of material being fed to stockpile during last one hour.

The sample is collected and tested in Laboratory on the same XRF, where raw mill/ kiln feed material and clinker are being tested. So, there are no chances of difference in calibration, as it can happen in case of CROSS BELT ANALYSER, where sources of analysis is different and there may be some difference in analysis. On the basis of required quality and quantity, stockpile can be formed, which will reduce the variation in raw material, fluctuation in process and quality of clinker. The purpose of bulk sampling system is same as CROSS BELT ANALYSER.

The operation of bulk sampling system being very simple, it can be adopted easily even in the existing system without incurring heavy cost. The tentative cost of this system is Rs. 7.00 to 10.00 lacs depending upon the layout and equipments and there is no recurring cost.

SAMPLING QUESTIONNAIRE

CUSTOMER		DATE	
ADDRESS		Tel.No.	
		Contact	
Customer Ref.		Contract Ref.	

FOR GRANULAR FEEDS:

Feed Material		Bulk Density (Te/m^3)	
Throughput (Te/PH)		Consignment (Te)	
Moisture (%)		Maximum Particle size (mm)	

FOR SLURRY FEEDS:

Feed Volume (Ltrs/Sec)		Nature of solids	
% Of solids (w/w)		Solids Bulk Density (Te/M^3)	

FOR BELTS:

Belt Width (mm)		Belt Speed (mps)	
Belt Slope (deg.)		Head drum dia (mm)	

FOR CHUTES:

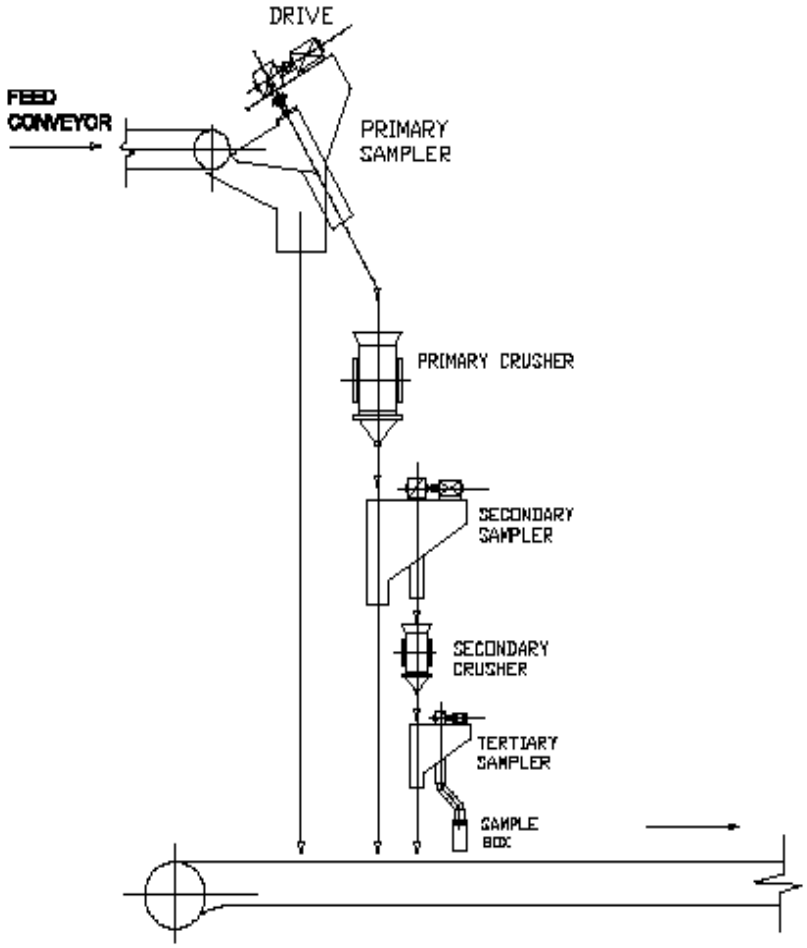
Chute dia (mm)		Slope (deg.)	

Required Sample Mass (kg/ltr)		Frequency of Sampling (per hr)	

ELECTRICITY SUPPLY:

Volt		Phase		Frequency (Hz)	

Sketch of Site/Position
(Use overleaf if necessary)



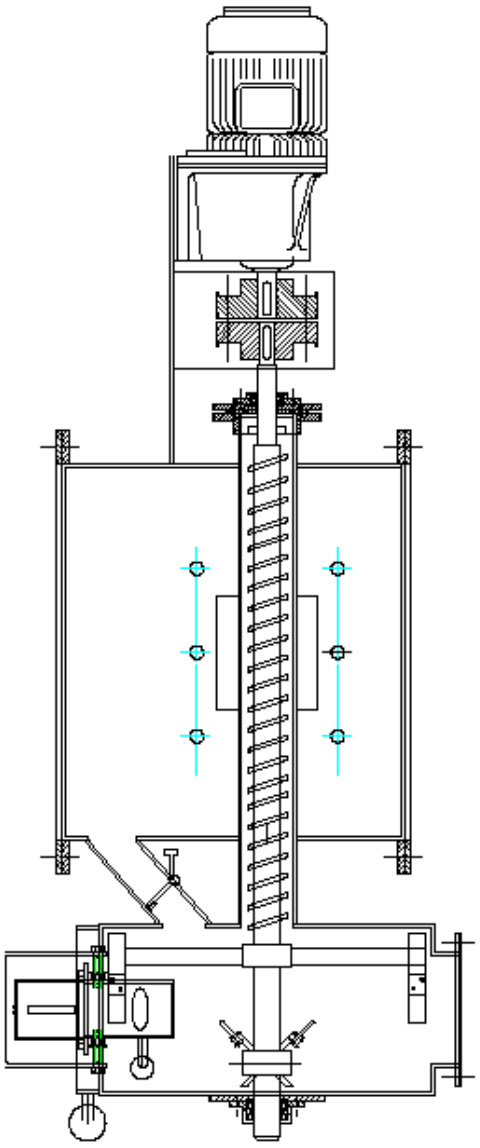
Oswal Engineers G.A .72 - 73 Riico Industrial Area BIJAI NAGAR AJMER (RAJ) - 305624		
DRAWN	R.K.J.	TITLE:- FLOW DIAGRAM OF ON LINE COAL SAMPLING SYSTEM
CHKD	Sujan	
APPD.	Sujan	
DATE	06/06/2012	JSW
SCALE	N.T.S.	DRG. NO. - SAM - 005

OSWAL AUTO POWDER SAMPLER

Oswal Auto Powder Sampler, Draws the representative Samples from the down stream of Material for representative sample no of holes are drilled across the width and size of holes and RPM of screw are calculated as per the flow rate of material, so 1 to 1.5 Kg per hour Samples is collected in the sample box it is properly mixed in mixing drams.

QUESTIONNAIRE FOR AUTO POWDER SAMPLING SYSTEM

1	Material	
2	Rate of Material flow	
3	Moisture Content / Temperature of Material	
4	Sieve Analysis - Residue on 45μ - Residue on 90μ - Residue on 212μ	
5	Size of discharge chute where proposed to be installed	
6	GA of discharge point	
7	Voltage of control Panal required	
8	Quantity of sample per hour	
9	Name and Address of the organization	
10	Name of contact person	



PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

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OSWAL High Efficiency Rotary Air Lock

Product Range:

RAL Size → / Description ↓	OWL-250	OWL-350	OWL-460	OWL-560
Rotor Dia	250 mm	350 mm	460 mm	560 mm
Rotor Width	285 mm	390 mm	525 mm	840 mm
Height of Feeder	400 mm	520 mm	725 mm	900 mm
RPM (Suitable)	10-30	10-30	10-30	10-30
Volume displaced/ Revolution	0.013 m^3	0.035 m^3	0.076652 m^3	0.18542 m^3
Capacity	Depends upon the application and type of material			
Bulk Density, Normal				
Power required				
Any customize size as per customer requirement				

Special Features:

- We have specially developed high efficiency Rotary Air Lock (RAL) for various applications, which ensures sealing effect radially as well as axially.
- Our RAL is equipped with scrapping arrangement between rotor body and side covers, which ensures no jamming and trouble free operation.
- Our RAL is equipped with adjustable plates and is supported by the spring plates, which ensures trouble free running in the event of any trap material.

Applications:

- Below Cyclone Separators
- Below Dust Collectors
- Below ESP & GCT Hoppers
- In the Inlet Feed Chutes of Vertical Raw Mill & Vertical Coal Mill
- In the Cyclone Separators
- Kiln Feed Arrangements & Coal Feed Arrangements

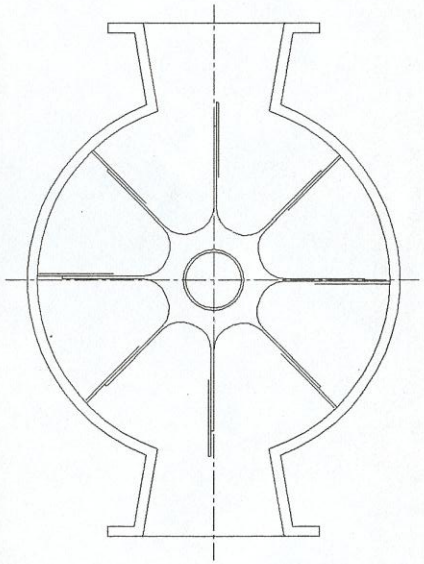
Advantages:

- It reduces false air
- It reduces power consumption of fan
- It improves separation efficiency
- It reduces recirculation of fine materials, thereby improve the efficiency of dust collectors, ESPs & Cyclones
- It improves the venting effect of dedusting points
- It improves the life of dust collector bags
- It improves the life of ESP internals
- It improves the wear on cyclones
- It reduces the wear on fan and ducts due to reduced recirculation.

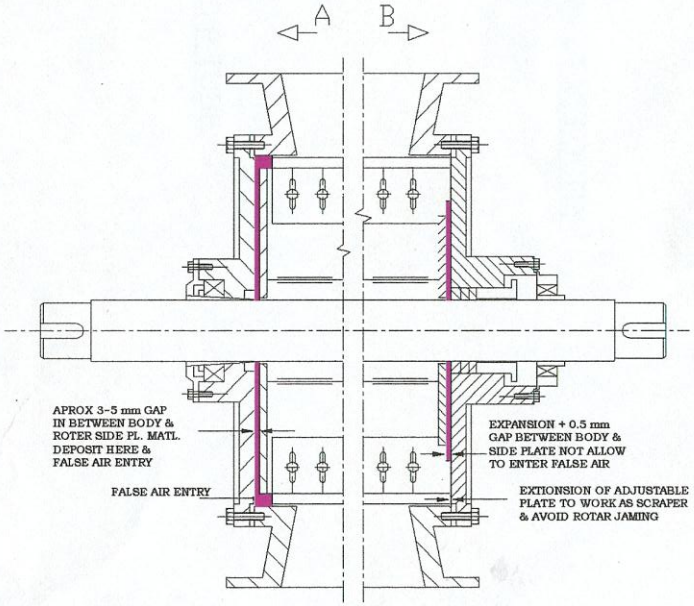
QUESTIONNAIRE FOR HIGH EFFICIENCY ROTARY AIR LOCK

1	Material / Rated Capacity (T.P.H)	
2	Temperature of Material	
3	Moisture	
4	Sieve Analysis - Residue on 45micron - Residue on 90micron - Residue on 212micron -	
5	Application - Cyclone, Dust Collector, E.S.P, Multicyclone, Coal Feeder, Coal Mill Feed, Raw Miull Feed, Cement MillSeperator etc. -	
6	Pressure Before and After rotary air lock (mmwg)	
7	RPM required (10-30)	
8	G.A of Application place, Flange Details	
9	Name And Address of The Organisation	
10	Name Of Contact Person	

Date: _____

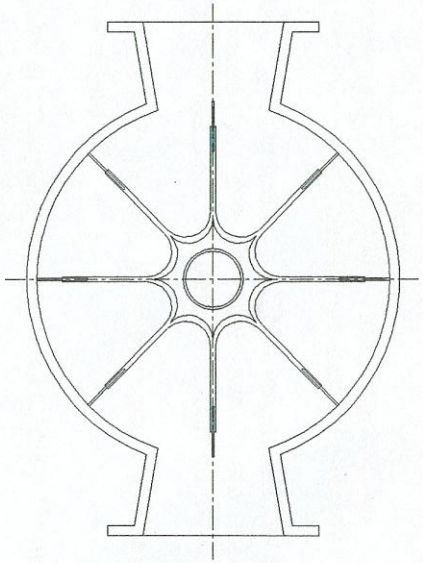


VIEW - AC



CONVENTIONAL ROTARY FEEDERS

HIGH EFFECIENCY ROTARY FEEDERS



VIEW - BD
HIGH EFFECIENCY

BENIFITS OF THE ROTARY FEEDERS :-
1:- LESS FAN WEAR
2:- D.C. & CYC. COLLECTION EFF. IMPROVE
3:- FAN EFFE. IMPROVE

APPLICATION:-
1:- BELOW DUST COLLECTORS
2:- BELOW ALL TYPE CYCLONES
(A) R.M. CYCLONE
(B) SEP. CYCLONE
(C) PRE, HEATERCYCLONE ON FEEDING KILN FEED
3:- PRE. COLLECTORS
4:- ON E.S.P.

Oswal Engineer's
GA. 72-73, RIICO INDUSTRIAL AREA
BIJAINAGAR, DIST. AJMER (RAJ.)

DRAWN	SUJAN	TITEL:- HIGH EFFECIENCY ROTARY FEEDER (WITH	
CHECKED			
APPROVED			
DATE	26-11-01		
SCALE	N.T.S.	DRG. NO. MISC. - 008	REV.

MODIFICATION OF CYCLONE SEPARATOR

The Cyclone Separator is one of the simplest and most reliable equipment for separating the solid particles from the air. However, it is not the energy efficient. In the cyclone separator, dust ladden gas enters tangentially inside the cyclone, causing centrifugal force on dust particles. Due to sudden volume increase, the velocity of gas drops and dust particles are thrown away by centrifugal force gained by the inlet gas velocity and the gases are sucked through the central tube.

Since the dip tubes are centrally located, the gas enters at randomly, causing the turbulence flow as well the lighter particles, which are not thrown upto the walls of cyclone, are caught by the exit flow gases and carried away by exit gases.

Due to the turbulence flow, pressure drop across the cyclone increases as well the power consumption of the fan.

Due to the entrapping of separated solid particles by the exit gases, the separation efficiency of the cyclone also drops.

To improve the cyclone efficiency, following modifications are required:

OPTIMUM INLET VELOCITY:

As in the cyclone separator, the separation takes place by centrifugal force and the centrifugal force is resultant of inlet velocity, so it is very important to maintain minimum velocity. At the same time, higher velocity results in higher-pressure drop, consumes more electrical powers. So, both the situations are not desirable and for both efficiency of cyclone for separation as well energy, the optimum design of inlet is desired.

MODIFIED DIP TUBE:

To avoid turbulence flow to have smooth exit gas flow, dip tubes are so designed that smooth exist is followed after cyclonic effect. So, there is no extra pressure drops due to turbulence flow. Since the gas enters inside the cyclone, velocity of gases gradually drops, then it moves circumferentially and the quantity of gases also drops when the gases travel from top towards the bottom of cyclone. To meet the actual gas velocity condition as well as quantity of gases, the dip tubes are designed in such a way that the exit gas velocity is maintained circumferentially as well as axially.

MODIFIED CYCLONE BOTTOM:

In the cyclone, gases move upto the bottom of the conical portion. Though the velocity and quantity is very low, but still sufficient to carry back the separated solid particles upward in counter flow of the gases, which again reduces the separation efficiency. So, the bottom of cone is so designed, the velocity of gases are dropped to the minimum level and not capable of carrying back the finer particle of material collected and also having the blind bottom of central tube, which prevent counter current flow of gases through dip tubes.

CYCLONE DISCHARGE:

The material collected in the cyclone is discharged through rotary air lock or flap valves. Normally rotary air lock and flap valves are designed for the convenience of maintenance, but without giving importance to the cost of operation. If suitably

designed high efficiency rotary air locks are installed, which takes care for trouble free running and preventing the substantial quantity of false air & re-circulation of material, which ultimately results in lower power consumption, better performance of cyclone and lower wear and tear on cyclone internal parts as well as suction fan and ductings.

SOLUTIONS:

Looking to the above limitations of cyclone separator, the team of ***OSWAL ENGINEERS*** with the guidance of eminent professor of Indian Institute of Technology, we have designed and developed new cyclone, which take care of ***inlet velocity***, smooth exit of gases through ***modified central tube*** and ***improved bottom of cyclone*** equipped with ***high efficiency rotary air lock***.

ADVANTAGE OF MODIFIED CYCLONE:

1. ΔP across the cyclone reduces by 15 to 25%.
2. The energy saving of the suction fan is approximately by 5-10%.
3. Separation efficiency improves upto 95-99%.

For modification of existing cyclone, we need the details as per enclosed questionnaire.

APPLICATION:

All types of cyclones provided for material collection with raw mill, cement mill, coal mill, pre-collector before separator, dust collector and all other application of cyclones.

Effect on fan power with fan impeller dia Vs fan speed		
Parameters	UOM	values
present fan impeller dia	mm	2630
fan power	kwh	1280
fan speed	rpm	970
fan I/L draft	mmwg	870
impeller dia	mm	2600
Static pr. At fan I/l Will be (after reducing impeller dia)	mmwg	850
For getting same draft ,fan speed will be	RPM	981
Fan power will be with increased speed	kwh	1325
fan power after reducing impeller dia	kwh	1356
power savings	kwh	31

VRM Bag house Return dust % by drop test method dt.02.05.2014				
S.No.	MT	KF (W Feeder Counter's in ccr)		Time (Intervel)in hr's
1	4.830	initial	197	3.01 PM
2	3.880	final	894	6.46 PM
3	5.250	Diffn.(MT)	697	3.45 hr's
4	3.780	TPH	185.87	
5	0.510			
6 (Extra)	0.350			
Total (Return dust quantity in ton's)	18.60			
VRM Bag house return dust %	2.654			

May 5, 2014

NOTE ON HIGH EFFICIENCY CONE ATTACHMENT

To collect the material from dust laden gases, normally cyclone separator is used and thereafter bag house is used. In conventional cyclone, cylindrical dip tube is provided, because of that swirling action is not full and there is short circuiting of the exhaust gases through dip tube causing more pressure drop and less dust suppression. Because of the reverse swirling, the separator dust is also again lifted and carried out as per the enclosed sketch (conventional cyclone).

To have full swirling action, before the gases are exhausted through central tube, we have developed a three point conical exit attachment with a closed bottom dip tube attachment, which has resulted in improving swirling action before exhaust and reverse spiral action is blocked by closed bottom. Both this have resulted in higher separator efficiency and smooth guided exhaust has resulted in lower pressure drop and ultimately in power saving of exhaust fan and also due to higher collection efficiency, which is collected in bag house, the return dust has reduced from 10 to 2.6% and differential pressure across the bag house has also resulted in saving of bag house fan power.

Because of reduced return dust, life of bag house bags will improve much more, resulting in low replacement cost of bags. Detailed calculation is enclosed herewith alongwith sketch of high efficiency cone.

We have tried in Vertical Raw Mill and total power saving is 137 kW/hr and return dust reduced from 10 to 2.6%, resulted in better bag house bag life.

Enclosure –

1. Calculation sheets
2. Sketch of conventional cyclone
3. Sketch of high efficiency cone

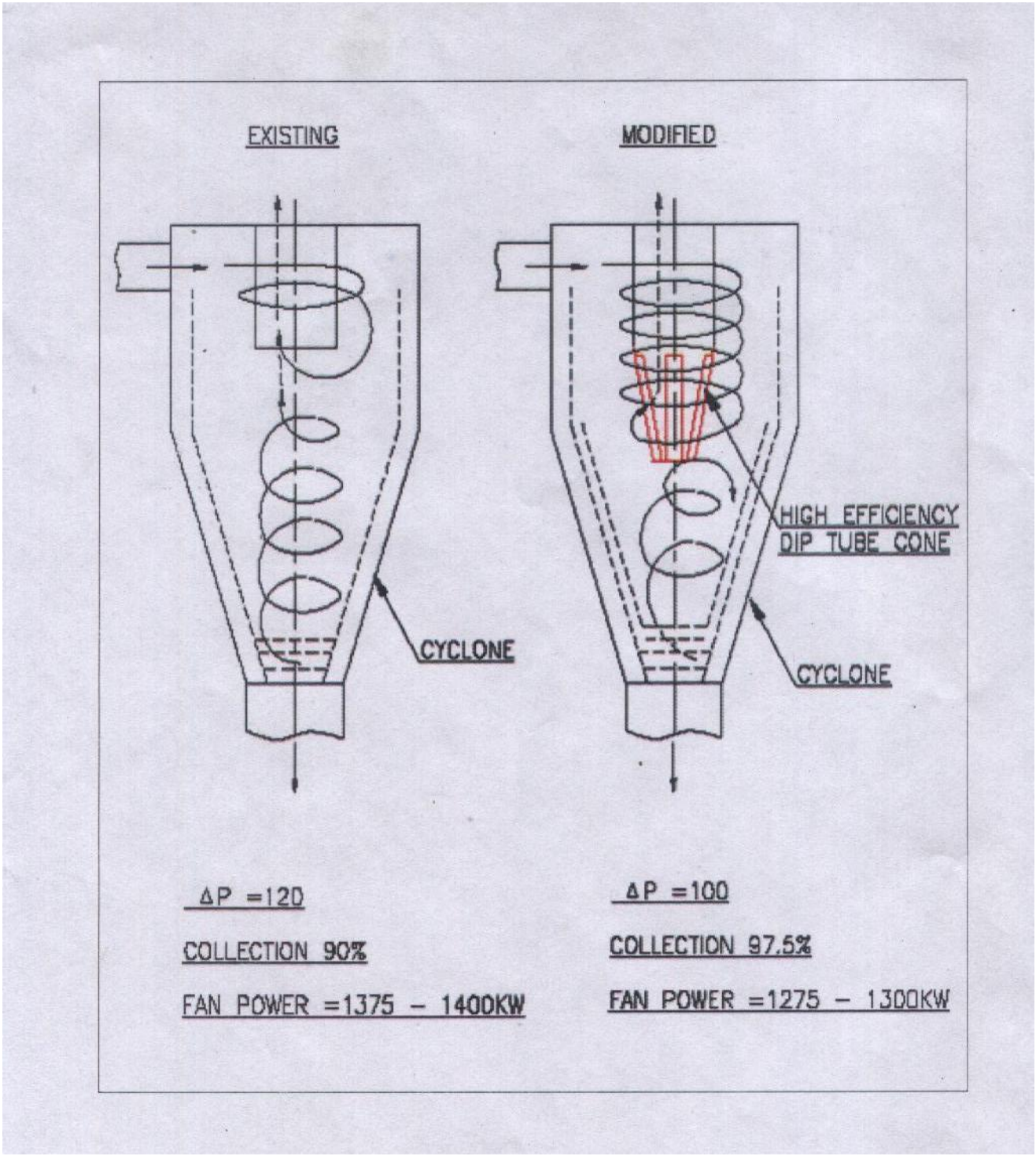
QUESTIONNARE FOR CYCLONE MODIFICATION

PROCESS PARAMETERS: -

Unit/ Section	Temp. (^oC)	Pressure at cyclone I/L (mmWG)	Pressure at cyclone O/L (mmWG)	Gas Flow at cyclone I/L (m^3/hr.)	Gas Flow at Cyclone O/L (m^3/hr)	Dust Loading At cyclone / I/L (Gm/m^3) Residue on 45μ, 90μ, 212μ	Fan Power (KWH)

Cyclone Dimension as per enclosed Sketch: -

Sr.No.	Dimension	Cyclone-I	Cyclone-II	Cyclone-III	Cyclone-IV
	W				
	H (i)				
	H (t)				
	H (cy)				
	H (cn)				
	D (o)				
	D (t)				
	D (cy)				
	D (m)				
	Material of construction				
	Present arrangement at the Bottom (R.A.L/Flap)				
	Application				


EXISTING
MODIFIED
HIGH EFFICIENCY
DIP TUBE CONE
CYCLONE
CYCLONE
ΔP =120
COLLECTION 90%
FAN POWER =1375 – 1400KW
ΔP =100
COLLECTION 97.5%
FAN POWER =1275 – 1300KW

WRITE UP ON DUPLEX SEALING ARRANGEMENT ON KILN

The Kiln is normally rotating at 3.0 to 5.5 RPM and at both the ends, at inlet and outlet, the Kiln subject to the vacuum. If proper sealing is not provided, the false air enters through the ends of the Kiln at inlet as well as outlet, and

1. The false air, which enters at **INLET** reduces the capacity of fans, as this air is false air and not participating in combustion of coal, which is taking place in the burning zone. So, it directly reduces the output of the Kiln to the extend of false air.

2. The false air at the **OUTLET** is directly affecting the heat efficiency of the cooler. The false air, which enters at the outlet is at an ambient air temperature between 20 to 45^{o}C, which replaces the secondary air from the cooler, ranging from 1100 to 1250^{o}C. So, directly affecting the heat loss.

Normally the seals are available in '**Inverted Leaves Spring Loaded Stainless Steel**' or '**Graphite Blocks**'. The Inverted Leaves Spring Loaded Stainless Steel Seals are having limitation because of lamination and from every joints the false air is entering into the Kiln and in the Graphite Block Seals, there is perfect sealing, but subject to the wear and tear caused by the clinker particles coming from the Kiln Hood occasionally because of pressurization.

To overcome these problems, **OSWAL** has specially developed DUPLEX Seals in two stages. In first stage, Inverted Leaves Spring Loaded Stainless Steel Seal arrests the clinker particles in case of pressurization and in second stage, the seals are of Graphite Blocks. Since the clinker particles are arrested by the Inverted Leaves Spring Loaded Stainless Steel Seal, the Graphite Block Seal runs trouble free without any wear because of the clinker particles. In between the Inverted Leaves Spring Loaded Stainless Steel and the Graphite Block Seals, the sealing air is supplied, which is interlocked with the air chamber temperature. If the temperature goes above 400^{o}C, then the air from the nose cooling fan through butterfly damper will enter and cool the air of the chamber between these two Seals and will pass from the Chimney provided at the top, which is closed by a light weight flap.

ADVANTAGES:

1. With the application of these seals, approximate saving is from 4.5 to 6.0 K.Cal/Kg. of Clinker and if the condition of the existing seal is worst, then the saving will be more.

2. Apart from the above saving, these seals also avoid the formation of snowman in the Cooler and coating formation in the Kiln Inlet by avoiding condensation of hot meal due to ingrace of cold air. It will also held in increasing the Kiln output to the tune of heat saved at Kiln Outlet and air saved at Kiln Inlet.

The seals are supplied as tailor made equipment. Before submitting offer for the seals, OSWAL will have to carry out the feasibility study at site for the installation of OSWAL DUPLEX SEALS.

****

QUESTIONNAIRE FOR OSWAL DUPLEX SEALS

1. Name and address of the party (with Telephone Nos. & Contact Person). :

2. GA/Detailed Drawing of existing Seal. : (To be attached)

3. Dia of the Kiln alongwith the dia & length of the existing Cow Shell. :

4. Detailed G.A. of Inlet Chamber / Kiln Hood with reference to the existing Kiln Seals. : (To be attached)

5. Details of the Nose Cooling Fan. : Capacity
   Pressure

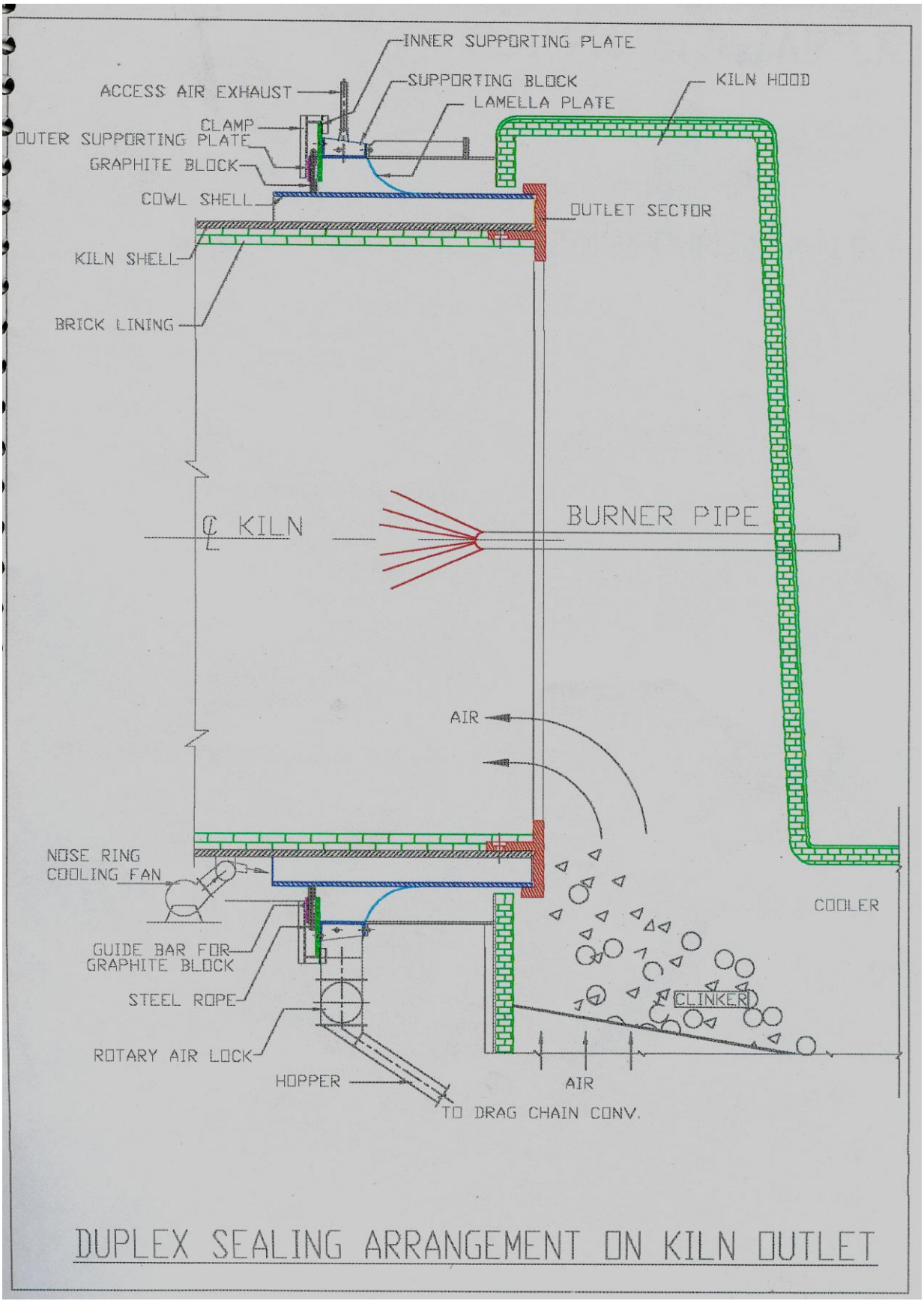
6. Present Heat consumption :

7. Present Clinker Cooler efficiency with following details :
   a) Kiln output/day
   b) Secondary air temp.
   c) Tertiary air temp.
   d) Cooler exhaust temp.
   e) Cooler outlet clinker temp.
   f) Cooling air / kg. of clinker
   g) Hood draft in mmWG
   h) Kiln Inlet temp. (Gas)
   i) Draft at Kiln inlet chamber in mmWG
   j) O_2 % at kiln outlet

(Signature)

Date :

COST BENEFITS OF GRAPHITE SEAL				
Basis	Kiln production	1750	TPD	
	Kiln Diameter.	3.95	mts	
	Cow shell Diameter	4.2	mts	
	Sp.heat consumption	860	Kcal/kg	
	Secondary Air temp.	1100	oC	
	Hood Pressure	1.4	mmWg	(-1.2 to 1.6)
	Avg ambeint Temp.	30	oC	45 to 15
Assumptions	Radial Gap of lamela	5	mm	
	Gap between lamela plates	2	mm	
	Lamela plate of	180	mm	
	No of Lamelas	80	mm	
Radial gap area		0.06594	m2	(3.14xCowshell diaxgap)
Gap area betweem lamela plates		0.0288	m2	(180*80*1.5)
Total gap		**0.09474**	m2	
Velocity of air at the gaps		2.92	m/s	sqrt(2*g* Dp/(2.5*density of gas)
Volume of air leakage		0.2761707	m3/sec	
Thermal energy loss/sec		122.27	Kcal/sec	(air density*leakage air* temp deff* Cp)
Thermal energy loss/day		10563885	Kcal/day	
Sp.heat loss/ potential		6037	Kcal/ton	
		6.04	Kcal/kg	



DUPLEX SEALING ARRANGEMENT ON KILN OUTLET

LABORATORY JAW CRUSHER

Description	Primary	Secondary	Tertiary
Type	JAW Crusher	JAW Crusher	JAW Crusher
Size	OWL 95	OWL 64	OWL 32
RPM	360	360	360
Capacity	5TPH	1TPH	0.5 TPH
Input Size (Max)	150mm	75mm	50mm
Output Size (Max)	40mm	16mm	10mm
Drive	V-Belt	V-Belt	V-Belt
Belt Size	C-124 (2 Nos.)	B-95 (2 Nos.)	B-62 (2 Nos.)
Drive Motor -Make	CROMPTON	CROMPTON	CROMPTON
-Rating	5.5KW	2.2 KW	1.5KW
-RPM	1440	1440	1440

SPECIAL FEATURES:

a) All Crushers are specially designed with heavy-duty antifriction bearing with long life grease lubrication arrangement.

b) Trouble free operation without day-to-day maintenance & lubrication.

c) Specially designed high wear resistant Jaw plates for consistent output size for longer duration.

QUESTIONNAIRE FOR CRUSHER

1	Party Name	:	
2	Contact Person	:	
3	Feed Material	:	
4	T.P.H.	:	
5	Moisture	:	
6	Bulk Density	:	
7	Output Size Require	:	
8	Input Maximum Particle Size (MM)	:	

Oswal Wear Plates

FOR CONSISTANT LONG LIFE

BEST TECHNOLOGY

COST EFFECTIVE

In continuous process plant, such as Cement, Sugar, Fertilizer, Thermal Power, Chemical, Mineral Processing, CONTINUOUS & CONSISTANT running is utmost important. In continuous plant, there is continuous flow of material, i.e. raw material and finished product, which wear on moving surface as well as surface of sizing equipment. Due to wear, there may be through and through holes and over sizing of sizing equipment, causing spillage and intermixing of material and process upsets due to over size.

To overcome the above problems patchwork is done partially or replacement of worn out parts is done repeatedly. This involves long downtime of equipment, production loss, cost of replacement parts, labor cost. Due to fast wear every now and then equipment cannot be stopped, so some compromise is done for less rate of production and quality of product. For example, wear of louver plates of DYNAMIC SEPARATOR OF RAW MILLS, COAL MILLS, and CEMENT MILLS of CEMENT PLANTS.

For above wear problems, we have solution by providing extra hard wear plates manufactured by world renowned EUTECTIC product, with AUTOMATIC WELDING EQUIPMENT. We have developed special wear liner for following applications: -

S.No.	Description of Wear Plate	Application
1.	HIGH ABRASION RESISTANT WEAR PLATES (OSWAL-HI-AB-WP) Hardness 550-650 BHN	1. Vertical Mills (Raw Mill, Coal Mill) Body Liners. 2. Dynamic Separator Body Liners, Louver Plate Wear Liners, Rotor Liners. 3. Inlet and Outlet Duct Wear Liners. 4. Cyclone Separator Body Wear Liners. 5. ID Fans Casing Wear Liners.
2.	MILD ABRASION RESISTANT – FAIR DEGREE OF TOUGHNESS WEAR PLATES (OSWAL-MI-AB-WP) Hardness 350-400 BHN	1. Inlet and Outlet Chute of Crusher Weigh Feeders, Hopper Liners, Push Feeder Liners, and Belt Conveyor Chutes etc.

S.No.	Description of Wear Plate	Application
3.	HIGH ABRASION AND HIGH IMPACT RESISTANT WEAR PLATES (OSWAL-AB-IMP-WP) Hardness 500-600 BHN	1. Body Wear Liner Plates of Impact Crusher. 2. Breaker Plates of Impact Crusher. 3. Body Liner of Jaw Crusher. 4. Clinker Cooler Discharge Chute (Temperature may 125^{o}C), 'V' Separator Body Liners and Louvers Liner Plates.

4.	TAILOR MADE WEAR PLATES (OSWAL-TAIL-WP)	On very specific requirement, we also develop and manufacture special wear plates on getting enclosed Questionnaire.

QUESTIONNAIRE FOR *Oswal* SPECIAL WEAR PLATES

1. Name of Customer

   1.1 Address
   1.2 Telephone No.
   1.3 Fax No.
   1.4 E-Mail No.
   1.5 Name of Contact Person

2. Application

   2.1 Details of Present Plates
   2.2 Material of Construction
   2.3 Thickness of Plates
   2.4 Surface Hardness
   2.5 Maximum Working Temperature
   2.6 Life Achieved
   2.7 Expected Minimum Life
   2.8 Drawing/Sketch of Plates
   2.9 G.A. Drawing of Equipment, Where Wear Plate will be used
   2.10 Application
   - Type of Material
   - Whether fall is gravitational Or with impact
   - If material is moved by Air:
     - Velocity
     - Size of material particle

(FURNISHED BY)

Signature:
Name:
Designation:

Oswal Brick Conveyor

Presently in most of the Cement Plants, during new brick lining, bricks are supplied manually by engaging enormous laborers, which is not only slow procedure but also mismanage the whole shutdown work, due to movement of huge laborers here and there. This can partially reduce by engaging Oswal Brick Conveyor, which is folding type and can be installed within one-two hours in the kiln and can be dismantled within one-two hours. This conveyor can supply bricks from burner platform to inside kiln.

Technical Specifications: -

1.	Belt Size	:	250 mm
2.	Belt Length	:	a) Multiple of 3 M and detachable head and tail drums.
			b) Maximum length 2 M + Kiln hood length + kiln length upto II tyre
			c) This is tailor made. Can be supplied as per requirement furnished in enclosed questionnaire.

QUESTIONNAIRE FOR *Oswal* BRICK CONVEYOR

1.	Organisation	:	
	Address	:	
	Telephone No.	:	
	Fax No.	:	
	E-Mail No.	:	
	Name of Contact Person	:	
2.	No. Of Kilns	:	
3.	Size of Kilns	:	(Inside dia without bricks + Inside dia with bricks + Hood length + Centre distance of II tyre from kiln trap + Size of bricks + No. Of bricks per M + Weight of bricks)
	Kiln No. 1		
	Kiln No. 2		
	Kiln No. 3		
4.	Bricking details	:	Rate of brick lining, i.e. M/day

Please enclose G.A. Drawing of Burner Platform with Kiln.

(FURNISHED BY)

Signature:
Name:
Designation:

Oswal Grinding Media Loader

Now a day due to large capacity of cement plant, downtime of any equipment is very costly. All efforts are being made to reduce the downtime for more availability. In this direction, attempts are being made to reduce the downtime of cement mill for loading grinding media. Grinding media are periodically charged for make up against regular wear. Grinding media changing or re-grading once in a year for optimum output rate of cement mill.

Presently grinding media are charged manually by engaging huge manpower, which is very costly as well as more impact in long downtime of the mill. Due to long downtime most of the time re-grading of grinding media is delayed and mill is allowed to run inefficiently to meet production requirement. To overcome this problem, we have developed **Oswal** Mechanised grinding media loader @ 10 MT to 25 MT/hour, depending upon customer requirement as per the enclosed questionnaire.

VENDOR REGISTRATION FORM, CEMENT

1)	Name of the Organisation	:	OSWAL ENGINEERS
2)	Office & Factory Address	:	GA-72-73, RIICO Industrial Area, BIJAINAGAR – 305 624 Dist. Ajmer (Rajasthan) Phone +91-1462-231356, 228132 Fax +91-1462-230414 E-Mail oswaleng@rediffmail.com oswalengbjnr@gmail.com sujan27@rediffmail.com
3)	Central Excise Registration No.	:	N.A.
4)	Sales Tax Registration No.	:	State 0103/02384 dated 01.02.1997 Central 0103/02384 dated 18.02.1997
5)	Status, Proprietory / Partnership / Private Ltd. / Public Ltd.	:	Proprietory
6)	Items dealing with	:	Machining, Fabrication, Material Handling Equipment etc.
7)	Area of Activities, Manufacturer / Distributor / Dealer / Fabricator / Repairer / Any Other	:	Manufacturer / Dealer
8)	Name and address of your authorized dealers / direct distributors for our area	:	
9)	Year of Establishment / Commencement of Production	:	1997
10)	Annual turnover for last financial year	:	Rs. 7,15,570.00 (1998-1999) Rs. 28,00,000.00 (1999-2000)
11)	Total Investment / Profit & Loss details (Please attach Audited Balance Sheet of the last Financial Year)	:	Photocopy attached.
12)	Name of Bankers	:	1. Bank of Baroda, Gulabpura 2. State Bank of Bikaner & Jaipur, Ajmer 3. Central Bank of India, Bijainagar 4. Oriental Bank of Commerce, Beawar
13)	Working Strength	:	10 – 15 Persons
14)	Production Capacity	:	Attached Introduction Letter.
15)	Details of Machinery available (Please attach list of machines and equipments)	:	Attached Introduction Letter.
16)	Do you have or Applied for ISO-9000 Certificate?	:	Attached Introduction Letter.

17)	What type of tests you can conduct in your Laboratory (Please enclose Annexure)	:	Through National Test House, Jaipur for physical and chemical analysis.
18)	Status, authorized dealer / distributor / handling agent (Please attach certificate)	:	1. Authorised Marketing Agent of TATA GROWTH SHOP for various Critical Machining, Fabrication and Casting. 2. Authorised Dealer for INDO CHAIN PVT. LTD. for various types of chain.
19)	Have you ever supplied to any of Aditya Birla Group Company.	:	Yes.
20)	Any other information you want to give about your business	:	We are OEM of Rotary Air Lock, Online Auto Bulk Sampling System, Auto Powder Sampling System, Grinding Media Loader, Brick Conveyor and fabrication and machining items.