CLEANER FLY ASH BRICK PRODUCTION

By

NEPTUNE

Engineering for future

www.flyashplant.com
www.neptune-india.com

Neptune promoted Fly ash based Green Technology for advanced building materials

(Fly ash Bricks Plant)

Introduction of Neptune

- Neptune is a provider of turn key based Engineering Projects.
- Wide experience of executing various kind of Turnkey Projects in Industries like Fly Ash Bricks/Concrete Pavers and Blocks, Sanitary Wares & Table Wares, Electro Porcelains/HT/LT/Insulators, Refractories, Technical Ceramics & Crockery.
- Adequate Infrastructure facilities and skills.
- Most Client-base is in growing infrastructure related industries like Building Materials, Power Transmission & Construction.

➢ Our Goal：Fly Ash Green Technology

Green Building Technology and Products from Fly ash

How ??

Through our extensive Innovation work

➢ Fly ash Green Technology:

- Appr. 180 billion tones of common burnt clay bricks are consumed annually & approximately 340 billion tones of clay is being used.
- About 5000 acres of top layer of soil dug out for bricks manufacture. Emission from coal burning or fire woods which causes deforestation are the serious problems posed by brick industry.
- The above problems can be reduced to some extent by using **Fly ash Bricks.**

➢ Pulverized Fuel Ash:

Ash generated by burning of ground or pulverized or crushed coal or lignite fired boilers. It can be fly ash, bottom ash, pond ash or mound ash.

1) Fly Ash — Silica, Alumina and Calcium, these particles solidify as microscopic, glassy spheres that are collected from the power plant's exhaust before they can 'fly' away hence the product's name "Fly Ash"

2) **Bottom Ash** — Pulverized fuel ash collected from the bottom of boilers by any suitable process.

3) **Pond Ash** — Fly ash or bottom ash or both mixed in any proportion and conveyed in the form of water slurry and deposited in pond.

4) **Mound Ash** — Fly ash or bottom ash or both mixed in any proportion and conveyed or carried in dry form and deposited dry

➢ Chemical Composition (%):

PROPERTY	UNIT	EN 450	ASTM C618 CLASS F	BS 3892	IS 3812
Chemical Analysis					
$SiO_2+AL_2O_3+Fe_2O_3$	%	70 (min)	70 (min)	N/S	70 (min)
So_3	%	3 (max)	5 (max)	2 (max)	3 (max)
Moisture Content	%	N / S	3 (max)	0.5 (max)	2 (max)
Loss on ignition	%	5 (max)	6 (max)	7 (max)	5(max)
Na_2O	%	5 (max)	N/S	N/S	1.50 (max)
Total Chlorides	%	0.1 (max)	N/S	0.10 (max)	0.05 (max)
Physical					
Fineness (Retention over 45 micros sieve)	%	N / S	34 (Max)	12 (max)	34 (max)
Strength Activity Index (Portland Cement)					
Compressive Strength at 28 days - % of Plain Cement Mortar	N/mm^2	75(min)	75 (min)	80 (min)	80 (min)

Fly Ash : Pulverized fuel ash shall conform to IS 3812: (Part 1) and IS 3812 (Part 2), BD - 0.9-1.3 gm/cc, SPGR - 1.6-2.6, Particle size - 45 micron (particle size more than 63 micron not suitable), Class-F(CaO-less than 20%), Class-C (Cao more than 20%),

Fine aggregates used shall conform to IS 383.

Cement complying with any of the following Indian Standards may be used

Ordinary Portland cement (OPC), conforming to IS 269

Admixtures when used shall conform to IS 9103

Water shall be clean and free from injurious amounts of deleterious materials, reference may be made to IS 456.

Curing : cured as per IS 456 or by mist curing so as to deliver the specified strength of bricks.

Compressive Strength : The minimum average wet compressive strength of bricks shall not be less than as described in IS 3495 (Part 1).

Water Absorption : The bricks, when tested in accordance with the procedure laid down in IS 3495 (Part 2), after immersion in cold water for 24 h, shall have average water absorption not more than 20 percent by mass.

Advantages of Fly ash Bricks:

- These bricks have a pleasing color like cement, are uniform in shape and smooth in finish, also, they require no plastering for building work.
- The bricks are of dense composition, uniformly shaped, free from visible cracks, warpage.
- They are lighter in weight than ordinary clay bricks and less porous too.
- They come in various sizes, but generally are similar to the sizes of clay bricks.
- Savings in mortar plastering, and giving smart looking brickwork.
- High compressive strength eliminates breakages / wastages during transport and handling,
- The cracking of plaster is reduced due to lower thickness of joints and plaster.

Advantages of Fly ash Bricks:

- These bricks do not absorb heat, they reflect heat and gives maximum light reflection without glare.
- It provides an acceptable degree of sound insulation.
- The bricks can be directly painted in dry distemper and cement paints, without the backing coating of plaster.
- Water absorption is 6-14% as against 20-25% for handmade clay bricks, reducing dampness of the walls.
- Fly ash bricks have a good fire rating.
- It has no problems of vermin attacks or infestation.
- The construction technique remains the same as regular bricks ensuring easy change of material, without requiring additional training for the masons.

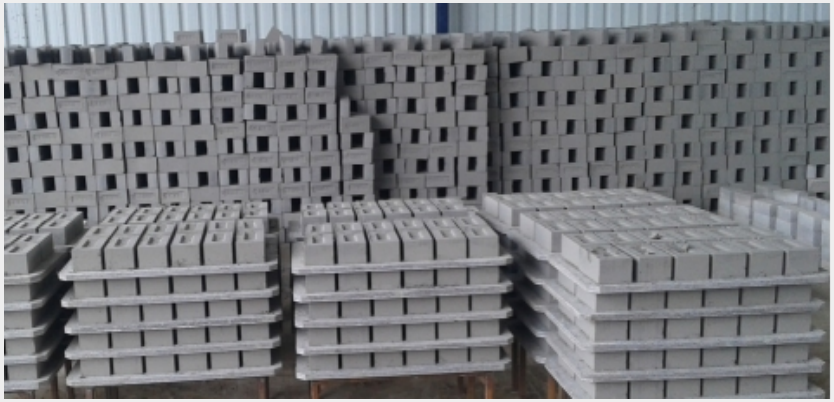
➢ Options Available For Fly Ash Utilization

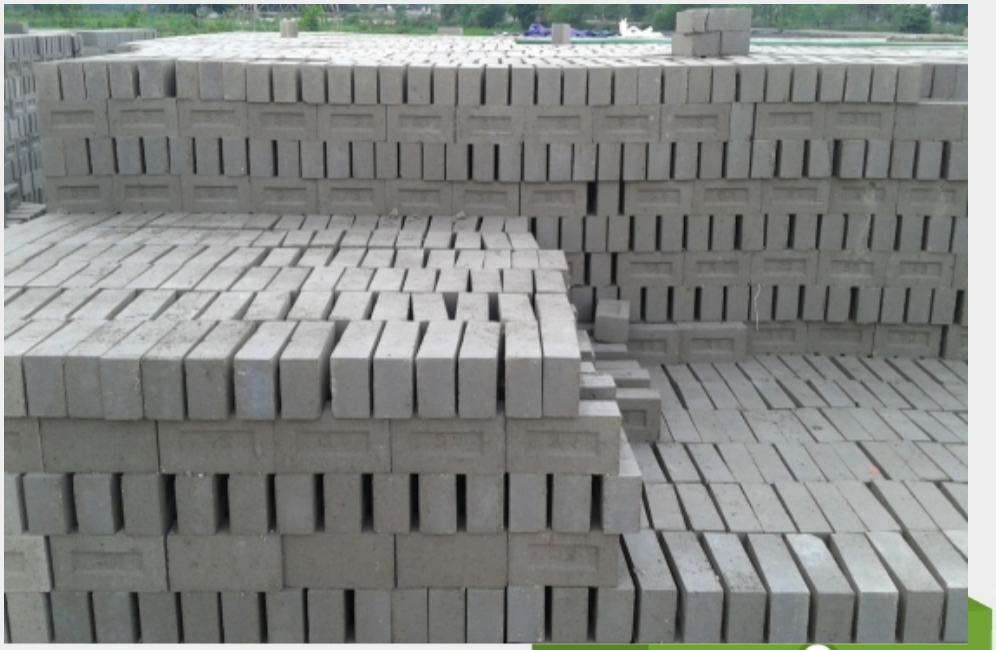
Potential uses of Fly Ash :-

- Fly Ash Bricks
- Classified Ash for Concrete
- Concrete blocks & Pavers
- AAC Blocks
- Pre-Stressed Concrete
- Ready Mix Mortar
- Rendering Material
- Special Cement Admixture

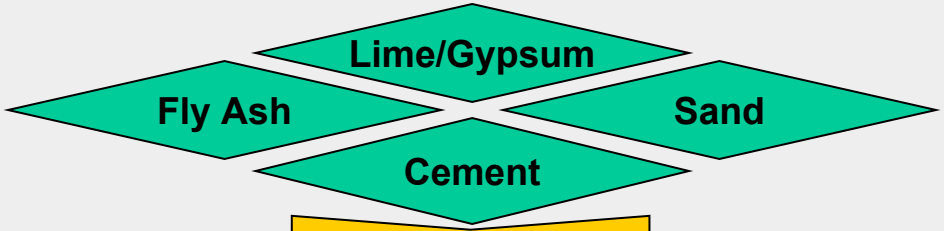
Feature of Good Quality Fly Ash Brick

Weight of Bricks	: 2.70-3.25 kg / Brick
Brick Size	: 230 x 110 x 75 mm
Compressive Strength	: 80-120 Kg/Cm2
Water Absorption	: 12-15 %
Shape/Size	: Uniform(± 2 mm accuracy)

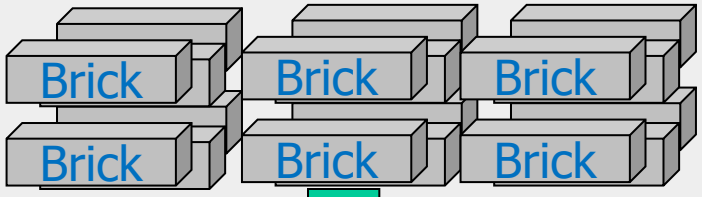




Fly ash brick formulation



Neptune Brick Plant

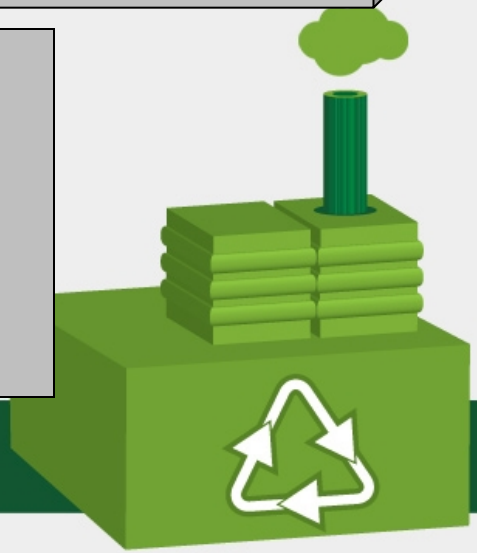


Raw Material:

Fly Ash	: 70-80%
Sand	: 15-20%
Lime &Gypsum	: 15-20%
Cement	: 05-08 %

Brick Feature:

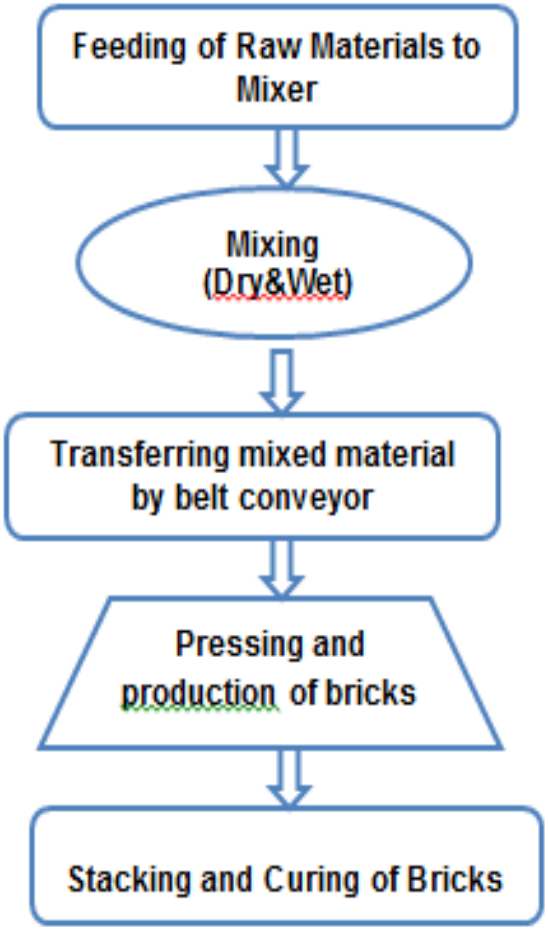
Weight	: 2.70-3.25 kg/ Brick
Size	: 230 x 110 x 75 mm (Or Desired)
Comp. St.	: 80-120 Kg/Cm2
Water Ab.	: 15-20 %
Shape/Size	: Uniform (+/- 1 mm accuracy)



NEPTUNE Engineering for future

CSE

➢ Process Flow Diagram:



Choice of raw material and recipe needs to be developed by the customer based on own experience.

Mixing time needs to be decided based on the type of raw materials and desired quality.

Stacking approach and curing time is decided by the customer based on local operating conditions.

➢ Available Technology for Fly ash Bricks:


Rotary Brick making m/c


Pressing on Rubber belt

Pressing on pallet system

Powder Compacting Technology with Metal to Metal Pressing

➢ Check List for selection of Fly ash Brick Technology:

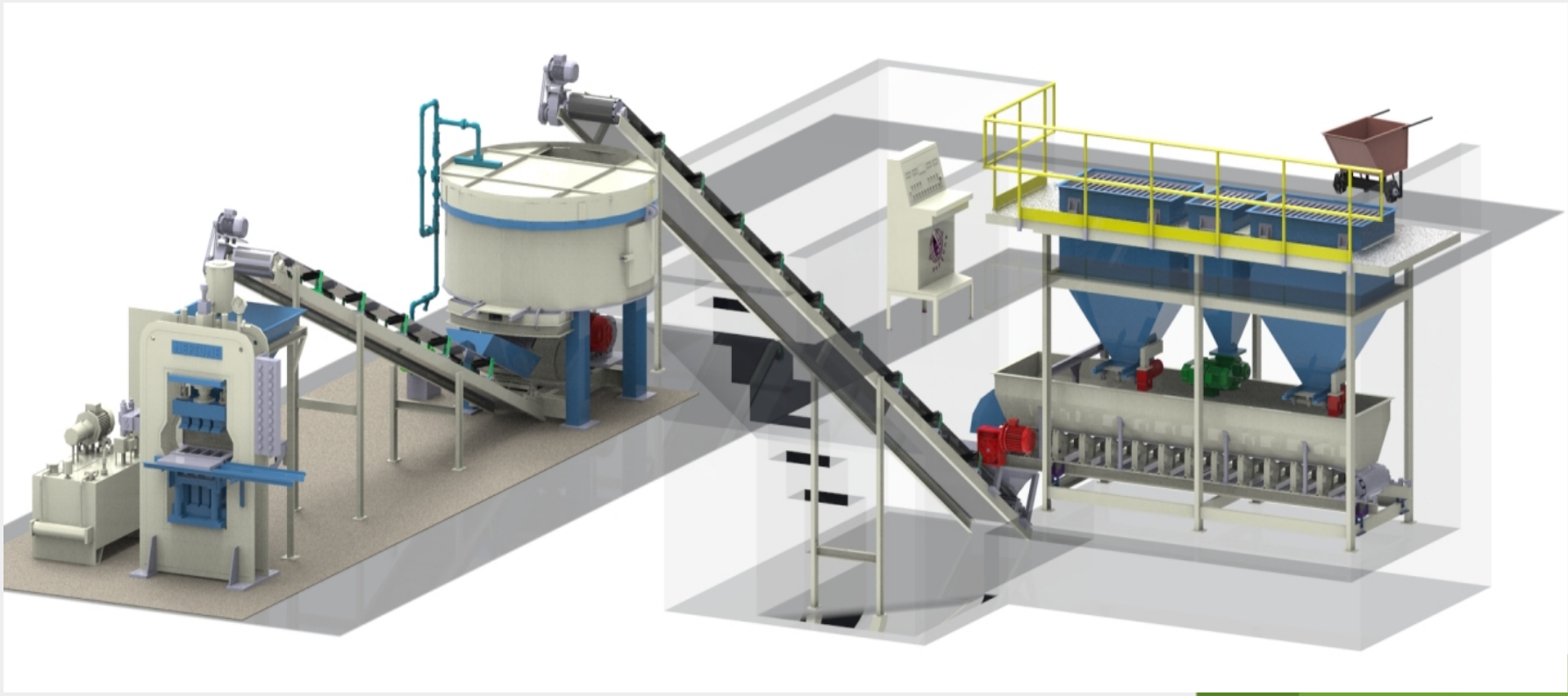
- Latest Technology with Automation
- Productivity / Higher efficiency
- Less maintenance
- Refer company profile
- After sales service
- Cost considering durability

➢ Advantages of Powder Compacting Technology

- Higher utilization of Fly ash/Pond ash
- Utilization of Bed ash to reduce River sand
- No requirement of any additional Binders
- Low consumption of Cement
- Lime & Gypsum can be used to reduce cement
- Minimum curing time
- Ease of Green product handling
- Higher Compressive strength
- Minimum rework / non-confirming products
- Various kind of process wastages can be used utilized

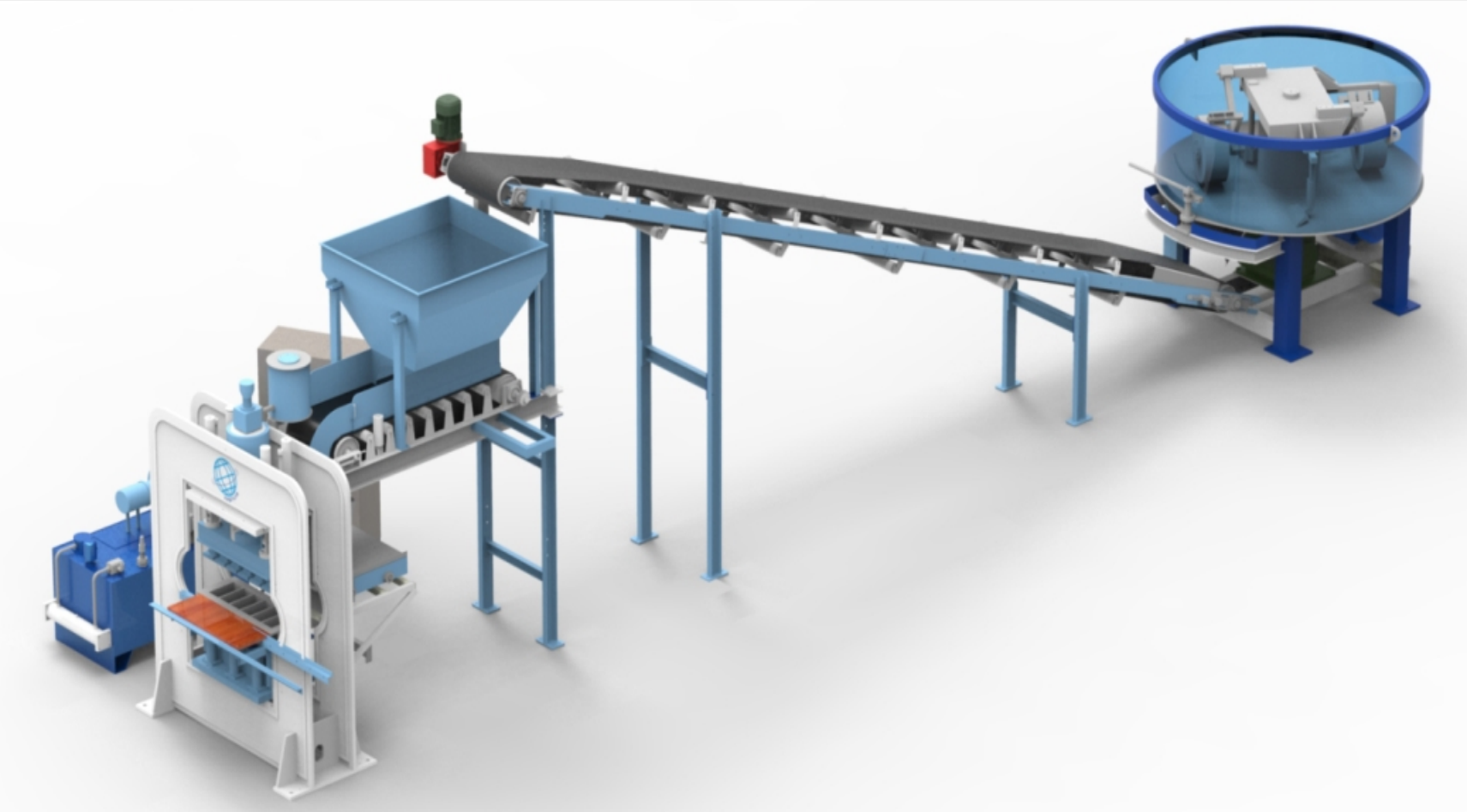
Neptune Offers….

Neptune +1000 HEY
Capacity 10,000 Bricks/day



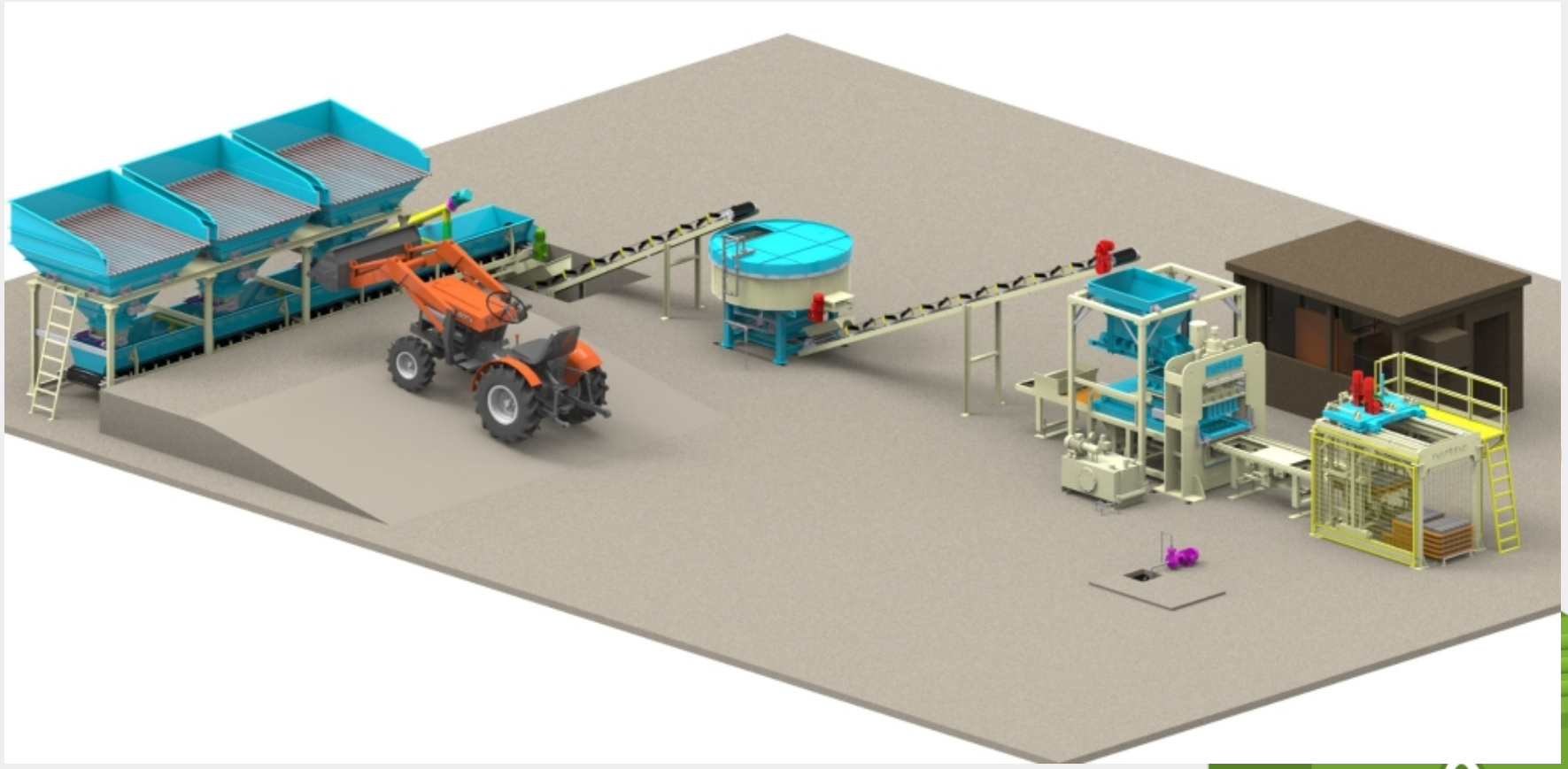
Neptune Offers….

Neptune +2000 HEY
Capacity 20,000 Bricks/day

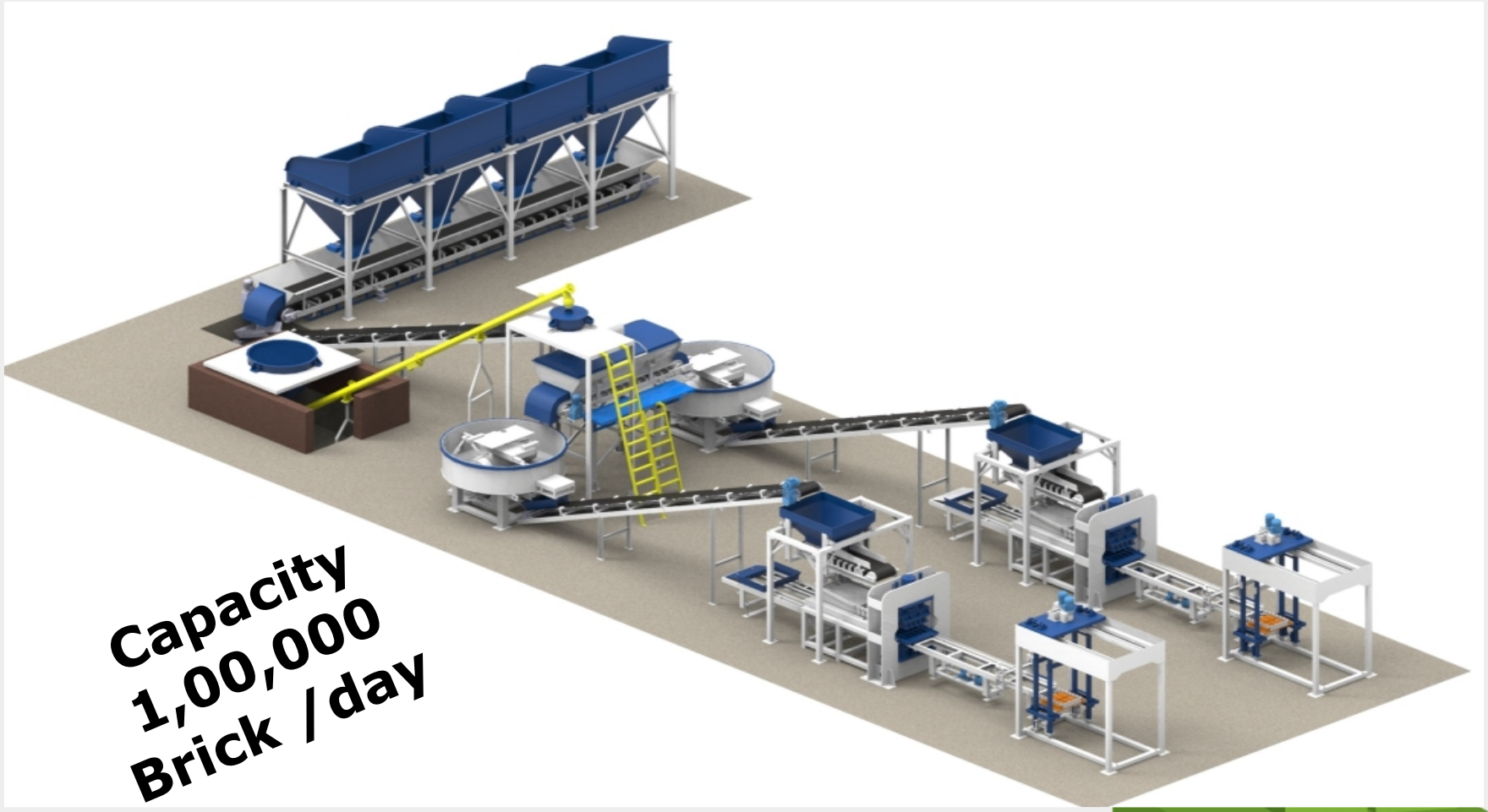


Neptune Offers….

Neptune +3000 HEY
Capacity 30,000 Bricks/day



FlyAsh Brick Plant with Auto Batch weighing and stacking system



➢ Hydraulic Brick Plant Machinery:

➢ Hydraulic Brick Plant Machinery:

Automatic Green product stacking system

➢ Hydraulic Brick Plant Machinery:

Automatic Batching & Weighing system

➢ Advantages of Automation:

- Higher productivity
- Less manpower
- Consistent Product Quality
- Minimum Human error
- Uniform Homogeneous Mixing
- Minimum raw material handling wastage
- Uniform water loading

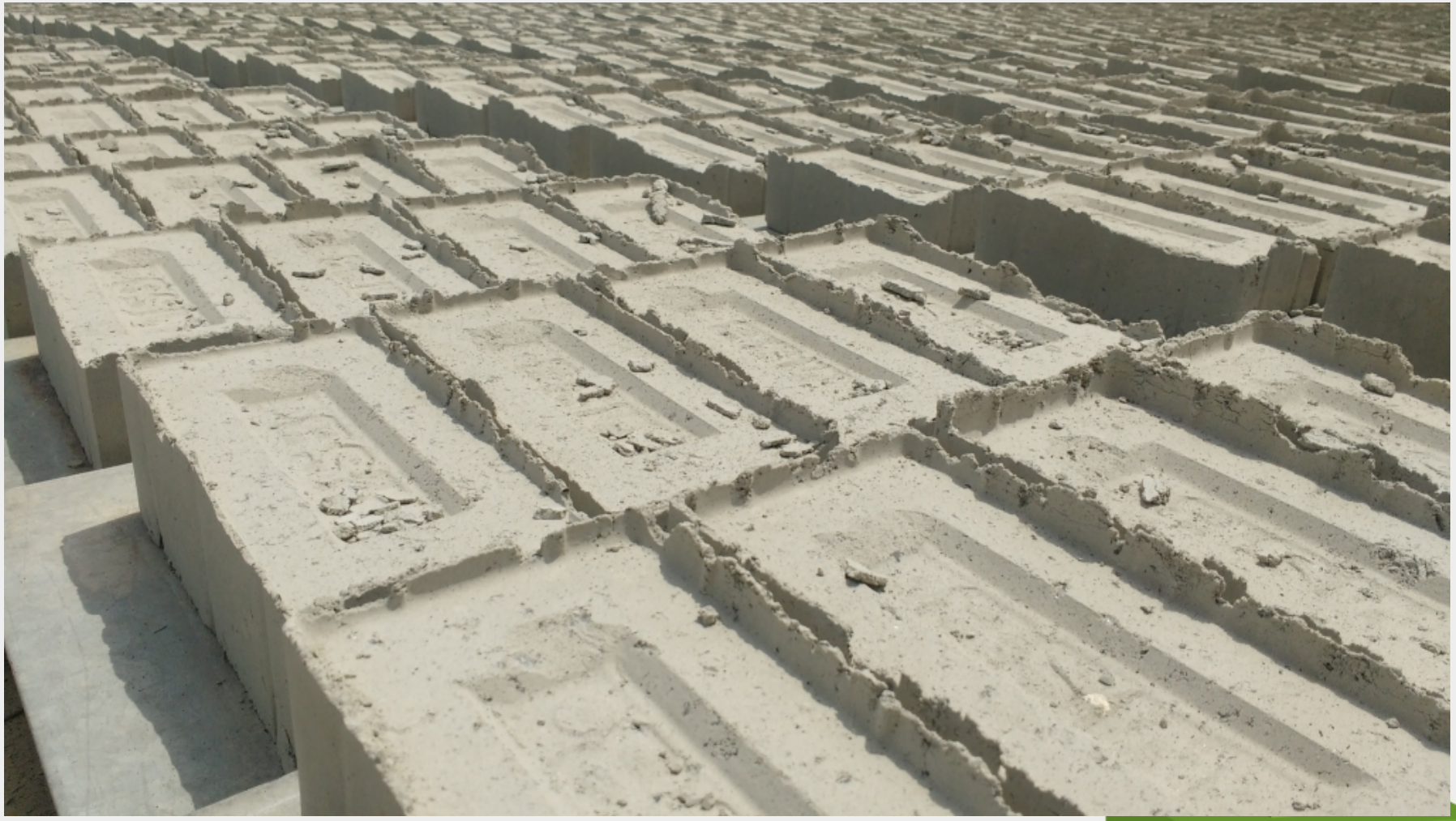
Maintenance Checklist:

- Cleaning - Daily
- Oiling & Greasing – Daily
- Nut bolt tightening – Twice in a week
- Hydraulic oil Filter cleaning – 2.5 months
- Wear & Tear –
  - Mould Liner Plates – Approx after 1.5 years / 10-15 lac bricks
  - Pan mixer Scrapper
- Check Power pack hydraulic oil cooling system during operation
- Maintain Hydraulic oil level during operation
- Power fluctuations can affect Control panels & proxy sensors

➢ Worn out Liner Plates:

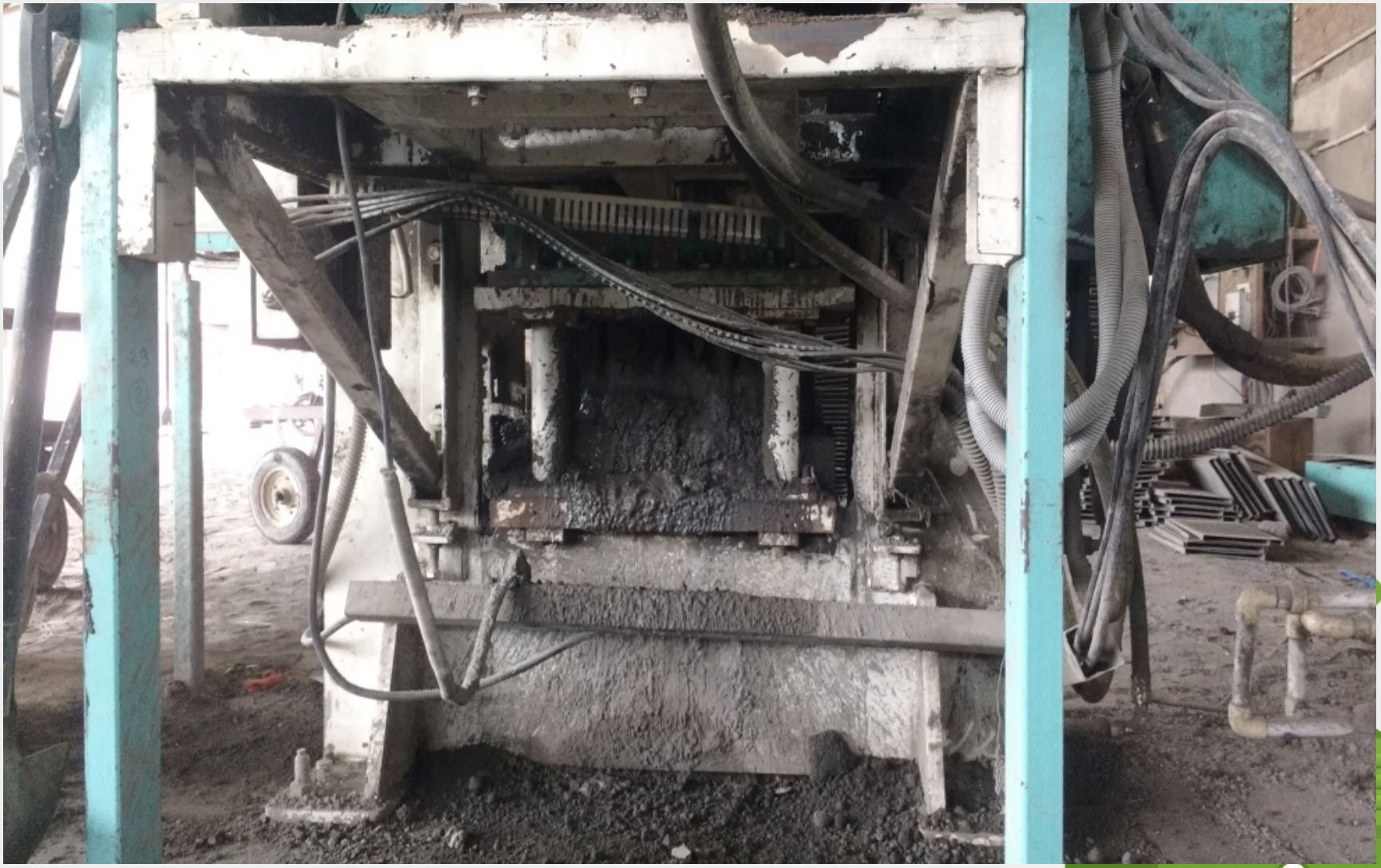
➢ Worn out Liner Plates:

➢ Wastage of Raw material due to Worn out Liner Plates:



➢ Worn out Pan mixer Scraper:

➢ Improper Cleaning: (Rear part of Press)



➢ Improper Cleaning: (Bottom part of Press)

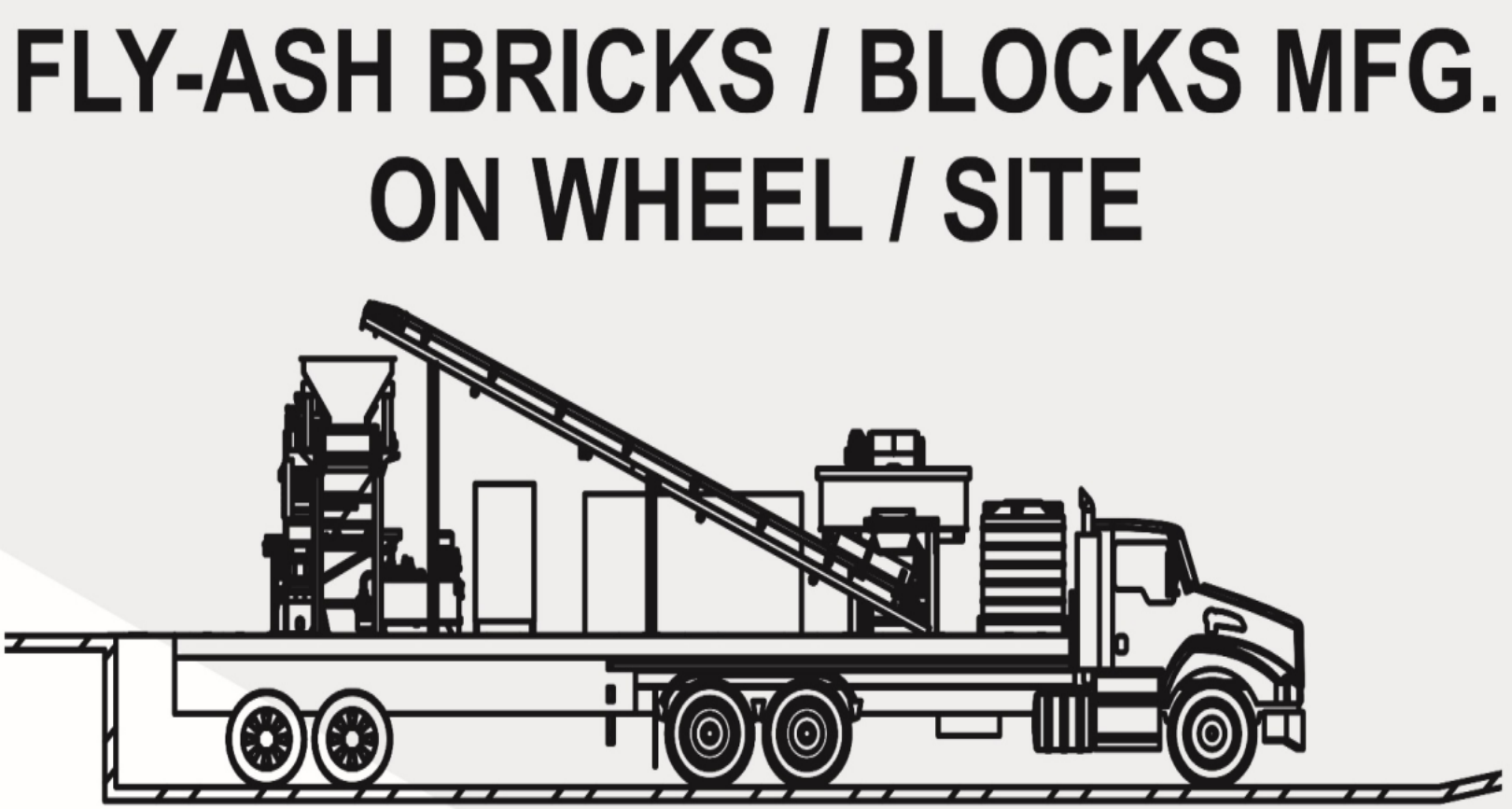
➢ Proper Cleaning: (Pan mixer side walls)

➢ Improper Production Cycle Time :

- Clean Counter balance valve & flow control valve
- Clean oil filters periodically and replace if required
- Check Hydraulic oil viscosity
- Replace it with suggested oil grade.

➢ Proper Cleaning: (Power pack & its Filters)

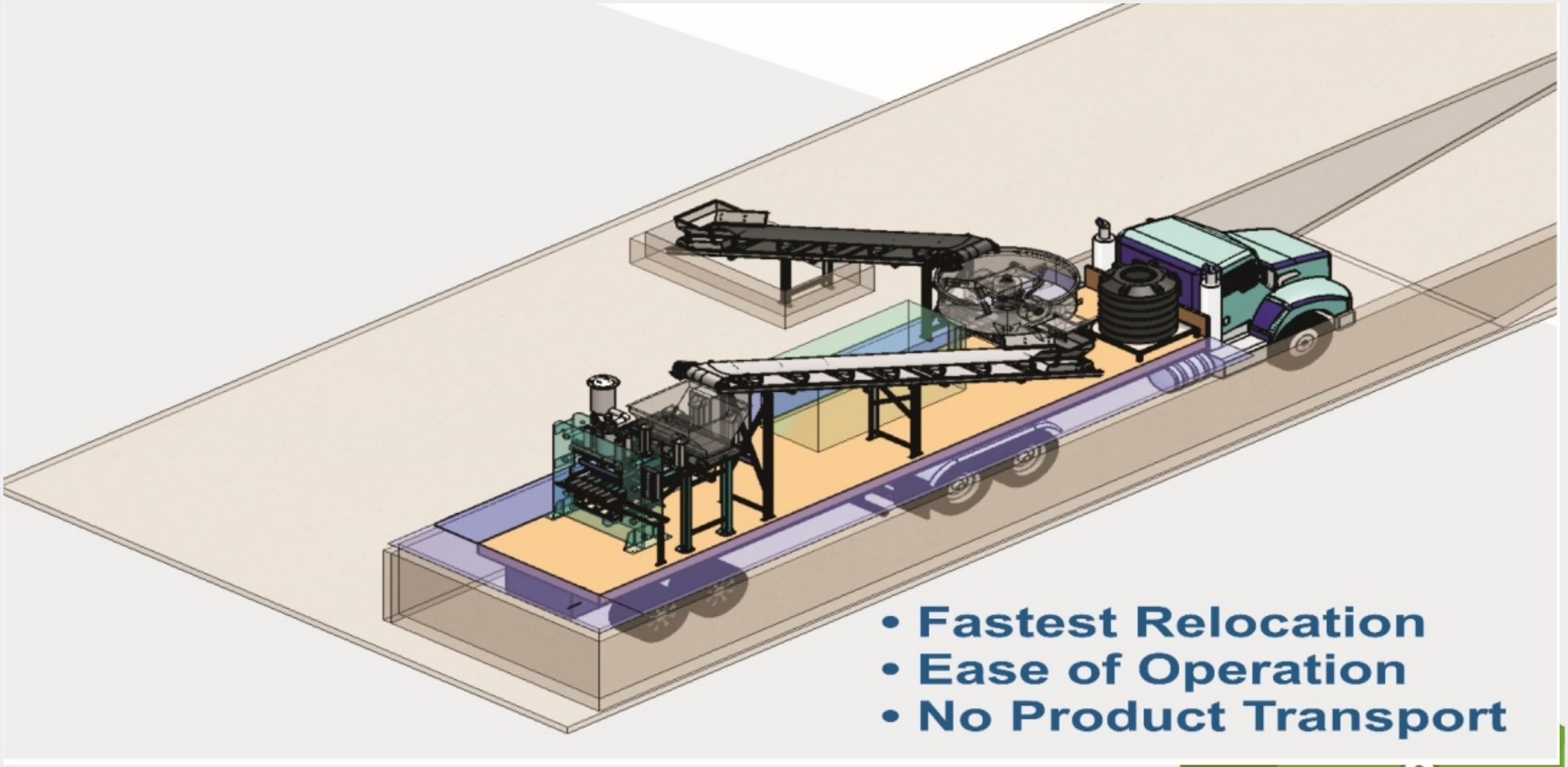
➢ Mobile Brick plant:



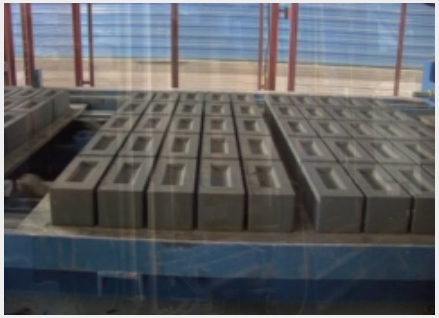
➢ Mobile Brick plant:

Neptune Offer Two Model

- **“Neptune Plus” +1000HEY – 1000 Brick/hour**
- **“Neptune Plus” +2000HEY – 2000 Brick/hour**



➢ Fully Automatic Plant – Capacity 2,00,000 Brick/day Supply at Jindal Steel & Power, Raigarh (C.G)



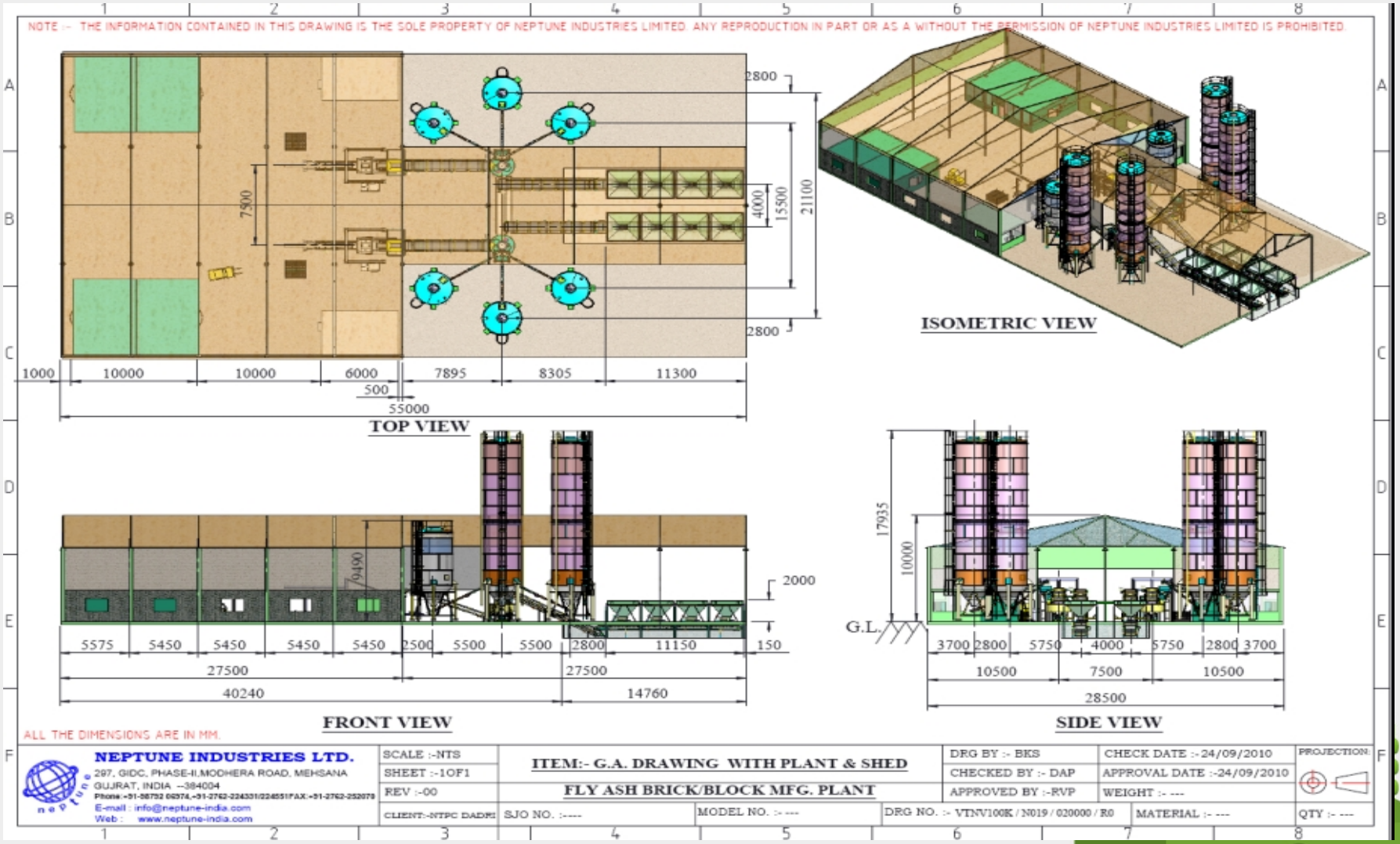
JINDAL STEEL & POWER

➢ Fully Automatic Plant – Capacity 2,00,000 Brick/day Supply at Jindal Steel & Power, Raigarh (C.G)

➢ Fully Automatic Plant – Capacity 2,00,000 Brick/day Supply at Jindal Steel & Power, Raigarh (C.G)

- **Fully Automatic Plant – Capacity 1,00,000 Brick/day Supply at NTPC – Sipat & NTPC LTD – Dadari**

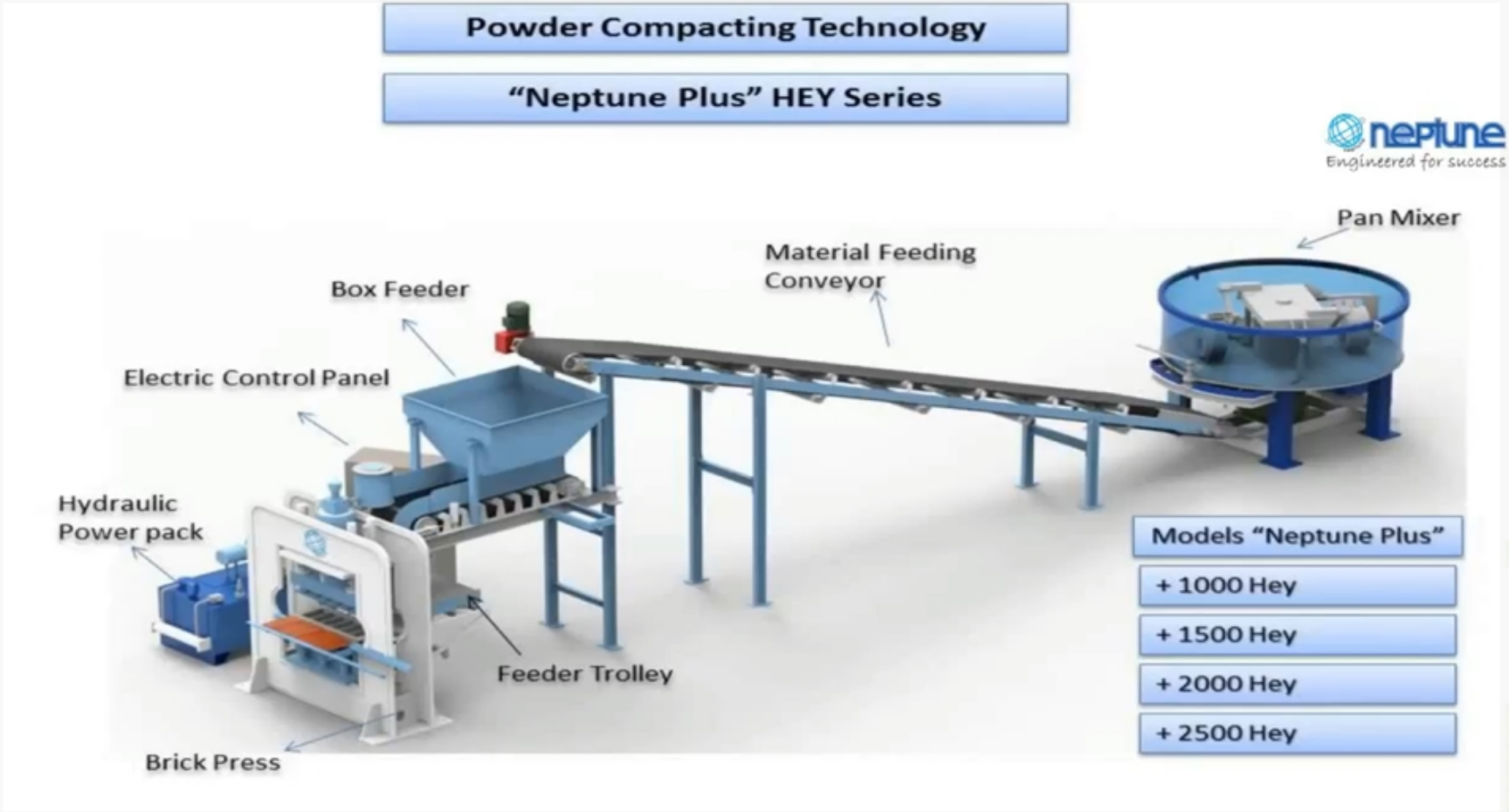
➢ Fully Automatic Plant – Capacity 1,00,000 Brick/day Supply at NTPC – Sipat & NTPC LTD – Dadari



➢ FlyAsh Brick Plant with Auto Batch weighing and stacking system – Capacity 3000/Hr

➢ Plant with Volumetric Pre feeding – Capacity 10,000 Brick/day supply at Fidelite Construction, Patan (Guj)

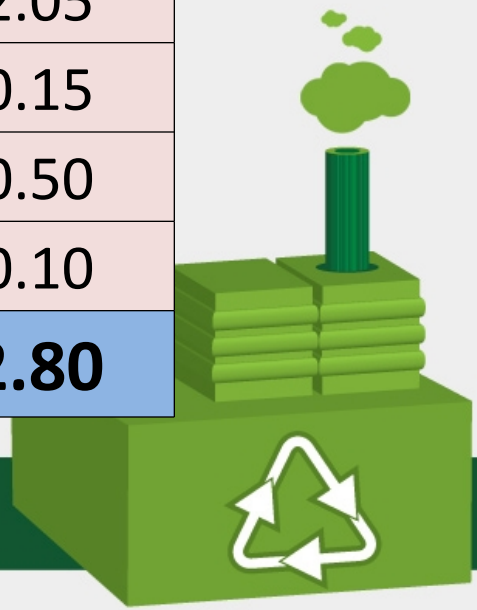
➢ Plant with Auto-Batching – Capacity 10,000 Brick/day & Plant with Manual Feeding – Capacity 20,000 Bricks/Day



Production Cost of Fly Ash Brick

Fly ash brick 230 X 110 X 75 MM				
Raw Material Cost				
Raw Material Cost	**RM %**	**Weight of Bricks**	**RM Rate/kg**	**RM Cost/brick**
Fly Ash	60 %	1.68	0.40	0.67
Sand	18 %	0.50	0.30	0.15
Dust	15 %	0.42	0.30	0.13
Cement	7 %	0.20	5.50	1.10
Total	**100 %**	**2.8 kg**		**2.05**

Raw Material	2.05
Power & Other Utility	0.15
Man Power	0.50
Office, Admin & Mkt	0.10
Total Production Cost / Brick	**2.80**



➢ OUR WORKS & INFRASTRUCTURE

UNIT – II, Dediasan GIDC – Phase 2, Mehsana

UNIT – III, Ahmedabad-Mehsana Highway, Jagudan

UNIT – III, Ahmedabad-Mehsana Highway, Jagudan

- **NEPTUNE has multinational & domestic customers to its credit like:**

➢ Our International Technology and Business Partners:

THERMAX

SUPERTEC

MALEKI
GREEN BUILDING PRODUCTS

FRIMA

WHITECH
CERAMIC DIVISION

➢ Brick Test Certificate:

ETS/91949

SRICCE 24 OCT 2017 NIT, Rourkela

DEPARTMENT OF CIVIL ENGINEERING
National Institute of Technology, Rourkela-769008 (Odisha)

No.NITR/CE/L/2017/
Date:

TEST REPORT

To
M/S. Jai Jagganath
Plot no-70/3, Vill-Chardhihariharpur,
PO-Kalosihiria, Kuarmunda, Dist-Sundargarh

Sub: Testing of supplied fly ash brick (Brand-JJ) samples.
Ref: Your letter No- nil, dated: 03.10.2017

Sample No.	Compressive strength (N/mm^2)	Water Absorption (%)	Efflorescence	Dimension		
				Length (cm)	Breadth (cm)	Height (cm)
1.	9.3	22.9	NIL	23.1	11.0	7.7
2.	13.4	14.2				
3.	10.4	22.3				
4.	12.7	19.6				
5.	13.0	19.3				
6.	11.9	22.3				

The above tests have been conducted as per BIS: 3495(Part-I, II, III) And BIS: 1077(6.2.1)

N.B: This test report refers only to the particular Brick Samples supplied and received in the Highway and Concrete laboratory of the Institute at the particular time with particular conditions of the samples.

23/10/17

Prof I/C & Head of Department

HEAD, DEPT. OF CIVIL ENGG.
National Institute of Technology
Rourkela - 769 008 (ODISHA)

Dean (SRICCE)

➢ Project Report submitted by our Client:

A PROJECT REPORT ON FLY ASH BRICK

Product	**: -Fly Ash Bricks**
Quality Standards	**: -IS:12894:2002**
Production Capacity	**: -24 lacks Bricks Per Annum**
Total Project Cost	**: -27,21,000/- approx.**
Prepared By	**: -Rakesh Kumar P.**
	(B.E. Mechanical)

Project Report (Cont…)

TABLE OF CONTENTS

Project Report (Cont…)

1.INTRODUCTION :

Pulverized fuel ash commonly known as fly ash is a useful by-product from thermal power stations using pulverized coal as fuel and has considerable pozzolonic activity. This national resource has been gainfully utilized for manufacture of pulverized fuel ash-lime bricks as a supplement to common burnt clay buildings bricks leading to conservation of natural resources and improvement in environment quality. Pulverized fuel ash-lime bricks are obtained from materials consisting of pulverized fuel ash in major quantity, lime and an accelerator acting as a catalyst. Pulverized fuel ash-lime bricks are generally manufactured by intergrading blending various raw materials are then moulded into bricks and subjected to curing cycles at different temperatures and pressures. On occasion as and when required, crushed bottom fuel ash or sand is also used in the composition of the raw material. Crushed bottom fuel ash or sand is also used in the composition as a coarser material to control water absorption in the final product. Pulverized fuel ash reacts with lime in presence of moisture from a calcium hydrate which is a binder material. Thus pulverized fuel ash – lime in presence of moisture form a calcium – silicate hydrate which is binder material. Thus pulverized fuel ash – lime brick is a chemically bonded bricks. These bricks are suitable for use in masonry construction just like common burnt clay bricks. Production of pulverized fuel ash-lime bricks has already started in the country and it is expected that this standard would encourage production and use on mass scale. This stand lays down the essential requirements of pulverized fuel ash bricks so as to achieve uniformity in the manufacture of such bricks.

Why Fly Ash?

The Main ingredient in Fly Ash Bricks is "Fly Ash" – Pulverized fuel ash is a by-product of Coal based Thermal Power Stations. 50-60 % of Fly Ash is used in manufacturing of Fly Ash Bricks. With increasing requirement for power companies, the production of Fly Ash is being accumulated as waste material in huge quantities near thermal power plants. The disposable of the increasing amounts of solid waste from coal-based thermal plants is becoming serious concern to environment due to lack of adequate facilities. To overcome this problem the construction industry came up with the idea of formulating concrete out of Fly Ash and utilizing it for making Fly Ash Bricks. Coal is responsible for large amount of greenhouse gas emission and pollutes the environment, while on the other hand Fly Ash (by-product of coal) helps curb carbon emission in the construction industry. Also production of Fly Ash Bricks saves agricultural land which is destroyed and unfertilized by making clay or Red Bricks. At the same time, Fly ash bricks have favorable characteristics such as high compressive strength, no emission of green house gases during production, durability, and a solution to prevent environmental pollution.

Project Report (Cont…)

2.MARKET DRIVES AND GOVERNMENT INITIATIVE :

Ministry of Environment & forests (MoEF), Govt. of India vide its notification (amendment) dated 03rd Nov 2009 and again amended 25th January 2016 vide S.O.254 (E) has made it mandatory within 300 km radius of a Thermal Power Plant to use Fly ash based building product such as cement or concrete, fly ash bricks , blocks, tiles etc. in all construction project, to use fly ash in Road or flyover Embankment construction etc. since electricity is an essential requirement of each human society and in India major part of power is produced using coal which produces fly ash. Each one who consumes power has a moral responsibility to contribute for its utilization. Fly ash bricks are environment friendly bricks and can be easily produced in factory as well as at construction site. There is a need to shift users habit and utilize environment friendly Fly Ash Bricks in place of conventionally made clay bricks.

Project Report (Cont…)

3.RAW MATERIALS :

3.a.FLY ASH:

Fly ash forms the major component of the raw min for Fly ash bricks. Therefore it controls to a large extent the properties of the finished product. As the ash is non-plastic, a binder must be added either plastic clay or Portland cement. Fly ash content ranges from 60 to 80%.

3.b.GYPSUM :

Hydrated calcium sulphate are called gypsum. (Caso4 2H2O). Gypsum should have minimum 35% purity and 5 to 15% may be used.

3.c.LIME :

Quick Lime or hydrated lime or both can be mixed in the composition. Lime should have minimum 40% Cao content.

3.d.SAND :

River sand should be clean & coarse. About 10 to 20% may used.

All the raw materials are indigenous and readily available from the manufacture or traders.

Project Report (Cont…)

4.MANUFACTURING PROCESS :

Fly ash (70%)Lime (10%) Gypsum (5%) and sand(15%) are manually feed into a pan mixer where water is added to the required proportion for homogeneous mixing. The proportion of raw material may vary depending upon quality of raw materials. After mixing, the mixture are allowed to belt conveyor through feed in to automatic brick making machine were the bricks are pressed automatically. Than the bricks are placed on wooden pallets and kept as it is for two days there after transported to open area where they are water cured for 10 -15 days. The bricks are sorted and tested before dispatch.

PROCESS FLOW		
Sr.No.	**Particulars**	**Remarks**
1.	Raw Materials Feeding System	Manual weighing / volumetric control feeding
2.	Dry / Wet Mixing	Intensive / rapid mixing. Cycle with manually water Feeding
3.	Bricks Production	By powder compacting with world class advanced Hydraulic pressing technology.
4.	Green Product Handling	Manually / Hydraulic palletizing system on wooden / steel pallets
5.	Curing System	Manual Curing System / Water jets Sprinkling

Project Report (Cont…)

6.RAW MATERIALS PROPORTION :

Sr.No	PARTICULARS	PROPORTION	SPECIFICATION
1	Fly Ash	50-70%	Free from Lump/ Stones/ Roots
2	Sand	20-40%	Sieved quality ≤ 3mm Size
3	Gypsum	02-08%	OPC 53 Grade
4	Lime /Cement	08-15%	Lime In Powder Form active ≥ 75%

Project Report (Cont…)

8.INSPECTION AND QUALITY CONTROL :

The Bureau of Indian Standards has formulated and published the specifications for maintaining quality of product and testing purpose. IS : 12894 :2002. Compressive strength achievable: 60-250 Kg/Cm.Sq. Water absorption: 5 – 12 %; Density: 1.5 gm/cc Co-efficient of softening (depending upon water consistency factor) Unlike conventional clay bricks fly ash bricks have high affinity to cement mortar though it has smooth surface, due to the crystal growth between brick and the cement mortar the joint will become stronger and in due course of time it will become monolithic and the strength will be consistent.

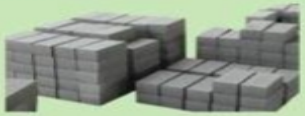
9.POLLUTION CONTROL :

The technology adopted for making fly ash bricks is eco-friendly. It does not require steaming or auto-calving as the bricks are cured by water only. Since firing process is avoided. There are no emissions and no effluent is discharged. Facial masks and dust control equipment may be provided to the employees to avoid dust pollution more over all the raw materials are kept under covered by polythene sheet to avoid air pollution.

10.ENERGY CONSERVATION:

General precautions for saving electricity are followed by the unit by providing energy meter. This products are low energy consumption since no need of fire operation in the production unlike conventional bricks. Thus considerable energy could be saved not only in manufacturing activities but also during the construction.

Project Report (Cont…)

Characteristics	Fly Ash Brick	Red Brick
compressive Strength	 70-120 kg/cm2	 30-60 kg/cm2
Water Absorption	 10-12%	 15-20%
Appreance	 Uniform	 Non Uniform
Wastage	 1%	 3-4%
Requirement of Plaster	 Less	 More
Requirement of Mortar	 Less	 More
Eco-Friendly	 Yes, Uses Fly Ash , No chimney required	 No, Uses Fertile Soil, Chimney required

Project Report (Cont…)

12.ELECTRICAL HP DETAILS :

Sr.No	DESCRIPTION	NO of M/S	HP CONNECTED
1	Automatic Fly Ash Brick making machine	1	12.5HP
2	Turbo Mixture	1	15.0HP
3	Belt Conveyor	1	2.0HP
4	Press Feeding System	1	0.5HP
5	Other electrical fittings	--	5.0HP
	TOTAL HP CONNECTED		35HP

Project Report (Cont…)

13.FINANCIAL ASPECTS :

1. FIXED CAPITAL

(a)Land & Building

Sr.No	DESCRIPTION	AMOUNT (Rs.)
1	Land Lease hold	30,000 Sq.feet
2	Production Shed (36 × 25 Sq. Feet.)	2,50,000
3	Overhead water tank	50,000
	TOTAL	**3,00,000/-**

(b)Machinery and Equipment

Sr.No	DESCRIPTION	QTY	RATE	AMOUNT (Rs.)	
1	Automatic Fly ash Brick making machine hydraulic operated with all accessories and fitting with 12.5HP Motor	1	10,50,000	Rs.10,50,000	
2	Pan Mixture 500 KG Capacity with 15HP Motor	1	3,80,000	Rs.3,80,000	
3	Belt Conveyor with necessary fittings and 2 HP Motor	1	1,20,000	Rs.1,20,000	
				TOTAL	**Rs.15,50,000**
	GST 18%	--	--	2,79,000	
	Erecting and Electrification Charges	__	__	20,000	
				GRAND TOTAL	**Rs.18,49,000/-**

Project Report (Cont…)

14.RECURRING EXPENDITURE (PER MONTH):

(a)Raw Material Per Month :

Sr.No.	PARTICULARS	%Of MIX.	TONS/ hr	TONS / Shift	RATE /Per Ton	AMOUNT
1	Fly Ash	67%	2.41	24.1	Rs.250	6,025
2	Sand	25	0.9	09	Rs.800	7,200
3	Cement	08%	0.28	2.8	Rs.6400	17,920
	TOTAL	**100%**	**3.59**	**35.9**	--	**Rs.31,145/-**
				Total Amount For 15 Days.		**Rs.4,67,175/-**

Project Report (Cont…)

(b) Salaries & Wages Per Month :

Sr.No	DESIGNATION	NO	SALARY	AMOUNT(Rs.)
1	Production Manager	1	--	Self
2	Un skilled workers	12	5,000	60,000
3	Office assistant	1	4,000	4,500
4	Operator	1	7,000	7,000
5	Watch man	1	3,500	3,500
	TOTAL	**16**	--	**Rs.75,000/-**

(c)Utilities Per Month :

Sr.No	DESCRIPTION	AMOUNT(Rs.)
1	Power 35 HP 3916 Units@ Rs.5 per Unit	19,580
2	Water	1,000
	TOTAL	**Rs.20,580/-**

(d)Other Expenses Per Month :

Sr.No	DESCRIPTION	AMOUNT(Rs.)
1	Postage and stationery	1,000
2	Repairs and maintenance	3,000
3	Traveling and transportation	2,000
4	Insurance	1,000
5	Telephone	3,000
	TOTAL	**Rs.10,000/-**

Project Report (Cont…)

14.1 TOTAL RECURRING EXPENDITURE PER MONTH:

a + b + c + d =Rs. 4,67,175+ Rs.75,000+ Rs.28,580 +Rs.10,000
=Rs. 5,80,755/-

14.2 RECURRING EXPENDITURE FOR 3 MONTHS:

5,80,755 X 3 = Rs. 17,42,265/-

15.WORKING CAPITAL ASSESSMENT :

Sr.No	DESCRIPTION	AMOUNT (Rs.)
1	Raw Material (Required for 3 weeks)	4,67,175/-
2	Work In Progress (Required for one month)	1,05,500/-
	TOTAL	**Rs.5,72,675/-**

Project Report (Cont…)

16.FINANCIAL ASSISTANCE (in rupees only):

16.a.Total Project Cost

a. Land	Lease hold
b. Building	Rs.3,00,000/-
c. Plant & Machinery	Rs.18,49,000/-
d. Working capital	Rs.5,72,675/-

Total =Rs. 27,21,675/-

16.b.Means of Finance

Total Project cost	Rs.27,21,675/-
Promoter contribution @ 5%	Rs.1,36,000/-
Finance required from the Bank	Rs.25,85,591/-

Project Report (Cont…)

Subsidy applicable under the PMEGP @ 35% Rs.9,04,956/- apprx.

17.COST OF PRODUCTION PER ANNUM :

Sr.No	DESCRIPTION	AMOUNT(Rs.)
1	Total recurring cost	Rs.69,69,060
2	Interest on total investment @ 12.5%	Rs.3,40,209
3	Total Depreciation on Shed @ 5%	Rs.15,000
4	Total Depreciation on Machinery equipments @ 10%	Rs.1,84,900
	TOTAL	**Rs.75,10,000/-apprx.**

Project Report (Cont…)

17.a.Turnover Per Annum :

Excepted sale 24 lakh bricks @ 3.40 per bricks =Rs.81,60,000/-

17.b.Profit Per Annum :

=Turnover - Cost of Production

=Rs.81,60,000 – Rs.75,10,000

= Rs.6,50,000/-

Project Report (Cont…)

- **% of profit on sales**

$$= \frac{\text{Profit/annum X 100}}{\text{Turnover}}$$

$$= \frac{6,50,000\text{X } 100}{81,60,000}$$

$$= \frac{6,50,00,000}{81,60,000}$$

$$= 7.96\%$$

- **Rate of Return**

$$= \frac{\text{Profit/annum X 100}}{\text{Total Capital investment}}$$

$$= \frac{6,50,000\text{X } 100}{24,92,300}$$

$$= \frac{6,50,00,000}{24,92,300}$$

$$= 23.88\%$$

Project Report (End)

Supplier's Address:

A. Raw Materials Supplier's :

Fly ash-

available from the BECL(padva) Power Plant

Ta. : Ghogha

Dist. : Bhavnagar

Tele/Fax : 91-278-2931175

Email : info@becl.in

Lime stone/Cement , river sand and crusher dust are available from the local dealers.

B. Machinery and Equipments:

Neptune Industries Limited

RIL Industrial Park, Near Jagudan petrol Pump,

Vill. Ditasan, Mehsana - 382710

Phone: + 91 – 9687695913 /02

Email: bmct@neptune-india.com

Web: www.neptune-india.com

Thanks,

Neptune Industries Limited

www.flyashplants.com

www.neptune-india.com