

INTERNSHIP PROJECT REPORT

JATIN JUNEJA

A
PROJECT REPORT
ON

**SATNAM BRICKS INDUSTRY: FLYASH BRICKS
MANUFACTURING COMPANY**



SATNAM BRICKS INDUSTRY

BACHELOR OF BUSINESS ADMINISTRATION (BBA)

SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY



SMIT SIKKIM
MANIPAL
UNIVERSITY
SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY

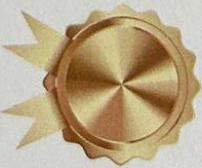
UNDER THE GUIDANCE OF

DR. AJEYA JHA

SUBMITTED BY

JATIN JUNEJA
Roll No.: 202219004
Session: 2022-2025

CERTIFICATE OF INTERNSHIP



THIS CERTIFICATE IS PRESENTED TO :

JATIN JUNEJA

For his successful completion of internship program at SATNAM BRICKS
INDUSTRY : GSTIN 10BXBPJ4197A1Z2 from 30th May to 20th July 2024 in the
field of Marketing and Sales.

SATNAM BRICKS INDUSTRY

Karan Juneja
Proprietor

(Proprietor)

Ravi Kumar
(Instructor)

 KARAN JUNEJA

 9507930573

 junejakaran137@gmail.com

 Near Sita Petrol Pump , Kharhua , Darbhanga

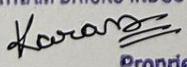
20th JULY 2024

To whom it may concern ,

I am writing this to wholeheartedly recommend JATIN JUNEJA having registration number 202219004 from SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY for his outstanding performance during the Marketing and Sales internship program at our company that is SATNAM BRICKS INDUSTRY from 30th MAY to 20 JULY.

He consistently impressed us with his eagerness to learn and strong work ethic. He quickly grasped marketing and sales concepts and applied them effectively in our projects .He is a valuable asset to any team and is a highly motivated individual with excellent communication and interpersonal skill . He readily collaborated with colleagues and consistently demonstrated a positive and professional attitude. I have no doubt that he will excel in marketing and sales career. Please feel free to contact me if you have any furthis questions.

SATNAM BRICKS INDUSTRY


Proprietor

KARAN JUNEJA
(Proprietor)

APPROVAL OF GUIDE

This certifies that JATIN SINGH JUNEJA, BBA from SMIT, MAJITAR, SIKKIM, has finished the project report named "SATNAM BRICKS INDUSTRY: FLYASH BRICKS MANUFACTURING COMAPANY."

I attest that this is a unique piece of writing that hasn't been plagiarized.

DR. AJEYA JHA
Signature of the Guide

DECLARATION

The project report titled "SATNAM BRICKS INDUSTRY: FLYASH BRICKS MANUFACTURING COMAPAN" has been approved by me. produced by myself with the help of my project manager, Dr..Ajeya Jha.

Additionally, I affirm that this report is the product of my own work and has not been submitted to any other university or institution for the purpose of receiving any kind of degree or benefits. To the best of my knowledge, every detail and analysis in the report is accurate.

(JATIN JUNEJA)

ACKNOWLEDGEMENT

I am extremely grateful to my Project Report Guide **DR. AJEYA JHA** for his helpful hand in the completion of my report. I would like all those who have contributed in completing this report.

I take the opportunity to express my gratitude to all the concerned people who have directly or indirectly contributed towards completion of this report. I extend my sincere gratitude towards **Mr. RAVI KUMAR** (MANUFACTURING HEAD) for providing the opportunity and resources to work on this report.

I would like to take an opportunity to thank all the people who helped me in collecting necessary information and making of the report. I am grateful to all of them for their time, energy and wisdom.

I also express my gratitude to my parents who give a constant support and love throughout my life and career.

(JATIN JUNEJA)

SUMMARY

The project at Satnam Bricks Industry focussed on the manufacture of fly ash bricks and its environmental importance as an alternative for conventional clay bricks. These bricks are manufactured using fly ash, a waste product produced by burning pulverized coal in power plants and which bring substantial benefits such as mitigating environmental risks, lessening carbon emissions and savings resources. In my research, I have studied manufacturing of fly ash bricks in construction industry along with its benefits market trends and promotional strategy.

During the internship, I was able to investigate how fly ash is being used in within the industry but through this investigation has discovered advantages as well as operations limitations faced by Satnam Bricks. I then looked at sustainable practices that are being enforced by regulatory frameworks, market dynamics and how competitive the markets are along with an aggregate which would have potential to grow due to increased awareness as well as adoption of fly ash bricks.

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CHAPTER-I

INTRODUCTION

Due to its superiority over clay bricks, fly ash bricks are widely employed as building materials in the construction sector. Sand, lime, and gypsum are used to make the bricks, and fly ash—a byproduct of burning coal in thermal power plants—is added.

They are a highly common building material in the construction industry since they are more conventional and advantageous than clay bricks. They are environmentally friendly, recycled products, which is advantageous for government laws and advertising.

The environmental sustainability of fly ash bricks is one of their main advantages. Because clay bricks are also made using coal, which eventually raises carbon footprints, the ashes also degrade nearby farms and render the soil unsuitable for irrigation. Additionally, fly ash bricks are more resource-rich since they require less water and energy during production.

Located in Darbhanga, Bihar, India, is the Satnam Bricks Company. It is a well-known fly brick producer in the nearby communities of Darbhanga, Mahbubani, and Simiri. They established this business with the intention of offering a sustainable substitute for traditional clay bricks. Utilizing cutting-edge technology, they turn fly ash—a waste product—into a building material of higher quality than clay bricks. In terms of strength, environmental advantages, and thermal insulation, they are superior.

The Satnam bricks industry is dedicated and takes pleasure in its work, reducing the construction industry's negative environmental effects and using less natural resources. Customers have given them very excellent comments, including praise for their emphasis on quality control, customer satisfaction, and the use of new technology for the benefit of humanity. By encouraging others to follow suit and lending a hand with infrastructure and real estate initiatives, they are contributing to the creation of a more sustainable Bihar.

These numbers show that coal is presently India's main source of electricity, with coal-based thermal power plants making 65% of the nation's total electricity. The nation's energy strains are met by these reliable plants, which provide enough electricity. The high ash content of Indian coal, which usually varies between 25% and 45%, is another major environmental impurity caused by coal dumping.

The most of the coal produced in India is used in thermal power plants which contains a lot of ash. About 40% of the total coal used in the production produces fly ash content which is filtered in power plants and stored to reduce the risk of heavy pollution. These plants are given instructions to keep the air pollution in control. There are number of problems with insufficient disposal of fly ash such as:

- Corruption of air
- Uncleanliness of water
- Degrade of land
- Health hazards

Before 1996-1997 only about 10% of the fly ash produced by Indian power plants was used for other recycle able products. Indian government in past did not put any strict regulations on power plants which was miss used by many, as filtering and storing the fly ash costed very high then just dumping them or letting it pollute the air and water, then comes the global trends when other countries started using the new technology and bringing more use of the waste materials. The development brought a change, about 25% of total fly ash produced started being used for the making of fly ash products mainly in the constructional sector. The international norms brought India to light and the fly ash produced was being used as a product.

Aware of the advantages of fly ash, the Indian government took the first step in 1999 by issuing new regulations for its disposal and encouraging its use in other products. The government also introduced new programs, such as tax breaks for recycling products, and the Ministry of Environment and Forests (MoFF) made it clear that 100% of fly ash from power plants would be used. Additionally, regular inspections and thorough monitoring were conducted. This encouraged a lot of companies to start using fly ash to produce cement, bricks, and roads. Following this, it was discovered that fly ash bricks were a fantastic substitute for clay bricks, which meant that the environment was also kept clean.

Regulations governing the use of fly ash have a significant impact on how ash is disposed of in the environment and how coal-based power stations degrade the environment. All possible applications of fly ash must be considered and analysed for the process to be implemented smoothly, which calls for the introduction of new technologies and the evolution of various industrial industries. Fly ash must be successfully integrated into the construction and industrial sectors using a well-planned and well-formulated approach.

In recent years, few trials have been done to estimate the pozzolanic properties of fly ash (with an attempt to stimulate its employment in sustainable & cost-effective applications). To address this issue from the perspective of building materials industry, research focus is now made towards finding viable alternatives for the use and recycle of FLY ASH to reduce its environmental impact on coal-based power generation showing an eco-friendly solution with waste turn into wealth involving less carbon dioxide emission in market. The implementation of these initiatives lies on the joint effort and collaboration among relevant government departments, industry players as well as research institutes in pursuing sustainable fly ash management and utilisation for India.

So, in nutshell, as much India is appreciated on coal part for its energy requirement but handling and using fly ash properly while going ahead with coal-based power generation will only help environmental hazards associated to direct connection of it. India can convert this waste ash to wealth by using the fly ashes innovatively and sustainably, which can save our environment as well as also help in improving economy. The fly ash utilization regulations that are implemented in the power stations and continuous efforts to make this material as a resource for different applications extension is crucial step to promote sustainability view of energy production not only India but everywhere.

OBJECTIVES AND LIMITATIONS

These were my main objectives of this study:

- 1. To analyze and quantify the awareness of the right use of fly ash bricks and its environmental benefits.**
- 2. Does favouring ash bricks have a favourable correlation with having an environmentally conscious mindset?**

1) To analyze and quantify the awareness of the right use of fly ash bricks and its environmental benefits.

- Quantifying the awareness of fly ash brick advantages over clay bricks can be challenging as it requires conducting surveys, studies, or analyzing existing data.
- These are some insights on the increasing awareness and adoption of fly ash bricks based on general trends and observations:

Deeds of State and Regulation

- Fly Ash Bricks many governments in the worlds has accepted fly ash bricks and also offer policy to use this. These tend to contain various incentives, subsidies or requirements for the building industry to use fly ash bricks. The existence of these policies is proof that there is an increasing realization for the use fly ash bricks in place of clay ones.

Research and Publications:

- Several studies have been published by researchers, and experts in the industry that compare attributes, performance characteristics as well as environmental impacts of fly ash bricks with clay brick. Such research papers are published in various scientific journals, conferences and reports leading to the general harness regarding advantages of Fly Ash Bricks. The research and its measures are available, indicating a maturing level of awareness in the scientific and engineering communities.

Demand in The Market and Industrial Acceptance (Industry Adoption governor)

- Having realized the benefits represented by the fly ash bricks, more and more companies are willing to use this type of product in construction work. Market demand of fly ash brick Fly ash Bricks are promoted for their environment benefits as they prevent clay by products during plan making and used here inhibit absorption from bricks. This means that contractors, architects and builders are now starting to realize the positive aspects of fly ash bricks compared with traditional clay bricks.

Awareness Campaigns and Education:

- entities, industry groups and Green Organisations This is why groups often do a sort of awareness campaign as well as educational materials, programs and other steps to encourage the sale of fly ash bricks. These efforts to inform and educate different actors, that cover builders, contractors, engineers and the public. With campaigns of this nature its suggested that a grassroots proactive strategy of promoting the benefits of fly ash bricks.

Changing Construction Practices:

- The transition to sustainable building methods and sustainable building certifications, such as LEED (Leadership in Energy and Environmental Design) have helped to boost the Use sustainable materials as much as possible like fly ash bricks. This shift suggests a increasingly widespread truth around the Load advantages of fly ash bricks. construction industry.

2) Does favouring ash bricks have a favourable correlation with having an environmentally conscious mindset?

- Yes, I do think favoring ash bricks have positively associated correlation with having an environmentally conscious mindset

Environmental Benefits:

- They are made out of a waste material (fly ash) which is an outcome of coal burning. By using fly ash in the manufacturing of bricks, it lessens its requirement for a trip to landfills which further invites Sustainable Waste Management. Reiterating from before, this is a pro-environmental approach to save resources and reduce waste.

Lower Carbon Footprint:

- Fly ash bricks need less energy for production compared to conventional clay bricks and therefore, require less fuel thus reducing emissions of carbon dioxide.
- When it comes to environment, fly ash bricks are always a better choice as compared to clay burnt or solid hollow brick due two main reasons; On one hand these type through production leads reduction in pollutants from power plants —air pollution control equipment— called system thereby protecting the air and making our planet greener. People who hold a pro-environmental attitude are typically worried about climate change and so opt for things with low carbon footprints.

Sustainable Construction Practices:

- Fly ash bricks are favourite among Contractors due to the providers level of Local sourcing and responsible segment in construction industry. So, when they use eco-friendly materials i.e. fly ash bricks people show support towards environmentally friendly building methods that in turn help to minimum the burden on our environment and encourage complete sustainability of it over long term duration.

Support for Circular Economy:

- Using waste product as an input promotes circular economy concept which is surprising gone are days when used to considered a burden fly ash contributes net carbon negative in total project. This follows a responsible eco mind-set to produce as little waste as possible and encourage recycling, upcycling; or the transformation of products into absurd compounds that provide a better world.

Energy Efficiency:

- Fly ash bricks have high thermal insulation resulting in energy-efficient buildings. People with pro-environmental attitude always concern on energy conservation and exert themselves to reduce the action of energy consumption in their daily life as well as building development. Fly ash bricks help to save energy requirement in heating and cooling of the building.
- Using fly ash bricks alone may not be bulletproof evidence of being environmentally friendly, but it definitely is an indication of someone who makes pro-environmental decisions without spending too much sleep over how sustainable and all that crap they really are. • It means we are ready to select construction materials with lesser environmental consequences and pave the way for a new era of sustainability.

LIMITATIONS

There have been certain challenges encountered during the research phase when producing research papers on the Satnam Brick Industry as part of the internship program. The following are the restrictions to be taken into account:

1)The biggest downsides to using CB Insights involves its access limitations in terms of data and Industry Reports.

API Access And Data Browser Animations Module Through the use APIs you will be able update your current datasets without manually uploading files, so, if afterwards a company being following is updated with new funds or exits we do not need make another manual search, all this using programming saving time. Other countries also have many companies that are already between hundred largest outside USA but unfortunately our Company List interact only inside the United States. Some features locked behind expensive subscription plans

However, the biggest limitation of the study was its limited information. The business has a nuanced view of secrecy when it comes to its own production figures, as well sales statistics and data on market share. As a result, this paper employed more information discussions of public data—and a trade-off arose: the university name and level were expected in deed results yet not as much detail came up.

2) Time Constraints

because the internship generally only lasts two months. Although it was impossible to conduct a detailed, long-term evaluation of the company's operation in such short time. This study would have benefited from increased time for observation, more extensive conversations with a greater number of partners and further research.

3) Process of Lawyering and Laws

The fly ash brick industry comes under the ambit of environmental rules, which regulate how fly ash from thermal power plants can be disposed. Due to these restrictions, it becomes difficult to dissect the fly ash brick production and producing process. This means the data analysed in this study may be less reliable as it has been extracted from other, earlier published reports.

4) Limited Exposure to Market Dynamics

The lack of exposure to more general market factors like competition, pricing, and customer perception. Because of variables including government policy, the expansion of the building industry, and environmental restrictions, the fly ash brick industry operates in a competitive market with changing demand. Owing to inadequate knowledge of these market dynamics, the research does not offer a universally applicable analysis.

CHAPTER-2

METHODOLOGY

1) Research methodology

- Qualitative research: This refers to the practice of collecting and analyzing numerical data, often utilizing statistical methods to derive inferences and insights.
- Quantitative research: Focuses on non-numeric data such as interviews, observations, and content analysis to understand underlying meanings and patterns

2) Data collection

- Surveys and questionnaire: Gathering information through structured sets of questions.
- Interviews: Conducting thorough one-on-one or group discussions to gather comprehensive information.
- Observation: Observing and documenting behaviors or phenomena firsthand

3) Data analysis

- Statistical analysis: Quantitative research involves the utilization of statistical methods to analyze data and draw meaningful conclusions.

4) Sample selection

- choosing a representative group from the large population being studied

MY RESEARCH AND FINDINGS AT SATNAM BRICKS INDUSTRY



CHAPTER-3

FLY ASH BRICKS MANUFACTURING PROCESS

These bricks are called Fly Ash Bricks. The bricks are practically all ash, and are just a solid puff of smoke. It is comprised primary fluid ingredient of water. The other ingredients that appear to have commercial protection are cheap, easy-care and used in small quantities because although essential. Technologies for blending, shaping into Molds and curing or firing. These are also easily scalable through existing clay brick factories. It consumes less power in comparison to the one consumed during clay bricks manufacturing process. It also consumes less man power and material tacking area over for processing of Clay bricks.

There are certain differences in the process of production between clay bricks and fly ash bricks the table shows the items which are different and make cost differences:

Table 1. Items of difference in the production process and expected to make cost difference:

	Common Load Bearing Clay Bricks	Load Bearing FlashBricks
Factory location	On site of raw materials	Any where, preferably on site of coal power station
Factory location	Must change when material depletes required	No change needed
Excavation needed		None
Raw materials qualities	Varies daily	consistent
Raw material needed per 1000 bricks	4-5 tonnes of clay and shale	2.75 tonnes of fly ash
Raw materials wastage per 1000 bricks	1.7-2 tonnes of clay and shale	None
Grinding of rocks	required	None to grind
Mixing dry materials	required	None
Additive (subject to provisional confidentiality)	None	Required @ 0.2L/100 kg
Drying green units	7 days	3 days
Temperature of firing the units	1000°C- 1300°C (1832 F-2372 F)	1000°C- 1300°C (1832 F-2372 F)
Length of firing time	1day-7 days	Few hours (subject to provisional confidentiality)

TABLE-1

summarizes the differences in the manufacturing process between the clay bricks and the Fly ash bricks. A very important saving that can be voluntarily seen is that of workers. Since neither mine nor grinding is needed, the workers that are usually employed for such operations will not be required. Added to this is the need for continual assessment of the raw materials in the case of clay bricks. Such assessment is not needed in the case of Fly ash bricks because the ash is analyzed repeatedly at the power generation station as a compulsory practice. Thus, the workers involved in the assessment of clay materials will not be required with Fly ash bricks production. Further market study of the items charted above is required so that figures may be assigned to total savings with Fly ash bricks. So far, the production of Fly ash bricks has been performed in the laboratory. This has been repeated successfully many times and the testing has produced consistent results. Figure 1 shows the molded bricks in their fresh state.



Figure 1. SHOWING FRESHLY MOULDED ASH BRICKS



Figure 2. The interior of a FlashBrick after 2 days of curing

Bricks after firing for two days: Figure 2 The bricks are firm enough to be fired after 24 hours but it is best if left for three days. Then a hole gets drilled through the brick as you are able to see in figure 2 photo followed but splitting apart it too get view at inside structural of it. Curing is very slow for this material to maintain the homogeneous level of that and prevent cracks.



Figure 3. FlashBrick after curing

Photograph of the bricks, post firing is shown in Figure 3. The bricks can have a colour between dark tan, brownish-reddish and reddish after firing time depending on some gradients; they look with that of certain diversities of clay brick. But this wasn't actually achieved with the bricks shown here.

Here are some of currently sold sizes of fly ash bricks in the market:

(1). 16 x 8 x 8 inches

(2). 16 x 6 x 8inches

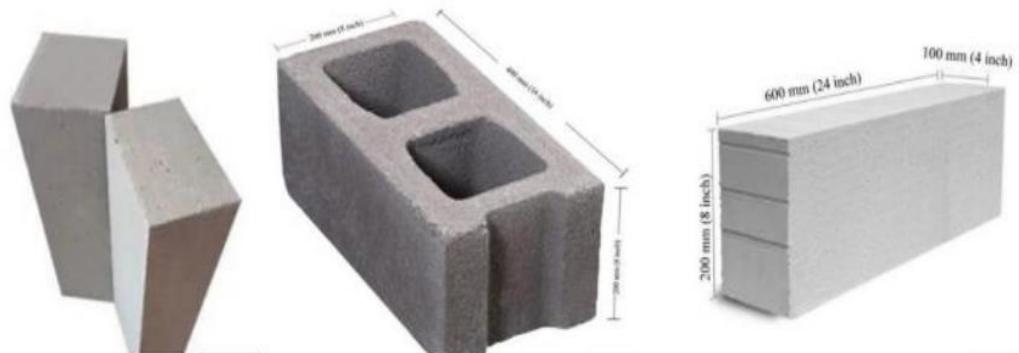
(3). 16 x 4 x 8 inches

(4). 6 x 6 x 12

(5). 6 x 9 x 12,

(6). 6 x 8 x 16

(7). 9 x 4 x 3



CHAPTER-4

PRICE AND PROMOTION

PRICE

- Price depends on availability of raw material.
- It is totally depended on purchase price of raw material
- Locality is more important first survey your locality then research what type and shape of bricks demand in your market.

PRICE ANALYSIS OF ASH BRICKS AND CLAY BRICKS:

AREA=12x10=120 SQ FEET
=120/10.76 SQ. MT.
=11.15 SQ. MT.

9MM BRICK WALL



ITEM	RED CLAY BRICK	FLYASH BRICK
SHAPE AND SIZE	 (9x4x3) = 225x102x75 mm	 (9x4x3) = 225x102x75 mm
MARKET PRICE	Rs.8-Rs.10 Per Pics	Rs.4-Rs.5 Per Pics
WITH CEMENT (+10mm)	(9x4x3) = 235x112x85 mm $=0.235 \times 0.112 \times 0.085 \text{ m}$ $=0.00952 \text{ sq. mt.}$	(9x4x3) = 235x112x85 mm $=0.235 \times 0.112 \times 0.085 \text{ m}$ $=0.00952 \text{ sq. mt.}$
MAKING 9" WALL	0.00952 sq. mt.	0.00952 sq. mt.
NO. OF BRICK REQUIRED	11.15/0.00952 TOTAL=1,171 BRICK	11.15/0.00952 TOTAL=1,171 BRICK
COST	1,171x8=9,368/- & 1,171x10=11,710/-	1,171x4=4,684/- & 1,171x5=5,855/-

PROMOTION

Promotions deal with communication of buyer and Ash Bricks Manufacturing Industry. Through the medium of advertisements, The Ash Bricks Industry urges buyer to buy their products or services. The making your people give acquainted with product of the industry. This additionally allows enhance the public photograph of an Industry This form of marketing also has the power to generate consumer interest and facilitate in building a loyal customer base.

Various promotion techniques used by fly ash manufacturing companies are:

1. Advertising
2. Direct marketing
3. Digital marketing

1) ADVERTISING

Advertising: The advertisement of a product, service or any company on the television, radio or social media. It aids in company/product/service exposure. Fly Ash Bricks Industries, by using known technology and techniques that are able to not only easily disguise it as a valid method of communication but also prevent its true causes from being exposed reportedly communicated through all mass media such as traditional media channels like daily newspapers or direct mail; which new media is search results, blogs or websites.

2) DIRECT MARKETING

Direct marketing is a kind of advertising where Fly Ash Bricks Industries communicates directly to customers through several media including the mobile phone text messaging, email, websites online advertisements database marketing fliers catalogue distribution promotional letters and television newspaper as well magazine advertisement outdoor. Reverse direct marketing.

3) DIGITAL MARKETING

Digital marketing (or online advertising) is Advertising delivered through digital channels such as a search engine, websites, social media email both for paid and organic efforts. It not only email, social media and web-based advertising but also text and multimedia messages as a marketing channel. In a nutshell, all those marketing activities that use digital devices are nothing but Digital Marketing.

SWOT ANALYSIS ON SATNAM BRICKS INDUSTRY

STRENGTH



- VERY GOOD CONNECTION WITH SUPPLIERS
- LAB TESTED PRODUCTS, MORE DURABLE THAN CLAY BRICKS
- COMPETITIVE PRICE MARGIN OVER CLAY BRICKS MANUFACTURER

WEAKNESS



- AWARENESS ABOUT ASH BRICKS IS LESS IN BIHAR
- RAW MATERIAL AVAILABILITY
- LOCAL POLITICS CAN HAMPER THERE SALES

OPPORTUNITIES



- NEW BUSINESSES AND CONSTRUCTION SITES, IN DEVELOPMENT
- NEW AIRPORT, WHICH NEEDS BRICKS SUPPLY
- SOLE FLY ASH BRICKS MANUFACTURER IN THE LOCALITY

THREATS



- NEW COMPETITORS IN FLY ASH BRICKS MANUFACTURING BUSINESS
- PRODUCTION LIMIT IS LESS AND CURING TIME IS MORE
- STOCK MANAGEMENT IS VERY EXPENSIVE

RECOMMENDATIONS FOR SATNAM BRICKS INDUSTRY

- The overall market capture they have is less than their capability so they should focus more on promotion and advertising.
- They are in an existing market with a new product, so they need to make their feedback and customer support strong.
- They need a research and development department as they already do lab tests but can not really provide true outputs.
- They need to store the bricks for 3 months before selling and production everyday can be hampered if they not sell the ready products quickly, for this they need a strong sales department which keeps all the tracks for stock and sales.
- Provide gift hampers related to sustainable environment to their loyal customers
- Promote plantings more trees in their locality so they can advertise and showcase their commitment towards the society

CONCLUSION

This project Shine a light on such an opportunity where Fly ash bricks can comes as a ecofriendly aspect in the Construction industry, and also improving Sustainable building practices. Satnam Bricks Industry is at the forefront of turning industrial waste into valuable resources, thereby making a substantial contribution to reducing the environmental impact associated with construction activities. At the same time, they have a number of challenges in terms of market penetration and status as an industry which will need to be tackled for it to reach their full potential. Additional impetus will also have to come from better promotional campaigns, advances in technology and collaborations with the authorities if fly ash bricks are ever going to find wide acceptance in India.