

Waste to Value Pathways in India: Solutions for Circular-Economy Driven Net Zero Transitions



magicrete
magic behind happy homes

About Magicrete

Ash circularity and net zero

WHO WE ARE ?

"We help people build their homes **better, faster and cheaper** by using innovative construction technologies".

More than a **decade** of innovation and continuing.



The largest manufacturer of AAC Blocks in India (installed capacity of **13,00,000CBM/annum**) near high growth markets of West and North



Seven lacs+ homes built over the past decade using Magicrete products.



Motilal Oswal Private Equity (2013) & **India SME** (2023) invested in Magicrete.



WHAT WE DO ?

Walling Products



- AAC BLOCKS
- AAC WALL PANELS
- BLOCK JOINING MORTAR
- READYMIX PLASTER
- WALL PUTTY

Construction Chemicals



- TILE & STONE ADHESIVES
- EPOXY & CEMENTITIOUS GROUTS
- TILE & STONE CARE
- WATERPROOFING

Precast Solutions



- PRECAST BUILDING SYSTEM
- PRECAST INFRASTRUCTURE PRODUCTS

WHY MAGICRETE ?

BEST IN CLASS PRODUCTS



First AAC Company to provide complete Walling Solution



ISI Marked



Grade 1 Material



Material, 33% Higher Strength



Range of Products

WORLD CLASS INFRASTRUCTURE



Present in **18 states**, top **120 Indian Cities** through more than **5000** retail outlets.



Operational excellence achieved through **TPM**, use of **BSC** as a strategic tool, and **SOP** driven systems.



India's top AAC players with **13,00,000 CBM** annual installed capacity.



Strategically located within **250kms** of major urban centres and thermal power plants.

Our Manufacture Unit – Jhajjar Plant



Activate Windows
Go to Settings to act

Our Manufacture Unit – Navsari Plant



Activate Window
Go to Settings to activate

ESTEEMED CLIENTELE



Ministry of Housing
and Urban Affairs
Government of India



LARSEN & TOUBRO



TATA
TATA CONSULTANCY SERVICES



SURAT MUNICIPAL
CORPORATION



Panoli Intermediates
India Pvt. Ltd.



ShethBuilders

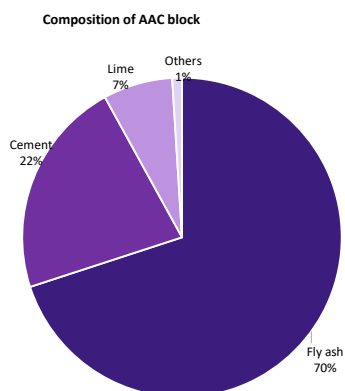


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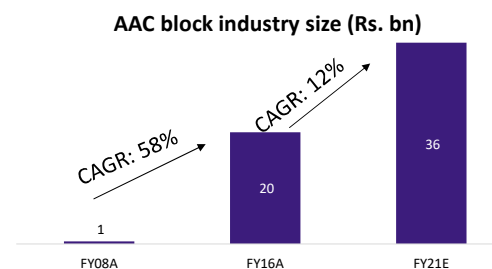
Introduction to AAC Blocks

- Autoclave Aerated Concrete (AAC) block is a better and cost effective substitute for clay bricks
- AAC is a steam cured cement product made from a mix of pulverized fly ash, cement, lime, gypsum and an aeration agent which gives it the porous, honeycomb structure



Market size

- Indian construction industry: Market size estimated at Rs. 10 tn (FY15), of which market for bricks is estimated at ~Rs. 600 bn
- Clay bricks form ~83% of the market and AAC blocks account for 6%. Rest is fly ash bricks (~7%) and concrete blocks (~4%)



BRICK VS BLOCK WALL COMPARISON FOR 100 SQFT. 4" THICK WALL

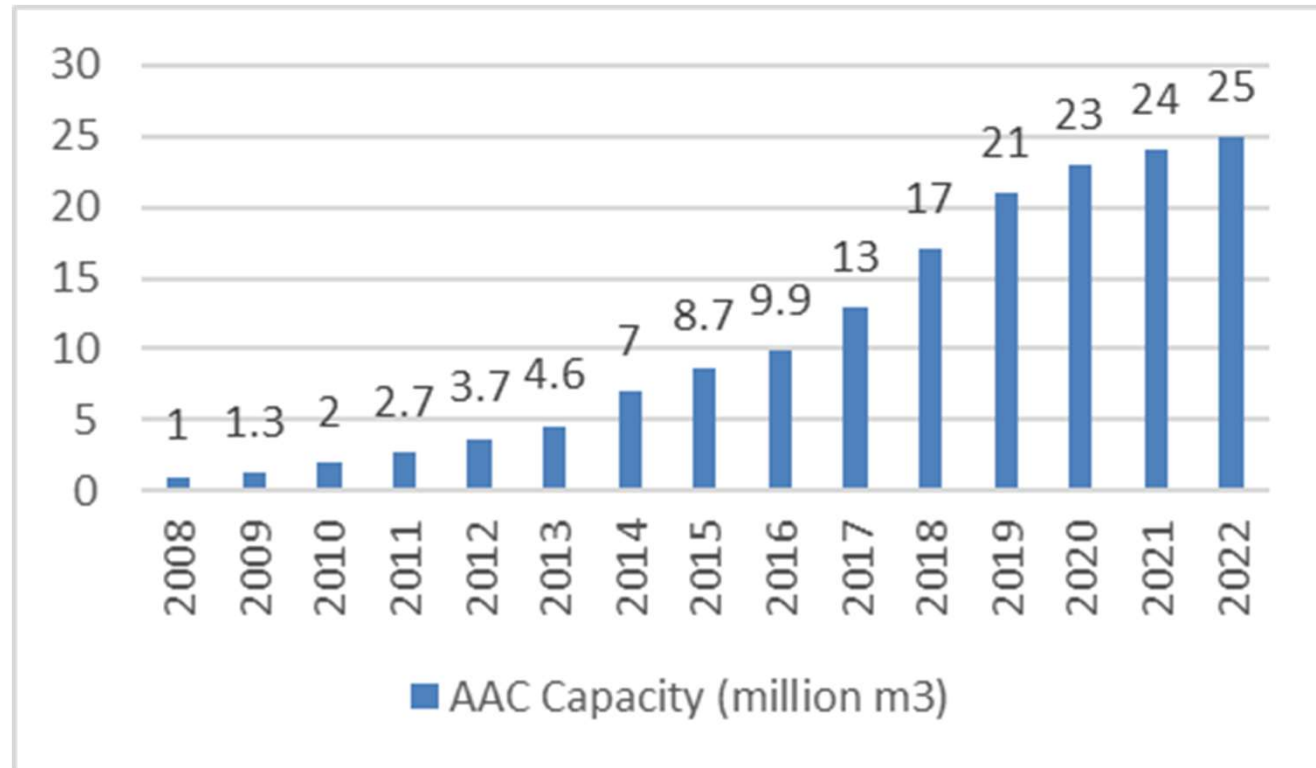


| BRICK WALL | | | |
|---------------------------|----------------------|-----------|----------------|
| | QUANTITY | RATE/UNIT | AMOUNT |
| Bricks | 500 | 8.5 | 4,250 |
| Mortar | 2.25 cement bags | 330 | 742.5 |
| | 10 CFT Sand | 50 | 500 |
| Plaster (2 Coat: 20mm) | 4 Bags Cement | 330 | 1,320 |
| | 16 CFT Sand | 50 | 800 |
| Total Walling Cost | | | 7,612.5 |
| | Cost per Sqft | | 76.125 |

| BLOCK WALL | | | |
|---------------------------|----------------------|-----------|--------------|
| | QUANTITY | RATE/UNIT | AMOUNT |
| Bricks | 56 | 51 | 2,856 |
| Mortar | 0.54 Bag | 450 | 243 |
| Plaster (2 Coat: 20mm) | 4 Bags Cement | 330 | 1,320 |
| | 16 CFT Sand | 50 | 800 |
| Total Walling Cost | | | 5,219 |
| | Cost per Sqft | | 52.19 |

Activate Wind
Go to Settings to e

Growth in AAC Industry in India



ADVANTAGES



Cost Effective

Save upto 25% in Foundation cost



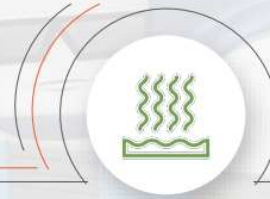
Building using Bricks

Building using AAC Products



Wall Installation Speed

Bricks Vs AAC Blocks Vs ALC wall Panel



Thermal Control

Day time exterior temperature 33°C



Desired interior air temperature 24°C

Night time exterior temperature 20°C

Building uses approx. 30% less energy for cooling and heating the interior air space

ADVANTAGES



Fire Resistance

MagicBlox AAC Block provides a fire rating of **4 hours for Thickness of 100 mm**. This makes it one of the best building materials available in the market.

| Thickness (mm) | 75 | 100 | 150 | 200 |
|---------------------|----|-----|-----|-----|
| Fire rating (hours) | 3 | 4 | 6 | 8 |



Acoustic Insulation

MagicBlox AAC Block provides extraordinary defense against noise pollution. The sound reduction index is more than **40 dB**.

| Thickness (mm) | 75 | 100 | 150 |
|-----------------|----|-----|-----|
| STC rating (dB) | 40 | 43 | 46 |

- With 3-4 mm skim coat
- For 52 dB, install gypsum board (12.5mm) with stud framing on both sides.



Durable

Absorbs strong impacts. Withstand harsh weather conditions without cracking.



Space saving

Better option to use thinner internal walls, 75mm instead of 100 mm and as a result there is an increase in floor space area upto 2%.



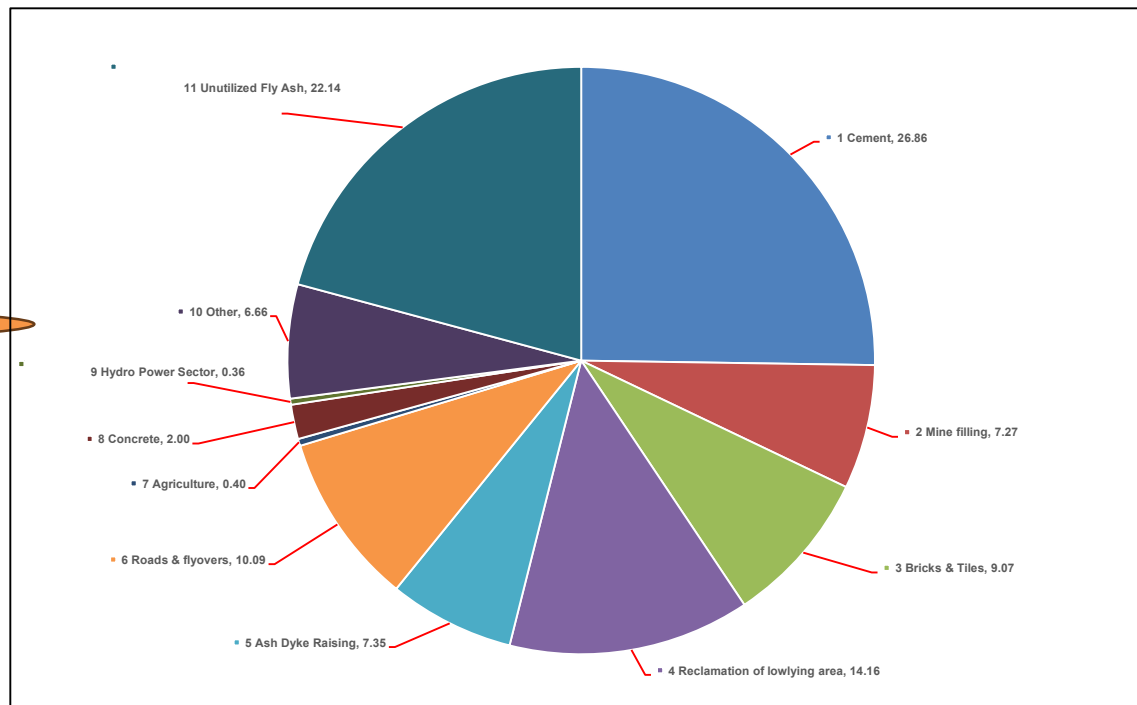
Easy & Fast Installation

It is easy to chisel, cut & core the ALC Panel, as per requirement.

Thermal Power Plant Ash Utilization Mode

Mode of Fly Ash Utilization During the 1st half of the Year 2020-21

| Sl. | Mode of utilization | Quantity of Fly Ash utilized in the mode of Utilization | |
|--------------|------------------------------|---|--------------|
| | | Million Tonnes | Percentage % |
| 1 | Cement | 26.86 | 25.25 |
| 2 | Mine filling | 7.27 | 6.84 |
| 3 | Bricks & Tiles | 9.07 | 8.53 |
| 4 | Reclamation of lowlying area | 14.16 | 13.31 |
| 5 | Ash Dyke Raising | 7.35 | 6.91 |
| 6 | Roads & flyovers | 10.09 | 9.49 |
| 7 | Agriculture | 0.40 | 0.38 |
| 8 | Concrete | 2.00 | 1.88 |
| 9 | Hydro Power Sector | 0.36 | 0.34 |
| 10 | Other | 6.66 | 6.26 |
| 11 | Unutilized Fly Ash | 22.14 | 20.82 |
| Total | | 106.37 | 100 |



Magcrete : Green future



- **Magcrete has consumed nearly 3 million tons of fly ash (producing more than 6 million cubic meters of AAC)**
- **With annual production of nearly 1 million cubic meters annually now, we will consume 0.5 million tons of fly ash annually**
- **OUR RENEWABLE ENERGY RESOURCE IS SOLAR**
- **BIOMASS IS OUR MAIN RAW FUEL SOURCE FOR BOILER OPERATION**

OUR BIT FOR ENVIRONMENT

Fly Ash Consumption:
25,69,103 MT +

CO₂ Emission Averted:
60 lacs MT +

Energy Consumption:
1,083 MW +

Coal Saved:
21,76,872 MT +

Soil Erosion Prevented:
60,85,823 CBM +



THANK YOU

Magicrete Building Solutions Pvt Ltd
Sidharth Bansal