

control
labour
COST



control
RISING
COSTS

take
the
right
step

labour
COST

RISING
COSTS

REAP THE PROFIT!

India, is now standing on the forefront of rapid construction growth. With the coming of leading business houses of the world, the citizen is getting armed by the day with opportunities of better living every moment. Be it business or residence, the impact on the construction industry is most visible. But rising costs in every peripheral of this industry is resulting in meager profits which impacts purchase decisions, and this, is leading to de-growth for many construction houses.

INSTABLOCK is that revolutionary AAC block that will refresh your business with resounding profits.

The rest of the world is already 70 years ahead in this business,



REAP
HIGH
PROFITS



CONTROL
transportation
COST

NOW!

for

GO



A product of Indo-Bhutan Construction Solutions Pvt. Ltd.

are
CONSTRUCTION COSTS
affecting the **FIGURES ON**
YOUR BALANCE SHEET

design: advertisingcds@yahoo.co.in

LOW
PROFITABILITY

Transform your
business today

transportation
COST

control
infra
structure
COST



control
material
COST

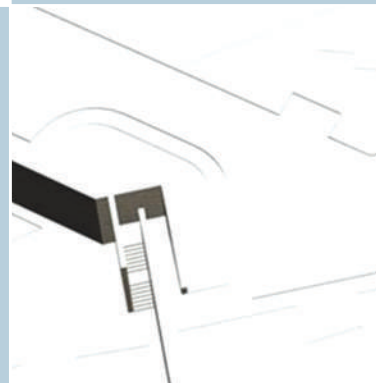
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i n f r a
structure
COST



material
COST





INSTABLOCK AAC (Autoclaved Aerated Concrete), yet at a nascent stage in India, was first developed in 1920 in Sweden, to meet the ever growing construction demands. It is a lightweight building material, made of natural raw materials, and used in a wide range of commercial, industrial and residential applications.

It is the preferred choice for construction in Europe, Middle East, America, Australia and several other countries for decades now. AAC is a lightweight and high strength, and produced in myriad forms from blocks, to structural floors and wall panels.

AAC is certified as a "green" alternative to traditional construction materials by LEED (Leadership in Energy and Environmental Design) and USGBC (US Green Building Council). Also, Indian Green Building Council (IGBC) recommends its use in India.



manufacturing

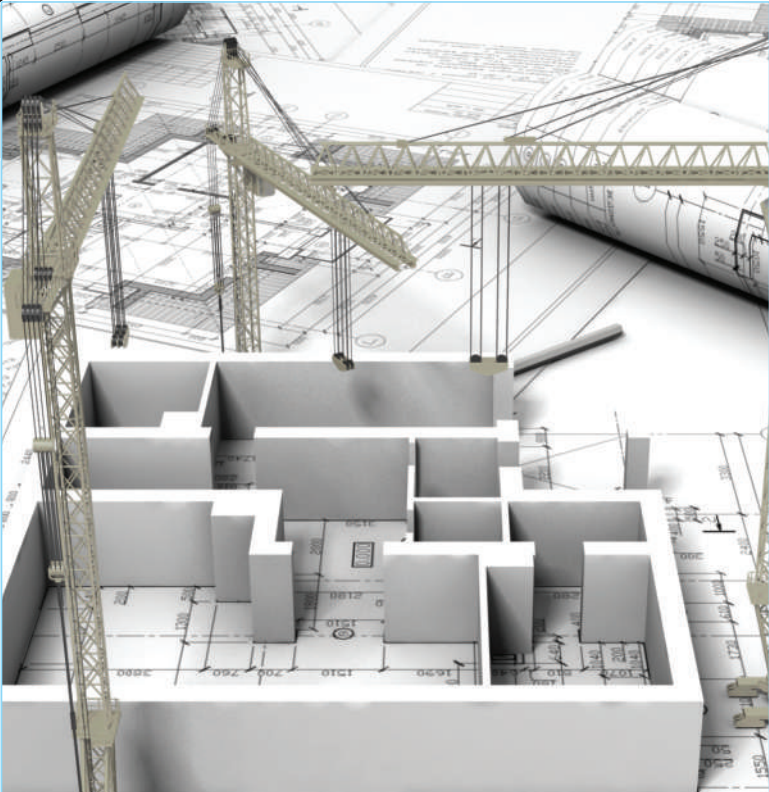
- Consists of 70% of air
- Combines silica (sand or recycled flyash) cement, lime, water and aluminum powder (expansion agent), paved into a mould
- Aluminum powder reacts with silica when added to concrete, resulting in the formation of millions of microscopic hydrogen bubbles
- Hydrogen bubbles cause the concrete to expand to roughly five times its original volume
- Hydrogen evaporates leaving a highly closed cell aerated concrete
- Thereafter, they are cut and finally steam & pressure cured in an autoclave

INSTABLOCK- THE GREEN BLOCK

- One of the major advantages of AAC over other cementitious construction materials is its lower impact on environment:
- No efflorescence emission (white salt appearance) at large

INSTABLOCK AAC - the intelligent block!

Just weighs 1/4th of standard concrete resulting in lower transportation costs, faster work-flow, lower material handling costs etc. It is a "Ready to build" material requiring no onsite curing time. The accurate panels are finished with a thin mortar joint producing a surface that requires minimum rendering. Over and above, it has outstanding durability qualities over traditional materials like- humidity, freeze/ thaw cycles and chemical attack. It eliminates the need for applying costly fire proofing materials and is highly cost effective and recyclable!



INSTABLOCK AAC Technical Analysis

NO.	PARAMETER	INSTABLOCK AAC	CLAY BRICK
1	Size (LxHxT)	625 x 250x (75 to 300) mm	230 x 115 x 75
2	Precision in Size	05 mm (+/-)	05 - 15 mm (+/-)
3	Compressive Strength	> 4.0 N/mm ² & above (as per IS 2185)	05 to 7.5 N/mm ² (as per IS 1077)
4	Dry Density	550-650 Kg /Cu M (oven dry)	1950 Kg/Cu M
5	Fire Resistance	02 to 06 Hours (depending upon thickness)	02 Hours
6	Sound Insulation Index	45 db for 200 mm thick wall	50 db for 230 mm thick wall
7	Thermal Conductivity	0.16 w/m ² k	0.81 w/m ² k
8	Drying Shrinkage	0.04%	0.8%

INSTABLOCK AAC Size Chart

L x H x Thick	pcs/m ³	Wall Area/m ²
625 x 250 x 100	64.00 pcs	10.00 sq.m
625 x 250 x 125	51.20 pcs	8.00 sq.m
625 x 250 x 150	42.66 pcs	6.66 sq.m
625 x 250 x 200	32.00 pcs	5.00 sq.m
625 x 250 x 225	28.44 pcs	4.44 sq.m
625 x 250 x 250	25.60 pcs	4.00 sq.m
625 x 250 x 300	21.33 pcs	3.33 sq.m

INSTABLOCK AAC Cost-Effectivity Analysis

Cost component	Saving in Component	Estimated impact on project cost	Explanation
Mortar Material	60%	1%	INSTABLOCK AAC are 9 times the size of conventional bricks, resulting in 1/3 rd the number of joints. Thus an overall mortar savings up to 66%
Plastering Material	35%	2%	Exceptional dimensional accuracy & smooth surfaces eliminate the need for three-coat plaster walls and allow for a final 6mm skin coat (Putty/Gypsum plaster)
Wastage	10%	0.5%	Breakage in clay bricks might escalate up to 15% which in case of INSTABLOCK AAC is bare minimum
Structural Material (steel & Concrete)	15%	6%	INSTABLOCK AAC drastically reduce the dead weight of the building. This translates to design of lighter structure leading to reduction in use of steel & concrete (up to 20%)
Increase in floor space area	2%	4%	Exceptional thermal insulation & weather barrier properties make it possible to use thinner blocks, hence increasing carpet area
Saving in capex for HVAC System	30%	0.3%	INSTABLOCK AAC has excellent properties resulting in saving in capex and opex of HVAC systems

Total Impact on Project cost 11.80%

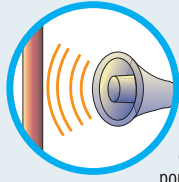


the 'Superhero' of building materials



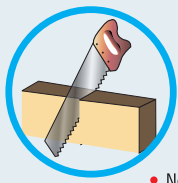
ENERGY EFFICIENT

- A 100% green building material of choice in LEED certified buildings
- Uses the least amount of energy & material per m² of the product
- Uses fly ash (65% of its weight)
- The solution to the nation's fly-ash utilization problem



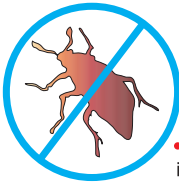
ACOUSTIC PROPERTIES

- The microscopic small non inter-connected air cells give it a very low air porosity
- Depending on density and porosity, closed air pockets provide very good sound insulation / absorption with an STC (Sound Transmission class) rating of 44
- Can also be used as a sound barrier wall along busy roads



WORKABILITY

- Just like using wood
- Can be drilled, sawed, nailed, chiseled
- No chipping or cracking
- No special tools required
- Results in less wastage and keeps the site clean



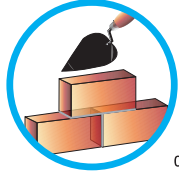
PEST RESISTANT

- Solid wall construction and finishes
- Almost no cavities for insects, termites, ants and rodents to dwell in
- Inorganic minerals composition retards growth of molds



HIGH COMPRESSIVE STRENGTH

- Average compressive strength- (28-35) kg/cm². 25% stronger than other light weight products of the same density, higher than even M-150 concrete
- High pressure steam-curing autoclaving leads to unmatched strength to weight ratio
- Successfully exceeds the Indian Building Code Requirements



ECONOMICAL EASIER QUICKER TO INSTALL

- Larger and lighter than conventional blocks and hence can be installed at a quicker rate
- Laid flush utilizing thin joint mortar hence reducing mortar and plastering cost and eliminating thermal bridging



SUPERIOR FIRE RESISTANCE AND THERMAL INSULATION

- A 10cm thick block is fire resistant up to 4 hours and a 15cm block is up to 6 hours fire resistant in accordance with BS-5628-3 standards, approximately twice more protection than normal concrete
- Particularly suited for fire walls and fire protection of structural steel
- INSTABLOCK AAC Unique cellular structure prevents disintegration in fire
- Melting point of over 1600°C, more than twice the typical temperature in building fire 650°C
- Has apex 1/3rd density than that of conventional Building blocks
- Low specific conductivity makes heating or cooling (Air Conditioning) very efficient
- Generates regular saving on energy and global warming



RESISTANCE TO AIR & WATER PENETRATION

- Infinitesimally small microscopic structure defies capillary action
- Added silicone based additives enhance water resistance
- Composition of non-organic materials prevent rotting and molding and keeps interiors clean and odor free



PROVEN DURABILITY & DIMENSIONAL STABILITY

- This wonder material is in use for over 70 years in most of the world
- Proven durability under extreme and different climatic & chemical conditions
- A linear expansion coefficient of approximately 0.02%

INSTABLOCK AAC IS A HIGHLY COST SAVING OPTION

Density of (550-650) Kg/m³ of AAC, 3 times lighter than clay brick

Reduces dead load of structure

Saves steel up to 15% and concrete up to 7%

Saves construction time

Saves on total materials required for construction