

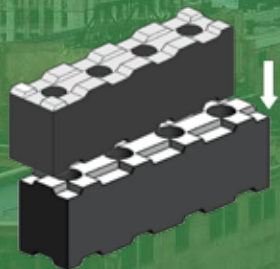


BHARAT NAV NIRMAN

LWC PANEL

**INTERLOCKING
DESIGN**

**RAPID
CONSTRUCTION**





BHARAT NAV NIRMAN

ABOUT US

BHARAT NAV NIRMAN WORKS ON ECOLOGICAL PRINCIPLES THAT OFFER NEW TECHNOLOGIES OF CONSTRUCTION TO ENHANCE THE SUSTAINABILITY.

OUR FOCUS IS TO DEVELOP NEW CONSTRUCTION PRODUCTS BY EMPLOYING ENERGY EFFICIENCY TO CONSTRUCT **THE GREEN EARTH.**

**“CONSTRUCTING THE SUSTAINABLE FUTURE
WITH GREEN BUILDING”**



BHARAT NAV NIRMAN

WHY BHARAT NAV NIRMAN ?

BHARAT NAV NIRMAN IS ONE OF THE FASTEST GROWING AND MOST RELIABLE COMPANIES IN THE WORLD. WE WORK ON INNOVATION AND NEW TECHNOLOGIES IN CONSTRUCTION TO PROVIDE MOST EFFICIENT PRODUCTS TO ACHIEVE NEW FUTURE OF BUILDING CONSTRUCTION.

WE PROVIDE READY TO DEPLOY SOLUTIONS IN INTRODUCING NEW PRODUCTS TO ESTABLISH THE BEST POSSIBLE CONSTRUCTION TECHNIQUE IN THE NEAR FUTURE.



Tested & Approved by
CSRI-Central Building Research Institute
Roorkee-247667(india)





LWC PANEL (LIGHT WEIGHT CELLULAR PANEL)

LWC PANEL KNOWN AS LIGHT WEIGHT CELLULAR PANEL FACILITATES CENTRALLY INTER-LOCKING MECHANISM WITH VERTICAL PANELS DELIVERS HIGH STRENGTH TO THE BUILDING.

TODAY, WORLD IS FULL OF CHALLENGES IN ECONOMICAL CLIMATE, TIME AND QUALITY DEMONSTRATE AN IMMEDIATE NEED OF NEW INNOVATION GLOBALLY. IN CONTRAST TO THIS, LWC PANELS IS INTRODUCED TO CONTRIBUTE IN BUILDING THE GREEN EARTH WITH HIGHLY ECONOMICAL, TIME SAVING AND ECO-FRIENDLY PRODUCT.

LWC PANEL IS THE COMBINATION OF HOMOGENOUS MIXTURE OF ORGANIC AND NATURALLY MINED MINERAL WITH DISTINCT COMPOUND RESULTS IN BUILDING A 21st CENTURY WALL.

MOREOVER, LWC PANEL IS A 100% CEMENT FREE PRODUCT.

IT IS THE LATEST PROVEN TECHNOLOGY THAT DEFINES A NEW PATH OF BUILDING CONSTRUCTION. INTER-LOCKING PANEL CONCEPT IS INTRODUCED TO BUILD A FUTURE TOGETHER WITH HIGH STRENGTH AND DURABILITY FOR LIFE TIME.

PROPERTIES AND ADVANTAGES OF LWC PANEL

INTERLOCKING mechanism is introduced with vertical panels contributing in the new technology in terms of Quality, Time, Cost to Construct to sustainable World with Green building.

BENEFIT TO BUILDING



HIGH STRENGTH -

Combination of uniform superior Materials and interlocking based design yields high strength of up to 10Mpa to the building.



MOISTURE AND EFFLORENCE -

The uniform mixture of Flyash and other chemical reaction reduce the moisture content and nil efflorescence in the structure.



ENERGY SAVING -

The uniform mixture of Flyash and other chemical reaction reduce the moisture content and nil efflorescence in the structure.



FLOOR SPACE AREA -

With Interlocking mechanism and high strength, LWC panel construct an external wall of 140 mm Width with higher shear resistance.



LONG LIFESPAN -

LWC Panel has a unique feature in increasing strength with time instead of deterioration.



LOW MAINTENANCE -

LWC PANEL once installed in the building does not require any maintenance as it consisted of organic and naturally miner mineral with ultimate properties.

BENEFIT TO BUILDING



THERMAL INSULATION -

with its low thermal conductivity properties, it reduces the energy consumption and prevents the heat gain/loss through the building envelope.



FIRE RESISTANCE -

LWC demonstrates an ultimate fire resistance and 6 inches wall can withstand up to 8 hours.



WEATHER PROOF -

the building with LWC panel withstand lifelong in any climatic condition. It has a ability to prevent corrosion in extreme weather condition and the research considered it as a earthquake resistant.



SOUND INSULATION -

LWC PANEL offers a higher sound insulation as compared to other material, as it put an end of travelling waves through the wall.



PEST RESISTANCE -

the components used in LWC fight against termites or any other pest to protect the building lifelong.



ECOFRIENDLY-

Perhaps the most significant environmental challenge facing us today is the reality of a changing climate. The challenges are vast, but in many cases we already have the instruments for tremendous progress. Some of our best solutions will come from putting nature to work.



DURABILITY -

Long lasting block provides a better life to building with ultimate properties of raw material and amazing eco-friendly chemicals.

BENEFIT TO CONSTRUCTION SITE

LIGHTWEIGHT- 900-1100Kg/m³

LWC PANEL is designed in lightweight with rigorous research by the experts in order to maintain high strength as well. Lightweight and high strength in one product makes a unique and ultimate outcome for LWC panel.

REDUCE CONSTRUCTION TIME - 10X FASTER

After continuous Experiment and research, building with LWC panel works 10 times Faster as compared to red clay brick.

WORKABILITY- CUT & MODIFY

LWC panel represents simplicity as it is easy to use and can be easily cut and modified according to the requirement of structure.

REDUCE WASTAGE-0%

LWC panel comes with the fixed dimensions and can be easily cut and modified results in 0 % wastage.

EASY TO INSTALL-INTERLOCKING

with interlocking mechanism and lightweight, it is easy to install and carry blocks easily on the site. LWC panel offers "SAY NO TO LEVEL" while constructing the building wall.

**LWC
PANEL**



LIGHTWEIGHT



EASY TO
INSTALL



WORKABILITY



REDUCE
WASTAGE



REDUCE
CONSTRUCTION
TIME

CONSTRUCTION COST

LABOUR-10X FASTER

LWC panel offers Fastest work with the Labour cost saving up to 10 times as compared to red clay brick.

MORTAR- SAVES 80%

No requirement of mortar in interlocking design. 60% mortar as compared to red clay brick will be used in grouting to enhance the strength.

REDUCE PLASTER-6MM

LWC panels need a 6mm plaster while brick work require 18mm plaster.

STRUCTURE-REDUCE UPTO 18%

Being High strength and lightweight, reduces the steel and concrete consumption up to 18% in comparison to red clay brick.





CONSTRUCTION OF 1000 Sq. Ft. WALL

TOTAL QUANTITY REQUIRED

LWC PANEL
13 CUM

AAC BLOCK
18.5 CUM

BRICK
21.36 CUM

COMPARISON OF LWC PANEL OVER RED CLAY BRICK AND AAC BLOCK

S.NO.	PARAMETERS	LWC PANEL WALLS	RED CLAY BRICK	AAC BLOCKS
1.	Design	Interlocking mechanism With Lime, flyash and other naturally mined mineral. Cement free product	Traditional Clay brick	Autoclaved aerated concrete block
2.	SIZE	300x250x100-140mm	230x110x75mm	625x240x75-300mm
3.	COMPRESSIVE STRENGTH	7.5- 25 N/mm2	2.5 to 10 N/mm2	3 TO 4 N/mm2
4.	LOAD BEARING	Yes	Yes	No
5.	WATER ABSORPTION	3%	20 to 25%	15%
6.	DAMPNESS/ EFFLORESCENCE	No	Yes	No

COMPARISON OF LWC PANEL OVER RED CLAY BRICK AND AAC BLOCK

7.	FIRE RESISTANCE	140mm wall can withstand 4-8 hours	230mm wall withstand 2 hours	200mm wall withstand 2 to 6 hours
8.	SOUND REDUCTION	45 db in 140 mm wall	50 db in 230 mm wall	45 db in 200 mm wall
9.	THERMAL INSULATION (kw-m/c)	0.14 ³	0.81 ³	0.16 ³
10.	CARPET AREA	offers more carpet area	less carpet area	less carpet area
11.	CONSTRUCTION COST	reduce by 35% in wall reduce by 10% in building	high construction cost	more construction cost than lwc panel
12.	DENSITY	900-1100 kg/m	1500-800kg/m	450-600 kg/m
13.	TIME & PROGRESS	10 times faster than red clay brick 4 times faster than aac block	brick masonry has very slow progress of work.	4 times slower process than lwc panel

COMPARISON OF LWC PANEL OVER RED CLAY BRICK AND AAC BLOCK

14.	MANPOWER	requires 10 times less manpower than red clay brick 4 times than aac block	more manpower	4 times more manpower than lwc panel
15.	WASTAGE	no wastage due to customize panel size	more wastage	less wastage
16.	EFFECT AGAINST WEATHER	high weather resistance.	low weather resistance	high weather resistance
17.	DURABILITY	High durability	less durable	less durable than LWC PANEL
18.	FINISHING	amazing finish with 6mm plaster	for finishing of brick work, 18mm of plaster in required	required 12mm plaster for finishing

THANK YOU

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