



***Corresponding author:**

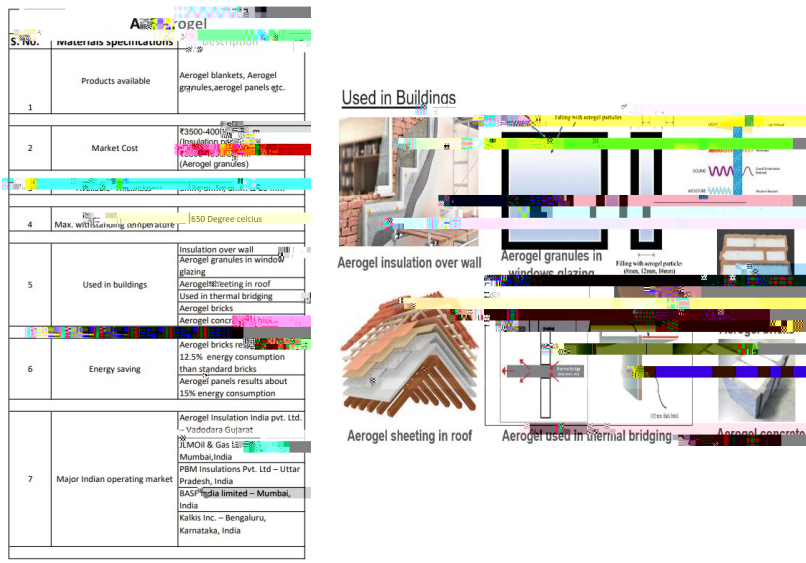


Figure 3: (Left to right) Materials specification & Use of Aerogel in buildings.

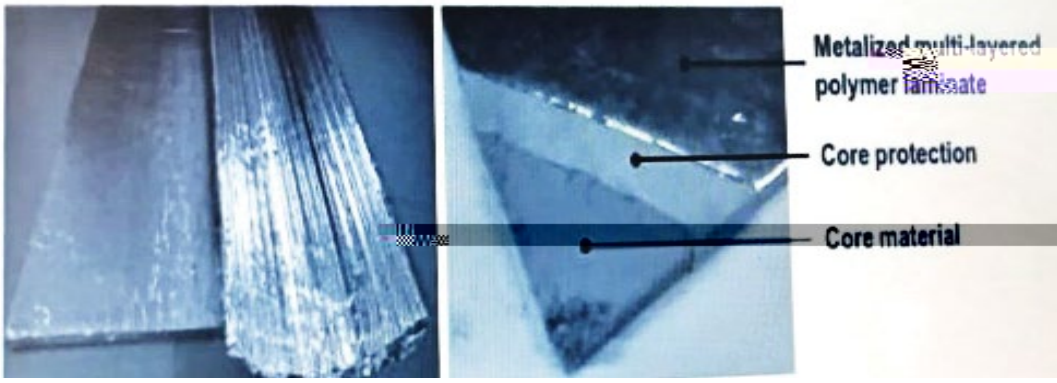


Figure 4

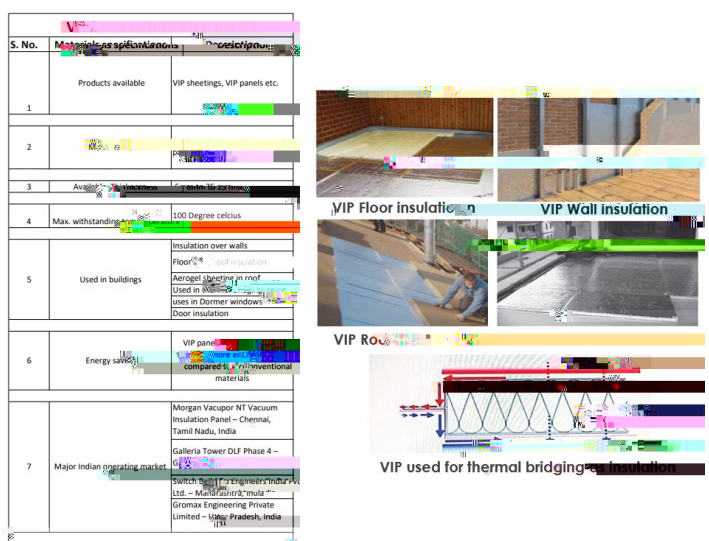


Figure 5: (Left to right) Materials specification & Use of VIP in buildings.

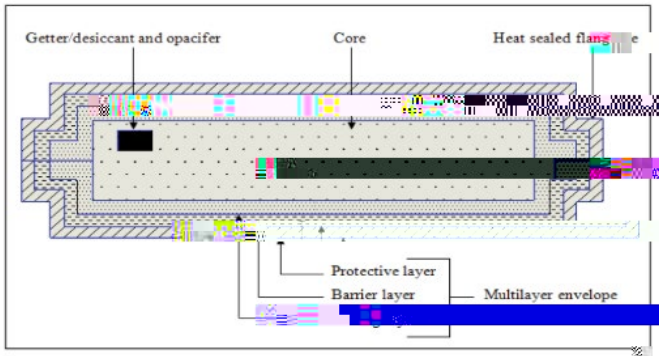


Fig.4. Schematic of a VIP

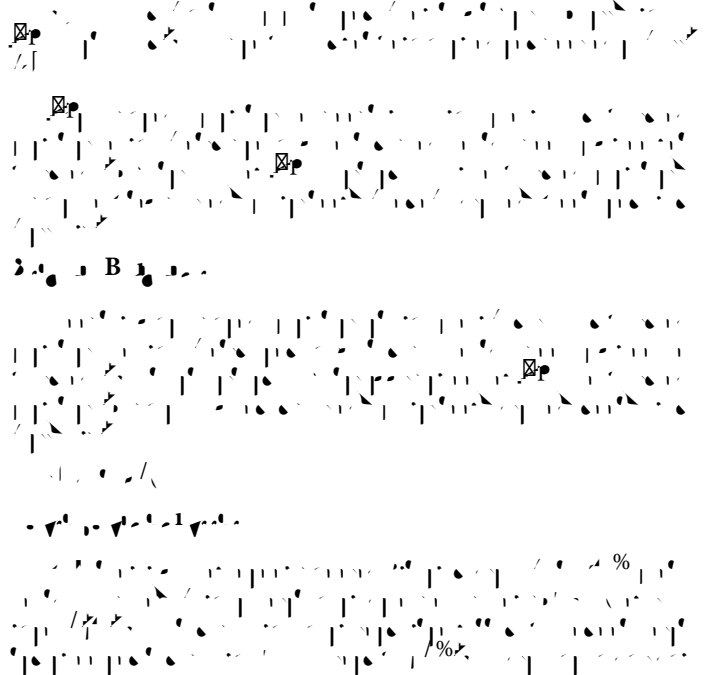
Figure 6



Figure 7

Nansulate insulated coating		
S. No.	Material	Material
1	Products available	for walls, ceilings, attics, windows Nano insulate Crystal for roofs
2	Market cost	₹,6000-7000/gallon (4.5 litre approx.)
3	Coverage area per gallon	150 sq. ft.
4	Typical applied coat	Thickness 127 microns (5 mils) 127 microns per coat.
5	Used in buildings	Coating over walls Floor, ceilings & roof insulation Aerogel sheeting in roof Used in thermal bridging used for coat windows used for coat Skylights
6	Energy saving	Nansulate coating results about 20% more energy efficient.

Figure 8



Sides of Building Envelope, Interior Walls or Exterior Walls, Windows/Skylights, Roofs of Building Envelope



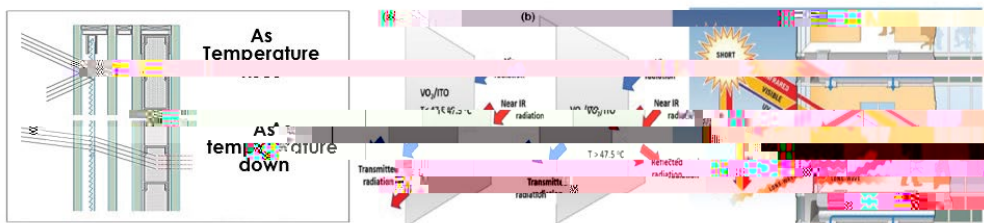
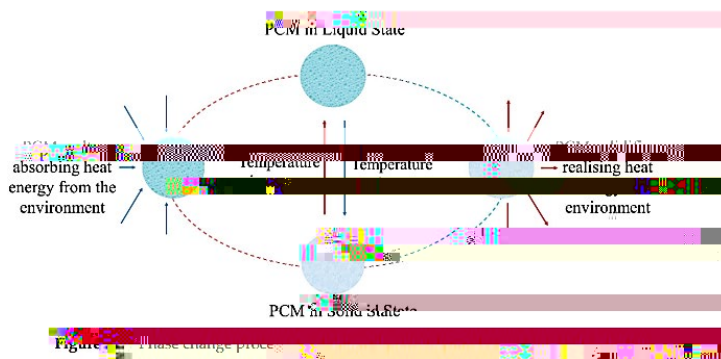


Figure 10 VO2-dispersed glass used



Figure 12 Use of paraffin wax & Bee wax as PCM in envelope

Layer Name	Width	Density	Sp.Heat	Conduct	Type
1. Plaster Building (Molded Dry)	10.0	1250.0	1088.000	0.431	85
2. Masonry Medium	95.0	2000.0	836.800	0.711	
3. Plaster Building (Molded Dry)	10.0	1250.0	1088.000	0.431	85

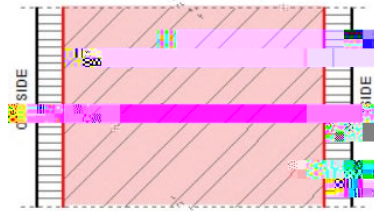


Figure 13

Layer Name	Width	Density	Sp.Heat	Conduct	Type
1. Glass Standard	6.0	2300.0	880.000	1.046	75

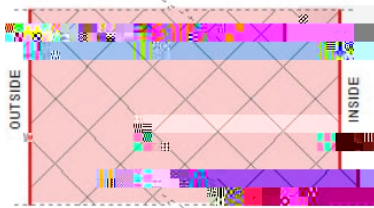


Figure 14

Layer Name	Width	Density	Sp.Heat	Conduct	Type
1. Plaster Building (Molded Dry)	10.0	1250.0	1088.000	0.431	85
2. Concrete	100.0	2300.0	880.000	1.046	75
3. Plaster Building (Molded Dry)	10.0	1250.0	1088.000	0.431	85

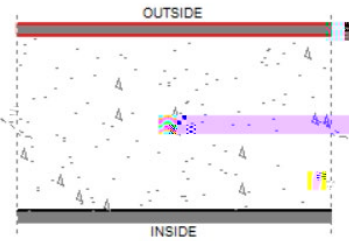


Figure 15

Layer Name	Width	Density	Sp.Heat	Conduct	Type
1. Concrete	100.0	2300.0	880.000	1.046	75
2. Concrete	100.0	2300.0	880.000	1.046	75

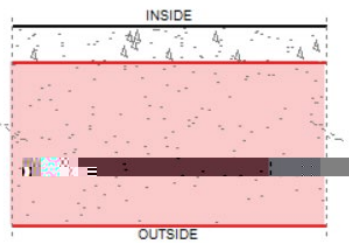


Figure 16

Layer Name	Width	Density	Sp.Heat	Conduct	Type
1. Wood Oak White Live (Acrid)	40.0	825.0	2385.000	0.157	85

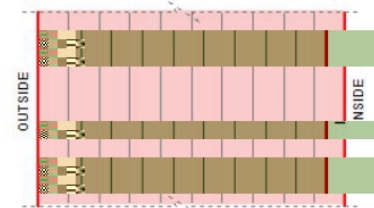


Figure 17

J A D
 J A E
 J A E

J A D
 J A E
 J A E

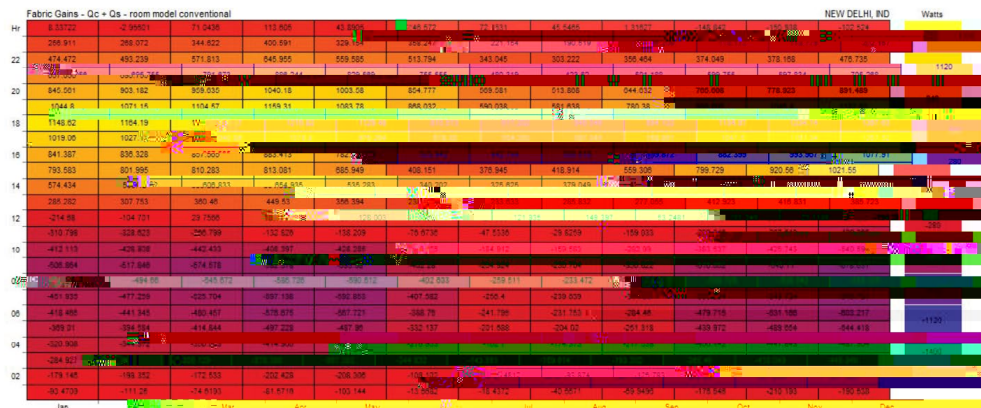


Figure 18

Layer Name	Width	Density	Sp.Heat	Conduct.	Type
1. Glass Standard	6.0	2300.0	836.800	1.046	75
2. aerogel granules	0.0	1200.0	1900.000	0.013	45
3. Glass Standard	6.0	2300.0	836.800	1.046	75

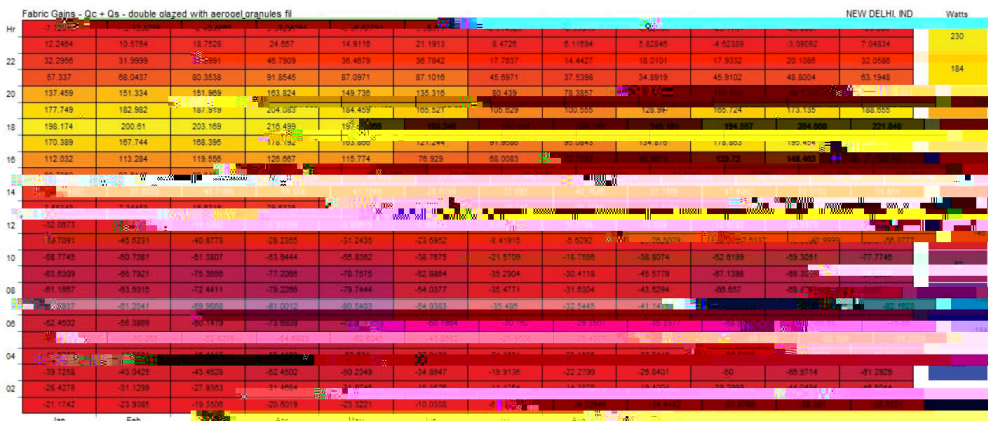
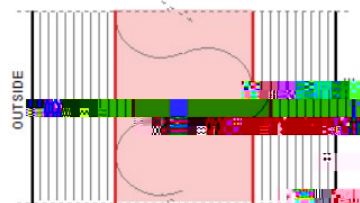


Figure 19

Layer Name	Width	Density	Sp.Heat	Conduct.	Type
1. Plaster Building (Molded Dry 10.0	10.0	1250.0	1088.000	0.431	85
2. Brick Master	3.0	2000.0	836.800	1.046	75
3. Plaster Building (Molded Dry 10.0	10.0	1250.0	1088.000	0.431	85
4. AEROGEL PANEL	10.0	1900.0	1900.000	0.013	45

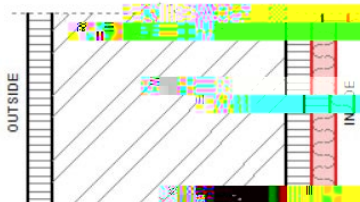
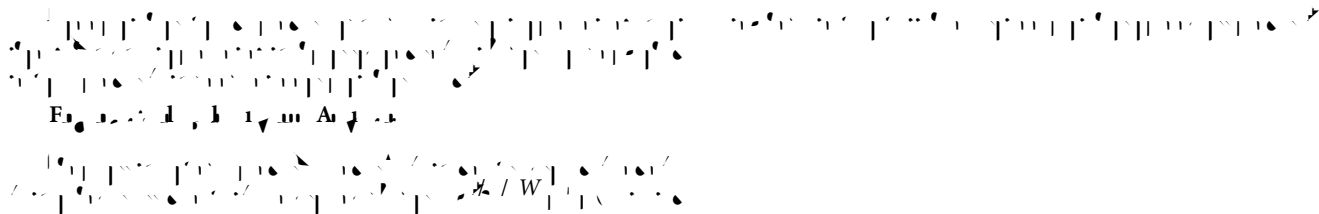


Figure 20



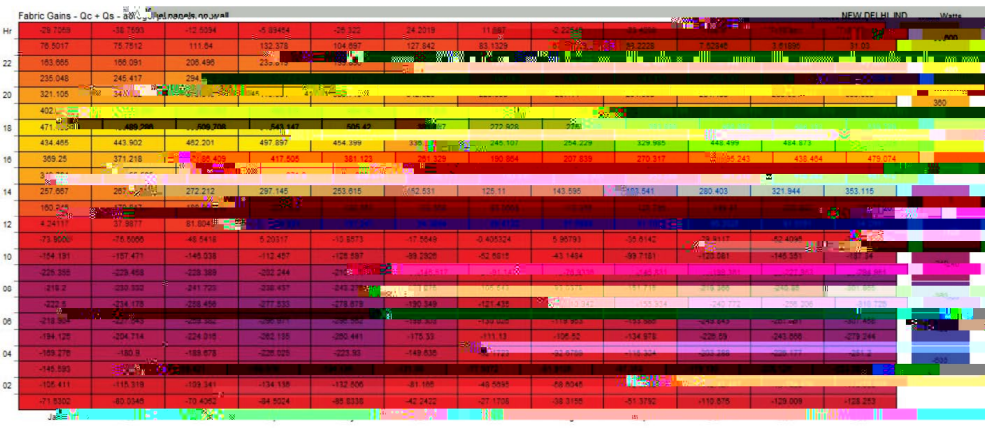


Figure 21

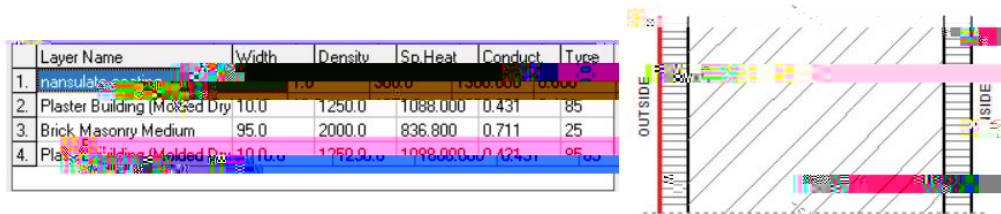


Figure 22

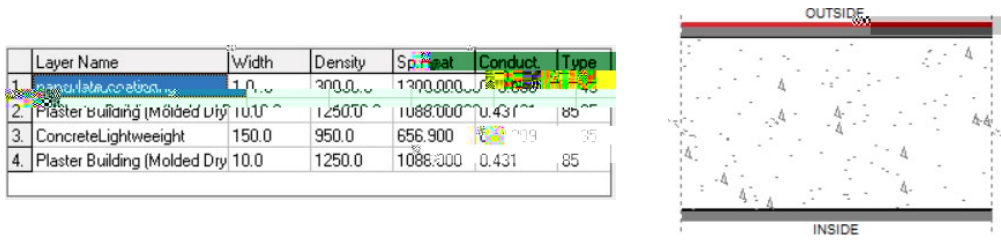


Figure 23

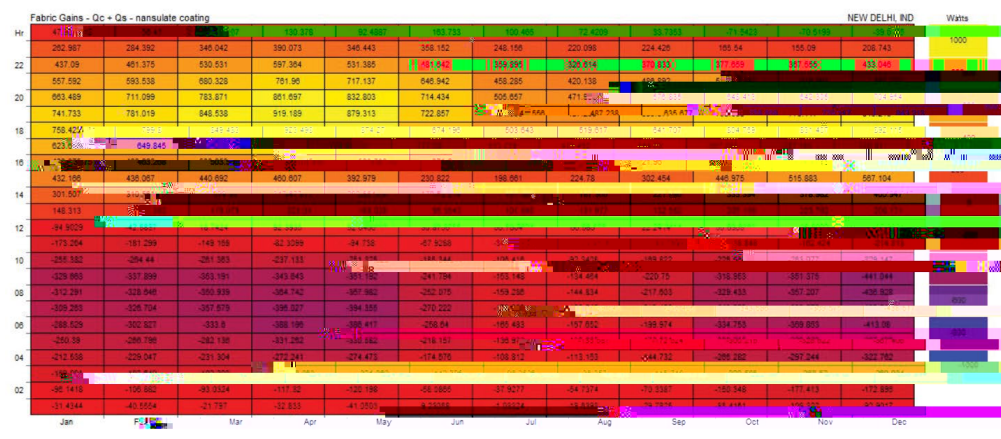


Figure 24

