

# Revolutionize Energy Conservation!



**Cool & Protective  
Enveloping of buildings  
with Cool Roofs & Green  
Hues of Success**



This is what our inspiration is !!!

This is where our business Journey starts from....



**Inspire**  
**Innovate**  
**Evolve**  
**Excel**



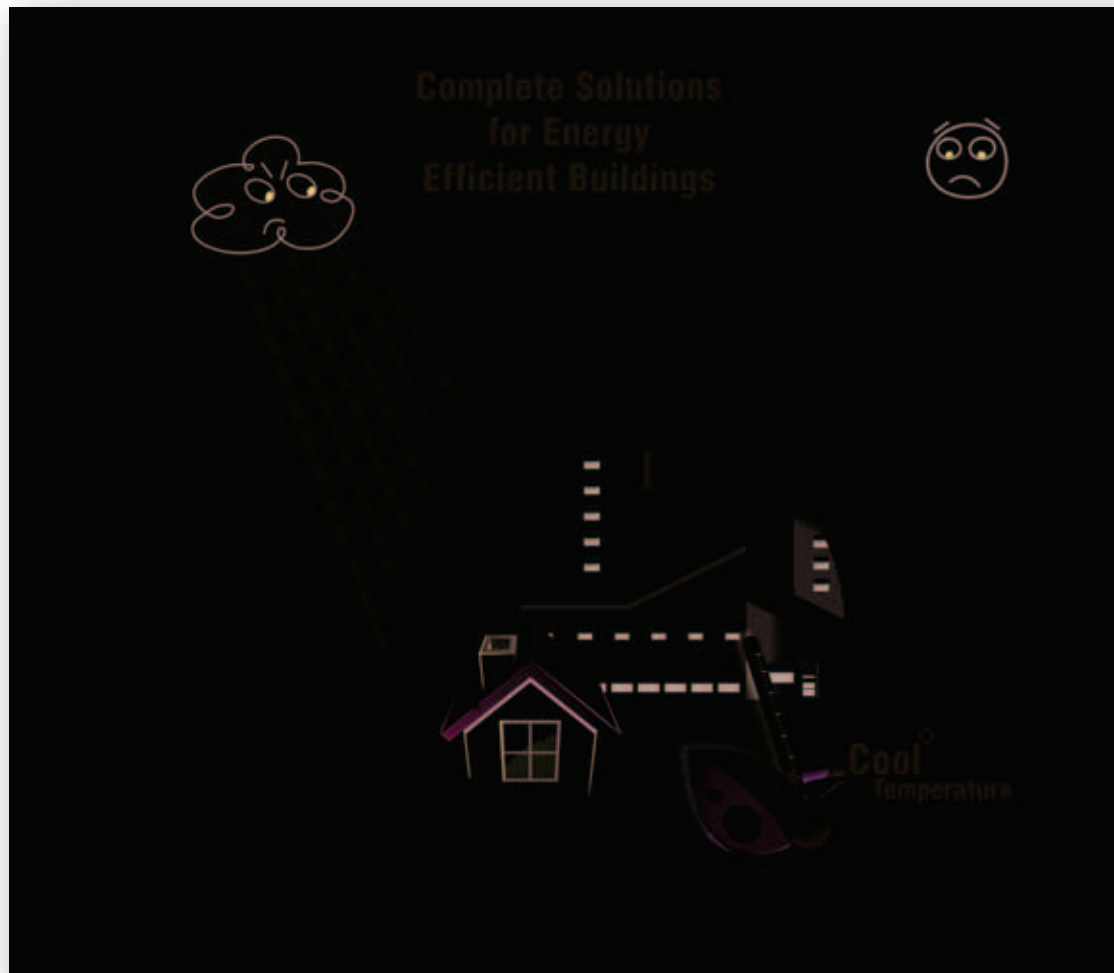


A Small Effort...  
A Big Dream ....

**PANACHE**  
is All Set to  
Contribute &  
Combat the  
Hostile Effects of  
Global Warming !  
Making this World  
More Beautiful &  
Safer Place to  
Live in !

# Revolutionize Energy Savings!

COOL HOMES WITHOUT AC !



**Innovative IR Reflective Cool Co Paints**

**WINNERS OF POWER OF IDEAS 2010**

**Aesthetic Solutions**

*Now*



**Panache Green Tech Solutions Pvt Ltd**



THE ECONOMIC TIMES

Certificate  
of Recognition

This is certify that Neetu Jain successfully reached the  
final phase of Investor Meets in The Power of Ideas initiative, 2009.

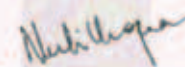


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THE ECONOMIC TIMES  
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The Economic Times

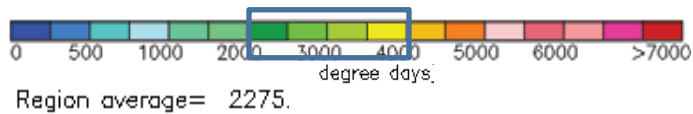
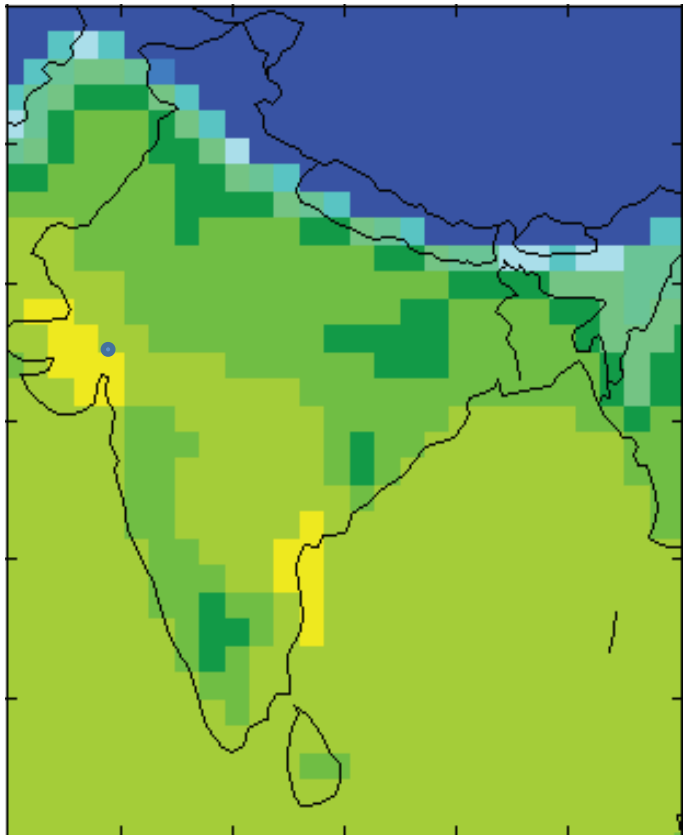
# Coat the World White !

Just Imagine !

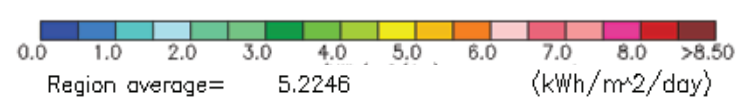
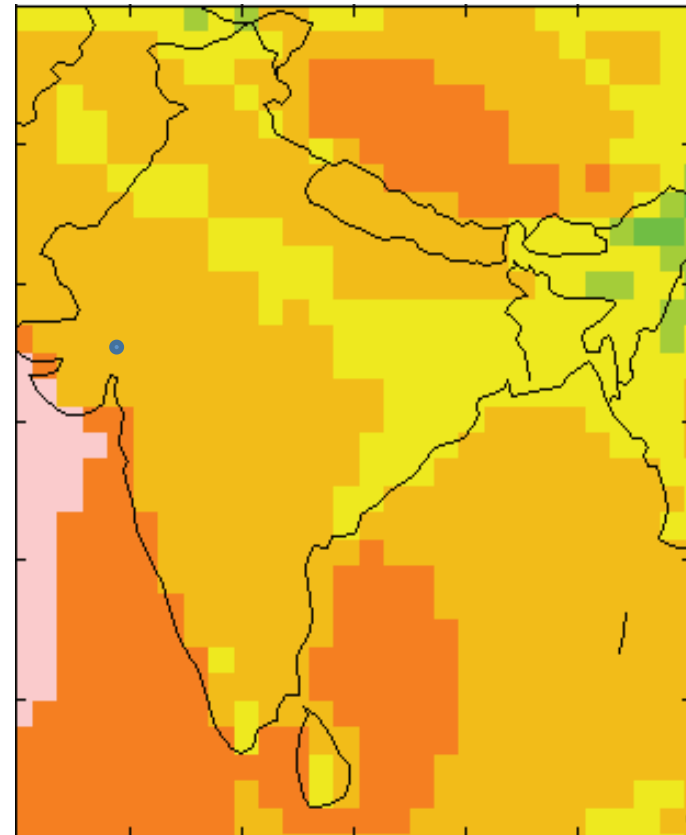
The area where ever the Cool Roof ,  
IR Reflective coating is applied – On that surface  
**NO heat generated !**

Adding to the decreased atmospheric temp –  
Reducing the Heat Island effect!

Cooling Degree Days



Solar Intensity



**Ahmedabad**

Annual - Cooling Degree Days (18 deg. C)

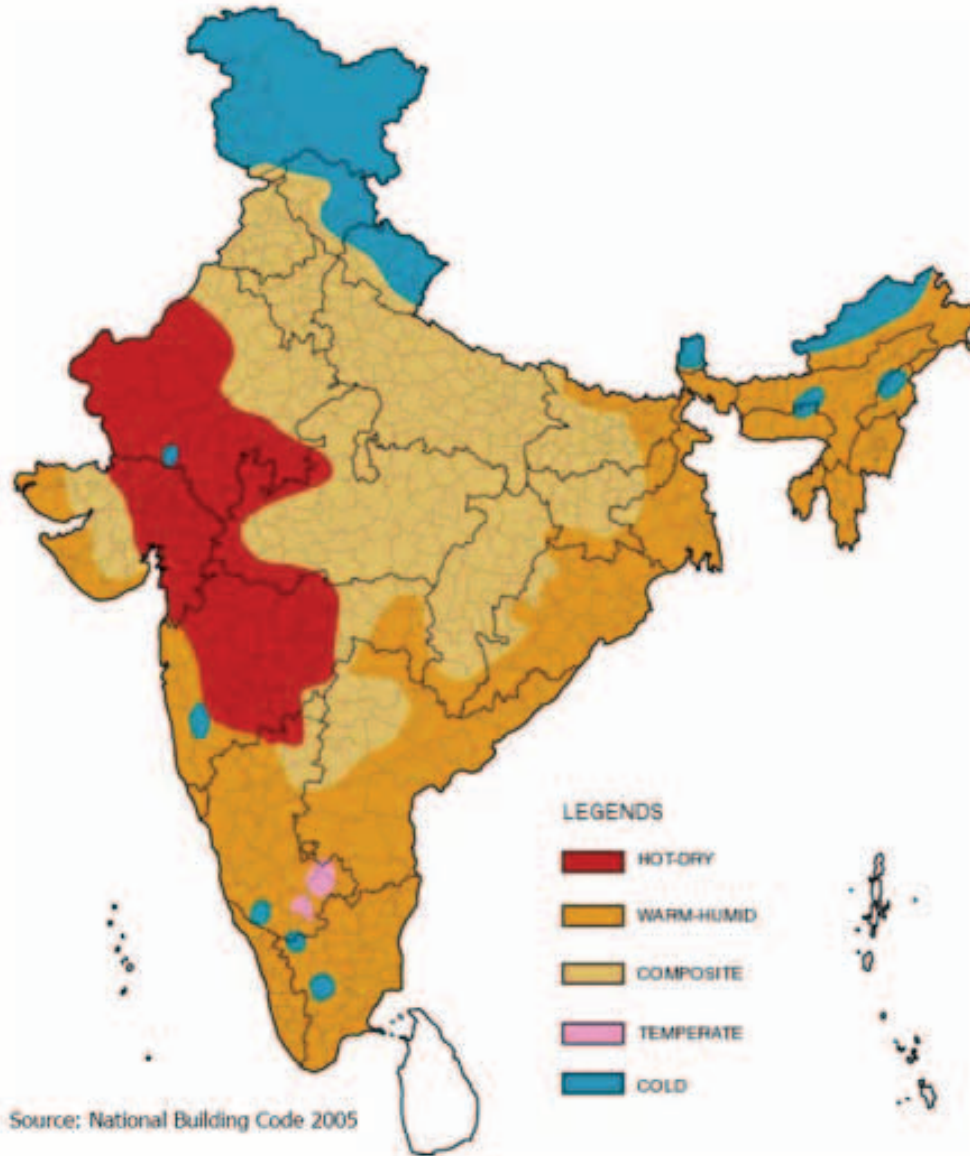
3382

Maximum Direct Solar of

7429 Wh/m<sup>2</sup> on Apr 5



### Climate Zone Map Of India



Source: National Building Code 2005

# Major Cities Cooling Degree Days/ Solar Intensity with High Construction Growth:

	Ahmedabad	Bangalore	Calcutta	Chennai	Mumbai	New Delhi	Hyderabad
Annual - Cooling Degree Days (18 deg. C)	3382	2036	3028	3718	3299	2679	3183
Maximum Direct Solar of	7429 Wh/m <sup>2</sup> on Apr 5	8017 Wh/m <sup>2</sup> on Feb 3	7089 Wh/m <sup>2</sup> on May 4	6165 Wh/m <sup>2</sup> on Jun 11	7062 Wh/m <sup>2</sup> on Oct 17	7196 Wh/m <sup>2</sup> on Apr 7	9498 Wh/m <sup>2</sup> on May 22

## NEED OF THE TIME – Energy Conservation

“Due to the tropical climate, we have a heavy influx of Solar heat and light.” The average annual spending on the energy bill consists of 35 per cent on cooling load (air-conditioning), and 20 per cent on artificial lighting, in spite of excessive natural light

Extreme Temp variation – Extreme Solar Heat gain – Increased electricity bills

*This calls for a dire need to go green.*

**Void for eco friendly construction solutions for energy conservation !**

## Consequences of Increased Temp

### **Increased atmospheric / indoor Temp Leads to –**

- **More AC consumption – increased electricity bill - Hole in Wallet**
- More CO<sub>2</sub> foot prints by increased electricity units
- Structure life reduced – crack formed
- Rate of increased of expansion & contraction
- Water leakage problem of concern
- Frequent renovation cost for paint peel off , leakage problem
- Heat Island Effect Increased

# Grabbed the Opportunity!! **Innovative Approach for Cool Affordable Housing !**

## **Panache's innovative economic solutions -**

Panache's coating system ensure every structure exposed to Sun heat & rain water to be

**GREEN, COOL, INSULATED, WATER PROOF & CRACK FREE**

**Ensuring every structure to be Cool & Water Tight with Enhanced Aesthetics !**

**Innovative Technology – IR Reflection Technology & Nanotechnology**

# What is Panache....

- Making buildings more energy efficient is at the heart of Panache's strategy. It offers enhanced solutions by striving to help protect the environment and, at the same time, improving the comfort and quality of life.
- Panache , a strong advocate of sustainable and renewable building technologies, offers Cool insulated Roofs & Walls and Complete enveloping of the building protecting it from Solar gain , Thermal Gain & rain water with latest technology without any additional costs.
- We are envisioned to provide with

**“Cool Homes without AC with a greener approach”  
Revolutionize Energy Saving ; Preserving the Future !**

# CONCEPT.....destructing factors for any construction ....

**SOLAR GAIN**

**THERMAL  
HEAT**

**CORROSION**



**RAIN WATER**

**WATER  
LEAKAGE –  
CRACK  
DEVELOPMENT**



“Nothing in the World is as soft as Water & as Hard as Sun Heat,  
Nothing in this world can surpass it. We at

**Panache**

DARE to surpass the  
destruction caused by HEAT & WATER ”

# Exteriors by Aesthetic Solutions – Cool Homes Without AC!

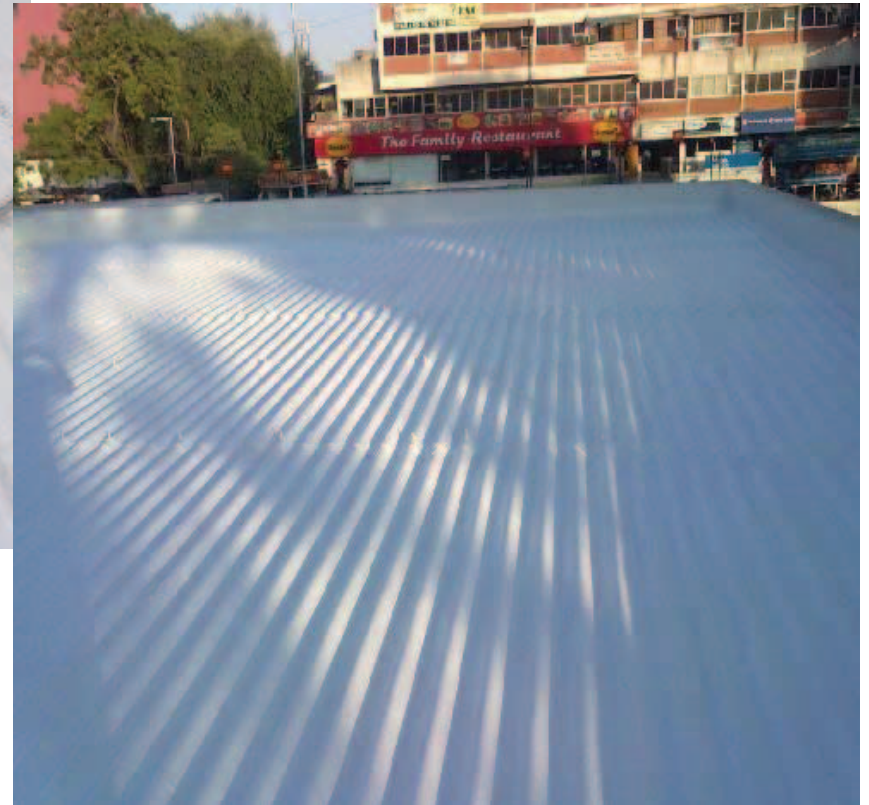




# Cool Roof – on Metal Corrugated Industrial shed



# FASCERS SEAL – Eco friendly waterproofing & Cooling on Corrugated roof



# Other Projects:

Nainital and Pantnagar Cool Roof Project Started May 2100



**Surface before coating & treatment - Pantnagar**



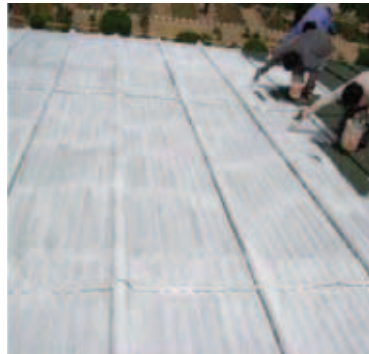
**After Scraping of Bitumen**



**After Cool Roof Coating**



**Surface before coating & treatment - Nainital**



**Cool Roof Coating- First stage**



**After Cool Roof Coating**

**Before Coating Roof Area**



**Before Coating- Corroded MS Tank**



**After Cooling Treatment**



**After Coating MS Tank**



# Proven Projects - Coffor Industries / Industrial Solvents

**COFFOR**  
INDIA

Date : 24th June, 2009

**TEMPERATURE DIFFERENCE**

Sr. No.	Time	Temperature in ° C		Drop in Indoor Temp ° C
		Uncoated Tinshade Roof	Coated Tinshade Roof	
1	12:00 PM	56.4	38.2	18.2
2	12:30 PM	57.6	38.3	19.3
3	1:00 PM	59.0	38.4	20.6
4	1:30 PM	62.3	39.0	23.3
5	2:00 PM	63.0	40.3	24.7
6	2:30 PM	63.2	41.6	21.6
7	3:00 PM	64.0	42.1	21.9

Instrument used : LASER GUN (IR Laser Thermometer)

Reading taken by Brijesh Tiwari (Project Manager, Aesthetic Solutions)

Reading Witness :

- 1) Mr. Jignesh Pawar (Project Manager - Coffor Construction)
- 2) Mr. Laxmikant Shukla (Asst. Eng. Electric - Coffor Construction)



Laxmikant Shukla  
Coffor Construction Tech. Pvt. Ltd.

“Good cooling Technique, Earlier I have to shutdown our electric panels due to heat, now I don’t have to do so.”



Harish Chavda  
Industrial Solvents Ltd.

“Due to cooling My employees efficiency increased by 2 hrs.”

To share other testimonials & certificates visit our site :  
[www.aestheticsolutions.co.in](http://www.aestheticsolutions.co.in)

## Our achievements .....


In the short journey from 2008 to 2011 ....

It's just the start ...there is a lot to be achieved yet!

Today, all our products are internationally certified. From one product in 2008 to a complete range of products catering to complete exterior protective enveloping catering the needs of indoor cooling and weather protection of both roofs and wall.

**INTERNATIONAL CERTIFICATION**  
**Aesthetic Solutions - Cool Coat - Cool Wrap**

**TEST REPORT: 719191608-CHM10-RR**  
 13 DEC 2010

  
 TUV SUD

**RESULTS**

**Table 1 Solar reflectance of samples under the air mass 1.5.**

Sample Names	Measurement 1	Measurement 2	Measurement 3	Average	Standard Deviation
Cool Wrap - Cool Coat	0.854	0.857	0.856	0.856	0.00153

Environment temperature of test: 24.8 °C  
Relative humidity of test: 59 %

**Table 2 Emittance values of samples.**

Sample Names	Measurement 1	Measurement 2	Measurement 3	Average	Standard Deviation
Cool Wrap - Cool Coat	0.88	0.86	0.87	0.87	0.01

Environment temperature of test: 24.8 °C  
Relative humidity of test: 59 %


**Table 3 Calculated surface temperature (T<sub>s</sub>) under different wind conditions.**


Sample Name	Surface Temperature (K)		
	Low-wind	Medium-wind	High-wind
Cool Wrap - Cool Coat	318.2	315.2	312.4

**Table 4 Calculated Solar Reflectance Index (SRI) under different wind conditions.**

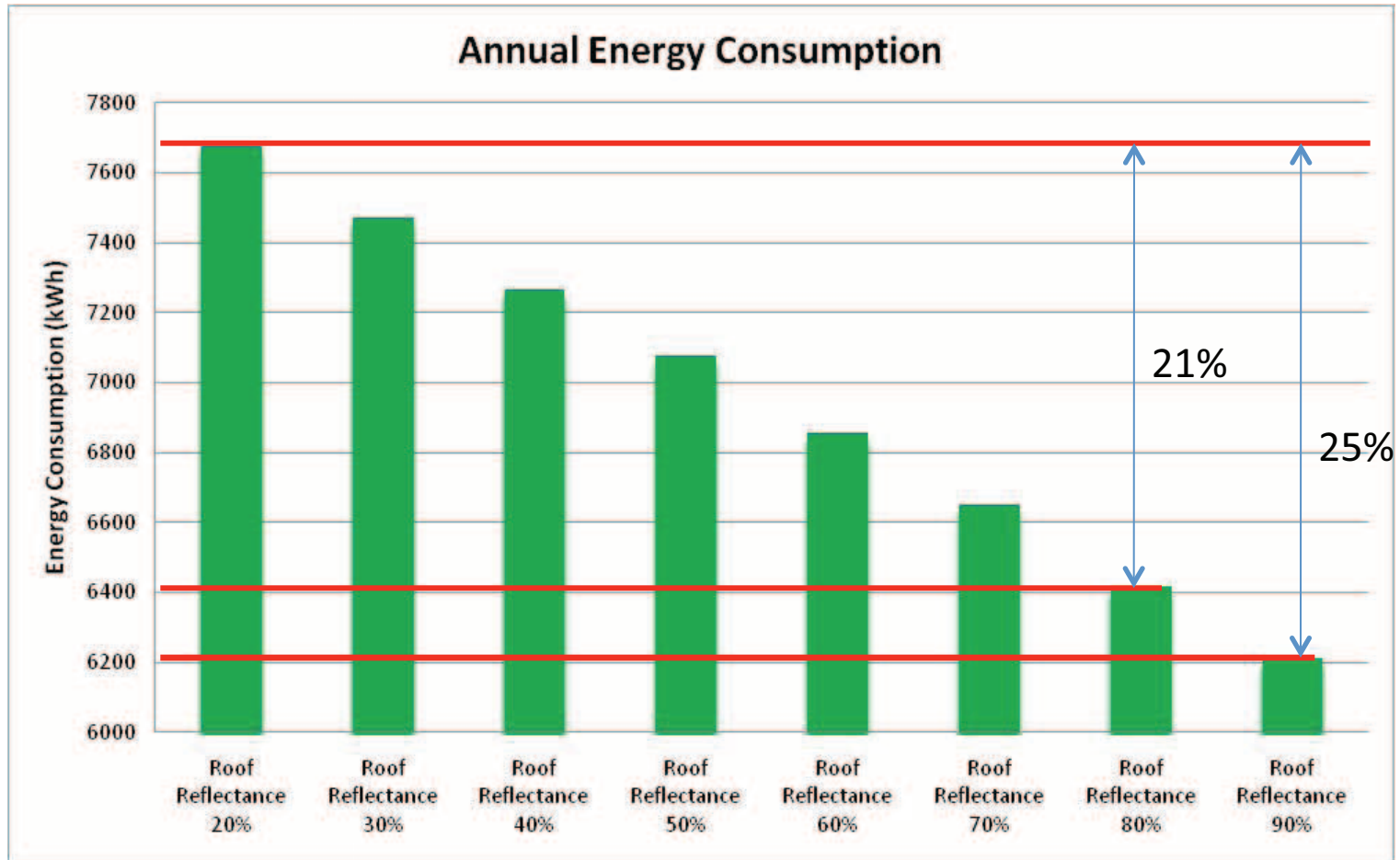
Sample Name	Solar Reflectance Index (SRI)		
	Low-wind	Medium-wind	High-wind
Cool Wrap - Cool Coat	106.63	106.85	107.05

SRI of the sample is quite high, with solar reflectance of about 0.856 and emittance of about 0.87.

  
**MR. RIAZUL RAZIQ**  
 TECHNICAL EXECUTIVE

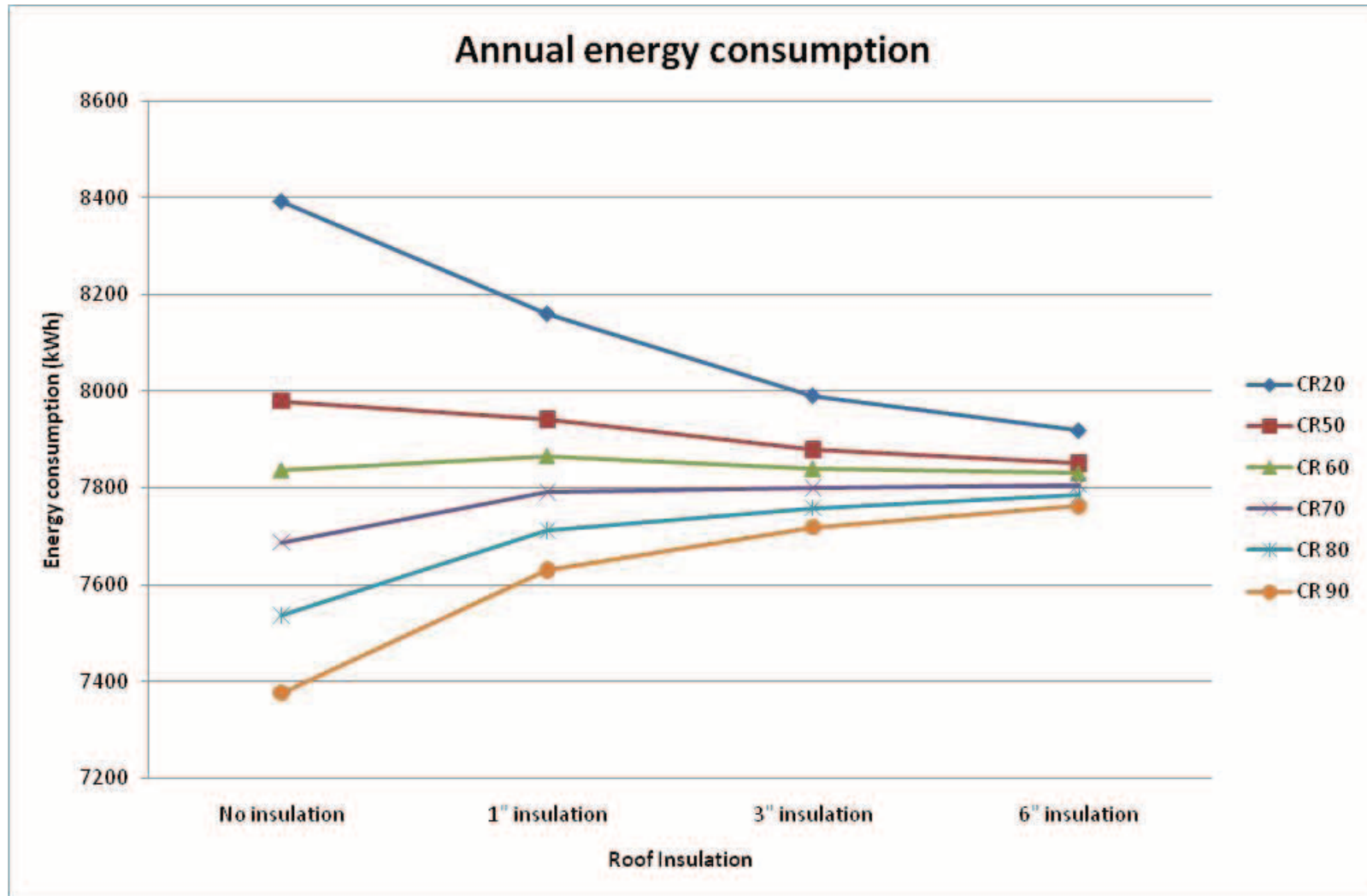
  
**DR TANG SONGBAI**  
 PRODUCT MANAGER  
 SURFACE ANALYSIS  
 CHEMICAL & MATERIALS

# Analysis – Cool Roof



The energy consumption reduction indicated is with use of only Cool roof , this can be increased by adopting Cool Walls too

## Analysis – Cool Roof vs. insulation





## Challenges –

Market Approach ..... Need strong conviction to face it & overcome .

- “Initially, we had trouble making people understand the applicability of our product. The issue of global warming – climate change was not the centre stage of boardroom discussions.
- “People were not concerned about energy conservation!
- Lack of awareness between people - easy & economic mode of energy conservation - Cool roofs ?
- More focus on water proofing.
- Our approach –floated the concept - even after water proofing treatment – excessive heat cause – increased rate of expansion & contraction, **it was necessary to prevent it from the heat.**
- People not ready to spend extra penny for Cooling / energy conservation – Builders / Developers – Do not own the property – Cost cutting tendency .

## Practical Challenges

- People / professionals having **more inclination for insulation** – R Value / U value ;
- People – Professionals awareness lacking - Conversion factor of SRI value & R value. SRI required in terms of insulation value .
- E.g. If we have roof with SRI value of 100 ; demands instead of Roof with R value of 14 what value of R can be reduced ?
- Lack of proper access to the testing equipments to maintain the onsite quality .

# Challenges

- Lack of testing facility – for mfg. in process testing of per batch for keeping consistent quality – For e.g.. SRI value – batch wise testing becomes difficult to be done , due to cost factor & not having NABL accredited lab.
- Not having proper access to the technology – We having research & product development department in house ; challenge -product updating & development.
- Govt policies - Taxation for interstate transfer of goods etc
- Training the applicators for proper approach towards application – avoid dilution, maintain DFT .

## Strategy adopted to face the challenges till now .....

- We first focused the IGBC segment.
- Became member of IGBC, IIID, VCCI , FGI and many other relevant organizations.
- Bring innovation from the problems of the customers.
- Tried to get recognition in short duration – Won “Power of Idea Awards”.
- Achieved “Innovative & Significant Alumni of the Year” Award.
- Tried to adopt green approach – All our products are water based – “Eco friendly”!
- Product updating to give consistent & improved quality with in house research & product development cell.
- Certified products with International Standards – Technically strong .



**Panache Green Tech Solutions Pvt Ltd**

## Proposal to Combat Challenges

- Developing an Chapter of Cool Roof Association there in India .
- Promote Cool Roof – organizing promotional & awareness programs in association with other groups e.g. IGBC , CII , IIID , FGI , FICCI .
- If these organizations are met under banner of Cool Roof Association , more privilege is being given.
- Media coverage – making shout of Cool Roofs
- Awareness crested at every level – schools / in professionals
- Testing facility affordable & easily accessible .
- Technology access to develop product for better performance
- Taxation structure modified / reduced .
- Conversion of R value in SRI value using the software support giving online calculator .

# Combating challenges

- Subsidy
- Associate with Solar panel group & encourage its use with Solar panel s
- Global Cool Cities implemented or endorse the bigger projects .
- Associate with banks for easy access to Loan facility , with less interest rates , credit cards , small e m i payment if people install Cool Roofs .
- Carbon credit linkage for incentives .
- Channel marketing of females
- Promoting Global Cool Cities
- Endorsing the group projects by some prestigious certification or some other mode – the valuation of the project is increased or prestige of the project is increased.
- Programs with Schools , institutes involvement.



“The journey so far has helped us more focused, determined, balanced and self-reliant. There is still a lot to achieve & develop, I believe this is just the start!”

So ... We need to keep going with determination , focus , patience & strong commitment with ourselves!

# Treatment that pays for itself

Our products help you make your buildings – Roofs

- Green
- Cool Without AC
- Damp Free – Leakage & Seepage Free
- Moss & Algae Free
- Dust Free
- VOC free
- Bright interiors to decrease lighting load
- Extended Construction life



**Make Your Buildings Energy Efficient with Greener Approach!**



*We have much more to achieve & a greater world to explore making India a Mark on Globe , but we will never waiver from our pledge to be ethical & honest with sincere efforts towards all our stake holders*

*Inspire ourselves to innovate , evolve & Excels continuously , enabling us to always make a positive difference in someone's life everyday.*

*We seek our wishes to continue to ---*





**Panache Green Tech Solutions Pvt Ltd**  
**Revolutionize Energy Savings!**

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