Lafarge Invention Awards

Winners tour of innovation across the Group

Construction Development Lab in Mumbai, Lafarge Research Center, jobsite of the Museum of European and Mediterranean Civilizations (MuCEM) built in Ductal in Marseilles. 2 of the 3 Indian winners of the Lafarge Invention Awards 2011 have just completed the tour of innovation across the Group. Both renowned architects, they share their first impressions!

Ashok B. Lall: First prize winner of the Invention Awards, Ashok Lall is an architect specializing in environmental and social responsibility issues since the 1980s. Based in New Delhi, he teaches sustainable construction and is an active member of various international institutions.

Neelam Manjunath: Specialized in sustainable architecture, Neelam Manjunath is a recognized expert in bamboo constructions. Her firm, based in Bangalore since 1994, has designed several sustainable construction projects in India and abroad. She is also a member of trade associations involved in the subject

What struck you most about innovation at Lafarge?

Ashok B. Lall: "*What seemed pertinent and valuable is the shift Lafarge is undertaking in its business model, with a focus on buildings and infrastructure, as well as component and systems.*
In the labs, I also appreciated the work on concrete with specific thermal properties. For me, thermal dynamic solutions using day and night temperatures is a priority area of research in the "warm belt" of the world to address the issue of energy consumption. Thermedia seemed very appropriate, being simple and convenient to install. This material can be explored for internal partition and non-bearing external elements."

Neelam Manjunath: "*I learnt more about concrete as a building material. I was awed by the range of work that has been done by Lafarge, especially for specific applications (Hydromedia, Thermedia).*
The work on the combination of mud and other rural material with concrete, which is an urban material, will open a new market and a new range of possibilities for mass construction in India.
By making concrete available to all, Lafarge contributes to change the perception of materials: mud will no longer be for the poor and concrete for the rich! Solutions like Aadhar cement for mudhouses are example of a good way to address the bottom of the pyramid."

On what topic would you like to work with Lafarge?

Ashok B. Lall: "*From what I saw at MuCEM, I can see a new range coming from Ductal screens. I would like to develop cladding systems for shading or screen systems derived from solar geometry to filter the*

light and help improve climatization of buildings in warm countries across the globe, particularly in India where there is a huge tradition of using screens. Thin and small-sized shading panels in Ductal could be widely used for housing, office buildings and public administration buildings. The market could be huge!"

Neelam Manjunath: "*Bamboo is a wonderful material, but under explored. Bamboo can replace steel for buildings and even roads. My dream is to build an airport in bamboo! I joined a creativity working group with Lafarge researchers at LCR and the first exchanges were very interesting. I want to work with your company to develop aesthetic solutions combining mud, bamboo and concrete. Lafarge could take a testing on bamboo solutions to understand its properties when mixed to other materials and, eventually, come up with formulas.*"

What is your vision of sustainable construction?

Ashok B. Lall: "*In my opinion, it means finding solutions of environmental responsibility in a way that is economically affordable for the majority of our population. It is also about using efficient methods of production which are knowledge and income distributive, because it produces economic and social sustainability too. To improve sustainable practices in India, it is crucial to educate the informal sector, which accounts for 2/3 of the market, on the basic science and engineering of cement and concrete and explain the benefits of using these materials properly.*"

Neelam Manjunath: "*Sustainable construction means the energy of the buildings should be minimal, as well as material processing and transport. Making execution simpler is also crucial to have the most cost-effective building. Using passive construction methods, featuring the 5 elements, and working on the aesthetics of a building are key to improve the people's comfort and quality of life. In order to be sustainable and adapted to the population's needs, buildings must involve all the stakeholders at all stages of the design and construction.*"

The Lafarge Invention Awards 2011 winning projects

On March 20th, 2012, the jury members of the Lafarge Invention Awards, chaired by Gérard Kuperfarb, the Group's Executive Vice President, named the 3 winners of the 2011 edition. The ceremony was held in Bombay in the presence of Bruno Lafont, the Group's Chairman & CEO.

All the selected projects, which each fit in perfectly with their local environment, respond to sustainable construction challenges in India through innovation, while using local resources intelligently and economically.

1st prize: Ashok B. Lall Architects, for a low cost and low energy footprint construction system for space cooling.
This method integrates thermal passive cooling properties into structural elements of the building. As a result, it provides better thermal comfort in hot dry climates, as well as a reduction in water and materials consumption!

2nd prize: KT Group, for a precast concrete panel for affordable housing.
More sustainable and economical than wood, earth, brick, concrete blocks or cast-in-place concrete, the precast slabs are lightweight and easy to install. They allow faster construction and require less raw materials.

3rd prize: Neelam Manasaram Architects, for a building system combining concrete and bamboo.
By replacing steel by bamboo, which is stronger and available locally, this solution lightens and strengthens concrete roofs and prevents shrinkage cracking. Besides, construction costs can be reduced by up to 40%!

The Lafarge Invention Awards 2011 Jury

The panel of judges of the Lafarge Invention Awards, chaired by Gérard Kuperfarb, the Group's Executive Vice President, is comprised of other Lafarge vice presidents, as well as well-known experts from the Indian construction sector.

- Gérard Kuperfarb, Executive Vice-President, Lafarge
- Thomas Farrell, Executive Vice-President, Lafarge
- Jean-Marc Golberg, Research & Development Director, Aggregates and Concrete, Lafarge
- Dr. Prodipto Ghosh, Distinguished Fellow at TERI, former Secretary, Environment and Forest, Government of India

- Surendra Hiranandani, Managing Director and Founder of the Hiranandani Group
- Dr. Ravindra Gettu, Professor of Civil Engineering at the Indian Institute of Technology Madras
- Mrs. Chitra . K . Vishwanath, Managing Director, Biome Environmental Solutions Pvt Ltd.
- Prof. M.S. Shetty, Consultant and Author on Concrete Technology

Discover the 10 finalists of the Lafarge Invention Awards 2011
(P.D.F - 240 Kb)
Read the press release

The Lafarge Invention Awards: innovation helps promote sustainable construction

The "Lafarge Invention Awards" were created in 2010 to reward projects by entrepreneurs and researchers in relation to building materials and contributing to sustainable construction.
Entries must be based on an invention less than 5 years old and relate to a new product, industrial process, construction method or service.

Highlights of the 2011 Awards

On Youtube: the competition video
On Facebook: photos of sessions – meetings

The 1st year of the competition attracted the interest of researchers and entrepreneurs from 18 European countries. In 2011, the focus turned to India where the peninsula's rapid economic and demographic growth is generating immense demand for infrastructure and housing.

View the winning projects
View the runners-up (P.D.F)

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