APPLICATION FORM - Submission Details

Submission Date : 10/03/2019 11:45 pm

Unique Submission ID	255
Terms and Conditions acceptance	Yes
First Name	Felipe
Middle Name	Genaro
Last Name	Mantilla Peña
Artistic Name	Felipe Mantilla
Team Members	1
Nationality	Mexican
Gender	Male
Date of Birth	
Mobile Number	
Country	Mexico
State / Province	Ciudad de México
Town / City	Mexico City
Street Address 1	
Street Address 2	
Postcode / Zip	
University (just for students)	
Document	
Document Number	

Prize Category	Conscious Innovation Projects
Project Title	Plastic roof tile system
Source of the used material	Plastic bottles
Type of plastic involved	PET
Other materials involved	wood and wire
Years of production	8 months
Edition	third prototype edition
Weight and Dimensions	1m2 per module
Manufactured by	Felipe Mantilla
Describe your project accurately and how you developed your idea	I'm Felipe Mantilla, I studied Architecture in Mexico City and while I was in my last year I occupied a space in the University as a laboratory for the development of new alternative construction systems where I created the idea of a plastic roof tile system made out of recycled plastic bottles. This project has a double purpose, first is building roofs by using recycled plastic bottles and second, water reception. Hence this system will benefit the marginal areas that can't afford any construction materials for building. This modular framework functions as a regular tile system, the lower part of the structure is made of half-length of the plastic bottle which is use to conduct the rain water, the top part of the structure mirrors and intercalates the lower one and sends the rain water to it. The main structure is made out of wood where the tiles are attached by wires that connect the whole tile system and finally a top mesh to give support to the tiles. To achieve the second purpose of water reception three filters were design: first the mesh filters bigger size waste, second the slots between the top tiles filter medium size particles and third the lower tiles stripes filter sediment producing more approachable drinking water. The intention is to replace the wood of the main structure with processing recycled plastic left overs made by machines that create the molds of the framework. Finally some of the applications of this system can be used as temporal shelters use in catastrophes, greenhouses, and ephemeral structures. As well, the benefits are numeral, such as the low cost of the project by using recycled plastic, the lightness of the roof, the reception of water and the practicality of replicating the system building.

Picture 1 - Cover

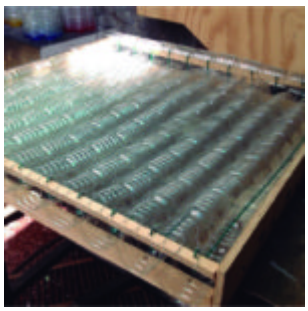
Picture 2 - Designer Portrait

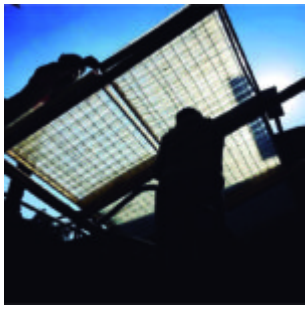
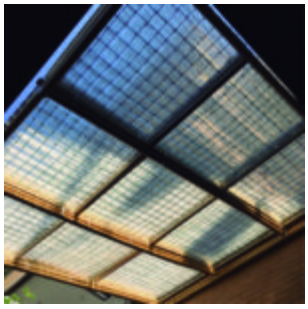
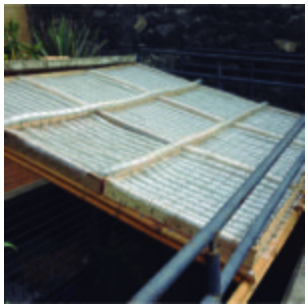
Picture 3

Picture 4

Picture 5

Picture 6



Picture 7	
Picture 8	
Picture 9	
Picture 10	
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