5TH CONCRETE DESIGN COMPETITION ENERGY 20112012

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TURKISH JURY REPORT

Place of Meeting: Istanbul Technical University Ta kı la Campus

Date of Meeting: June 15,2012

Jury Members at the meeting:

Arif Suyabatmaz (Chairman)
Alpaslan Ataman,
Hasan Çalıslar,
Tülin Hadi
Burak Altınısık

**Intro:**

Students were asked to explore and exploit the potential of concrete's properties with respect to any notion on ENERGY. It asked to evaluate those properties of concrete that make it a relevant and versatile material for 'energy-aware' applications. It aimed to fully pursue the potential of core properties like mass, volume, surface textures, mixtures and hybrids, in acting on current needs and ambitions.

2011-2012 Concrete Design Competition is attended by architectural, engineering, designing departments and related fields of the universities. The projects were reviewed by jury members on June 15, 2012 Istanbul.

**Review /Evaluation:**

The jury performed a common evaluation and discussion sessions on the projects followed by individual touring. The result of the competition, which includes attracted and creative ideas in 3 terms, is reached with consensus: based on the features of concrete as material, production process and the way of execution (construct).

**General Considerations on Winning Projects**

**CS 000 – Chamcrete**

Semra Refkaeva Shukrieva, Istanbul Technical University
Cosku Cinkılıç, Istanbul Technical University

The project named "**Chamcrete**" with code number CS000 considered as outstanding suggestion based on the implementation of concrete utilizing energy released of hydration to large extent and additionally the work maximizes the energy storage.

Its correlation on the main idea of the theme and the structure featuring the theme is developed well enough to match the purpose looked forth within the scope of competition. The structure featuring the theme is successfully phrased to match the purpose. . Moreover, the approach is environmentally friendly like capturing heat from the sun and reserving it and vice versa as a result of using additives to concrete. The project highlights the usage of different additives for different purposes.

The proposal is worth doing further researches on it that would lead to sustainable construction. Nowadays throughout the country Urban Development Projects are initiated by the Government mostly concentrated at low income and earthquake regions. New housing construction projects are potential areas for material and structural developments.

Consequently, the project titled "**Chamcrete**" coded CS000 is awarded to first prize, which is built on concrete utilization having a feature that turns colour obtained from the energy created by sun. Main focus of this project presented is that **Chamcrete** becomes whiter in hot conditions to reflect more light and cool down concrete structure and becomes darker in cold conditions to absorb more energy to heat structure.

**TY241 – Through Water to Produce Concrete**

Aylin Yegen, Kocaeli University
Ibrahim Türkeri, Kocaeli University

The project named as "**Through Water to Produce Concrete**" numbered TY241 is found successful on main idea, formation process and being precise in the presentation for all these ideas and the processes. Moreover, the condensed water droplets can also be produced with other materials. Driving from the concept, the proposal can be searched more profoundly.

The second project titled as "**Through Water to produce Concrete**" coded TY241 was awarded to second prize proposing to create greener environment through the condensed water droplets by producing spiral concrete structures. The project represents good example of nature/material relation through design rather than proposing new structural application of concrete. It also generates relations and cooperation among various disciplines like meteorology, agriculture and landscape design.

The visual presentation is found rather extreme but venue selection is successful to draw attention to draught. Although the project concept is open for plastics as material still without questioning concrete is environmentally friendly.

**Other Projects:**

The projects, which stated themselves by using the keywords as: "**Thermochromism**", "**chromatophores**", "**changing colour of concrete**", "**more heat in cold**", and "**more light**", stood out upon the level of ideas presented, answers received to expectations of the main theme of the competition and the successful statements.

Detailed examination through sessions jury noted the need for further investigation and idea development for above projects but still found them promising.