Polycarbonate solar air collector breaks efficiency record



Enerconcept Technologies, a Canadian company located in Quebec, Canada, developed and patented a technology based on perforated transparent glazing to minimize heat losses in solar thermal collectors and to recover heat in a very effective way.



As a first application of its technology, Enerconcept offers the Lubi™ collector, a wall-mounted solar air heater which is entirely made of polycarbonate, deemed so far the best material to withstand impacts from the environment and for wind load resistance. All other parts of the collector, including the structural components and the frames, are made of aluminum.

It is often claimed that the adoption of polymeric materials for solar thermal collectors entails a drop in efficiency when compared to metal, but this time this was not the case.

The LubiTM solar air heater was tested in 2010 at the National Solar Test Facility of Toronto after about three years of development, and the efficiency test results showed a 20% increase in efficiency for preheating outside air over any of its metal counterparts, including Enerconcept's own UnitairTM metal collector.

The principle of the collector is simple: to perforate the transparent front glazing in order to let the light through the glazing to the absorber, and then to minimize heat losses by allowing the cool outside air through the glazed surface, thereby reducing the glazed surface temperature. Further development now focuses on the characterization of collector performance over the expected lifetime of 20 years.

More information: <u>www.enerconcept.com</u>



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Task 39 - Polymeric Materials for Solar Thermal Applications

Meetings

11th Experts meeting, Sept. 27-28, 2010

The Experts Meeting No 11 took place at the GHU conference centre in Ljubljana, Slovenia from May 19-20, 2011. The meeting was hosted by the National Institute of Chemistry in Ljubljana. 32 experts participated in the meeting, among them experts from two new industrial companies from Canada and Israel.

Most of the presentations are summarised in this newsletter.





Next meeting Sept 18-21 in Aveiro, Portugal