

24 hour deployable concrete tents back in the news as disasters mount

May 19 2011, by Bob Yirka



(PhysOrg.com) -- First imagined and created back in 2007 by two University engineering students who met at the Royal College of Art in London, Will Crawford and Peter Brewin; tents that can be shipped to a disaster site in a wooden box, unfolded and blown up with a fan, then hardened into concrete within 24 hours, are back in the news as disasters from Haiti, to Chili, New Zealand, Japan and the United States have highlighted the need for emergency shelter that can be brought to use in very short order.

The tents, winner of 11 awards, are available from a company the pair have founded, <u>Concrete</u> *Canvas*, are made by impregnating cement particles into a fabric, which are then sewn together and affixed to an



inner plastic coating that serves as a bladder for holding air when it is pushed in by a fan. Upon delivery, the tent need only be unrolled and pulled out in the desired location (using a vehicle, as the tent is very heavy, of course) tacked down with stakes, then filled with air via a fan. Then, once in place, the tent is soaked with water (any will do, dirty, salty, etc.) and then left to dry for 24 hours. Once in place, the tents last for up to ten years.

The tents are delivered in an airtight sack to prevent decay of the materials, and delivered in heat treated timber panel crates, and because of the inner plastic lining, the tent housing is airtight, which means it can be used for sterile medical purposes. The tent, because it is based on ceramic technology, is also fire proof.

Brewin notes in a <u>BBC video interview</u> that he and his partner came up with the idea in response to a design competition, but then immediately saw the benefit that could be derived from such a shelter in areas where disaster strikes due to the speed with which the tents could be both delivered and setup for almost immediate use. The duo also point out that though the tents can be used to protect people from small arms fire and such, they don't see it as a weapon, but instead as a means of defense, from human as well as natural elements.

The cement tents come in two sizes, 5.0 m long by 5.6 m wide by 2.6 m Max Height with a floor space of 26 sqm and 10.0 m long by 5.6 m wide by 2.8 m Max Height and a floor space of 54 sqm. Both come with installable doors and because the walls are hard, electrical outlets and plumbing pipes can also be installed.

A virtual tour of the inside of one of the tents can be taken at the <u>Concrete Canvas</u> website.

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