



THERMOMASS®
BUILDING INSULATION SYSTEMS
 By Composite Technologies Corporation

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THERMOMASS® ARMS HOMEOWNERS IN THE ENERGY SAVINGS BATTLE

BOONE, IA -- The term “green construction” is becoming quite popular in residential construction. With the country in economic turmoil, more and more people are investigating construction methods and products that will help them make their new home energy efficient, control moisture and environmentally friendly.

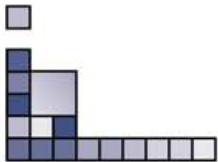
Using high mass materials, such as concrete with the THERMOMASS® Building Insulation System (**Booth # N2324**), is helping the American people in their quest for energy efficiency. The system incorporates energy efficient Dow brand STYROFOAM polystyrene insulation sandwiched between two layers of concrete – all joined together by patented high strength fiber composite connectors, resulting in a wall system that provides unparalleled energy efficiency and uncompromised moisture resistance. The rigid foam insulation used is specially engineered with pre-installed twist lock assemblies to accommodate the fiber composite connector rods, which are inserted at the building site. The non-conductive material allows for an uninterrupted envelope of insulation throughout the walls of the structure. This creates a highly energy efficient wall insulation system. These walls comprise a mass wall system with an overall R-value that is substantially enhanced. This is largely due to the high mass of concrete, which can store significant amounts of thermal energy and delay heat transfer.

Integrally insulated concrete sandwich walls help builders complete the project efficiently and effectively, while promoting their reputation as a quality builder. The ability of concrete to store energy and dampen the effect of temperature change on heating and cooling systems is known as the “Thermal Mass Effect.” Due to the mass effect created by integral insulation the performance R-value of the system can be two to three times greater than that of the material R-value; resulting in significant energy savings.

This system helps the owner save money is in heating and cooling costs. Because the concrete walls have an excellent thermal storage capacity, structures using them have a reduced total load requirement and can take advantage of off peak energy pricing, allowing reduction of energy use by as much as 50% or more. By increasing the thickness of the insulation, R-values can be increased from R-11 to R-40.

Just as important to today’s homeowners is moisture control. Health experts know that mold and mildew is a serious problem in homes and has been identified as health hazards. These organisms thrive in moist areas caused by temperature fluctuations usually located near places where the outside climate influences the interior walls. Integrally insulated wall systems controls moisture by keeping the dew point in the middle of the wall, thus any moisture entering the wall due to vapor drive is stopped by the insulation. This translates into little temperature fluctuation inside so there is no moisture condensation.

Using integrally insulated concrete sandwich walls can make a significant contribution toward the construction of a Green Building. Through their highly energy efficient properties, these walls aids architects, engineers and builders in achieving points toward LEED™ certification. LEED™ is a point system used to quantify the use of “green” building materials, designs and products. This rating system contains several sections and subsections in which points are allocated toward LEED™ certification of a building. Architects, engineers and builders using the THERMOMASS® system can earn up to 21 points in five of the six sections of LEED™



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Concrete is low in cost and one of the most durable and flexible construction materials available. It's a common misnomer that block/brick and stick built construction methods are less expensive than using insulated concrete. To get a high performance concrete insulation system, there is not a more economical way than sandwich wall construction. Walls built an integrally insulated concrete wall system are solid from surface to surface. With rigid foam insulation sandwiched between two layers of concrete, there is no warm cavity or edible material to support termites and other unwanted pests. In other systems, termites and pests thrive in insulation that is not protected like it is with an integrally insulated concrete wall system. Concrete walls provide incredible structural integrity and security plus an added measure of fire safety. THERMOMASS walls have been tested by a nationally recognized fire testing laboratory, blasted by temperatures up to 2000° F for four hours while maintaining their structural integrity.

For almost 30 years, the THERMOMASS PIP Insulation System has been the industry leader in the residential and commercial markets for sandwich wall construction. Extensive testing, research and development of innovative technologies help keep THERMOMASS at the forefront of changing the way the world builds.

For more information on THERMOMASS PIP Insulation System visit us at booth #N2324, visit our website www.thermomass.com or call us at 800-232-1748