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Cementing the Future

National Science Foundation Center for Science and Technology of Advanced Cement-Based Materials

Outreach Matters

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ent and upcoming ACBM outreach programs include Technology Transfer Day, 1997 Summer Research Experience for Undergraduates and the fourth Undergraduate Faculty Enhancement Workshop. More detailed information on the programs listed below are available on the ACBM website (http://www.civil.nwu.edu/ACBM/) or you can request information via e-mail (acbm@nwu.edu).

Technology Transfer Day. "Issues in High Performance Concrete" is the subject for Technology Transfer Day to be held on April 16, 1997. The one day presentation will take place on the Northwestern University campus and cover such topics as Blended Cements, Bridge Decks, Toughness of High Performance Fiber-Reinforced Concrete and High Temperature Curing. Registration fees for the -long program are $195.00 and include printed materials and meals. Technology Transfer Day is sponsored by the Small Business Partnership. The Partnership consists of companies with an interest in promoting technology

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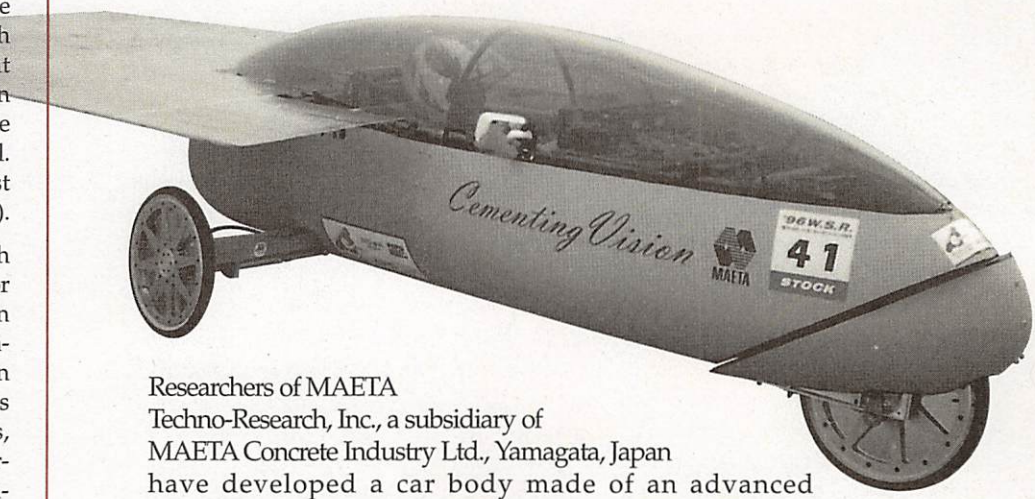
Solar-Powered Car made from MDF Cement



Researchers of MAETA Techno-Research, Inc., a subsidiary of MAETA Concrete Industry Ltd., Yamagata, Japan have developed a car body made of an advanced cement-based material for a solar-powered car. The body measures 3.6 X 0.7 X 0.9 m. The molded panels have a thickness of 2.5 mm (0.1 in) and a total weight of 33 kg (73 lb). The solar-powered car ran in the 500 km World Solar Car Rally in Akita prefecture averaging 45 km/h (27 mph). The trial run was made to study the feasibility of utilizing cements in the transportation industry. The car received the "Hans Tholstrup" award for its outstanding achievement as an earth friendly, low energy material body. The material is a fiber reinforced cement polymer-composite, Macro-Defect-Free cement, formulated with calcium aluminate cement and a phenol resin precursor. The green body is made without water, but generates water during the heating process that initiates cross-linking of the phenol resin precursor. The material was invented by a research group of MAETA Concrete Industry Ltd. in 1992, and patent applications have been granted in the United States and Europe. Researchers of MAETA Techno-Research, Inc. are now working on further developments of applications in the transportation industry.

The car was exhibited at the MAETA Workshop on High Flexural Polymer-Cement Composite, held October 3-4, 1996 in Sakata, Japan.