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to the
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Development of Technologies That Utilize Electrically Conductive Concrete (ECC)

Objectives

To explore how the ECC material can be commercialized in the fields of electrical grounding, indoor radiant heating and snow melting. The work will include the development of real world applications, including their design, control strategies, and installation techniques. Our goal is to transfer this knowledge to a licensee who will introduce the technology to the commercial market.

Background

Electrically conductive concrete is an NRC-patented material that conducts electricity by electronic conduction. It is a lightweight material, which is classified as a semi-conductor, has strength properties similar to normal concrete and can be made with conventional equipment. Prospective applications that improve upon existing technology are seen to have considerable commercial potential.

Statement of Work

A project will be designed to demonstrate each proposed application. Factors such as mix design, mixing technique, placement and curing will be optimized for each application while still keeping it cost competitive. The projects will be monitored to confirm the suitability of the material, the construction techniques, and the overall design of the system.

Expected Outcomes

For each of the proposed applications, designs and installation we will develop procedures that are practical, durable, and economically viable. This knowledge is to be transferred to a licensee.

Start/Expected Completion Dates

The project will begin in May 2005 and will be completed in March 2008.

Project Manager

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For more information, see http://irc.nrc-cnrc.gc.ca/bes/cmst/ecc_e.html

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Test of a snow melting application

