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# **FERRO-8**

## **FERROCEMENT**

### **And Thin Reinforced Cement Composites**

**Edited by**

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**S. Sayamipuk**

**Proceedings of  
FERRO - 8  
Symposium and Workshop  
Bangkok 2006**



# **FERRO – 8**

Proceedings of the Eighth  
International Symposium and Workshop on

## **Ferrocement and Thin Reinforced Cement Composites**

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February 6-8, 2006*

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## **PREFACE**

Ferrocement and thin reinforced cement composites are essentially reinforced concrete products having less than about 50 mm in thickness. As such their reinforcement is subjected to dimensional scale constraints such as using a steel wire mesh versus a steel reinforcing bar, or mortar instead of concrete. Their applications are extensive in housing, agricultural structures, marine structures, and in repair-rehabilitation.

Over the course of the last four decades which mark the modern use of ferrocement and thin reinforced cement composites, their analysis, design, and manufacturing were the subject of remarkable advances; these dealt with: 1) the reinforcement, such as high strength steel, advanced fiber reinforced polymeric reinforcements, 2D and 3D textiles, etc, 2) the cementitious matrix, such as high strength or high performance, high durability, lightweight, blended with supplemental materials, additives, etc., 3) the concept of hybridization such as adding fibers and microfibers to supplement conventional reinforcement, and 4) the manufacturing process ranging from simple plastering to infiltration, extrusion, pultrusion, and the like.

The main objectives of this symposium are: to provide a compendium of up-to-date information on the latest development and research advances in the field of ferrocement and thin reinforced cement composites; to allow a forum of world specialists to share their knowledge, experience and vision; to foster collaboration and technical exchanges between researchers and practitioners; to identify current technical gaps as well as immediate research needs; and to suggest directions to follow.

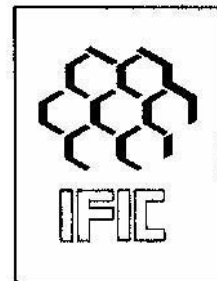
Thin cementitious composites reinforced with steel wire mesh traditionally belong to the ferrocement family. The use of textiles or fabrics made of high performance fiber reinforced polymeric (FRP) meshes adds another dimension to the traditional ferrocement family. Thus ferrocement should, from now on, encompass the term thin textile reinforced concrete. The possible addition of discontinuous fibers or micro-fibers to the cement matrix and new availability of three-dimensional textiles adapted for cement based applications offer unique opportunities for future developments and growth. It is one of the particular objectives of this symposium to illustrate the use of 2D and 3D textiles or fabrics, although they are still in their early development.

Another particular objective of this symposium is related to education. The development of sustainable, humane, safe housing and infrastructure for developing regions of the world is one of the grand challenges facing society, in which civil engineers should have a prominent role. Educating civil engineering students for this type of global challenge and encouraging internationalization of undergraduate and graduate civil and environmental engineering curricula is one of the continuing objectives of the US National Science Foundation which is sponsoring this symposium.

We would like to take this opportunity to thank the authors who made this publication possible, members of the International, Scientific, and Local Organizing Committees, the US National Science Foundation for its support of the US participants, and the many organizations who have co-sponsored this symposium.

P. Nimityongskul, A.E. Naaman, J.E. Bolander,  
C. Jaturapitakkul, C. Sujivorakul, S. Sayamipuk  
*Editors*







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