Compact reinforced composite (CRC) is the designation for a new type of high-performance composite material which is based on strong, brittle cement bound matrix materials given a high degree of ductility with a high concentration of fine fibers and further reinforced with densely arranged bars.

The load capacity in bending is 5 to 10 times that of conventional, good reinforced concrete and almost the same as for structural steel, the formalized ultimate bending stress (normalized bending moment: $M/\varepsilon = bh^2/6$) being in the range of 140 to 250 MPa. The matrix material remains uncracked under tensile loading right up to the yield limit of the reinforcing steel (tensile strains about 3 mm/m), whereas ordinary reinforced concrete cracks at tensile strains of only 3 to 5% of the yield limit of the reinforcing steel.

CRC is still in its infancy (the principles were demonstrated for the first time in May 1986). Aalborg Portland is interested in cooperation with regard to research and development of CRC technology. CRC is the subject of a patent application notified by Aalborg Portland.

This report, entitled “Compact Reinforced Composite,” can be purchased from:

Cementfabrikkernes tekniske Oplysningskontor
AALBORG PORTLAND
Rørdalsvej 44, P. O. Box 165
DK-9100 Aalborg, Denmark
Tlx.: 69646 cemex dk
Fax: 458101186

A figure from the book is shown below.

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Farkas Elected to ASTM Board of Directors

Emery Farkas, vice-president of the Construction Products Division, W. R. Grace & Co., Cambridge, Massachusetts, has been elected to serve on the ASTM Board of Directors for a three-year term.

A native of Hungary with a chemical engineering degree from the Polytechnical University of Budapest, Farkas came to the United States as a teaching fellow at Harvard University. He later attended the Sloan School for Business Executives, Massachusetts Institute of Technology.

Farkas joined W. R. Grace & Co. in 1957, where he served in various capacities, including research, technical services, and now business management. He has been with Grace for 29 years, although he spent two years as senior vice-president of H. G. Protze, a consulting and engineering firm in Boston.

Farkas has been a member of ASTM for over 25 years and currently is a member of Committees C-1 on Cement and C-9 on Concrete and Concrete Aggregates. He also serves on numerous subcommittees of C-1 and C-9. He is the current chairman of C09.74 Subcommittee on International Standards and C01.93 on Papers and Symposia.

In 1981, Farkas received the American Concrete Institute’s (ACI’s) Henry L. Kennedy Award “in recognition of many years of outstanding technical and administrative services to the institute.” He is a former director of the Institute’s New England Chapter.

Farkas is immediate past president of the ACI. He is also a member of ACI’s Committee 201, Durability, and served for four years as chairman, Educational Activities Committee. He is also a fellow of ACI.

Farkas is a registered professional engineer and holds several patents related to chemicals for the cement and concrete industries.

Sikes Named to Post

David C. Sikes has been named director of the newly expanded west coast operations of the Skokie, IL, based Construction Technology Laboratories, Inc. (CTL). He will be based at CTL’s Los Angeles office. In his new assignment, Sikes will direct programs of the Los Angeles and Seattle-Tacoma, WA, area offices and will be responsible for expanding the company’s services in the western U.S. A member of the CTL staff for almost ten years, Sikes most recently served as director of the concrete materials/technical services dept. He is a member of Committee C-9 on Concrete and Concrete Aggregates.

New Quarterly Journal on Cement Announced

Palladian Publications Ltd have announced the publication of a new international quarterly journal, Advances in Cement Research. The first issue was published in October 1987. The journal focuses on the fundamentals of cement science and provides a forum for dissemination of the results of current research, for review papers collecting and interpreting available experimental information, technical notes, research and conference news and book re-
views. It is produced to the highest technical and editorial standards: all papers are reviewed by the Editorial Advisory Board and the journal is typeset with high quality reproduction of micrographs and other halftones.

*Advances in Cement Research* is of interest to researchers in the field of cement and cement-based materials, in universities and polytechnics, government and commercial laboratories, cement manufacturers and users.

The scope of *Advances in Cement Research* includes:
1. Cement manufacture and materials.
2. Hydration of cement and cement components.
3. Properties and durability of cementitious materials and systems.
4. Interaction of cements with other materials.
5. Analysis and testing.
6. Special cements and applications.

The members of the Editorial Advisory Board are:

- Professor F. P. Glasser, University of Aberdeen, Scotland
- Professor G. Frigione, University of Calabria, Italy
- Dr. Ian P. Skalny, W. R. Grace & Co., Columbia, Maryland
- Professor Dr. Ivan Odler, Technical University, Clausthal, Germany
- Professor Shigekazu Udagawa, Chiba Institute of Technology, Tokyo, Japan
- Professor Sidney Mindess, University of British Columbia, Vancouver, Canada

Among the papers in the first issue were:

2. "Modification of the Ferrite Phase in Cements by Manganese Substitution" by F. Puertas and F. P. Glasser.
3. Some Applications of Conduction Calorimetry to Cement Hydration" by J. Bensted.

Other papers planned for inclusion in the first or second issues deal with: continuous monitoring of cement hydration; XRD studies of portlandite; the role of iron oxide in the formation of Portland clinker; fracture process zone and crack growth in fibre-reinforced cementitious materials; condensed silica fume and the steel-cement paste transition zone; consolidation model for bleeding of cement paste. (Subject to change.)

The Editor welcomes original papers from all parts of the world on any aspect of cement science. Instructions for contributors are available on request from The Editor, J. N. Clarke, *Advances in Cement Research*, Palladian Publications Ltd, 11 Grosvenor Crescent, London SW1X 7EE, England.

*Advances in Cement Research* (ISSN 0951-7197) is published four times a year (October, January, April, July). The first issue (Vol. 1, No. 1) was published in October 1987. Subscription rates for Vol. 1 are:

- £50.00 UK.
- $100.00 Overseas, surface mail, including Eire.
- $150.00 Overseas, air mail.

Subscriptions to *Advances in Cement Research* may be entered by sending your remittance, made payable to Palladian Publications Ltd, to: The Circulation Manager, Palladian Publications Ltd, 11 Grosvenor Crescent, London SW1X 7EE, England. A specimen copy is available on request.

ASTM Publishes New STP on Cement

A book entitled *Uniformity of Cement Strength* has just been published by ASTM. The book, STP 961, provides the factors that are important in the production of uniform concrete. It is the result of the first step in an effort to improve the uniformity of concrete produced at a single source.

The papers presented in this publication document the first approaches to record the results achieved by the use of a relatively new ASTM standard, adopted in 1979 and entitled ASTM Method for Evaluation of Cement Strength Uniformity From a Single Source (C 917-82).

This standard is intended for use where the purchaser desires information on the strength uniformity of a hydraulic cement produced at a single source. The information imparted about improvements in the uniformity should significantly aid in the concrete production process.

Seven papers comprise the contents of this book covering research conducted here in the United States, Saudi Arabia, Belgium and India. The subjects addressed include:

1. Cement strength uniformity.
2. Statistical analyses of specification mortar cube test.
5. Detecting inherent heterogeneities in cement strength.
6. Quality of cements in India.
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ASTM Committee C-1 on Cement

Scope

The development of specifications, methods of test, recommended practices, and definitions of terms for hydraulic-cements, including portland, natural, pozzolanic, masonry and slag cements, and modifications of the foregoing, and combinations during manufacture thereof; the investigation of the properties of hydraulic cements and the promotion of improvement and uniformity of testing and using these materials; joint sponsorship, with ASTM Committee C-9 on Concrete and Concrete Aggregates, of the Cement and Concrete Reference Laboratory, a cooperative project of the Government and ASTM.

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Membership Secretary: Karl Hauser, Edward C. Levy Co., 9300 Dix Ave., Dearborn, MI 48120

ASTM Committee C-9 on Cement and Concrete Aggregates

Scope

The assembling and study of data pertaining to the properties of portland cement concrete and its constituent materials, including the study of effect of characteristics of materials and mixtures upon the properties of concrete; the development of methods of test for concrete and for the constituent materials of concrete (except cement), as well as for certain related materials, such as materials used in curing; the formulation of standard specifications for the constituent materials of concrete (except cement) and for concrete itself (subject to suitable interpretation of the term "concrete"). The scope of Committee C-9 does not include the field of design and construction of concrete structures except insofar as references need to be made to construction methods in special cases of concrete as "over-the-counter" materials.

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