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GUIDE TO CONCRETE REPAIR AND PROTECTION

handbook

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Australian Concrete Repair Association

CSIRO AUSTRALIA
Division of Building, Construction and Engineering

Guide to

Concrete Repair and Protection

Guide to Concrete Repair and Protection
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The Australian Concrete Repair Association (ACRA) was incorporated in 1991 with the aim of providing a forum to promote excellence in all spheres of concrete repair and protection work.

The Association is fundamental to the ongoing nationwide development of a professional industry whose key objectives include providing the highest levels of expertise, experience, training and quality. ACRA demands a continuing commitment from its members to maintaining the quality standards it has set for the concrete repair industry.

Through its membership base, which includes manufacturers, specialist contractors, consultants and owners, ACRA provides stakeholders with confidence in the remedial concrete repair process. This insistence on quality and best practise underpins the increasing penetration of ACRA into the concrete repair market.

ACRA has established a scheme of awards for excellence in concrete repair which are open to Corporate Members of the Association. These awards, which have been run every two years since 1998, showcase the work of the member companies. The role ACRA plays in the industry is clearly demonstrated in the levels of excellence on display in all entries and the winning projects in particular.

ACRA is firmly committed to ongoing training of its members in the very latest developments in both the technology and practical application of concrete repair and protection. Maintaining up-to-date levels of knowledge and expertise is vital to providing clients with the level of professional service expected of an ACRA member. As such ACRA is extremely grateful to its fellow collaborators in the production of this document, *The Guide to Concrete Repair and Protection*.

CSIRO AUSTRALIA

THE COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is Australia's national science agency and one of the largest and most diverse scientific research organisations in the world. CSIRO has more than 6500 staff carrying out research in a wide range of areas including construction, materials, energy, minerals, agriculture and natural resources.

Manufacturing and Infrastructure Technology is a division of CSIRO that supports the building, construction and engineering industries with research, consulting and testing. With over 350 researchers, the division's science spans building materials - including concretes, timbers, polymers and tiles - to heating and cooling, air quality, urban planning and infrastructure, IT applications for construction, fire testing, and water systems and products.

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PREFACE

The original 1996 edition of this document was originally prepared by Dr Kwesi Sagoe-Crentsil from the CSIRO division of Manufacturing and Infrastructure Technology at the request of the Australian Concrete Repair Association (ACRA), who also provided the technical, editorial and funding input.

The document is intended for widespread use by anyone engaged in the maintenance, repair and production of concrete structures. However, this document is intended as an overview of the typical methods and practices in the industry but it should not be used as a standard or as part of any contract relating to the repair of concrete.

In preparing this document, one of the fundamental aims has been to provide a publication that can be read and understood by a diverse group of persons, ranging from professionals engaged in specifying or carrying out repairs to concrete structures, to those involved in the management of buildings and structures.

The guidance in this document has been specifically influenced by RILEM Technical Recommendation 124-SRC, Guide to Repair Strategies for Concrete Structures Damaged by Reinforcement Corrosion, 1993.

Previously available publications on investigatory and repair technologies for concrete are of overseas origin. The development and support of this document by ACRA underlines its belief that a document describing the local scenario for techniques and materials was necessary.

The new 2006 edition of this document has now been updated and modified to reflect the advances and more wide-spread use of electrochemical prevention and protection systems.

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