

# CONCRETE REPAIR WORKSHOP

MAXIMISE THE LIFESPAN OF YOUR NEW & EXISTING PROJECTS

6TH NOVEMBER 2012

DUBAI WORLD TRADE CENTRE, DUBAI, UAE

WORKSHOP LEADER:



WORKSHOP PARTNERS:



## WHY YOU SHOULD ATTEND:

Update your concrete repair and corrosion knowledge in line with the most recent European Standards and Concrete Society Technical Reports

Improve your ability to effectively mitigate the risk of concrete damage to improve life-cycle costs and maintain structural integrity

Detect the potential risk of damage through improved monitoring, inspection and analysis

Ensure that your application and use of concrete supports effective maintenance

Receive a certificate of workshop attendance, to be used as evidence of continuing professional development

BUY TWO,  
GET THIRD  
**FREE**

See rear of brochure for details

SUPPORTED BY:



'Guide to Evaluation Repair  
of Concrete Structures in  
the Arabian Peninsula'

**FREE TO THE FIRST  
TEN DELEGATES**

[www.middleeastconcrete.com/concretereair](http://www.middleeastconcrete.com/concretereair)

# DEAR CONSTRUCTION PROFESSIONAL,

I am delighted to be able to invite you to the 2012 Concrete Repair Workshop, led by Concrete Repairs UK and endorsed by The Concrete Society.

Reinforced concrete forms the core of most concrete structures and in the Middle East region, with the heat, humidity and salinity of the atmosphere, repairing and protecting this reinforced concrete provides specific challenges.

Attending the full day Concrete Repair Workshop will provide you access to the latest information on techniques for corrosion prevention as well as repairing existing damage, ensuring that you leave the workshop with the tools and knowledge to maximise the lifespan of your next project.

The workshop will be delivered by a range of international speakers with a wealth of collective experience gained through many years of working in the field of Concrete Repair.

I hope to be able to welcome you to the workshop on 6th November, and that you come away with the enhanced knowledge and skills you need to further your business opportunities.

Best Regards



Nathan Waugh  
Event Manager  
dmg::events

## PS.

To secure your place please book early – the 2011 event SOLD OUT IN TWO WEEKS!

# KEY TOPICS COVERED

- Main causes for concrete deterioration and strategies for mitigating damage
- Utilising survey techniques to spot the early warning signs and reduce risk
- Adopting concrete repair techniques from the new BS EN1504 European Standard – hand placed mortars, sprayed concrete, flowable concretes
- Strengthening structures using FRP composites to the standards outlined by the Concrete Society Technical Reports TR55 & TR57 for the design and installation of composite systems
- The specification and installation of corrosion rate monitoring probes for long term monitoring
- Controlling corrosion for new and existing structures

## WHO SHOULD ATTEND

The Concrete Repair Workshop will provide critical information for those involved in the planning, design, construction or ongoing maintenance and repair of any concrete structure such as:

- Architects
- Engineers
- Surveyors
- Developers
- Owners
- Facility Managers

## ABOUT CONCRETE REPAIRS LTD



Concrete Repairs Ltd is a specialist contractor supplying asset maintenance services to concrete building and structure owners on a worldwide basis. The company has 60 years experience in the inspection, repair and strengthening of concrete structures using the latest available techniques.

These services include NDT testing, cathodic protection for corrosion control and strengthening using FRP composite materials.

CRL provides this specialist service in the Middle East region from its registered office in Abu Dhabi.

TO REGISTER CALL +971 (0)4 445 3645

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Please quote 'CONCRETE BROCHURE' when enquiring



6TH NOVEMBER 2012

## MORNING SESSION

08:30AM – 1:00PM

### The inspection, repair and strengthening of reinforced concrete

The morning session will give delegates an understanding of the reasons why concrete can deteriorate, how to inspect the concrete condition, the types of NDT equipment which are used, methods for repairing the concrete and finally how to strengthen existing concrete structures using FRP composites.

Reference will be made to the new European Standard EN1504 "Products and systems for the protection and repair of concrete structures" and also the latest Concrete Society Technical Reports.

### 09:00am - 10:00am

#### The inspection of concrete buildings and structures

It is an essential prerequisite that before any repairs are undertaken to the concrete that a detailed survey is undertaken to understand the nature of the concrete deterioration, why it has occurred and the extent of the problem. This presentation will look at the types of concrete deterioration as set out in the European Standard, typical inspection techniques and sample survey reports.



*John Drewett,  
Director  
Concrete  
Repairs Ltd*

# COURSE PROGRAMME

### 10:00am - 10:45am NDT testing equipment

This presentation will look at the types of NDT testing equipment which are available in the market to assist in the assessment of concrete deterioration and how to use them.



*Richard Sumner,  
Managing Director,  
Al Futtaim Exova*

### 11:00am - 12:00pm Concrete Repair: a guide to good practice

It is important to understand the types of repair materials and techniques which are available to repair the areas of concrete deterioration. This presentation will look at how to select the correct repair materials and methods of repair using the Principles from Part 9 of the European Standard EN1504.



*Tim Thomas,  
Business Segment  
Manager, BASF  
Construction  
Chemicals*

### 12:00pm - 1:00pm Structural strengthening using FRP composites

Once the concrete has been repaired it may be necessary to strengthen using FRP composites to reinstate structural integrity. These lightweight and durable materials have been used since the mid 1990s for cost effective strengthening of concrete structures. This presentation will look at what are FRP composites, the generic types of materials available and how to install these strengthening systems. It will reference the Concrete Society Technical Reports TR55 & 57 for the design and installation of FRP composite strengthening systems.



*John Drewett,  
Director  
Concrete  
Repairs Ltd*

### 1:00pm - 2:00pm LUNCH

## ABOUT THE CONCRETE SOCIETY

The activities of The Society's advisory, technical development, professional/business networking, CPD and information services provide the international construction industry with a major focal point for information and a proactive forum for debate and action. We play a vital role in encouraging the use and development of concrete as a uniquely versatile and competitive material.

For further information visit [www.concrete.org.uk](http://www.concrete.org.uk)



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## AFTERNOON SESSION

2:00PM – 5:00PM

### Enhancing the durability of reinforced concrete

The deterioration of reinforced concrete in the Arabian Peninsula is often associated with corrosion of the reinforcement, initiated by high levels of chloride in the concrete from the marine environment and saline ground conditions.

It is therefore important to address the durability of the concrete in terms of corrosion risk to the reinforcement. This is done by using Impressed Current Cathodic Protection (ICCP) systems to minimise the risk of steel reinforcement corrosion and also by installing corrosion monitoring devices in the concrete to identify when corrosion is likely to occur so that prevention techniques can be used.

This session will cover corrosion prevention using ICCP in new concrete, corrosion control using ICCP in existing concrete and corrosion monitoring using probes buried in the concrete.

### 2:00pm - 3:00pm Corrosion monitoring

All concrete structures have to be managed and maintained in order to achieve the required operational service life. Part of this process is to monitor corrosion risk to the steel reinforcement and this is particularly important in the Arabian Peninsula where chloride ingress can pose a significant risk. This presentation will look at the use of corrosion probes buried in the concrete alongside the reinforcement to measure the condition of the concrete and corrosion rates. Project examples will be used to illustrate how these devices can be effectively used to manage reinforced concrete structures.

# COURSE PROGRAMME

### 3:00pm - 3:45pm Corrosion prevention for new concrete structures

Corrosion prevention using ICCP for new reinforced concrete structures is a recognised method in the Arabian Peninsula for ensuring the long term durability in aggressive environments. This presentation will look at how corrosion prevention systems are designed and installed with reference to project examples in the region.



*Dr Robert Walker,  
Principal Engineer,  
URS Consultants*

### 3:45pm - 4:00pm COFFEE BREAK



*Calvin R. Pynn,  
Senior Specialist,  
Aegis Technical  
Systems LLC.*

### 4:00pm - 5:00pm Cathodic protection of existing concrete structures

Existing concrete structures in the Arabian Peninsula can suffer from significant deterioration due to corrosion of the reinforcement which causes spalling of the concrete and eventually threatens the structural integrity. Traditional repairs to the concrete and treatment of the exposed steel reinforcement will not stop further steel corrosion in adjacent areas of the structure. The recognised

method for dealing with reinforcement corrosion is to install an ICCP system. This presentation will look at the design and installation of ICCP systems with reference to the new Concrete Society Technical Report TR73 and European Standard EN12696.



*Kevin Davies,  
Senior Corrosion  
Engineer  
CorroCiv Limited*

### 5:00pm CLOSING REMARKS AND Q&A SESSION

## DON'T FORGET TO VISIT



**MIDDLE EAST  
CONCRETE 2012  
AT THE BIG 5**

The Concrete Repair Workshop forms part of Middle East Concrete, the region's largest event dedicated to the concrete sector.

Register online and gain FREE entry to Middle East Concrete with your delegate badge and meet hundreds of suppliers from around the world.

Visit [www.middleeastconcrete.com/reg](http://www.middleeastconcrete.com/reg)

Middle East Concrete will be open from 11am - 7pm on 5th-8th November at the Dubai World Trade Centre, Saeed Halls

To enquire about exhibiting, sponsoring or visiting please contact:  
Firas Abou Ltaif  
E: [firasaboutaif@dmgeventsme.com](mailto:firasaboutaif@dmgeventsme.com)  
T: +971 (0) 4 445 3645

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# DELEGATE REGISTRATION FORM

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## CONCRETE REPAIR WORKSHOP

6TH NOVEMBER 2012

DUBAI WORLD TRADE CENTRE, DUBAI, UAE

### DELEGATE RATE (\$/AED)

<input type="checkbox"/> Concrete Repair Workshop: Full Day	\$450/AED 1,642
<input type="checkbox"/> Concrete Repair Workshop: Student Rate	\$399/AED 1,456
<input type="checkbox"/> Early Booking rate for bookings before 12th October 2012	\$399/AED 1,456

Your fee includes: refreshments and lunch

**GROUP DISCOUNTS!**  
Buy two, get third delegate  
place FREE. Further discounts  
available for larger groups.  
Contact us for details.

### DELEGATE DETAILS

Title: \_\_\_\_\_ First name: \_\_\_\_\_ Surname: \_\_\_\_\_

Email: \_\_\_\_\_

Job title: \_\_\_\_\_ Company name: \_\_\_\_\_

Address/PO Box: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ Postcode: \_\_\_\_\_ Country: \_\_\_\_\_

Phone number \_\_\_\_\_ Fax number \_\_\_\_\_  
(country + area code + number) (country + area code + number)

Mobile number (country + area code + number) \_\_\_\_\_

### JOB FUNCTION

- (JOB03) Architect
- (JOB119) CEO / President / Chairman / Director
- (JOB67) Concrete Technologist
- (JOB12) Consultant / Specifier
- (JOB13) Contractor / Fitout
- (JOB62) Contracts Manager
- (JOB18) Engineer
- (JOB66) Factory Manager
- (JOB30) Health & Safety
- (JOB44) Plant Manager
- (JOB63) Leasing Manager
- (JOB48) Project Manager / Leader
- (JOB50) Purchasing / Procurement
- (JOB51) Quantity Surveyor
- (JOB05) Sales / Marketing / Business Development
- (JOB65) Site Manager
- (JOB19) Sustainability / Environment
- (JOB64) Workshop Manager
- (JOB42) Other (please specify)

### PRIMARY BUSINESS ACTIVITY

- (OTH03) Agent / Distributor / Supplier
- (DES02) Architectural Practice
- (CON05) Building Consultancy
- (CON23) Concrete Contractor
- (CON04) Cement Supplier
- (CON22) Decorative Concrete Contractor
- (CON13) Engineering
- (GOV05) Government / Public Sector
- (CON06) Main Contractor
- (CON15) Manufacturer
- (CON08) MEP Contractor
- (CON21) Repair Contractor
- (CON20) Surveyor
- (CON24) Transport and Supply Chain
- (OTH12) Trade Association
- (OTH13) Other (please specify)

### TERMS & CONDITIONS

**PAYMENTS:** Bookings made prior to the event must be paid in full to guarantee your registration. Only those delegates whose fees have been paid in full will be admitted to the event. Your booking is not secure until it is paid.

**CANCELLATIONS:** Substitutions can be made at any time by contacting the organisers in writing within five working days of the event. If you have to cancel your registration you may do so with full refund less a 20% administration charge up to 2 weeks before the event. Cancellations received after this date will be liable for the full registration fee.

**VISAS:** To avoid visa delays, delegates requiring visas should contact the hotel they wish to stay at directly as soon as possible. Visas for non GCC nationals may take several weeks to process. The organisers shall not be liable for refunds should visas not be obtained in time. Any refunds will exclude any flight / hotel cancellation charges.

**PROGRAMME CHANGES:** The organisers reserve the right to make changes to the programme, venue and timings at any time.

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