



The Institute of Concrete Technology

Supported by SCI Construction Materials and The Building Limes Forum

Natural Cements for Repair and Renovation of Heritage Structures

27th June 2013



Sponsored by



SCI
14/15 Belgrave Square
London
SW7 8PXS



<http://ict.concrete.org.uk>

Provisional Programme

New cement plants have been set up in Europe to manufacture natural (or so-called “Roman”) cement. This cement produces an ochre coloured breathable material which can be used for repair and re-forming of architectural details which is much more sympathetic for the repair of heritage structures. To overcome the limitations of its quick setting properties by using additives and by different mixing techniques we are effectively rediscovering skills that artisans and masons must have had in past times.

Natural or Roman cements, were key materials for the economic and easy manufacture of renders and cast architectural details for the exteriors of buildings during the nineteenth and early twentieth century. Roman cements were produced by burning naturally occurring deposits of calcium carbonate rich in clay minerals below their sintering temperatures and grinding burned stones to a required fineness. The materials offered a high speed of set, beautiful texture and warm ochre colour imitating those of natural stones, and could withstand exterior conditions very effectively. The production and use of Roman cement production peaked in the 1840s and 50s, and declined with the dominance of the newer Portland cement on the market and modern functional architecture with its absence of ornament.

For a long time, conservation of the architecture of the late nineteenth and early twentieth century did not receive the same considerations as other periods, one of the principal reasons being lack of original historic binders which would closely match those of the original structure.

Recently a large European research programme, called “Rocare” (www.rocure.eu), has extensively investigated historic renders based on Roman cements and will be addressed by the speakers. The meeting will be of interest to architects, consultants, materials suppliers, engineers and anyone with an interest in the preservation of historic structures.

Recognised by ICT for continuing professional development (CPD)

09.00	Registration opens/coffee	
09.55	Introduction by the symposium Chairman	Professor Peter Hewlett, ICT
10.00	ROCARE project	Professor Johannes Weber, IATCS- University of Applied Arts Vienna, Austria
10.30	Composition and hydration of Roman (Natural) Cements	Dr Christophe Gosselin, Geotest, Switzerland
11.00	DISCUSSION	
11.15	Coffee	
11.45	Formulating mortars for use in restoration practice	Professor Dave Hughes, University of Bradford, UK
12.15	Practical aspects of restoring with mortars based on Roman Cements	Jacek Olesiak, Remmers, Poland
12.45	DISCUSSION	
13.00	Lunch	
14.00	Salt resistant mortars: Present knowledge and future perspectives	Dr Barbara Lubelli, Delft University of Technology, Netherlands
14.30	The rise, fall and revival of Natural Cements in the developing pattern of binders	Paul Livesey, Consultant, UK
15.00	DISCUSSION	
15.15	Tea	
15.45	Hard pointing and soft bedding mortars from Aberdeen: characterisation, interpretation and specification	Dr John Hughes, University of West of Scotland, UK
16.15	American Natural Cements and their Renaissance	Dr Gerard Lynch, Master Mason, UK
16.45	Discussion and summary by Chairman	
17.15	Close	