Seminar On Dry-Mix Mortar Technology In Modern Architecture And Engineering Practices

Sustainable Building Technology – The Hidden World Unveiled

Introduction

Dry mortar is one of the most widely used construction materials but it is also one of the least explored.

Examples of materials that fall under Dry Mortar family includes plaster, skim coat, tile adhesives, waterproofed screed, colour tile grouts, non-shrink grouts, high strength grouts etc etc.

Today, the applications of dry mortar are getting increasingly varied and exciting due to the need to adapt to today's innovative building technologies, the Green initatives and of course the pursuit towards better productivity.

Through this seminar we shall showcase the hidden world of dry mortar and share the latest global trends with fellow practitioners in the industry.

Programme Details

Date : 25 October 2012, Thursday

Time : 1:00 PM

Venue : Furama Riverfront Hotel, 405 Havelock Road S(169633)

Seminar Fees : Complimentary for SIA/ACES Members, $45.00 for Non-Members

3 CPD Points

5 PDU Points

Use of Dry Mortar

- Sustainability
- Productivity
- Green

ORGANISED BY

SIA

ASSOCIATION OF CONSULTING ENGINEERS SINGAPORE

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AkzoNobel

PROGRAMME

12:00	**Registration**
13:00	**Welcome Speech** SIA President; Mr. Theodore Chan ACES President; ER. Koh Boon Liang
13:20	**LCS Optiroc - Company Introduction** Mr. Chong Choong Fee, Managing Director, LCS Optiroc Pte Ltd Past President (2010 – 2011) – South East Asia Dry-Mix Mortar Association (SEADMA)
13:40	**AkzoNobel - Company Introduction** Mr. Sumitro Wijaya, Business Manager, Performance Additives Asia Pacific; AkzoNobel, Switzerland
14:00	**The Role of Tile Adhesives and Grout Mortars to Withstand Daily and Seasonal Thermal Cycles** Dr. Roger Zurbriggen, Senior Research Scientist, Performance Additives, AkzoNobel, Switzerland
14:30	**Common Issues Faced with Tile Adhesives & Construction Grouts** Ms. Sorada Jingjid, Technical Manager, LCS Optiroc Pte Ltd, Singapore Mr. Martyn Chew, Technical Sales Manager, LCS Optiroc Pte Ltd, Singapore
15:00	**Redispersible Polymer Powder and Cellulose Ethers functionality in Dry-Mix Mortar Applications** Mr. Tan Boon Teck, New Business Development Manager, Performance Additives Asia Pacific, AkzoNobel, Switzerland
15:30	**Tea Break**
15:50	**Bricor Color Mortar - New Generation Cement Based Color Mortar** Ms. Sonia Shi, Technical Manager, Performance Additives Asia Pacific, AkzoNobel, Switzerland
16:20	**Dry-Mix: A Green Solution to Construction Industries** Dr. Vernon Wang, Commercial Manager, Performance Additives Asia Pacific, AkzoNobel, Switzerland
16:50	**Dry-Mix Mortar Testing Procedures** Mr. Tan Hong Kian, Manager, Construction Materials Testing Department, Setsco Services Pte Ltd., Singapore
17:20	**Dry-Mix Mortar Plants & Equipments** Mr. Rudi Muigg, BE, Global Sales Manager, Doubrava Industrial Plants, Austria
17:50	**Q & A Session**
18:30	**Networking and Buffet Dinner**

The Role of Tile Adhesives and Grout Mortars to Withstand Daily and Seasonal Thermal Cycles

In many climate zones, externally applied building materials are exposed to temperature changes in the order of 40°C. Especially facade or flooring composite-systems with layers of different materials undergo thermal stresses at their adhesive interfaces.

This study investigates thermally induced tensile stresses in ceramic tilings. Daily and seasonal thermal cycles, as well as, rare but extreme events, such as a hail storm striking a warmed up terrace tiling, were (i) studied in the field and (ii) numerically modeled.

But, if additional loads (e.g. substrate shrinkage) or a weakening of the adhesion strength (e.g. by a strong skin formation) meets strong thermal stresses, then micro-cracks may form. Therefore, lowering elastic moduli of the adhesive and grouting mortars by adding polymers is an approach to reduce tensile and shear stresses at the material interfaces.

Common Issues Faced with Tile Adhesives & Construction Grouts

The common issues faced with the application of Dry-Mortar materials like Tile Adhesives and Construction Grouts can pose a major challenge to end-users who are not familiar with its applications. The key focal points of the presentation emphasises on application properties like cleaning time, adhesion resistance, water absorption and flexural & compressive strengths and performance standards.

Good practices and solutions addressing some of the common issues in the application of Dry-Mix Mortar materials will be featured.

Redispersible Polymer Powder and Cellulose Ethers functionality in Dry-Mortar Applications

Redispersible Powder (RP) and Cellulose Ether (CE) are two standard additives for ceramic tile adhesives to improve (a) the performance with respect to workability and water retention (mainly given by CE) of the fresh paste, as well as (b) final strength and flexibility properties of the hardened mortar (mainly improved by RP).

The data resulting from the distribution diagrams of different formulations will be compared with their physical properties (e.g. adhesion strength). The quantitative distribution pattern of an additive is one key to understand its performance in the application including the influence on the final mechanical properties of the mortar

Elotex Bricor Color Mortar - New Generation Cement based Color Mortar

Efflorescence and color variation are two common phenomena of cement based color mortar. This paper examines how inorganic binder and polymer powder interactive to efflorescence and color consistency for cement-based color mortar. The results reveal a new generation of Bricor Color Mortar which is based on a unique polymer powder - Elotex BRICOR800 and special inorganic binder system has excellent anti-efflorescence property and color consistency.

Dry-Mortar: A Green Solution to Construction Industries

Cement industry is notorious for its CO_2 emission and high energy consumption, which is highly suspected as one of the root cause of global warming threaten. However, cement still strongly stands on the irreplaceable position in construction materials and construction industries.

Dry-mortar is a very effective way to reduce using cement in varies construction applications while still keeping the excellent cementitious material functions and even getting improvements.

By reducing cement usage, improving cement efficient, contribute to building energy saving, using gypsum instead of cement, dry-mix industries contribute to the CO_2 emission reduction and saving our environments.

Dry-Mortar Testing Methods & Specifications

The various testing methods and specifications used in the testing of Dry-Mortar materials in Singapore will be featured.

Introduction of Modern Dry-Mix Mortar Plant Designs

Introduction of Modern Environmental Friendly Dry-Mix Mortar Plant embracing Sustainable Production Technology in the production of Dry-Mix Mortar materials in an environmental friendly environment

ABSTRACT OF PRESENTATIONS

Dr. Roger Zurbriggen

Senior Research Scientist, Building and Construction, Performance Additives, Functional Chemicals, AkzoNobel, Sempach, Switzerland. Dr. Roger Zurbriggen graduated from the University of Bern (Switzerland) in 1992 with a Masters Diploma in Mineralogy and got his PhD in 1996 with major in Structural Geology. Dr. Zurbriggen joined Elotex (former National Starch which merged with AkzoNobel in 2009) in 1997, as a member of the Material Science Group (R&D). During this period Dr Zurbriggen supervised a series of key research projects. His focal points of Research and Analytics includes: Physico-chemical interaction mechanisms between polymers and cement; Structure-property relationships of polymer-modified dry mortars (renders, tile adhesives, self-leveling flooring compounds); Optical and electron microscopy, thermal analysis, stress-strain analysis.

Ms. Sorada Jingjid

Technical Manager, Product Development, R&D and QA/QC, LCS Optiroc Pte Ltd, Singapore. Ms Sorada Jingjid graduated from Srinakharinwirot University, Bangkok, in 2003 with a Bachelor's degree in Chemical Engineering. In 2006, Ms Sorada received her Master's degree in Chemical Engineering from Chulalongkorn University, Bangkok. In 2006, Ms Sorada joined the Saint Gobain Weber Group (a major global dry- mix mortar group in Europe) in Thailand as a R&D engineer. She was promoted to Assistant Manager R&D and QC in 2009 with key focus in new product research and development in Dry- Mix Mortar materials. Ms Sorada is presently the Technical Manager with LCS Optiroc Pte Ltd, Singapore.

Mr. Martyn Chew

Technical Sales Manager, LCS Optiroc Pte Ltd, Singapore. Mr Martyn Chew graduated from Singapore Polytechnic in 1989 with a Diploma in Chemical Process Technology. In 1995 he graduated from Murdoch University, Australia with a Bachelor's Degree in Marketing. He had worked 17 years in the chemical related industries, including construction, electronics, marine, paint & coating and other industrial chemicals. Martyn is presently the Technical Sales Manager in LCS Optiroc Pte Ltd, Singapore providing on-site technical support and sales marketing to various project including HDB, private residential and industrial developments.

Mr. Tan Boon Teck

New Business Development Manager, Asia Pacific, Performance additives. Mr Tan graduated from National University of Singapore with major in Chemistry in 1993 and in the later part of his career, he obtained a Master of Science Degree for management of Technology from National University of Singapore. Throughout his career, he had held various positions in the building and construction field such as R&D, product development, Sales and Marketing position both in local and MNC companies. Mr Tan joined AkzoNobel in 2001 as a Technical Sales Manager and is now the New Business Development Manager for Asia Pacific, Performance additives sBU, AkzoNobel.

Ms. Sonia Shi

Technical Manager, Building and Construction, Asia Pacific Region, Performance Additives, Functional Chemicals, AkzoNobel, Shanghai, China. Ms Sonia Shi graduated from Wuhan Industry University in 1999. She completed her Masters degree in Material Science in 2002. Soon after graduation, Ms Shi joined the Insulation industry as a R&D engineer. She was instrumental in the development of foam cement insulation material and polymer modified cement mortar for ETICS. Ms Shi joined Elotex as Technical Service Representative in 2002. Ms Shi has accumulated many years of experience in ETICS, CTA, Skim Coat and Cement based Color Mortar during her tenure of employment with different Companies. She had also participated in the edition of many Chinese dry mortar standards in China over the last few years.

Dr. Vernon, Wang Chunjiu

Commercial Manager, Building and Construction, Asia Pacific Region, Performance Additives, Functional Chemicals, AkzoNobel, Shanghai, China. Dr. Wang graduated from Tsinghua University in 1985 majoring in Chemical Engineering. He accumulated his academy experience in Beijing University of Chemical Technology as Associate Professor and Deputy Dean in Industrial Management Department for eight years. Dr. Wang moved to the industrial sector and took on different roles and positions in Sales, Marketing, Technical, R&D and Commercial with companies like BASF, Rhodia, Rhom & Haas, and is presently a senior manager at the AkzoNobel group. His work in the different industries focused mainly on construction materials; including polymer latex synthesis and applications on Waterproofing, mortar modification, adhesives, and Dry-mix mortars, etc.

Mr Tan Hong Kian

Manager, Setsco Services Pte Ltd, Singapore. Mr. Tan Hong Kian graduated from the Nanyang Technology University of Singapore majoring in Civil and Structural Engineering. Mr. Tan is involved in the testing, evaluation and consultancy works of building and construction material in the building and construction industry. He is also a SAC Singlas approved signatory.

Mr Rudi Muigg

Global Sales Manager, Dry-Mix Mortar Plants & Equipment. Mr. Rudi Muigg graduated from the Institute of Technology Steyr, Austria majoring in Engineering. Mr. Muigg had worked in various industries like batching plants, mining, glass and automotive. He joined Doubrava, Austria in 1993 specialising in the design, construction and installation of Dry-Mix Mortar plants and equipment around the world.

ABOUT SPEAKERS

Registration Form

PROGRAMME DETAILS

Seminar	: Dry-Mix Mortar Technology In Modern Architecture And Engineering Practices
Date	: 25 October 2012, Thursday
Venue	: Furama Riverfront Hotel (Venus Grand Ballroom, Level 3) 405 Havelock Road, Singapore 169633 (click here for Location Map: http://www.furama.com/riverfront/location.php?s=map)
Time	: 1.00PM – 8.00PM (Registration starts at 12.00pm)
CPD/PDU	: 3 CPD points, 5 PDU points
Seminar fees	: Complimentary for SIA/ACES Members, $45.00 for Non Members

- *All seminar fees are inclusive of GST.*
- *Seminar will include seminar materials light refreshment and Dinner*

[SIA SAP Code: 2PK-4201050-018]

For SIA members, and Non SIA members/Architects, please fax / email the completed registration form to Ms Jacey Tay:
Tel: (65) 6226 2668
Fax: (65) 6226 2663
Email: cpd@sia.org.sg

And follow up with cheque / cash / online payment only to "Singapore Institute of Architects". Registration closed on **19 October 2012**.

[ ] By Cheque to SIA
Bank/Chq # : _____ Amt S$: _____
Local Cheque (must be drawn in Singapore) should be crossed and made payable to "Singapore Institute of Architects".
SIA office: Singapore Institute of Architects
79B Neil Road, Singapore 088904
Please indicate your name, company/institution and course date/title on the back of the cheque.

[ ] By Online Payment to SIA
http://www.sia.org.sg/payment/sia_20121025.html
(It is mandatory to provide us with the Receipt ID # after your credit card payment transaction)
Receipt ID #: ☐☐☐☐ - ☐☐☐☐ - ☐☐☐☐ - ☐☐☐☐

[ ] By Cash to SIA
You can drop by the SIA office to make cash payment between 9.30am – 5.30pm on weekdays.

For ACES members, and Non ACES members/Engineers, please fax / email the completed registration form to Ms Lilian or Ms Jennifer:
Tel: (65) 63242682
Fax: (65) 63242581
Email: secretariat@aces.org.sg

And follow up with cheque / cash to "Association of Consulting Engineers Singapore". Registration closed on **19 October 2012**.
Cheque No. / Amount: _____, Mailing Address: Thomson Road Post Office, PO Box 034, Singapore 915702.

Participant Detail

Name of Participant: _____ NRIC / FIN #: _____
(as per NRIC / FIN)

Organization: _____ Designation: _____

Receipt Mail to: _____ S ( )

Tel: _____ Fax: _____

Email: _____ HP: _____

Pls indicate: Complimentary [ ] SIA member, SIA M'ship #: _____ BOA #: _____
Complimentary [ ] ACES member, ACES M'ship #: _____ PE #: _____ (if applicable)
$45.00 [ ] BOA registered, BOA #: _____
$45.00 [ ] CIJC member, Organization: _____
$45.00 [ ] Non member

Contact Person Detail *(if different from participant)*

Contact Person: _____ Designation: _____

Tel: _____ Fax: _____

Email: _____

*** For SIA Members whose registrations have been confirmed, attendance is compulsory. Absentee/Cancellations 3 days or less before the event will be charged at $20.00. Verbal notification of cancellation is not acceptable.**

Cheque payment for this activity should not be combined with payment for other SIA events/courses.

Fees paid are non-refundable under all circumstances. Replacement of participant will be allowed only if written notification is made at least 3 days before the event.

Where a Non-Member replaces a Member (must be from the same Org.) the fee difference will have to be made good to SIA prior to the event.

Registration will be on a First-Come-First-Served basis and will be accepted upon receipt of registration form and payment to SIA. Registration by fax will only be confirmed upon receipt of payment.

Registration Confirmation No.:-