

SOUTHEAST ASIA

building

INCORPORATING ARCHITECTURE, INTERIOR DESIGN AND LANDSCAPING
Published since 1974

MAR/APR 2013



132 pages

ON THE COVER The Star Vista | **FEATURES** Eco-Friendly Paints & Coatings | New Designs For Shopping Centres | Home Interior Design | Tall Building Trends Of 2012 | Winners Of International Competition Archiprix SEA 2012 For Innovative Use Of Technology In Tropical Architecture Design® Announced | **SHOW PREVIEWS** China (Beijing) International Intelligent Building and Smart Home Expo 2013 | ARCHITECT'13



WE'RE CELEBRATING OUR JUBILEE.

GEZE sets doors and windows in motion.

GEZE moves people.

GEZE – in motion since 1863.

Thank you for the trust you have placed in us for 150 years.



GEZE
IN MOTION SINCE 1863

www.geze.com





DOOR TECHNOLOGY

DOOR CLOSERS, FLOOR SPRINGS & SLIDING DOORS



AUTOMATIC DOOR SYSTEMS

AUTOMATIC SWING, SLIDING & REVOLVING DOORS



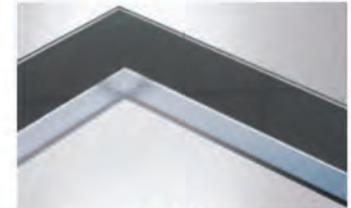
SMOKE AND HEAT EXTRACTION & VENTILATION

FANLIGHTS, CHAIN, SPINDLE, SCISSOR & ELECTRIC
LINEAR DRIVES



SAFETY TECHNOLOGY

EMERGENCY EXIT SYSTEMS, ACCESS CONTROL &
IQ LOCKS



GLASS SYSTEMS

SWING AND SLIDING DOORS & SLIDING WALL



Innovative system solutions thanks to intelligent technology

GEZE GmbH is one of the world's leading developers and manufacturers of construction systems for door, window and safety technology. GEZE offers a comprehensive range of products including automatic door systems and door technology, glass systems, smoke and heat extraction systems, safety technology as well as window and ventilation technology.

CONNECT WITH OVER
4,000
TRADE BUYERS

AT ASIA'S LEADING INTERNATIONAL EXHIBITION & CONFERENCE ON LANDSCAPE, LEISURE, GREENERY DESIGN, CONSTRUCTION & TECHNOLOGY

Strengthen your brand image with pre-event marketing and on-the-day exposure



Gain insight on industry best practices and environmental issues from top analysts, implementers and government officials



Organised By:



Supported By:



Supporting Organisations: Australian Institute of Horticulture Inc., Indonesia Flower Association, Landscape Contractors Association of the Philippines, Orchid Society of South-East Asia & Taiwan Floriculture Development Association

Official Online Partner: Eco-Business.com

Media Partners: bi GaLaBau, Infotrade Media Co. Ltd., Marshall Cavendish Business Information, Southeast Asia Building



Your Trusted **Induction Lamp** Partners.



The Answer to Your Industrial Lighting
No.1 Energy Savings Induction Lamp



Office:
34 Boon Leat Terrace #04-20 S(119866)
Warehouse/Service Centre/Showroom:
34 Boon Leat Terrace #03-02 S(119866) Tel: +65 6795 2168 Fax: +65 6795 6361 enquiry@eco-gps.com



SINGAPORE | THAILAND | HONG KONG | INDONESIA



Held in conjunction with



7 - 10 June 2013

New China International
Exhibition Centre

Beijing, China

8th Edition

China's Premier Event on Cutting-edge Solutions for
Audio Visual Installation & Systems Integration Technologies

Contact Us

**Immediately to Secure
Your Choice Location**

Juri Tan, Exhibitions Director

DID : +65 6411 7708

Email : juri.tan@informa.com

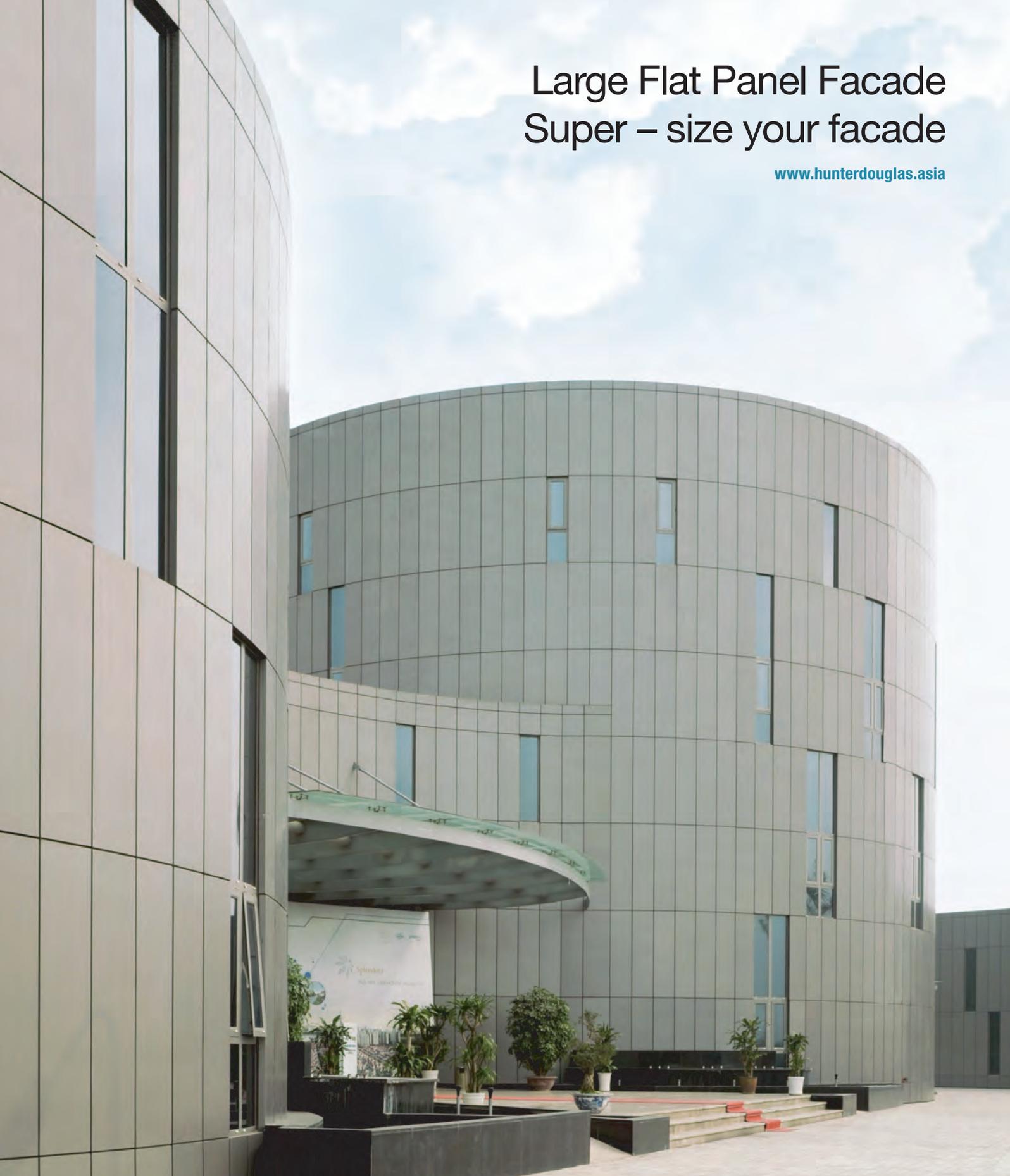
www.install-online.com/china

Organised by:



Large Flat Panel Facade Super – size your facade

www.hunterdouglas.asia



ENERGY
SAVINGS



THERMAL
CONTROL



PRECISION
ENGINEERING



ZERO
WASTE

HunterDouglas

contents

mar - apr 2013

Features

Green Buildings – Eco-Friendly Paint, Coatings & Finishes

46 Many eco-friendly paints are making their way into the market. In this issue, we take a look at the different paint options available to consumers and how these paint companies aim to differentiate themselves from the competition

Architecture – Shopping Centres / Mall

56 Shopping centre designs have become more innovative and sustainable than before. Here, we showcase three beautiful mall projects in Singapore – JCube, The Star Vista and orchardgateway

Interior Design – Houses

68 This issue looks at the design of two different types of houses – a Low Cost House in Dongnai, Vietnam and a bungalow called 'Tropicana' in Petaling Jaya, Malaysia

Architecture – Application Features

74 We present Flowcrete Asia's most prolific project installations

76 We feature Mapei's new technology for synthetic turf sub-bases construction

80 Armed with Tekla's Building Information Modeling software, an engineering company based in Vietnam, ThyssenKrupp Polysius AG, begins designing cement plants for the world

Architecture – Profile Story – Buzon

87 Buzon is a leading manufacturer of pedestals in the world. In this issue, we profile a story on Buzon's history and showcase its projects in Singapore, Hong Kong and Australia

Architecture – Feature

90 An article by CTBUH looks at the tall building trends of 2012

Architecture – Industrial Lighting

94 Eco Green LVD (S) Pte Ltd discusses the future of industrial lighting

Architecture – Innovations in Architectural Glass

96 Rolith and AGC announce partnership to bring anti-reflective glass to market

Architecture – Sustainable Globalization

98 Mr Lothar Herrmann, CEO of Siemens ASEAN-Pacific Cluster, discusses sustainable globalization and what businesses and cities must have

Architecture – Feature

100 Winners of the International Competition Archiprix SEA 2012 for Innovative Use of Technology in Tropical Architecture Design announced

SHOW PREVIEWS

114 China (Beijing) International Intelligent Building and Smart Home Expo 2013

116 Architect 2013

Regulars

News

8 Architecture news from around the world

Agenda

44 Calendar of events, exhibitions and conferences

Facility Management

106 Plumbing Systems & Equipment (Faucet, Flush Valves, Plumbing Fixtures, Plumbing Accessories, Pipes & Pumps)

Roof & Façade

108 Regional Focus: Middle East

PRODUCT SHOWCASE

118 Sealants & Sealers

120 Spaceframe & Skylights Systems

122 Mixed Category

126 New on the Market



On the Cover: The Star Vista in Buona Vista, Singapore. Photo: CapitaMalls Asia

Cover design by Fawzeeah Yamin



Contact the Flooring Specialist:

vietnam@flowcrete.com hongkong@flowcrete.com
 malaysia@flowcrete.com indonesia@flowcrete.com
 china@flowcrete.com singapore@flowcrete.com
 thailand@flowcrete.com

THE INDUSTRIAL & COMMERCIAL FLOORING SPECIALIST

Flowcrete Asia is a world leading manufacturer of **seamless resin flooring solutions** for a wide range of both **industrial and commercial environments**.



MONDÉCO

Our seamless epoxy terrazzo range, Mondéco, delivers superior aesthetics and durability for use in a wide range of commercial environments. Mondéco boasts a huge variety of colours and decorative aggregates that collaborate with extreme wear, scratch and abrasion resistance.

FLOWFRESH

Flowfresh; our range of hygienic polyurethane flooring solutions, has been specially developed to meet the demands of Food and Beverage environments. Containing a unique silver-ion additive, Polygiene®, Flowfresh kills up to 99.9% of bacteria on the surface of the floor.

✓ Durable

✓ Attractive

✓ Hygienic

✓ Chemical resistant

✓ Bespoke design

✓ Easy to clean

✓ Anti-slip profiles

✓ Flexible

editor's note



Hello readers, welcome back to another exciting issue of *Southeast Asia Building*. We hope you had a nice Chinese New Year celebration with your friends and loved ones, and hopefully, the Year of the Snake is an auspicious one for everyone!

The architecture of shopping malls has become an important part of their commercial success. In addition to using modern building materials, shopping malls these days are incorporating more sustainable features in their designs. Inside, we showcase three beautiful mall projects in Singapore – JCube, The Star Vista and orchardgateway.

This issue also explores the theme of eco-friendly paints and coatings and their growing popularity in homes and offices. Market leaders Jotun, Nippon Paint Singapore, eicó paint and AkzoNobel Decorative Paints in South East Asia & Pacific discuss the current trends in 'green' paints and the 'green' products that they offer.

In the interior design section, we showcase two houses, which are very different in their styles. One is a low-cost house in Dongnai, Vietnam and the other one is a refurbished bungalow in Petaling Jaya, Malaysia.

The Council on Tall Buildings and Urban Habitat (CTBUH) recently produced a report on 'Tall Trends of 2012' that shows the number of tall buildings completed annually around the world and the forecast for 2013. We have published that report in this issue.

If you are planning to visit Architect'13 in Bangkok this year, don't miss the preview of the show in this issue. Over 700 exhibitors are expected to take part in this year's show.

We hope you enjoy this issue and we look forward to providing you with more interesting articles in the next few months.

If you have any suggestions or if you would like to submit an article for possible publication, please e-mail it to seab@tradelinkmedia.com.sg.

Amita Natverlal

Disclaimer

All advertisers and contributors must ensure all promotional material and editorial information submitted for all our publications, must be free from any infringement on patent rights and copyrights laws in every jurisdiction. Failure of which, they must be fully liable and accountable for all legal consequences (if any) that may arise.

The Editor reserves the right to omit, amend or alter any press release submitted for publication. The publisher and the editor are unable to accept any liability for errors or omissions that may occur, although every effort has been taken to ensure that all information is correct at the time of going to press. No portion of this publication may be reproduced in whole or part without the written permission of the publisher.

South East Asia Building is available free-of-charge to applicants in the building industry who meet the publication's terms of control. For applicants who do not qualify for free subscription, copies will be made available, subject to acceptance by the publisher, for a subscription fee, which varies according to the country of residence in the following manner:

Annual Subscription

Airmail: Europe – US\$90, USA – US\$90, Asia Pacific – US\$70, Brunei – S\$45, Malaysia – S\$45

Surface mail: Singapore – S\$30

(Incl 5% GST Reg No.: M2-0108708-2)

For further details, fax: 65 6842 2581 or tel: 65 6842 2580

Printed in Singapore by KHL Printing Co Pte Ltd

MICA (P) 120/07/2012 KDN No: 1560 (1270) - (6)

PUBLISHER

Steven Ooi (steven.ooi@tradelinkmedia.com.sg)

EDITOR

Amita Natverlal (seab@tradelinkmedia.com.sg)

GROUP MARKETING MANAGER

Eric Ooi (eric.ooi@tradelinkmedia.com.sg)

MARKETING MANAGER

Felix Ooi (felix.ooi@tradelinkmedia.com.sg)

HEAD OF GRAPHIC DEPT/ADVERTISEMENT

CO-ORDINATOR

Fawzeeah Yamin (fawzeeah@tradelinkmedia.com.sg)

CIRCULATION

Yvonne Ooi (yvonne.ooi@tradelinkmedia.com.sg)

Southeast Asia Building is proud to be a media partner of:



Vietnam Green Building Council



Emirates Green Building Council



Bangladesh Green Building Council



Green Building Council Indonesia



Philippine Green Building Council



Green Building Council Mauritius



Green Building Council Italia



Spain Green Building Council®

SOUTHEAST ASIA BUILDING is published bi-monthly by:

Trade Link Media Pte Ltd, 101 Lorong 23, Geylang,

#06-04, Prosper House, Singapore 388399

Tel: +65 6842-2580 Fax: +65 6842 2581

Editorial e-mail: seab@tradelinkmedia.com.sg

Website: www.tradelinkmedia.com.sg

RCB Reg No: 199 204 277K

Trade Link Media Pte Ltd also publishes:

- Bathroom + Kitchen Today
- Lighting Audio Visual Asia
- Lighting Today
- Security Solutions Today
- Southeast Asia Construction

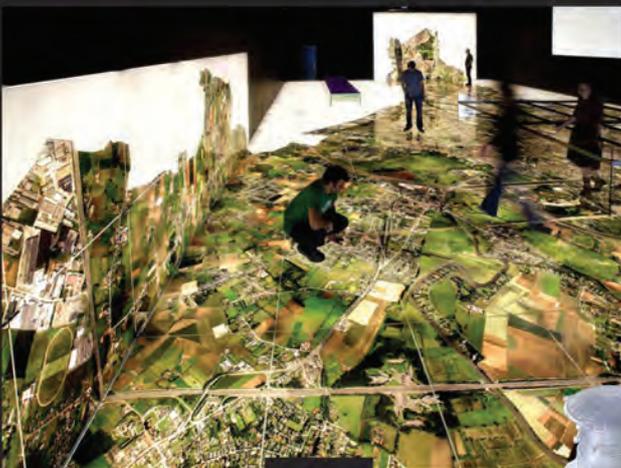
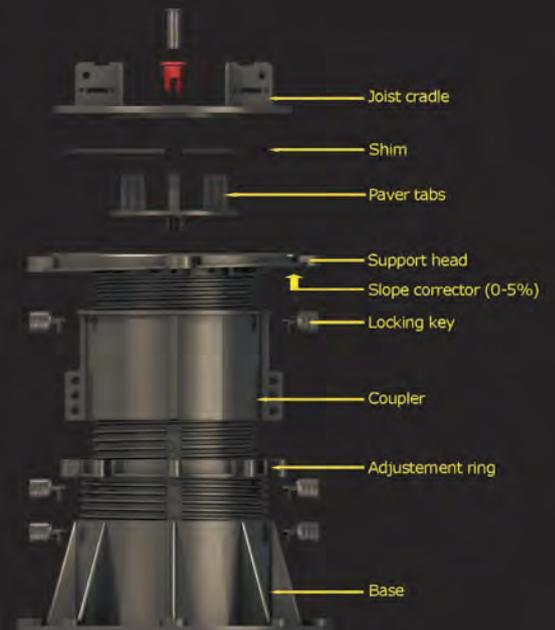


'Raising the World to a Higher Level'

Since 1984, Buzon is the market leader for external raised floors and terrace applications, and has a long track record of prestigious international references worldwide, such as Marina Bay Sands Integrated Resorts & Reflections at Keppel Bay in Singapore, Burj Khalifa, Taipei 101 & KLCC Twin Towers, as the three highest buildings in the world, etc.

Buzon is mainly used for the construction of all types of raised floors, terraces and water features, incl. landscape area's on flat roofs and/or elevated decks, balconies, pool decks, transparent floorings, interior floorings, etc.,

Buzon can be installed with a wide variety of decking materials.



Buzon Pedestal International s.a. (Head Office)
Z.I. des Hauts Sarts, Zone 1, Prolongement rue de l'Abbaye, 134 B-4040 Herstal, Belgium
Tel : +32 (0)4 248 39 83 - Email : info@buzon-world.com - www.buzon-world.com

Buzon Asia Pte Ltd
Tel : +65 97622188 - Email : info@buzon-asia.com

Buzon HK / China - Jepsen Building Products Ltd
Tel : (852) 3180 3330 - Email : jepsenbuildingproducts@jepsen.com

Buzon Australia Department / Pasco Pty Ltd
Tel : +61 3 9429 9111 - Email : buzon@pasco.net.au



www.buzon-world.com

AECOM to provide design services for the new Intermodal Transfer Terminal and the Passenger Terminal 2 Expansion project at Hong Kong International Airport

Hong Kong – AECOM Technology Corporation, a leading global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government, announced today that it was awarded two consultancy contracts by Airport Authority Hong Kong (AAHK) to provide initial scheme and scheme design services for the new Intermodal Transfer Terminal (ITT) and the Passenger Terminal 2 (T2) Expansion project at Hong Kong International Airport (HKIA), forming part of the strategic expansion programme of the HKIA until 2030.

The new ITT will expand the existing Skypier development and link the new facility to the Hong Kong Boundary Crossing Facilities (HKBCF). The new terminal will encompass check-in facilities, an automated people mover and baggage handling system, a secure bonded road to HKBCF and modifications to Terminal 1.



Skypier. Photo: © AECOM



Passenger Terminal 2. Photo: © AECOM

In addition, the T2 Expansion project will reconfigure the existing facilities to accommodate both arrivals and departures processing facilities. The project will include a new meet-and-greet area, a new baggage reclaim hall, expanded security and immigration facilities and additional check-in islands.

"We are delighted to continue our partnership with the authority to maintain the sustainable development of the airport after accomplishing the Hong Kong International Airport Master Plan 2030 Study," said Mr Eric Ma, AECOM's executive vice president, transportation, pan-Asia. "One of the biggest challenges for the design teams of these two projects is to prepare a design solution that will allow normal airport operations while the new facilities are being constructed. We will communicate closely with all stakeholders and pay extra attention to the requirements of various departments, airlines, operators and agents, given the congested nature of the development area," added Mr Ma. ■

Expansion of The Big 5 events fuelled by market confidence

Dubai, UAE – The confidence in the building and construction market demonstrated at The Big 5 2012, which took place from 5-8 November 2012 at the Dubai World Trade Centre, has further propelled the event's expansion across the Middle East and India.

As a total of 2,371 exhibitors, from 60 countries showcased the latest products and technologies from across the building and construction industry, millions of dollars worth of deals were reported from the exhibition floor. The four-day event saw exhibitors, significantly from the UK, Qatar and the USA, announce big bill deals inked onsite.

The positive outlook for the market has been reflected in the increased demand by suppliers to exhibit at The Big 5 Saudi, taking place in Jeddah, Saudi Arabia, in March 2013.

"The Big 5 2012 appears to have set a precedent for the market, and generated a significant amount of optimism and enthusiasm for the year ahead," said Andy White, event director, The Big 5. "Having such a well established reputation, with more than 30 years in the region, The Big 5 will see substantial expansion in 2013 with the launch of two new events and further growth of the Saudi event (9-12 March), which has doubled in size year-on-year since 2011," he added.

The Big 5 Construct India and The Big 5 Kuwait will both launch in September 2013, taking place from 2-4 in Mumbai and 16-18 in Kuwait City respectively.

"Two thousand and thirteen will very much be a milestone year for The Big 5, with two new events and phenomenal growth in Saudi," concluded Mr White. The Big 5 2013 will take place from 25-28 November at the Dubai World Trade Centre. **For more information, e-mail info@thebig5.ae.** ■

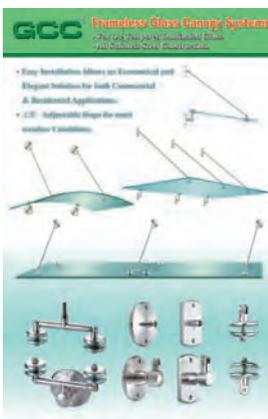
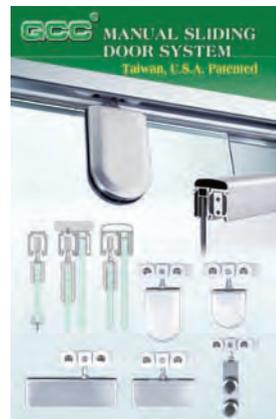
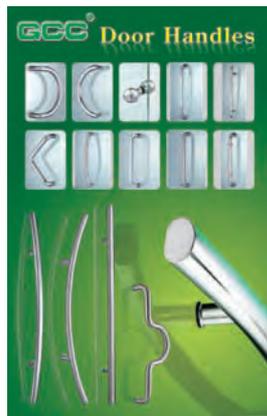
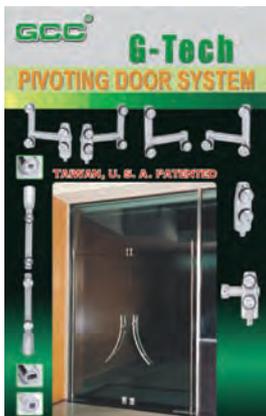


GCC®

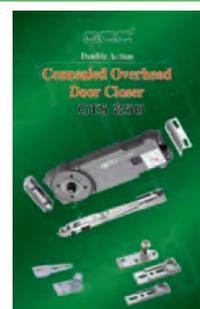


EEC Countries and worldwide registered brand.

We are not the Biggest, But we insist on the Best!!



We are proud of Made In Taiwan



Sliding And Folding Wall System(Bi-Fold)

Heavy Duty Sliding Wall System



GOOD CREDIT CORPORATION

No.13, Longmen Rd., Situn Dist., Taichung 40757, Taiwan

E-mail: gcctw@ms7.hinet.net

TEL: 886-4-22583755(Hunting Line) FAX: 886-4-22583753

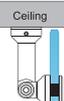
<http://www.gcintw.com.tw>

NEW

Heavy Duty Sliding & Folding Wall System

- Floor guide & U-channel are not required.

For more information, welcome to visit our website: <http://www.gcintw.com.tw>



2.7 hectare 'Crystal Lagoons' to be built in US\$600 million Sharm El Sheikh luxury resort

Dubai, UAE – Crystal Lagoons Corp., a patented technology developer of giant crystalline lagoons, is constructing a second saltwater lagoon in the popular tourist resort of Sharm El Sheikh. The company made the announcement at Cityscape Global 2012 in Dubai.

"Our second Sharm El Sheikh project will be the centerpiece of a new US\$600 million luxury resort being developed by leading Egyptian tourism company Radamis for Hotels & Touristic Resorts. Aimed at the high-end traveler, the resort covers 75 hectares with 2,500-rooms across three separate hotels and 2.7 hectare lagoon offering an unlimited selection of water sports," said Mr Kevin P. Morgan, the newly appointed CEO of Crystal Lagoons Corp.

The Radamis' Sharm El Sheikh resort is Crystal Lagoons' latest Egypt project with the company already licensing its technology in what will be claimed as the world's largest manmade lagoon as part of the Citystars Sharm El Sheikh resort. This 12-hectare 'mega lagoon' will claim to surpass the current Guinness Book of World Records holder, Chile's San Alfonso del Mar resort, Crystal Lagoons' first project. Part of a mixed-use project developed in partnership with Egypt's Golden Pyramid Group, Citystars Sharm El Sheikh will feature a series of 10 saltwater lagoons, covering a combined area of 100 hectares and including the world's largest lagoon, to create a unique desert oasis and new tourism landmark for the region.

The development, which is currently under construction and expected to open before the end of the year, will offer 1.2 million square metres of residential units, hotels, golf courses, marinas, a museum and a commercial centre.

"The Middle East and North Africa represents huge opportunity for Crystal Lagoons as investment in tourism infrastructure continues to grow. The UNWTO has forecast a respectable 3-4 percent growth for the region this year and our portfolio of projects continues to attract attention from flagship tourism destinations across the Middle East," remarked Mr Morgan.

"Our uniquely innovative concept is backed by patented technology and offers a strong competitive advantage that we believe will be the catalyst to revolutionise the leisure experience in the real estate and tourism markets," he added. ■



The 2.7 hectare Crystal Lagoon, under development by Radamis for Hotels & Touristic Resorts in Sharm El Sheikh, Egypt.

New green leaders emerge in 2012

Sydney, Australia – The Green Building Council of Australia (GBCA) celebrated its most successful year, with 145 Green Star projects certified in 2012.

"The Green Building Council of Australia has increased its rate of Green Star certification by 43 percent on 2011 – a clear indication that the market is rapidly shifting to sustainable design and construction, and values the independent verification that Green Star provides," said Chief Executive, Romilly Madew.

A number of new green leaders have emerged over the course of the year, and the GBCA has chosen four shining stars of Green Star for 2012:

Government leadership

The Queensland Government Department of Education and Training achieved Green Star ratings for four of its new state schools in 2012. The Murrumba State Secondary College, and the Augusta, Woodlinks and Coomera Rivers State Schools were all awarded 4 Star Green Star - Education As Built v1 ratings, signifying 'Best Practice'.

"The Queensland Government has recognised that Green Star is the method of measurement to demonstrate accountability, financial responsibility and transparency, and ensure its buildings and communities are truly sustainable," said Ms Madew.

Industrial leadership

While the industrial market is still mostly grey, rather than green, Goodman Group sees that a Green Star rating equates to a future-

proofed investment. "Goodman Group demonstrated its green leadership with a number of Green Star ratings in 2012, including the first Green Star - Industrial As Built v1 rating for a distribution centre," said Ms Madew.

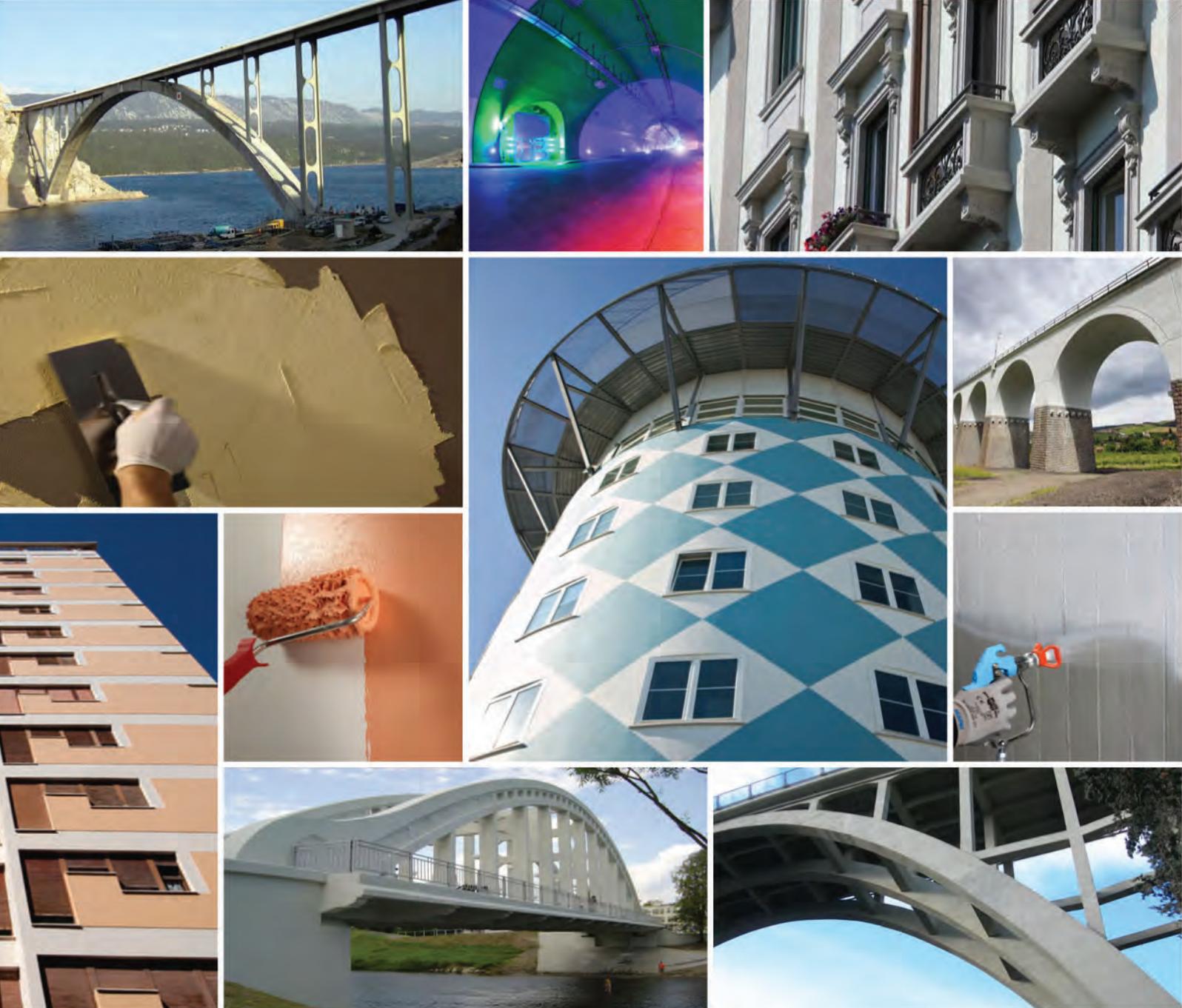
Investment leadership

When ISPT first sought Green Star certification in 2006, the business case for green building was only just beginning to take shape. "For many, sustainability spelled risk, and only the true leaders were certifying at all, much less taking a portfolio approach to Green Star. Green building investment has proved a winning formula for IPST, as evidenced by the 14 Green Star certifications achieved to date across the commercial office and retail sectors," said Ms Madew, adding that ISPT achieved five ratings under Green Star in 2012 for projects including commercial offices and retail developments.

Development leadership

Stockland has maintained a long-term commitment to Green Star, and achieved the highest number of Green Star ratings in 2012, with eight certifications. Projects included the first retirement living clubhouse, Affinity Village in WA, as well a number of commercial offices and retail developments.

"Stockland has also worked with the Green Building Council of Australia to develop Australia's first Green Star rating tool for retirement living developments, and plans to achieve Green Star ratings for retirement villages in 2013 and beyond," concluded Ms Madew. ■



Wall Coatings

A vast range of finishings for professional use for completing Mapei systems which are aesthetic and durable.

Quarzolite, Silancolor, Silexcolor, Colorite, Elastocolor and Dursilite, the 6 excellent products in: yield, easy application, covering, water repellence, elasticity, resistance to UV rays, transpirability and easy to clean.

Discover our world of Mapei: www.mapei.com.sg

The "beautiful" protection

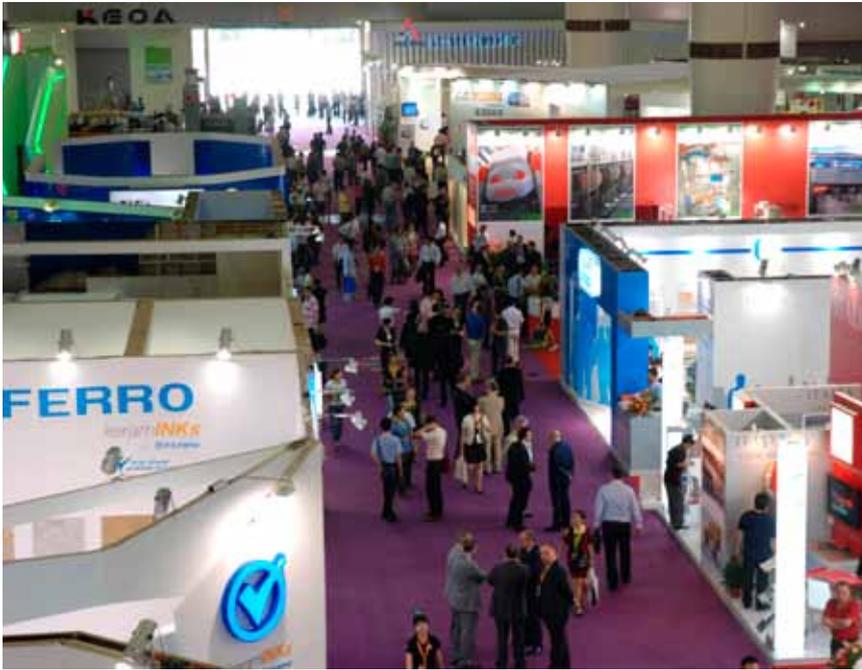


Mapei Far East Pte Ltd
 28 Tuas West Road, Singapore 638383
 Tel: +65 68623488 Fax: +65 68621012/13
 Website: www.mapei.com.sg Email: mapei@mapei.com.sg

MAPEI[®]
 ADHESIVES • SEALANTS • CHEMICAL PRODUCTS FOR BUILDING



Ceramics China 2013: Technology comes first



Guangzhou, China – The question from the downshift of world economy reflected in ceramic industry is: the way out. To answer this question, Ceramics China 2013, organised by CCIA and Unifair, will take the theme of “Revolution, Innovation, Crossing”. The show, which takes from 29 May to 1 June 2013 in Pazhou Complex, Guangzhou, will gather the most advanced and latest products, presenting leading processing technology, equipment, material, decoration, creative products and services in Guangzhou. Ceramics China 2013 will cover an area of 80 000 square metres with 4,500 booths in 8 halls in Canton Fair Complex. The four-day show is estimated to have 800 exhibitors showcasing their products and technologies to visitors. Eight sectors will be highlighted in the show, including Energy Saving and Emission Reduction Technology & Equipment Area, Automation Technology & Equipment Area, Ceramic Inkjet Printing & Application Area, Ceramic High-Tech Area (International Hall), Decorative Material Area, Raw Material, Anti-friction Material and Fire Resistance Area, Moulds, Tools and Spare Parts Area, Ceramic Creative Products Area.

Automation is always the solution to increasing cost in both labour and production itself. Beside, nowadays it is not only the solution but also the trend. As a show aims to lead the industry trend, Ceramics China 2013 will present abundant of advanced and quality automated products in Automation Technology & Equipment Area.

Another well-known trend is the inkjet printing adopted in ceramics industry. Ceramics China 2013 will extend the technology and encourage it to cover more ceramic manufacturers. Since its appearance in Ceramics China 2009, inkjet printing technology has been the highlight of the show, attracting hundreds of thousands of insiders. Riding on the number of 30 inkjet printing companies in the last show, Unifair will forge a highly professionalised Ceramic Inkjet Printing and Application Area in 2013. Insiders can check out the latest ceramic inkjet printing application, such as inkjet microlite, inkjet wood finish, inkjet rustic tiles, inkjet ceramic chips, etc.

Problems including over capacity, excessive mining, serious environment pollution, etc, all call for better environmental friendly performance. This is the ground for more energy-saving & environment protecting innovation in Ceramics China 2013. Energy Saving and Emission Reduction Technology & Equipment Area will be the other highlights.

The way out for the industry and therefore for Ceramics China is technology. On this basis, Ceramics China 2013 will not only increase its scale but upgrade itself as the platform to showcase and share the latest technology.

For more information, visit www.ceramicschina.com.cn/EN/main/index.asp. ■

Dow Epoxy highlights expanded portfolio of curing agents

Guangzhou, China – Dow Epoxy, a business unit of The Dow Chemical Company, has introduced a broad portfolio of epoxy products designed for civil engineering, general coating, adhesive and composite, featuring new high-performance D.E.H.™ curing agents and FORTEGRA series. Dow highlighted its expanded product portfolio at its Epoxy hardener and specialty resin technical seminar on 28 November 2012 during the upcoming CHINACOAT 2012.

The expanded portfolio includes epoxy components, specialty resins, curing agents, as well as resin blends and hardener solutions. The addition of these products increases the company's ability to offer epoxy solutions to meet specific formulation, application and end-use performance needs.

During the seminar, Dow introduced specialty offerings in the expanded epoxy portfolio include low temperature cure, low-emission and waterborne curing agents as well as toughening agents, such as FORTEGRA series. Innovative low temperature curing agent presents good cure even at -5°C application and excellent adhesion to dry and wet concrete. The innovative, low-emission series curing agents facilitate low Volatile Organic Compound (VOC) formulations and low odor. These products are ideal for use in indoor spaces, such as schools and hospitals, where users experience prolonged exposure to flooring emissions. The next-generation D.E.H. waterborne series curing agents are ideal for use in flooring and indoor locations where organic solvents need to be avoided. Benefits include low odour, rapid drying and curing for faster application, and curing ability at low temperatures to enable application in a variety of climates and seasons. In addition to curing agents and toughening agents, the recent epoxy resin expansion in Dow Rheinmuenster and Stade manufacturing site will increase Dow global capacity by 30 thousand kilotons.

“Now our customers can look to Dow as a one-stop source for epoxy solutions,” said Julie Mongeluzi, Dow Epoxy global marketing leader for differentiated resins. “We intended to combine our expertise in epoxy components in combination with our strong technical support offerings to help our customers achieve their objectives,” she added. ■

guangzhou electrical building technology

广州国际建筑电气技术展览会

Asia's premier platform for
electrical engineering, building and
home automation market

9 – 12 June 2013

China Import and Export Fair Complex
Guangzhou, China

www.building.messefrankfurt.com.cn



Contact

Messe Frankfurt (Shanghai) Co Ltd

– Beijing Office

Tel : +86 10 6517 1388 ext 837

Fax: +86 10 6510 2799

building@china.messefrankfurt.com



messe frankfurt

Carrier's Sustainability Lecture Series highlights green building trends in Southeast Asia

Singapore – Developers and building owners have the opportunity to take Singapore's visionary accomplishments in green building to new heights according to experts at the Distinguished Sustainability Lecture Series, held on 29 November 2012 at Goodwood Park Hotel.

The event was organised by the Singapore Green Building Council (SGBC) and Carrier. More than 130 building professionals attended the event, which delivers lectures to educate and inspire green building leaders across the globe. A Founding Member of SGBC, Carrier has been working closely with the SGBC to achieve their shared vision of a sustainable built environment.

"Our vision is to build sustainable cities for better living, and we are glad to have many strong sustainable advocates like Carrier to journey along with us and help us achieve our vision," said Mr Tai Lee Siang, president of SGBC. "These days, going green is no longer a question of why, but how soon and how fast. The Asia Pacific region is the fastest growing region for environmental goods and services in the world, and SGBC is keen to help our members to meet this need by tapping on the business opportunities in the region."

A number of speakers shared their expertise on green building trends including John Mandyck, chief sustainability officer, UTC Climate, Controls & Security, Mahesh Ramanujam, chief operating officer of the U.S. Green Building Council and president of the Green Building Certification Institute, who presented a global perspective



Sustainability and Green Building Speakers (From left to right): Mr Derrick Hong, Mr Ho Thim Seng, Assoc Prof Lee Siew Eang, Mr Valentine Lehr, Mr John Mandyck, Mr Mahesh Ramanujam, Mr Lim Chan Boon, Mr Oon Wee Chin.



Opening Address at Carrier Distinguished Sustainability Lecture Series by Mr John Mandyck, Chief Sustainability Officer, United Technologies Climate, Controls & Security.

on energy efficiency, sustainability and green buildings at the event, and Valentine A. Lehr, senior partner, Lehr Consultants International, who discussed what it takes to embrace sustainable technology and sustainable building practices.

Lim Chan Boon and Kong Jia Hng of the Singapore Building and Construction Authority (BCA) presented updates on the BCA Green Mark Scheme for supermarkets and retail, and Ho Thiam Seng, vice chairman of the Asia Institute of Intelligent Building (Singapore Chapter) discussed the role of automation in sustainable buildings. Derrick Hong, general manager of Environmental Market Solutions, Singapore, looked at the benefits and pitfalls of ISO® 50001 certification.

"Carrier has been actively taking part in building sustainability, providing innovative solutions to improve efficiency and save energy. With new technologies, air conditioning systems are now significantly more efficient than systems available 10 years ago," said Mr Oon Wee Chin, Managing Director, Carrier South East Asia.

"Carrier understands the important balance between building technology today and the world we live in tomorrow. Singapore has an incredible opportunity to accelerate building efficiency and save energy," said Mr Mandyck. "It's not a question anymore of a major development will be green – it's only a discussion of how green."

Launched in 2011 in the Middle East, Carrier's Distinguished Sustainability Lecture Series expanded its scope in 2012, bringing green building and sustainability experts to Brazil, the Middle East and now Singapore. ■

Greenpac to enjoy a fast payback from solar energy

Singapore – Phoenix Solar has been appointed by Singapore-based Greenpac (S) Pte Ltd, a manufacturer of environmentally friendly industrial packaging solutions, to build a 435 kilowatt peak (kWp) solar photovoltaic (PV) system on its new integrated manufacturing and R&D centre facility dubbed the "Greenhub".

The cost of solar installations has dropped rapidly in the last two years due to significant increases in production capacity and improved system installation costs. Combined with rising electricity tariffs, PV systems such as Greenpac's are an attractive investment, achieving paybacks of 7 years*.

The Greenhub is fully consistent with Greenpac's commitment to the environment and responsible entrepreneurship. The building is designed for energy efficiency, including features like skylights to reduce the use of electric lights. Working with Phoenix Solar for their rooftop PV system, Greenpac received the Solar Pioneer Award in October 2012 from Singapore's Energy Innovation Programme Office (EIPO). The award recognises pioneering solar installations in Singapore in terms of system design, size and installation techniques. The rooftop solar PV system will supply more than 20 percent of the building's total electricity consumption, offsetting about 270 metric tonnes of CO2 per year. ■



Photo: © Phoenix Solar Pte Ltd

*Based on retail electricity prices of SGD0.2628/kWh in Q1/2013 (Singapore)

ARCHIDEX® **13**

14th international
architecture,
interior design
and building
exhibition, malaysia

19-22
JUNE
2013
10 AM - 7 PM

**KUALA
LUMPUR
CONVENTION
CENTRE
MALAYSIA**

www.archidex.com.my

JOINTLY ORGANISED BY



PAM PERTUBUHAN AKITEK MALAYSIA
MALAYSIAN INSTITUTE OF ARCHITECTS

CIS

ENDORSED BY



MINISTRY OF WORKS



MALAYSIA EXTERNAL TRADE
DEVELOPMENT CORPORATION

Australia wins silver in Japan National Stadium Competition

Melbourne, Australia – Cox Architecture, one of Australia's leading sports architecture firms, has been awarded second place in the International Competition for the new Japan National Stadium. The stadium, proposed for the 2019 Rugby World Cup, forms the centrepiece for Tokyo's bid for the 2020 Olympics.

Cox Architecture was the only Australian firm shortlisted from a high profile of international architects. The competition was won by Pritzker Prize winner, Zaha Hadid from Great Britain.

Cox Architecture's proposal was highly commended by the judges who included world-renowned architects Tado Ando, Lord Richard Rogers and Lord Norman Foster. Judges' commentary stated that: "The proposal submitted by Cox Architecture is characterised by its delicate and transparent dome and the wood-finished stands contained within it. The elegant and tranquil quality of the design was extremely well-received. The seating stands are planned in sectors and are highly functional, feasible, and promise to offer a rich ambience. Cox Architecture was also highly appraised for its hospitable design that incorporates gardens."

"Our design represents an evolution of sports and entertainment environments as key cultural and social event platforms for public life. Conceived with Arup, our design synthesises traditional Japanese craft with a structurally light environmental enclosure," said Patrick Ness, a Director of Cox Architecture.

The hydraulic reconfigurable pitch and stands combined with the first use of environmental gardens built within the stadium concourses show cased innovation in technology and models for environmental sustainability, that would have provided a lasting legacy for both the city and the Olympic movement.

New environmental technologies feature active energy systems and internal verdant sky gardens. The operable photochromatic glass roof incorporates new materials and technologies allowing control over internal light levels.

This simple and elegant form blending craft, technology and environment, symbolises a deep Japanese cultural affinity for purity of form and nature. The unique design combined technology with tradition incorporating many innovative features that will inform the development of stadia architecture for years to come. ■



Image: Courtesy of Cox Architecture

DAMAC Properties launches 'The Distinction'

Dubai, UAE – DAMAC Properties has announced its first major new product launch since 2008, with 295 premium serviced hotel apartments in the Burj Area. 'The Distinction' will be a 195 metre, 53-storey, iconic tower overlooking the platinum real estate in the heart of Dubai, with enviable views of the fountain, mall and world's largest tower.

On the back of improved market sentiment, which has shown average prices increasing by 14 percent in the first nine months of the year, according to the Reidin Residential Sales Indices, 'The Distinction' will serve to the very top top-end luxury sector of the emirate's real estate market.

The rental market is also seeing strong growth with yields up as much as 24 percent in prime locations across Dubai according to a recent report by CB Richard Ellis. While Dubai's property market sees a strong growth path, hotels are also benefitting, with 87.1 percent occupancy in October according to the latest figures from TRI Hospitality Consulting – an increase of 7.5 percent year-on-year.

"Luxury projects in prime locations are driving the UAE property resurgence and 'The Distinction' will provide the quality of finish and service expected at this end of the market," said Niall McLoughlin, Senior Vice President, DAMAC Properties. "The serviced hotel apartments at 'The Distinction' will offer the highest levels of customer service, luxury and opulence placing it among the premium

products DAMAC Properties has on the market today."

Main contractor, ANC Contracting, has already started work on the project, which is set for completion in the first quarter of 2015. The project will be a mix of studios, one, two, three and four-bedroom penthouses.

The Distinction, which will be one of the most desirable projects DAMAC has ever undertaken, has been designed by architects ZAS with the interiors being undertaken by WA International.

"In Dubai there remains a strong desire for the very best, and this, combined with an improving economy and limited availability of high-end luxury developments, is driving the demand. We are anticipating a high level of interest in 'The Distinction'."

'The Distinction' comes lavished with the highest quality amenities to be enjoyed by the residents, including a luxury spa which houses a relaxing Jacuzzi and peaceful sauna. There is also a high-tech gymnasium and stunning swimming pool. ■



PEFC continues expansion in the tropics

Singapore – Indonesia has become the latest Asian country to join PEFC after China and Malaysia, demonstrating that PEFC is the forest certification system of choice for the region. The Indonesian Forestry Certification Cooperation (IFCC) decision to join the world's largest forest certification system was founded in PEFC's unique bottom-up approach, which respects the uniqueness of sovereignty, ecosystem diversity, and the culture of every country.

"Indonesia is home of some of the most biologically diverse forests in the world. We are looking forward to working with IFCC to promote sustainable forest management through forest certification and welcome them as a PEFC member," said Mr Ben Gunneberg, PEFC Secretary General.

"PEFC has refined its Sustainability Benchmarks over the past years to remove barriers to tropical forest certification, and we are excited to see the development of a national forest certification standard by Indonesians for Indonesians," added Mr Gunneberg. "The promise of Indonesian's forests being managed sustainably, in a manner that provides people with jobs that

comply with the fundamental ILO conventions, safeguards forest biodiversity, and protects them from conversions, should be viewed by all who care about saving the world's forests as an important first step in the right direction. The fact that the challenges of the past will be addressed for a sustainable future is positive," he added.

Indonesia's forest land comprises 60 percent of the country's land area, which makes it the third largest area of tropical rainforest in the world. Indonesia's forest is therefore important not only for the national economy and local livelihoods, but also for the global environment. The Indonesian rainforests are also among the world's richest in terms of biodiversity, yet for each year between 2003 and 2006, the Indonesian government estimates that around 1.17 million hectare of forest was cleared or degraded.

The economy in Indonesia is largely dependent on natural resources, with the forest sector employing around 4 percent of the total working population and contributing more than 9 percent of Indonesia's non-mineral export revenue. The Forest Peoples Programme estimates that up to 95 million people in Indonesia (or 40 percent of the population) depend of forest resources for subsistence and trade, emphasising the need for a balanced, responsible approach to forest management.

"We believe that for Indonesia to become a PEFC member is an important development," emphasised Mr Gunneberg. "There's still a long way to go, and we appreciate the opportunity to advance the agenda through IFCC," he added.

By becoming a PEFC member, IFCC has fulfilled an important prerequisite for applying for PEFC endorsement. IFCC is currently facilitating a multi-stakeholder process at national level to develop an Indonesian forest management standard, and the organization is committed to seek international recognition for its forthcoming national standard.

"Joining PEFC is a natural step for any national forest certification system seeking international acceptance," stressed Mrs. Saniah Widuri, General Secretary of IFCC. "We've been feeling welcomed and respected, and we are looking forward to working with fellow PEFC members to advance sustainable forest management and forest certification in Indonesia," added Mrs Widuri. ■



BUILDING DIAGNOSTICS MADE EASY WITH FLUKE INNOVATIVE TOOLS.

Introducing the new Fluke VT02 Visual IR Thermometer that combines the convenience of a spot thermometer with the visual advantage of a thermal imager giving you an entry level troubleshooting camera with an infrared heat map.

This new addition complements the general purpose Fluke TiR125 and high performance Fluke TiR32 whose innovations make thermal imaging so easy.

Fluke has once again revolutionize the day-to-day jobs of our customers delivering tools that make it easier for you to do your job.

Contact us:

Fluke South East Asia Pte Ltd
Tel: +65-6799-5575 • Fax: +65-6799-5577
Email: ig-ad@fluke.com • Website: <http://sg.fluke.com/seab2013VT02>



FLUKE.

Formica unveils new Asian showroom in Singapore

Singapore – Formica®, a leading high pressure laminates company, opened a new flagship showroom in Singapore on 20 December 2012. According to the company, the showroom is the company's first in Asia.

The new showroom, located at 504, Sims Avenue, Geylang, close to the Central Business District, gives visitors the chance to expand their knowledge of the latest designs of Formica and its application beyond basic applications. The store features product displays such as cabinets, kitchen fixtures, bedroom and wall panels in a real-life home setting. Customers also have the opportunity to see and feel up-close the textures of different laminates on display.

"The Formica Singapore Showroom is a 'lifestyle' store that gives customers inspiration

to design their home using high pressure laminates (HPL) in all areas of interior home furnishing," said Mr Fred Wang, President of Formica Asia. "We believe the Formica Singapore Showroom will work as a bridge to inspire our architects and designers in Asia and has more effective communication with our customers," said Mr Wang.

Mr Wang said that the showroom was aimed equally at interior designers and architects but also can provide inspiration to the general public as they seek to improve their lifestyles. "This new flagship showroom is ideally located for visitors to explore options, get inspired, meet with Formica representatives, collaborate with interior designers or architects and demonstrate the latest designs in a real-world application," he added.



Located at Sims Avenue, Geylang of Singapore, the flagship showroom displays Formica laminates such as cabinets, kitchen fixtures, bedroom and wall panels in a real-life home setting.



Formica unveils its first Asian Showroom in Singapore.

The focal point of the showroom is the unique lifestyle-driven designs, with mix & matched colours applying in a real-life home setting, establishing an updated, modern yet sophisticated tone as guests enter the space and experience beyond the product display areas.

Formica's intention was to design a space that communicates its quality, innovation and brand spirit. The showroom features a living room that comes with built-in cabinets in warm earth-tone wood grains matching with Formica DecoMetal®, the premium range of Metal Laminates & Solid Metal by Formica Group, hence enlivening the ambience. The built-in kitchen fixtures highlights the strength of Formica® 2mm thick Gloss Compact® Grade Laminate that luxuriate the beauty of a remarkably enhanced flat surface. Stepping into the bedroom area, the wall panels are installed with the new range of Wood Grains from Infinite Creations by Formica Asia, showcasing the brand's new series of design integrity of transforming the ordinary into something spectacular.

The opening of the showroom also showcases Formica's commitment in sustainability. Formica® Laminates are GREENGUARD Certified and Singapore Green Label Certified. To support Formica's commitments for environmental stewardship, sustainability was a driving factor throughout the design and construction process.

Formica® is committed to design, quality, service, integrity and sustainability. The showroom offers interior designers, architects, dealers, homeowners and other guests with an easily accessible destination for viewing these design solutions at the following operating hours.

The showroom is opened from Monday to Friday, from 9 am to 5.45 pm and on Saturday, from 9 am to 12.30 pm. It is closed on Sundays. **For more information, tel (+65) 6514 1313 (1-800-FORMICA).** ■



Singapore | Malaysia | Philippines | Vietnam

PLAYGROUND | 3G FITNESS
WATERPLAY | INTERACTIVE PLAY
SKATEPARK | STREET FURNITURE



Playpoint (Singapore) Pte Ld
No.1 Sims Lane #04-02 Singapore 387355
Tel: (+65) 6398 1558 | Fax: (+65) 6398 1559
Email: info@playpoint.com.sg

www.playpoint.asia |  www.facebook.com/playpointasia | www.tgogc.com

playpoint
imagination @ play

CDL honoured with 2012 Asia Pacific Green Builder of the Year Award

Singapore – City Developments Limited (CDL) has been named the Asia Pacific Green Builder of the Year by global research and growth consultancy, Frost & Sullivan. This best-in-class award for the real estate sector is conferred as part of the 2012 Frost & Sullivan Asia Pacific Green Excellence Awards, which honours companies in the Asia Pacific region that have excelled in green product and technology innovation, and service achievements across various industries.

A total of five real estate developers from the Asia Pacific region were shortlisted for the Builder of the Year category. CDL emerged as the best-in-class performer following a rigorous measurement-based assessment and benchmarking process, which encompasses a broad range of criteria including green growth strategy excellence, number of green buildings certified, green and environmental sustainability concept implementation, degree of innovation with services and technologies, leadership in customer and stakeholder value, and leadership in market penetration of green buildings.

In particular, CDL's first-mover advantage as one of the pioneer green builders in the region and its success in implementing the culture of building "Green" throughout the organisation with the commitment and drive of its top management was highlighted. "CDL's adoption and implementation of green concepts and technologies in the design and construction of its projects and the constant education of its customers as to its offerings and the benefits to them has

made it an institution in green buildings and a trend setter in the increasingly fast paced green buildings movement," states Frost & Sullivan, in its analysis report on CDL.

"For over a decade now, CDL's corporate strategy has been founded on a triple bottom line approach for continued growth and business excellence. We have established policies to 'conserve as we construct'. We strive to develop and manage properties in an energy-efficient and cost-efficient manner, while also influencing various stakeholders and supply chains through outreach initiatives. As a result of this holistic strategy, we estimate that our 37 Green Mark certified buildings between 2008 and 2011 account for an estimated saving of S\$19.7 million in electricity annually. We are honoured to be recognised for our pioneering efforts in integrating environmental priorities and long-term sustainability as part of our business strategy," said Mr Kwek Leng Joo, CDL's Managing Director.

CDL has been measuring its environmental and social performance with the aim of driving improvements. One of the forerunners in sustainability reporting, the Company has been proactively publishing a dedicated Sustainability Report, which discloses comprehensive details on its triple bottom line performance for the calendar year, since 2008.

CDL's latest Sustainability Report 2012 titled "Ideas, Initiatives, Impacts" is the first Level A+ Sustainability Report checked by the Global Reporting Initiative (GRI) using the GRI G3.1 guidelines and

the Construction and Real Estate Sector Supplement (CRESS) to be published by a Singapore property developer. CRESS was only released by GRI in September 2011 and the performance indicators included are better tailored to the real estate and construction industry for enhanced relevance and transparency. This includes areas such as building and material certification, CO2 emissions as well as health and safety issues. The aim is to help organisations improve transparency of reporting disclosure with tools that can better communicate the impacts of the industry. The report covers CDL's environmental and social performance for the calendar year 2011 and is available at www.cdl.com.sg/sustainabilityreport2012.

This latest award joins CDL's growing list of global and local sustainability accolades. CDL is the first Singapore corporation to be listed on all three of the world's top sustainability benchmarks: the Dow Jones Sustainability Indexes (World & Asia Pacific – since 2011), FTSE4Good Index Series (since 2002) and the Global 100 Most Sustainable Corporations in the World (since 2010). In Singapore, CDL remains the private developer with the most Building and Construction Authority (BCA) Green Mark certified developments to date, comprising 62 certified developments of which 21 are of the highest Platinum tier. In addition, CDL was the inaugural recipient of the BCA Green Mark Champion, Built Environment Leadership (Platinum) and Green Mark Platinum Champion Awards in 2008, 2009 and 2011 respectively. ■

Mitsubishi Electric establishes elevator and escalator joint venture in India

Tokyo, Japan – Mitsubishi Electric Corporation announced that it has established a joint venture company, Mitsubishi Elevator ETA India Private Limited, to sell, manufacture, install and provide maintenance for elevators and escalators in India. Headquartered in Chennai, the joint venture was formed with UAE-based ETA Ascon Holding LLC and will start business in January 2013.

Since 1995, Mitsubishi Electric has distributed elevators and escalators in India through a local agent, installing its products primarily in the premium segment including luxury hotels and offices.

To further expand its growing Indian market, Mitsubishi Elevator ETA India will take over the business of the local agent. In addition to expanding sales in the premium segment, the new company will enter the residential segment and others, where the demand for elevators is showing remarkable growth.

Mitsubishi Elevator ETA India aims to grow sales volume by strengthening its sales network across the country and by offering more products that fulfill local needs. A new logistics center will enable more efficient procurement of components and develop a product supply framework. Also, an engineering center will be established to strengthen customer solutions in terms of product specifications and technical requirements.

Skilled engineers from Japan will provide company employees with technical training to enhance the quality and reliability of installations and servicing for greater customer satisfaction. Increased training also is expected to nurture the company's human resources as a powerful corporate asset. ■

Architecture and the Built Environment

series of events for the built environment

31 July - 02 Aug 2013
Singapore EXPO, Singapore



The Architecture and Built Environment (ABE) series of events is organised by Sphere Exhibits for the built environment. Under the flagship of BuildTechAsia2013, 4 shows integrate as ONE unique platform to serve the key growth sectors across various industries and address the challenging trends of urbanization. Together with InterDecAsia2013, AsiaLighting2013 and FMSE2013, the series is held during the Singapore Construction Productivity Week. Bringing together the regional community and international brands, be a part of this sourcing, networking, learning and competition platform from 31 July – 2 August, 2013, at the Singapore EXPO.

**To exhibit, call +65 6419-4021 or email to abeseries@sph.com.sg.
To visit, pre-register online at www.abeseries.com.**

Organised by:

Held In:

Held concurrently:



HASSELL + Populous win the design of Sydney's new Convention, Exhibition and Entertainment Precinct

Brisbane, Australia – Joint venture partners, HASSELL + Populous have won the architectural contract for the design of Sydney's new integrated convention, exhibition and entertainment precinct at Darling Harbour, due for completion in 2016.

HASSELL + Populous are design consultants to Destination Sydney consortium, which has been selected by the New South Wales Government as preferred developer and contractor of the AUD \$1 billion facility. The consortium comprises of developer Lend Lease, its infrastructure development business Capella Capital, leading venue managers and operators AEG Ogden, and Spotless, which will deliver Facility Management Services.

Populous has designed both the London and Sydney Olympic stadiums in addition to 45 Convention and Exhibition centres around the world. The firm's senior principal and project leader, Richard Breslin, says Sydney will have a state-of-the-art venue that will showcase the city to the world and revitalise Darling Harbour, both economically and culturally.

Ken Maher, HASSELL design leader on the project, said the firm was delighted to take on the challenge of transforming a key Sydney precinct through the design of three major public buildings and the unifying public realm.

"The re-making of Darling Harbour is a rare opportunity to design a significant new quarter within the central city," he

said. "It extends the urban fabric and re-connects the city to Ultimo and Pyrmont with more permeable networks of streets and lanes. Importantly it can bring a new level of public amenity for visitors and citizens alike through extended public parkland that is identifiably 'Sydney' in character.

"It will be a fusion of architecture and landscape, of indoors and outdoors, of engagement, education, living, creative working and entertainment. The project demonstrates the imperative of responsive design to sustain urban life at this critical time for our cities and communities," he said.

Populous' Richard Breslin added that the project presents a great opportunity for Sydney as a major international destination. "This precinct will reflect the dynamism of Sydney's cityscape, redefine Darling Harbour, and respect the precinct's parkland setting.

"The landmark Convention Centre, deliberately clad in materials which reflect its spectacular harbour outlook, will be complimented by the rest of the precinct which looks onto parkland. Here, the building's boundaries are set back, designed so the landscape becomes part of the building, with circulation and



Photo courtesy HASSELL + Populous

meeting spaces open to the park, terraces functioning as meeting spaces, and a huge 5,000 square metres open deck on top of the building providing a platform to be used for major events," said Breslin.

The precinct will include:

- A convention facility capable of holding three separate concurrent events of up to 2,500 delegates
- Total exhibition capacity of 40,000 square metres
- An external event deck of 5,000 square metres featuring spectacular city views
- A plenary hall which can be converted to an entertainment theatre with a seated capacity of 8,000
- A grand ballroom with banqueting space for up to 2,000 ■

Cummins Power Generation announces new ratings classification for data center power generation systems

Singapore – Cummins Power Generation Inc., a leading global supplier of backup power generation systems for data centers and other mission-critical facilities, has announced a new diesel generator power output ratings category for data center applications. In response to data center customers' needs for assurance of total reliability and dependability, the Data Center Continuous (DCC) rating offers diesel generator sets rated for unlimited hours of operation, with no restrictions on average variable load factor. DCC ratings will be applicable for any data center installation where a reliable utility exists. The Data Center Continuous ratings span the range of Cummins Power Generation's high horsepower diesel generator sets, from 1 MW up to 2.5 MW, and will apply to both 50 Hz and 60 Hz configurations. This introduction is part of Cummins overall focus on data center innovation, marshalling a team global experts and life cycle support resources specifically for its data center customers.

"Our data center customers have indicated to us there still is confusion around various rating descriptions, guidelines and applications by different manufacturers, making the data center power system design process difficult to navigate," said Craig Wilkins, Director of Global Critical Protection for Cummins Power Generation.

"These new ratings will not only simplify the engineering design process, but will make it much easier for those data center customers seeking site certification from the Uptime Institute."

Consultants and engineers can now design with the confidence that Cummins DCC ratings can be applied up to the specified rating without restrictions on varying or non-varying loads or hours of operation. The new ratings are in addition to the current emergency standby and prime power ratings. By combining DCC ratings with Cummins' diesel generators' time-tested ability to achieve 100 percent load acceptance in one step with best-in-class PowerCommand® digital controls, data center customers can be confident they are purchasing power generation systems at the leading edge of reliability and dependability. ■