SOUTHEAST·ASIA CONSTRUCTION

MAY - JUNE 2024

Cover Story:

North-South Expressway, Vietnam

Features:

SJ Campus Singapore: A showcase of engineering marvels

Road construction for Zoji-La Tunnel in the Himalayas

Overhauled Liebherr HS 873 HD crane in Hong Kong

Sennebogen 825 E Demolition machine

30 YEARS

Laminated with Derprosa™ Antimicrobial

DINGLI

Exceed · New Height

Three-Year Comprehensive Warranty

Comprehensive Upgrade Fourteen Benefits

PERFORMANCE+

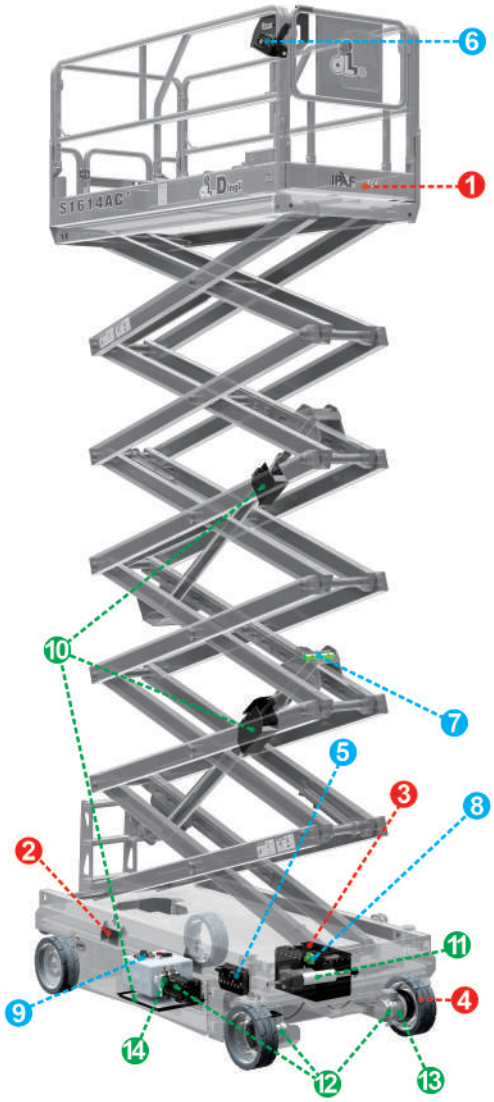
1. **Industry Leading Platform Capacity**
   Maximum increase up to 40% compared to the original model
2. **Side and Rear Forklift Pockets**
   Multiple choices for transport efficiency
3. **Lithium-Ion Battery with Long Duty Cycle and Fast Recharging**
   High-density battery pack with five-year warranty
4. **High Strength Damage Resistant Tyres Compound**
   Double the life compared to conventional tyres

RELIABILITY+

5. **Integrated Four-in-One Motor Controller**
   40% reduction in connections and harnesses
6. **New Platform Control Box**
   The durability of the touch pad is greatly improved, the new surface cleans easily, and the display is three times larger
7. **Reliable Load Sensing System**
   Less affected by temperature and friction
8. **Scissor Angle Sensor Reliability Improvement**
   Limit switches are reduced by 60%
9. **Hydraulic Oil Heater (Optional)**
   Applicable for cold environment

ENVIRONMENT+

10. **Hydraulic Oil Leak Containment**
    For applications with zero leak tolerance
11. **Electric Actuator Steering System**
    No hydraulic oil, faster steering speed and 66% reduction in energy consumption
12. **Gravity Down Energy Recovery System**
    Battery charge regeneration during platform descent
13. **Highest Efficiency Electric Drive System**
    15% decrease in energy consumption and higher power density
14. **Highest Efficiency Electric Lift Pump System**
    20% decrease in energy consumption and higher power density



AC+								
	250kg	408kg	250kg	450kg	350kg	350kg	350kg	350kg
Working Height	**8m**	**8m**	**10m**	**10m**	**12m**	**14m**	**16m**	**16m**
Overall Width	0.7m	0.8m	0.8m	1.2m	1.2m	1.2m	1.2m	1.4m

AC+ Series Scissor Aerial Work Platform

ZHEJIANG DINGLI MACHINERY CO.,LTD.

ADD:188 Qihang Road, Leidian Town, Deqing, Zhejiang, P.R.C

TEL:+86-572-8681688

Phone:+86-13806523131 Susan Huang

E-Mail:export@cndingli.com

Https://en.cndingli.com

PERFECT PARTNERS.

Introducing the Cat® 320 GX Excavator

The new economy model with all the reliability and ease of operation you expect from a Cat excavator, with easy maintenance and lower cost features designed to give you a faster return on your equipment investment. Compatible with Cat H120 GC Hammer to make short work of your demolition, construction, and quarry needs. The result is a low cost per hour solution providing the consistent power and performance you need.

THAILAND/ LAOS
metrocat.com

PHILIPPINES
monark-cat.com

MALAYSIA
tractors.com.my

SINGAPORE
tractors.com.sg

CAMBODIA
cambodiametro.com

MYANMAR
mspcat.com.mm

VIETNAM
phuthaicat.com.vn

BANGLADESH
banglacat.com

CAT®
LET'S DO THE WORK.™

www.cat.com

© 2024 Caterpillar. All Rights Reserved. CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Corporate Yellow", the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

2024 TRENCHLESS ASIA

TRENCHLESS ASIA 2024

16-17 July

World Trade Center Metro Manila, Philippines

The thirteenth event in this outstanding series travels to Manila.

TRENCHLESS ASIA is the major annual international gathering for trenchless technologists to meet and discuss the latest industry developments featuring:

- Trenchless Technology
- Underground Infrastructure
- Pipeline Technologies
- Underground Utilities
- Trenchless Solutions for Urban Flooding
- Knowledge Transfer
- Green Technology

BOOK YOUR STAND TODAY

For more details regarding exhibiting and sponsorship opportunities please contact:
Contact Trevor Dorrell: tdorrell@westrade.co.uk or +44 (0)1923 723990

Organised by: WESTRADE GROUP LTD

Supported by: ISTT International Society For Trenchless Technology; GSTT Trenchless Made in Germany; Federal Ministry for Economic Affairs and Climate Action; UKSTT

Chinese Partner: BEST 百斯特展览 Best Int'l Expo

Official Media Partner: Trenchless Romania; TRENCHLESSWORKS

Bronze Sponsors: DCI Digital Control

Platinum Sponsors: DRILLTO 钻通; PipeSolution Inc; USAE; Vermeer; XCMG

Conference & Drinks Sponsor: HERRENKNECHT Tunnelling Systems

Conference Sponsor: PE100+ Association

www.trenchlessasia.com

All solutions for Construction Safety

K-CONSAFETY EXPO 2024

Korea International Construction and Industrial Safety Expo 2024

Oct. **16(Wed) to 18(Fri)**, 2024(for 3 days) / **KINTEX**

Sponsored by Ministry of Land, Infrastructure and Transport · Ministry of Employment and Labor · GYEONGGI-DO

Hosted by KINTEX · EXPOnJ

Promoting a large exhibition with a scale of 54,000 m² by opening five exhibitions :
Expectation to create synergy by expending related industries and new markets

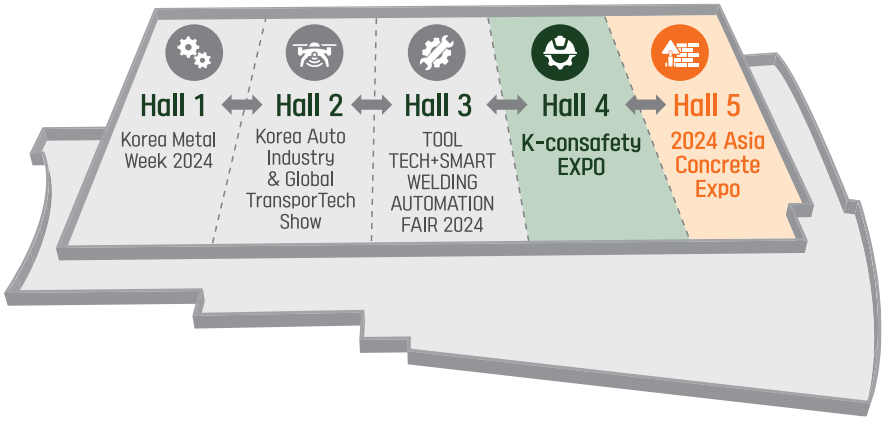
Held by potential buyer

ASIA CONCRETE EXPO KOREA

INTERNATIONAL CONCRETE, CEMENT & MODULAR CONSTRUCTION
(Off-Site Construction) TECHNOLOGY TRADE SHOW

16(Wed)-**18**(Fri) **October 2024** KINTEX, Republic Of Korea

Early application for **recruitment of participating companies is on discount !**



2024 Asia Concrete Expo	10,000㎡
K-consafety EXPO	11,000㎡
TOOL TECH+SMART WELDING AUTOMATION FAIR 2024	11,000㎡
Korea Auto Industry & Global TransporTech Show	11,000㎡
Korea Metal Week 2024	11,000㎡

Contact Information KINTEX office www.k-consafetyexpo.com www.asiaconcretex.com
Tel. 031-995-8782/7255/8042 **Email.** kconsafety@kintex.com / concretex@kintex.com

2nd Edition
CBA EXPO
ConsBuild ASIA 2024

THAILAND INTERNATIONAL CONSTRUCTION, MINING AND BUILDING TECHNOLOGY EXPO

22-24 August 2024

BITEC, Bangkok, Thailand

www.consbuildasia.com

Register NOW

Co-Concurrent with
CONCRETE EXPO ASIA

For more info: E-mail: info@consbuildasia.com Website: www.consbuildasia.com CBA Expo @CBAExpo

Organizer
MB Global Marketings Co., Ltd.

Supporters
TSEA

Bronze Sponsors
AMMANN
Bekaert

Official Media Partner
SOUTHEAST·ASIA CONSTRUCTION

doka

That's a miss. That's a hit!

Formwork & Scaffolding
from a single source.

Doka's 'one-stop-shop' solution provides enhanced project coordination, improved quality control and increased efficiency. The application of its state-of-the-art products and engineering expertise helps you to achieve more sustainable results.

Scan to get more information

linkedin.com/company/doka-asia-pacific

instagram.com/doka_apac

AreaMarketing@doka.com

www.doka.com

SOUTHEAST ASIAN

BUILDING AND CONSTRUCTION EXHIBITION AND CONFERENCE

BCT
BUILDING CONSTRUCTION TECHNOLOGY

EXPO 2024

18 19 20 SEPTEMBER 2024

Hall 12, IMPACT Exhibition
and Convention Center, Bangkok, Thailand

"THE CONSTRUCTION INDUSTRY MEETING PLACE"

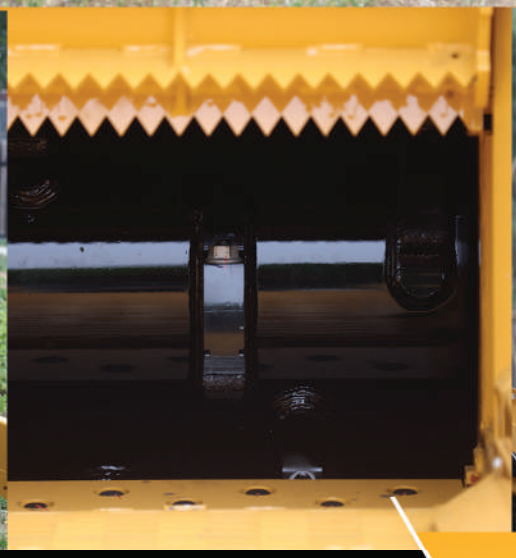
SCAN TO VISIT WEBSITE

Website: www.bct-construction.com

BuildingConstructionTechnology Expo/BCT Expo

Organizer IMPACT MUANG THONG THANI

CAPABLE GRINDER
SMALL FOOTPRINT



EFFICIENT ORGANIC MATERIALS PROCESSING WITH HG400

An entry level, small horizontal grinder, the HG400 Horizontal Grinder can process materials like compost, pallets, wooden construction debris and logs with efficacy, making it suitable for mulching and recycling industries. Its compact size faciltates ease of transportation and its wide, flared infeed walls allow for hassle-free feeding of materials.

Vermeer®

Vermeer Asia Pacific | vapinfo@vermeer.com | www.vermeer.com

CONTENTS

NEWS

EVENTS

PRODUCTS

On the cover:
The North-South Expressway project in Vietnam
(page 56)

Cover designed by
Fawzeeah Yamin

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

Editor
Fabia Sugandy (seac@tradelinkmedia.com.sg)

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

Media Sales Consultant
Jasmine Gan (jasmine.gan@tradelinkmedia.com.sg)

Head of Graphics Department/ Advertisement Coordinator
Fawzeeah Yamin (fawzeeah@tradelinkmedia.com.sg)

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

Any other matters : info@tradelinkmedia.com.sg
Website: http://seac.tradelinkmedia.biz

ISSN 2345-7082

Scan to visit our website

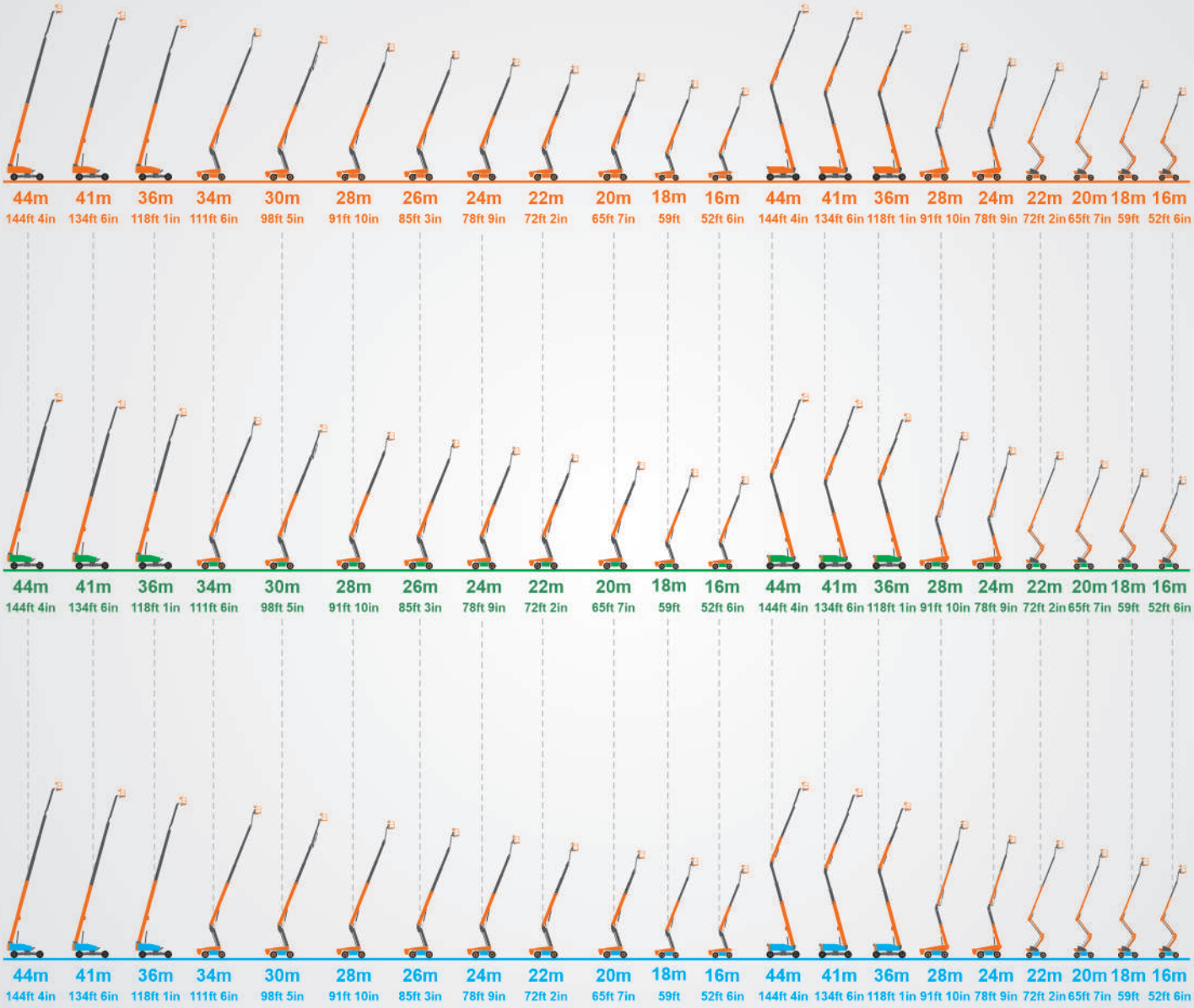
DINGLI

Exceed · New Height

Engine | Electric | Hybrid

KG

Heavy Loading
250kg - 454kg
551lb - 1000lb



Working Height

Modular Boom Series

ZHEJIANG DINGLI MACHINERY CO.,LTD.

ADD:188 Qihang Road, Leidian Town, Deqing, Zhejiang, P.R.C

TEL:+86-572-8681688

Phone:+86-13806523131 Susan Huang

E-Mail:export@cndingli.com

Https://en.cndingli.com

Standard Container Transport For The Full Range

CONTENTS

PROJECTS & OTHER FEATURES

SOUTHEAST ASIA CONSTRUCTION is published six times a year by:
Trade Link Media Pte Ltd. RCB Registration no: 199204277K
Address: 1 Paya Lebar Link, #04-01 Paya Lebar Quarter 1 (PLQ 1), Singapore 408533
Tel: +65 6842 2580 Email: info@tradelinkmedia.com.sg
Website: http://seac.tradelinkmedia.biz

The magazine is available free-of-charge to applicants in the building and construction industries who meet the publication's terms of control. For those applicants who do not qualify for free subscription, copies will be made available, subject to the acceptance by the publisher, of a subscription fee which varies according to the country of residence of the potential subscriber. Airmail (per year): Singapore - S$70; Malaysia and Brunei - S$120; Rest of Asia - S$180; Japan, Australia, New Zealand, Middle East, Europe and USA - S$220 (Inclusive of GST / Reg: M2-0108708-2).

Printed in Singapore by Fuisland Offset Printing (S) Pte Ltd.
MCI (P) 061/08/2023 • ISSN 2345-7082 (Print) and ISSN 2345-7090 (E-Periodical) • KDN No: 1560 (1271)-(6)

Clause: 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.
Disclaimer: Advertisers and contributors must ensure that all promotional material and editorial information submitted to our publication are free from any infringement on patent rights and copyright laws in every jurisdiction. Failure of which, they must be fully liable and accountable for all legal consequences (if any) that may arise. Views and opinions expressed or implied in this publication are contributors' and do not necessarily represent those of Trade Link Media Pte Ltd, Southeast Asia Construction and their staff.

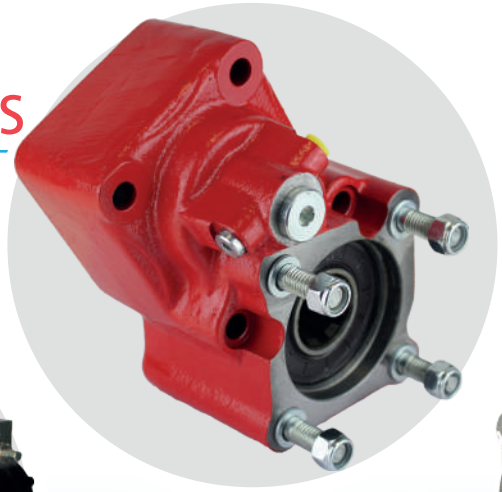
INTERNATIONAL SALES OFFICE:
Mr. Akiyoshi Ojima, Echo Japan Corporation
Grande Maison Rm 303, 2-2, Kudan-Kita 1-Chome, Chiyoda-ku, Tokyo 102, Japan
Tel: +813 3263 5065, Fax: +813 3234 2064
Email: ojima@echo-japan.co.jp

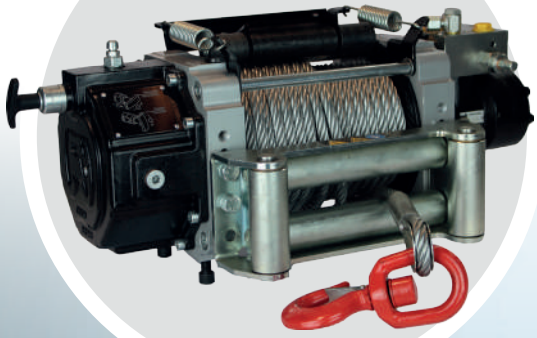
PTOs and pumps for truck-mounted cranes, dump-trucks, concrete mixers, aerial platforms and more...

bezares s.a.

BUILDING OUR WORLD

HEAVY-DUTY
POWER TAKE OFFS





GEAR / PISTON
PUMPS

WINCHES

Hydraulic equipment made in Spain: PTOs, Pumps and Motors (Gear, Piston and Vane), Valves, Oil Tanks, Winches, Split-Line PTOs...

(+34) 918 188 297 - bezares@bezares.com - bezares.com

New mega infrastructure project for Visayas, Philippines

AG&P Industrial (Atlantic, Gulf and Pacific Company Manila, Incorporated) has signed a memorandum of understanding (MOU) with Visayas Neceboley Interlink Holdings Corporation (VNIHC), a real estate, property development and reclamation company, for National Economic and Development Authority's (NEDA) US$15 billion mega infrastructure Project Neceboley, which is expected to commence in the second quarter of 2024.

Project Neceboley – Negros, Cebu, Bohol and Leyte – aims to connect these four major islands in the Visayas region. VNIHC was given certificates of acceptance, thereby granting it original proponent status by the provincial governments of Negros Oriental, Cebu, Bohol and Southern Leyte to develop the project through a collaborative joint venture initiative under the public-private partnership (PPP) framework.

This large-scale development will be supported by a private consortium of global partners that will finance, design, construct, operate and maintain the bridges, road and mass transit network composed of four-lane bridges with expanded expressways. The consortium will also undertake the building of pipes, ducts and landing stations. Other sources of project income will be derived from reclamation development, water supply, power wheeling charges, communications, mass transit and real estate development.

AG&P Industrial, a subsidiary of AG&P Group, is a full-asset lifecycle EPFCIC (engineering, procurement, fabrication, construction, installation and commissioning), infrastructure development and O&M (operations and maintenance) company. In this mega project, AG&P Industrial will serve as a technical partner and EPC contractor and contribute its expertise and resources in infrastructure development and project management.

As the project proponent, VNIHC will procure the requirements, plan and reporting in accordance with the rules, regulations and policies of the local government units (LGUs) and engage AG&P Industrial in pre-proposal conferences, post-award meetings with LGUs and other government institutions to ensure alignment of obligations upon award of the project. AG&P Industrial will also be provided access to contract specifications for reviewing accuracy and technical assistance during pre-solicitation, pre-bid and post award conferences.

The MOU signing ceremony between AG&P Industrial and VNIHC.

Project Neceboley will be carried out in two phases. Phase 1 will be focused on the construction and operation of a 238.05-km bridge and toll road expressway network, connecting the four major islands of the Visayas region. It is further divided into six packages, of which Package A will involve the construction of a bridge spanning from Sibulan (Negros Oriental) to Santander (Cebu), with a length of 11.30 km. Package A is scheduled to begin in the second quarter of 2024.

Phase 2 will be focused on raw land reclamation and horizontal development of 568-ha foreshore and offshore areas in the Visayas region, as well as the development of the reclaimed land into ready-to-use complexes for residential, commercial, industrial and other tourism-related purposes. ■

Work starts on Khe Net Pass railway project in Vietnam

Work on the railway improvement project at Khe Net Pass in Tuyen Hoa district, Quang Binh province, Vietnam, has officially begun. A groundbreaking ceremony to mark this important stage was held on 22 March 2024.

The Khe Net Pass railway rehabilitation project on the Hanoi – Ho Chi Minh City line is said to be Vietnam's first ODA-funded project from the Korean EDCF, with a total value exceeding VND2,000 billion.

The project consists of two contract packages: XL01 for building two railway tunnels (620 m and 393 m) by Ilsung Company – Deo Ca Group in 23 months, and XL02 for bridges, tracks, signals, etc. by Ilsung – RCC in 22 months.

When completed, the Khe Net Pass project will enhance the North-South railway, shortening Hanoi to Ho Chi Minh City train journeys, ensuring smooth and safe rail transport, and improving service quality.

According to Deo Ca, one of the contractors on the project, the company will be focusing on railway infrastructure investments as its new direction for the next five to 10 years. It is currently looking into advanced countries like Singapore, China and Japan to prepare for high-speed railway and urban railway projects by importing training programmes and experts.

In January 2024, Deo Ca Research and Training Institute launched a specialised programme in railway – metro construction to develop human resources for the transportation industry, aiming to meet the urgent need for skilled professionals in the rail – metro sector.

In March 2024, Deo Ca collaborated with Vietnam's Dong A University to establish the Deo Ca Practical Training Institute, offering advanced training courses for practical road and rail – metro engineers and the post-graduate level. ■

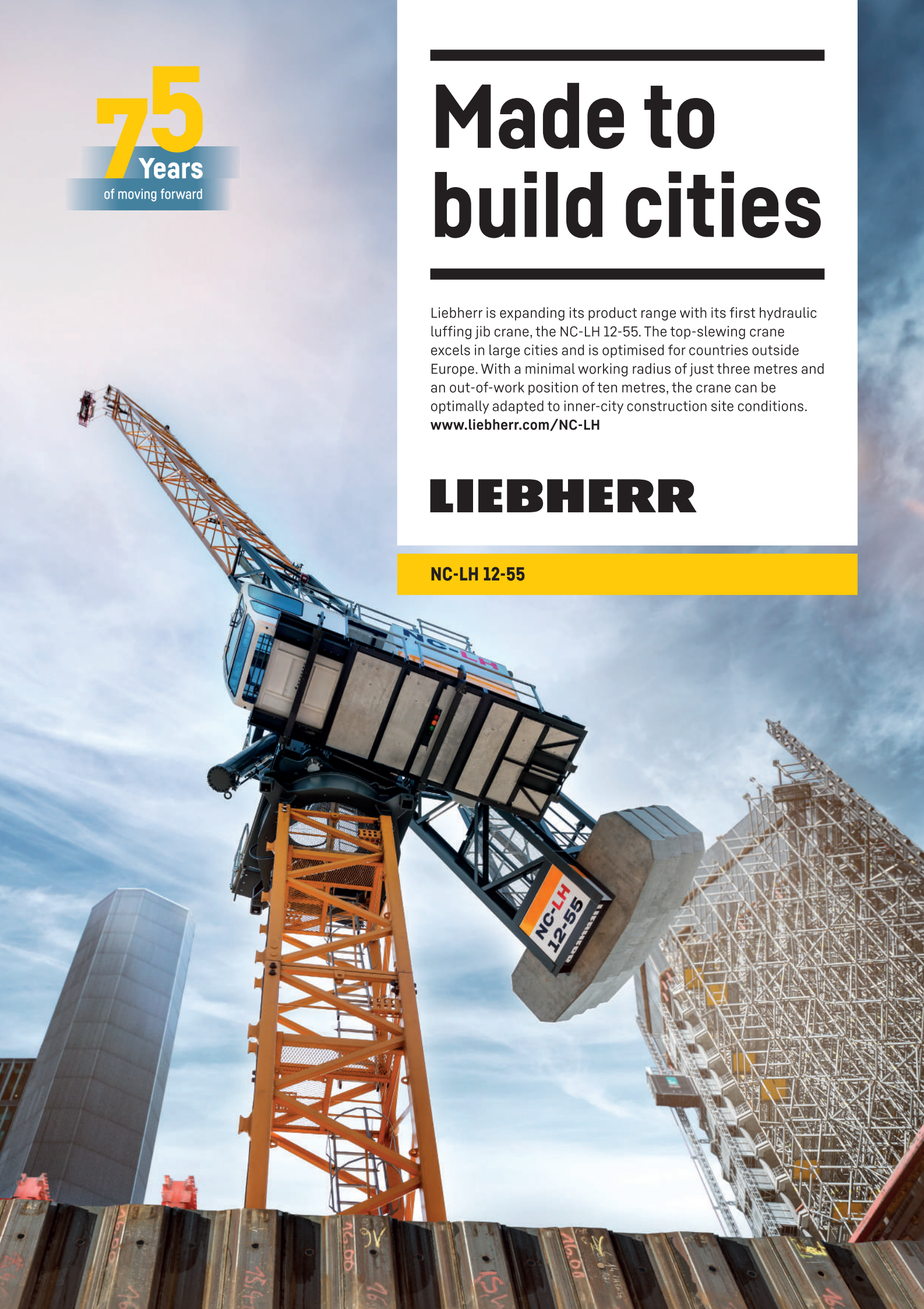
75 Years
of moving forward

Made to build cities

Liebherr is expanding its product range with its first hydraulic luffing jib crane, the NC-LH 12-55. The top-slewing crane excels in large cities and is optimised for countries outside Europe. With a minimal working radius of just three metres and an out-of-work position of ten metres, the crane can be optimally adapted to inner-city construction site conditions.
www.liebherr.com/NC-LH

LIEBHERR

NC-LH 12-55



SHKP plans for new large-scale project in Hong Kong

Sun Hung Kai Properties (SHKP) is planning for a new large-scale project in Mong Kok, Hong Kong. One of the highlights is a 53-storey main tower – which has a three-storey podium and a public rooftop viewing platform – reaching a height of 320 m above the principal datum. Upon completion, the building will become the second tallest commercial landmark in Kowloon after the International Commerce Centre (ICC).

According to the developer, preliminary works are currently underway for the project. Its planning application has recently been approved by the Hong Kong's Town Planning Board.

The project will have a total gross floor area of 1.52 mil sq ft, comprising a 200,000-sq-ft shopping mall and 1.2 mil sq ft of commercial space. Other amenities will include five community facilities with a total floor area of 50,000 sq ft and over 100,000 sq ft of outdoor public space.

Dubbed the 'Green Heart' of Mong Kok, the project will incorporate many green, sustainable elements. A notable feature is the preservation of three banyan trees which are more than 60 years old. A 'Ficus Plaza', which is over 34,000 sq ft, will also be launched at the project's ground-level entrance.

The developer further aims to plant over 50 trees in the project to achieve 30% in greenery coverage and 1,250 kg in annual carbon dioxide absorption. This, together with the other green measures, should create a 'Cool Island Effect' that will reduce the temperature of the vicinity.

Embracing the design concept of 'Urban Cool Ribbon', the project will also come with two landscaped walkways leading to the MTR Mong Kok East Station and a footbridge to Hak Po Street, linking the project with various streets in the neighbourhood. ■

Located in the Mong Kok area, SHKP's new large-scale project will include a 53-storey main tower, which is set to become the second tallest commercial landmark in Kowloon after ICC.

Dubbed the 'Green Heart' of Mong Kok, the project will incorporate many green, sustainable elements. It has a total gross floor area of 1.52 mil sq ft.

Three more tunnel breakthroughs for Malaysia's ECRL rail project

The East Coast Rail Link (ECRL) project in Malaysia recently reached another milestone with three tunnel breakthroughs in the Bentong district. With this, a total of 30 tunnels along its rail alignment have now completed excavation works.

The three new tunnels, namely Bentong 1 Tunnel with a total length of 561 m, Kampung Lentang 1 Tunnel (270 m) and Kampung Lentang 2 Tunnel (478 m), recorded their breakthroughs ahead of schedule via the drill and blast method.

The permanent lining for Bentong 1 Tunnel has progressed to 348 m prior to breakthrough, while preparation of trolley lining for permanent lining construction is underway for Kampung Lentang 1 Tunnel and Kampung Lentang 2 Tunnel. Each tunnel has an average height of 12 m and width of 13 m, thus providing the space for two standard gauge railway tracks upon completion.

The construction of the tunnels in the Bentong district will enable the railway track to comply with its maximum gradient of 0.9% as well as to significantly reduce open forests cutting and minimise the impact on wildlife in the area.

The ECRL project features a total of 41 tunnels with a length of approximately 69 km along its rail alignment – of which 21 tunnels are located within Section A (Kota Bharu-Dungun) and Section B (Dungun-Mentakab), and the remaining 20 tunnels are situated in Section C (Mentakab-Port Klang).

All 21 tunnels in Section A and Section B have completed their excavation works since August 2023. Nine tunnels in Section C have also followed suit to date. The ECRL project registered its first tunnel breakthrough at the 1.1-km long Paka Tunnel in Terengganu in April 2021.

"We are optimistic that the construction of the ECRL alignment from Kota Bharu to ITT Gombak will be completed by December 2026, considering tunnel excavation works which are both challenging and contingent on geological conditions have progressed smoothly and as per schedule," said Dato' Sri Darwis Abdul Razak, CEO of Malaysia Rail Link Sdn Bhd (MRL).

He added that as of February 2024, the ECRL project had achieved an overall progress of 62.40%, underpinned by rapid infrastructure works that included tunnel excavation, beam launching, track laying and station construction. There are approximately 23,000 workers at about 1,900 jobsites across the states of Kelantan, Terengganu, Pahang and Selangor.

MRL, a wholly-owned subsidiary of the Minister of Finance (Incorporated) [MOF (Inc.)], is the project owner of the ECRL while China Communications Construction Company Ltd (CCCC) is the engineering, procurement, construction and commissioning (EPCC) contractor for the project. The ECRL is scheduled for operation in January 2027. ■

JP Nelson

website: www.jpnelson.com.sg

SINGAPORE · MALAYSIA · THAILAND · TAIWAN · HONG KONG · VIETNAM

Your Reliable Partner in Equipment Solutions

Singapore HQ address: 30 Benoi Road Singapore 629900

TEL: +65 6368 9991 FAX: +65 6367 9991

Sole Distributor SUNWARD

Boring Rig

Sole Distributor SUNWARD

Excavator

Sole Distributor SUNWARD

Hydraulic Grab

Sole Distributor SUNWARD

Hydraulic Trench Cutter

Generator

Sole Distributor Junttan

Hydraulic Pilling Hammer

XCMG

Micro Pile

Sole Distributor PVE

Hydraulic Vibro Hammer

ANTAR CRANES SERVICES PTE LTD

ANTAR

Subsidiary of JP Nelson Group

安達起重機服務私人有限公司

Address: 30 Benoi Road Singapore 629900 TEL: +65 6755 8821 FAX: +65 6754 8821 EMAIL: antarcs@singnet.com.sg

Exclusive Distributor ZOOMLION

Crawler Crane with luffing jib

Exclusive Distributor ZOOMLION

Crawler Crane

Exclusive Distributor ZOOMLION

Crawler Telescopic Crane

Exclusive Distributor ZOOMLION

Aerial Working Platform

Sole Distributor MAEDA Mini Cranes

Mini Telescopic Crawler Crane

Sole Distributor MAEDA Mini Cranes

Mini Crawler Crane

Smart Lift

Glass Smart Lift

BCA launches NEC4 contract for construction and engineering projects in Singapore

The Building and Construction Authority (BCA) has launched the NEC4 contract for construction and engineering projects in Singapore. Together with NEC, BCA has also developed a set of additional clauses (Y clauses) to align the contract with local laws.

This move is part of BCA's efforts to widen the adoption of collaborative contracting in Singapore's built environment sector. Another initiative includes identifying pilot projects to use the Public Sector Standard Conditions of Contract (PSSCOC) Option Module.

According to BCA, public sector developers such as the Housing and Development Board (HDB), JTC Corporation (JTC) and Land Transport Authority (LTA) will be piloting the use of NEC4 contract in their upcoming projects.

"Collaborative contracting seeks to overcome the issues in conventional construction contracts; it builds trust, strengthens communication and facilitates a more balanced share of risks among contracting parties. It also nudges parties to consider and implement solutions to address the issues identified to avoid additional costs and project delays," explained Kelvin Wong, CEO of BCA. "Having seen the positive impact of NEC4 contract in overseas projects, we encourage our industry partners to adopt the use of NEC4 contract in their projects. It is a step forward in our collective commitment to drive excellence and collaboration in project delivery, in line with our refreshed Built Environment Industry Transformation Map goals."

The NEC4 contract, which originated from the UK, has been adopted in overseas jurisdictions (e.g. UK and Hong Kong) with demonstrated success in project delivery. "Collaborative contracting allows project parties to have better time and cost control, better management of risks and efficient project management," said Sathia Jagateesan, partner at law firm Allen & Gledhill LLP.

"Compared to conventional lump-sum contracts, collaborative contracts such as NEC4 contract provides a target cost option which allows project parties to share cost savings or overruns when they occur. This could encourage project parties to resolve issues early and explore more productive solutions together."

With the launch of NEC4 contract in Singapore, the local built environment sector now has more options to consider when adopting collaborative contracting in their projects for better project delivery. Private and public sector developers can choose the PSSCOC Option Module or NEC4 contract.

In anticipation of the training demand, the BCA Academy, the Singapore Academy of Law, Institutes of Higher Learning (e.g. Singapore University of Social Sciences), industry associations (e.g. SCAL, ACES and SPM5) and firms have introduced courses and seminars to raise competencies in collaborative contracting. Moving ahead, the BCA Academy will also provide training to facilitate the implementation of NEC4 contract in the pilot projects.

The Hong Kong government carried out its first NEC pilot in 2009 and has been extending its use for various public sector construction projects. Preliminary analysis shows that the NEC4 contract can help improve performance in terms of cost and time management, including large and complicated projects delivered on time and within budget. Based on a review in 2021 by the Hong Kong government, NEC projects are found to achieve 10% saving in time and 2% saving in costs, compared to those procured under its standard General Conditions of Contract (GCC) forms. ■

Taiwan's Xin-Hong acquires Liebherr LTM 1300-6.3 mobile crane

Taiwan-based Xin-Hong Crane Engineering Co Ltd has taken delivery of its third Liebherr crane, the LTM 1300-6.3. This is the first 300-t crane in the rental company's fleet.

Featuring a 90-m-long boom and high lifting capacities, the LTM 1300-6.3 is ideal for applications that require increasingly high hook heights. The crane can carry its 90-m telescopic boom with a 12-t axle load on public roads. In addition, this fast-erecting crane offers compact ballast options, thanks to the VarioBallast and flexible VarioBase support technology.

Whether for semiconductors or high-tech microchips, the production facilities of the Taiwanese IT industry are becoming increasingly taller. "The LTM 1300-6.3 is therefore particularly suitable for our planned operations in science parks, but also on construction sites, in refineries and power stations," said Chien-Min Wu, owner and CEO of Xin-Hong.

"It's a versatile six-axle crane with an excellent telescopic boom and outstanding capacities. With the new mobile crane, we now also have a new flagship for our fleet, which has a considerable resale value."

The story of Xin-Hong began with just one forklift truck in 2003. As the company grew, it branched out into traditional transport work and now has 120 employees in both Taiwan and mainland China. Xin-Hong's fleet is used for traditional lifting tasks as well as challenging crane jobs. The company added its first Liebherr crane, an LTM 1230-5.1, to its portfolio in 2023. ■

Handover of the LTM 1300-6.3 mobile crane to Xin-Hong Crane Engineering Co Ltd in Taiwan.

B2B Trade Exhibition Exclusively Dedicated to

■ CONSTRUCTION ■ MINING

22 ▸ 24
AUGUST 2024

MITEC
KUALA LUMPUR, MALAYSIA

ASEAN International Construction Machinery & Mining Equipment Exhibition (ACM) 2024

For exhibiting and visiting enquiry, please contact:
Roger Lim
T : +603 7987 1668
Whatsapp: +6010 384 4931
E :enquiry@oneinternational.com.my

BuildHub: New online marketplace for construction industry in Philippines

BuildMart PH Technologies, Inc., a B2B e-commerce platform that connects manufacturers with hardware stores, has made an investment in Hubware Corporation – a leading online marketplace for builders, hardware stores and construction suppliers – through the launch of 'BuildHub.ph', an online platform serving as a centralised system for the construction industry.

This strategic investment enables Hubware to initiate the development of a holistic digital construction ecosystem in the Philippines, spearheaded by its key platform, BuildHub.ph. This online marketplace aims to streamline and enhance the visibility of construction sellers, especially hardware stores and brands, thereby bolstering their online presence and customer reach. It will also benefit from Buildmart's 18 fulfillment centres nationwide, 33 renowned brand partners such as Republic Cement, TKL Steel, Union, Saint Gobain and Vicem, as well as 150 partner hardware stores.

LEFT: **BuildHub.ph was officially launched on 4 April 2024, with a celebration held in Taguig, Metro Manila.**

BELOW LEFT: **Richard Lim Jr., co-CEO of BuildHub.ph.**

BELOW: **Marika Laciste, chief business officer of BuildHub.ph.**

BuildHub.ph plans to introduce several new products, including BuildCredit, a dedicated financing facility offering competitive interest rates between 1-3% for terms of 30-60 days. This initiative is designed to support the growth of hardware stores and builders. Additionally, the marketplace will benefit from BuildmartShipping, a proprietary logistics and warehousing network ensuring the timely delivery of over 400 shipments monthly, facilitated by a fleet of 10 trucks and its owned ship, 'MV Buildmart 1', which has a capacity of 22,000 bags.

The launch of BuildHub.ph marks a pivotal advancement in addressing construction industry challenges, such as manual transactions, limited payment options and extended delivery times.

Andre Bernardo, co-CEO of BuildHub.ph, emphasised the importance of industry experience and strategic partnerships in innovating the construction sector. "With a combined 67 years in construction, our team adeptly identifies industry pain points, devises effective solutions, and fosters sustainable partnerships with hardware sellers, construction brands and contractors across the Philippines. Together, we strive to shape the future of inclusive business and community development."

Hubware Corporation, established in 2018, holds the distinction of being the Philippines' first specialised online marketplace for the construction, hardware and home improvement sectors. It aims to empower small and medium-sized enterprises through digital innovations.

"This strategic alliance represents a monumental leap forward for the technology industry, with both Hubware Corporation and BuildMart PH Technologies Inc. set to transform the digital landscape of the construction sector," said Marika Laciste, chief business officer of BuildHub.ph.

BuildMart PH Technologies has been a key player in supplying

A screenshot of BuildHub.ph, an online marketplace dedicated to the Philippines' construction industry.

premium building materials at competitive prices. Leveraging its extensive network and assets within the construction industry, the company continues to make significant strides in providing quality products to its clients.

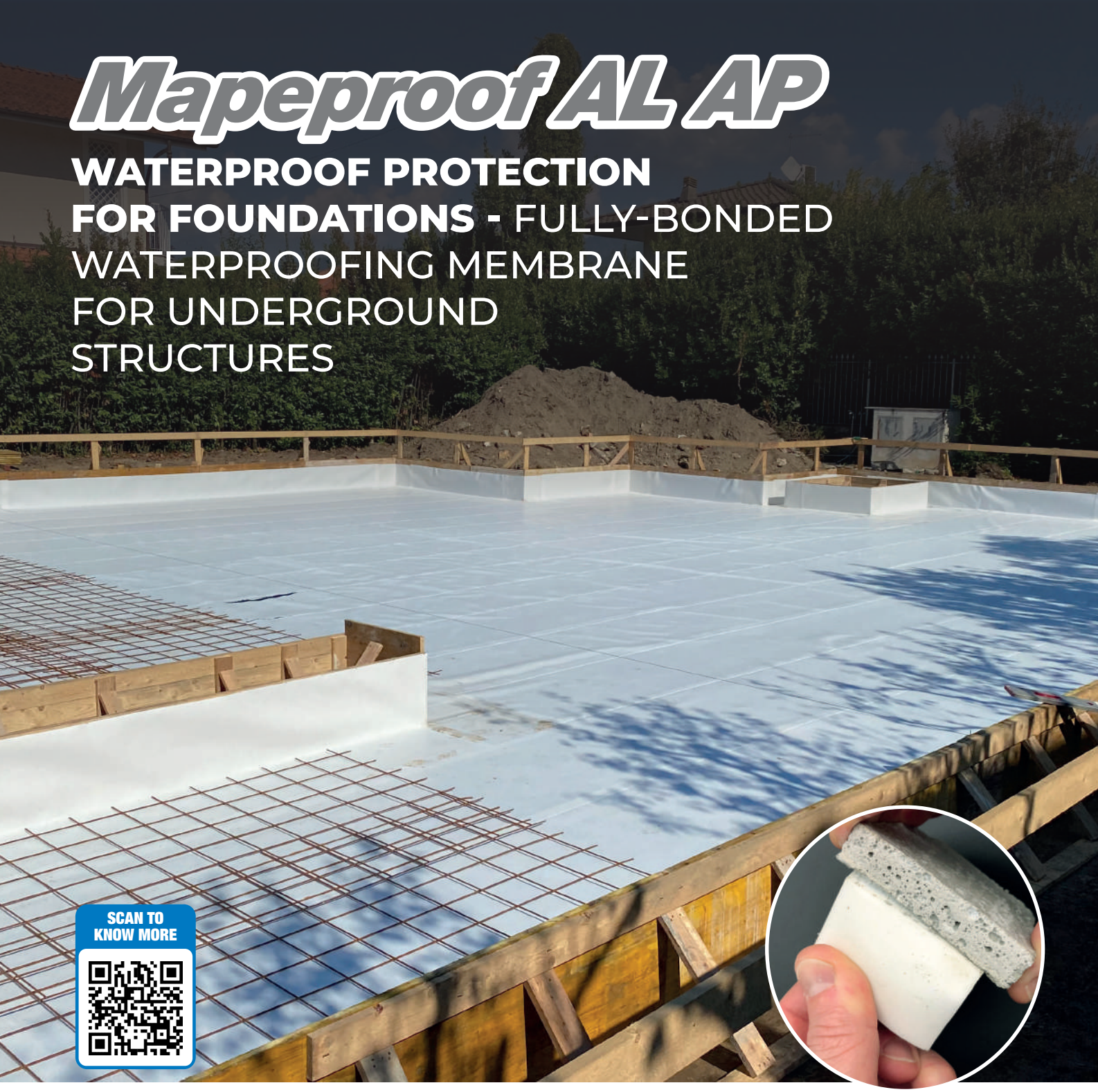
Mr Bernardo envisions the partnership as a strategy aligned to a successful business model. "Our collective goal is to dominate the sector by adopting Jack Ma's Alibaba Iron Triangle model, which focuses on three core elements: platform, logistics and financing," he said.

Richard Lim Jr., co-CEO of BuildHub.ph, also highlighted the importance of dedication, perseverance and collaboration in achieving a sustainable future. "If you aim for quick results, you may choose to work alone. However, for enduring and lasting outcomes, collaboration is essential. Here at BuildHub, we are committed to building a future that stands the test of time, together."

Despite the fragmented nature of the local construction industry, BuildHub.ph identifies significant growth opportunities, projecting the market could attain a value of US$18 billion (approximately Php1 trillion), with 30-40% dedicated to construction supplies and materials. Looking ahead, the platform sets ambitious goals to decuple its user base in 2024, achieve a gross merchandise value of Php1 billion by 2025, and expand its partnerships across the country. ■

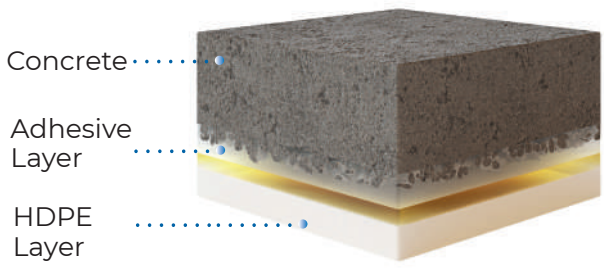
Mapeproof AL AP

WATERPROOF PROTECTION FOR FOUNDATIONS - FULLY-BONDED WATERPROOFING MEMBRANE FOR UNDERGROUND STRUCTURES



SCAN TO KNOW MORE

The Mapeproof AL AP system creates an external shell that protects a structure from water, moisture, radon and methane, and any other substance contained in the ground. By being fully-bonded with the concrete, the membrane inhibits lateral migration of water in case of puncture or tearing.



EVERYTHING'S **OK** WITH **MAPEI**

28 Tuas West Road, Singapore 638383
T: +65 6862 3488 E: mapei@mapei.com.sg
Learn more on **www.mapei.com.sg**

Mapei Singapore

MAPEI®
ADHESIVES · SEALANTS · CHEMICAL PRODUCTS FOR BUILDING

Doka wins contract for 'world's second tallest tower'

Azizi Developments has signed an agreement with global formwork and scaffolding company Doka for the manufacture and supply of formwork systems for its new skyscraper project in Dubai.

The tower, which according to Azizi will be the second tallest in the world, is scheduled to be completed within four years (the exact height will be announced at a later date). It will feature a vertical shopping mall, luxury residences and opulent penthouses, a seven-star hotel, an observation deck and numerous high-end F&B options, among others.

Farhad Azizi, CEO of Azizi Developments, said, "This agreement is a testament to our commitment to procuring and partnering with only the very best, and aligns perfectly with our pursuit of delivering sustainable, innovative, high-quality, world-class developments that enrich lives for generations to come. Collaborating with Doka allows us to ensure premium construction quality for these unique developments."

Doka offers a broad portfolio of solutions for the super high-rise segment, and therefore is able to tailor solutions to requirements. As the tower will be built on the famous Sheikh Zayed Road, the project team faces the challenges of working in limited on-site space. These challenges will be solved by Doka's in-house workshop in Dubai designing strategically pre-assembled formwork and platform elements. These custom solutions will meet the client's requirements for speed, technical precision and adherence to site specifications while effectively managing the space limitations.

Image: Azizi Developments

The project will benefit from Doka's expertise in providing turnkey formwork solutions, including climbing systems for core walls, climbing systems for mega columns, protection screens, slab formwork, table lifting systems, loading platforms, and slab edge protection. By implementing a comprehensive approach to each individual project, Doka can minimise interference between project teams and ensure a smoother, more efficient construction process.

Robert Hauser, CEO of Doka, said, "It's a privilege to partner with one of the most prestigious global developers, Azizi, on this outstanding project. We are delighted that Doka has once again the opportunity to demonstrate its broad experience in the high-rise sector. Only highly experienced formwork experts can provide the right answers to the challenges of this project, from planning and engineering to operational excellence in execution." ■

Image: Azizi Developments

MIDDLE: **Farhad Azizi, CEO of Azizi Developments (on the left) and Robert Hauser, CEO of Doka sign an agreement for the supply of formwork systems for Azizi's new iconic tower in Dubai.**

LEFT: **Situated on the famous Sheikh Zayed Road, Azizi's new tower is set to become the second tallest building in the world. It is scheduled to be completed within four years.**

Manitou and SSAB agree on fossil-free steel

Manitou Group has signed a letter of intent with the Nordic steelmaker SSAB for deliveries of fossil-free steel. Deliveries are scheduled to start in 2026 and ramp up as SSAB's fossil-free steel production capacity increases. This agreement meets the ambitions of both companies to significantly reduce their direct and indirect carbon emissions.

As Manitou's supplier, SSAB is a highly-specialised global steel company that develops high-strength steels and provides services for better performance and sustainability. The two companies are now furthering their collaboration by adding future deliveries of SSAB Fossil-free and SSAB Zero steel to the mix.

Both steel types are produced with virtually zero fossil carbon emissions, which will allow Manitou to bring to market a new generation of sustainable products with radically reduced CO2 footprint, such as telehandler, aerial work platform or forklift ranges.

SSAB aims to revolutionise the entire steelmaking process and be the first to offer emission-free steel to the market at a commercial scale in 2026. At the same time, Manitou aims to reduce its direct and indirect carbon emissions (scope 1 and 2) by 46.3% and its CO2 emissions for every hour of use of the machines by 33.7% (scope 3) by 2030. ■

Image: Viveka Osterman

The agreement between Manitou and SSAB meets the ambitions of both companies to significantly reduce their direct and indirect carbon emissions.

PHILCONSTRUCT VISAYAS

INCORPORATING: HVAC/R VISAYAS

June 20 – 22, 2024

Waterfront Cebu City Hotel & Casino, Lahug

A Journey of Growth, Sustainability, and Progress in the Digital Era

PHILCONSTRUCT MINDANAO

INCORPORATING: HVAC/R MINDANAO

September 5 – 7, 2024

SMX Convention Center Davao, SM Lanang Premier

PHILCONSTRUCT CELEBRATING 35 YEARS

INCORPORATING: HVAC/R PHILS.

November 7 – 10, 2024

SMX Convention Center Manila

World Trade Center

For interested exhibitors, contact info@philconstructevents.com

Connect with us:

philconstructevents.com | Philconstruct Expo | @philconstruct

Organized by: PCA

Co-Organized by: ACEL, PSME

Event Managed by: PHILCONSTRUCT, GLOBALINK MP

In partnership with: Ayala Foundation

Gamuda and Google Cloud partner to deliver AI in engineering and construction

Malaysia's Gamuda Berhad has expanded its collaboration with Google Cloud to make enterprise-grade generative AI (gen AI) capabilities accessible and useful to every Gamuda employee, empowering them to more efficiently and innovatively deliver engineering, construction and public infrastructure projects in the region.

The adoption of gen AI for Gamuda is "another step forward in our continuous digital innovation journey to transform a highly traditional industry, which is engineering and construction. Through the Gamuda Innovation Hub, we're breaking new ground with a digital and data-driven approach for construction while upskilling talent in Google Cloud competencies to set them on new career paths in our industry," explained John Lim Ji Xiong, group chief digital officer at Gamuda Berhad.

"Google Cloud is our cloud provider of choice because of their vast expertise in planetary-scale data management and cutting-edge AI, coupled with the intuitiveness of their developer platforms and tools. These make it very easy for our workforce to even build their own gen AI tools to address challenges in their work – in a manner that is private and secure."

A unified data platform to drive agile decision-making

To give employees enhanced operational visibility and lay the groundwork for gen AI adoption, Gamuda developed the Gamuda Digital Operating System (GDOS), which is a standard ecosystem of tools for every Gamuda project where enterprise data is consolidated and underpinned by a unified data cloud platform. This includes data from mission-critical systems like Autodesk Construction Cloud and SAP S4/HANA. Notably, this follows the successful migration of Gamuda's SAP S4/HANA systems from Amazon Web Services (AWS) to Google Cloud in 2023, supported by Google Cloud partner Cloudspace.

"Moving all our compute workloads, including SAP S4/HANA to Google Cloud, allowed us to harmonise our compute and data in a single cloud platform, thereby enabling the team to focus on driving value-creating use cases and shifting the focus away from managing infrastructure. Google Cloud's BigQuery data warehouse and workload-optimised infrastructure delivers cost savings, is easy to use, and helps us derive more value from our data footprint," said Mr Lim.

A unified data cloud provides Gamuda's design, engineering, finance, supply chain and field operations teams with a holistic, integrated and real-time view of all project workflows. This enables agile, data-driven decision-making throughout the process of delivering complex, long-term projects in Malaysia, Australia, Singapore and Taiwan.

To safeguard its enterprise data and core digital systems, Gamuda has implemented Google Cloud's Security Command Center Premium platform, which is powered by machine learning, for advanced threat detection and prevention, attack path simulation, and upholding regulatory compliance.

Integrating gen AI for safer and faster tunnelling

One initiative that digs deep into the core of Gamuda's tunnelling competencies is the use of Google Cloud's Gemini models on

TOP AND ABOVE: **Images of autonomous tunnel boring machine (A-TBM) created by Gemini models.**

the Vertex AI platform to build and integrate a gen AI-powered conversational agent into its cloud-based Tunnel Insight platform, with support from CloudMile, a Google Cloud partner.

Powered by Google Cloud, Tunnel Insight ingests, presents and analyses sensor data from the world's first autonomous tunnel boring machines (A-TBMs) developed in-house by Gamuda. Guided by sophisticated algorithms to automate repetitive operational tasks like machine steering, and advance and muck excavation, these A-TBMs are being used for better tunnelling in construction projects like the Defu and West Coast Mass Rapid Transit (MRT) stations and tunnels in Singapore and the Sydney Metro West-Western Tunnelling Package in Australia.

The vast amount of data that is continuously generated by such operations can make it challenging for staff to extract insights at pace for timelier responses to geological changes or maintenance needs. The gen AI-powered conversational agent is therefore being used by staff to quickly extract relevant summaries and instructions from a vast repository of machine documentation to ease the maintenance process, and easily interpret data charts on machine performance in natural language.

An image of construction site created by Imagen.

Embracing gen AI-powered future

Gamuda has also been using Vertex AI Search and Conversation to build generative search and chat applications for its market intelligence, design and technical teams. These employees can now synthesise thousands of pages of research documentation into crisp summaries within minutes and query data from hundreds of past projects for insights to inform new project tender proposals.

This marks the start of Gamuda's efforts to empower more employees to build customised generative search and chat applications – with just a few clicks – to support their specific role or function, and make them accessible to the rest of the workforce through an internal marketplace called BotUnify. With Vertex AI Search and Conversation, Gamuda and its employees retain full control over what information sources their generative applications access, ingest and index. This allows them to ground these applications' outputs in enterprise data and implement features like source citations, thereby boosting user confidence in the relevance and quality of their responses.

"Google Cloud's enterprise AI stack has accelerated our gen AI innovation cycles, allowing us to go from concept to impact much faster than we had hoped. With Vertex AI's out-of-box capabilities, even employees with zero specialist AI knowledge can build, deploy and gain value from functional generative applications in a matter of weeks. With access to world-class foundation models and easy-to-use APIs, Google Cloud enables Gamuda to lay the groundwork for a marketplace of expertise and insight at our fingertips," said Mr Lim.

"Construction has traditionally been a labour- and process-intensive industry with lengthy project cycles, but Gamuda has swiftly transformed this paradigm by embracing digitalisation and gen AI at scale on Google Cloud. They're merging diverse data streams to solve real-world challenges, while saving time and costs – and they're setting a powerful example for enterprises seeking rapid innovation through the convergence of modern infrastructure, data analytics, security and AI," said Patrick Wee, country manager for Malaysia at Google Cloud.

"We're excited to be supporting Gamuda's gen AI-powered advancements across autonomous drilling, building information modelling, augmented reality, and more, equipping its 4,200-strong workforce with future-forward tools to shape the built environment in Malaysia and beyond." ■

The A-TBM in Malaysia. This autonomous TBM has been developed in-house by Gamuda.

The A-TBM working on a jobsite in Sydney, Australia.

New model makes it easier to build sustainable structures of textile-reinforced concrete

By reinforcing concrete with textiles instead of steel, it is possible to use less material and create slender, lightweight structures with a significantly lower environmental impact, according to researchers at the Chalmers University of Technology in Sweden.

The technology to utilise carbon fibre textiles already exists, but it has been challenging, among other things, to produce a basis for reliable calculations for complex and vaulted structures. The researchers are now presenting a method that makes it easier to scale up analyses and thus facilitate the construction of more environment-friendly bridges, tunnels and buildings.

"A great deal of the concrete we use today has the function to act as a protective layer to prevent the steel reinforcement from corroding. If we can use textile reinforcement instead, we can reduce cement consumption and also use less concrete – and thus reduce the climate impact," said Karin Lundgren, professor in concrete structures at the Department of Architecture and Civil Engineering, Chalmers University of Technology.

Cement is a binder in concrete and its production from limestone has a large impact on the climate. One of the problems is that large amounts of carbon dioxide that have been sequestered in the limestone are released during production, the researchers pointed out. Every year, about 4.5 bil t of cement are produced in the world and the cement industry accounts for about 8% of global carbon dioxide emissions. Intensive work is therefore underway to find alternative methods and materials for concrete structures.

Image: Chalmers / Udo Jandrey

The pedestrian and bicycle bridge in Albstadt, Germany, is an early example of a textile-reinforced concrete structure. The bridge is about 100 m long.

Image: Chalmers / Robert Mehl

Picture from the construction of a pavilion at the RWTH Aachen University of Technology, Germany. The shell-shaped roof structure has been reinforced with carbon fibre textile and is only 6 cm thick.

Image: Chalmers / Catharina Björk

Concrete with embedded carbon fibre textile.

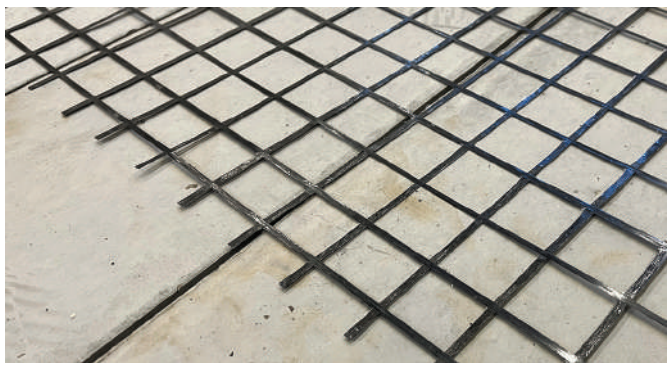


Image: Chalmers / Mia Halleröd Palmgren

Carbon fibre textile reinforcement mesh.

Reduced carbon footprint with thinner constructions and alternative binders

By using alternative binders instead of cement, such as clay or volcanic ash, it is possible to further reduce carbon dioxide emissions. But so far, the researchers found that it is unclear how well such new binders can protect steel reinforcement in the long term.

"You could get away from the issue of corrosion protection, by using carbon fibres as reinforcement material instead of steel, because it doesn't need to be protected in the same way. You can also gain even more by optimising thin shell structures with a lower climate impact," said Ms Lundgren.

In a recently published study in the journal Construction and Building Materials, Ms Lundgren and her colleagues share a new modelling technique that was proved to be reliable in analyses describing how textile reinforcement interacts with concrete.

"What we have done is to develop a method that facilitates the calculation work of complex structures and reduces the need for testing of the load-bearing capacity," revealed Ms Lundgren.

The researchers said one area where textile reinforcement technology could significantly reduce the environmental impact is in the construction of arched floors. Since the majority of a building's climate impact during production comes from the floor structures, it is an effective way to build more sustainably. A previous research study from the University of Cambridge shows that textile reinforcement can reduce carbon dioxide emissions by up to 65% compared to traditional solid floors.

Method that facilitates calculations

A textile reinforcement mesh consists of yarns, where each yarn consists of thousands of thin filaments (long continuous fibres). The reinforcement mesh is cast into concrete, and when the textile-reinforced concrete is loaded, the filaments slip both against the concrete and against each other inside the yarn. A textile yarn in concrete does not behave as a unit, which is important when one wants to understand the composite material's ability to carry loads. The modelling technique developed by the Chalmers researchers describes these effects.

"You could describe it as the yarn consisting of an inner and an outer core, which is affected to varying degrees when the concrete is loaded. We developed a test and calculation method that describes this interaction," explained Ms Lundgren. "In experiments, we were able to show that our way of calculating is reliable enough even for complex structures."

The work together with colleagues is now continuing to develop optimisation methods for larger structures.

"Given that the United Nations Environment Programme (UNEP) expects the total floor area in the world to double over the next 40 years due to increased prosperity and population growth, we must do everything we can to build as resource-efficiently as possible to meet the climate challenge," said Ms Lundgren. ■

Note: The article titled 'Textile reinforced concrete members subjected to tension, bending, and in-plane loads: Experimental study and numerical analyses' is published in the journal Construction and Building Materials. The research projects that form the basis of the article are funded by the Swedish Research Council.

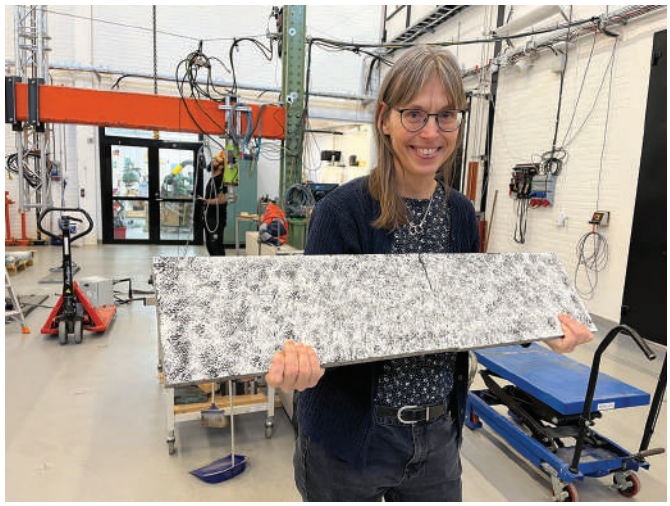


Image: Chalmers / Mia Halleröd Palmgren

Research leader Karin Lundgren shows a carbon fibre reinforced concrete slab, the load-bearing capacity of which has been tested in the construction lab at the Chalmers University of Technology, Sweden.

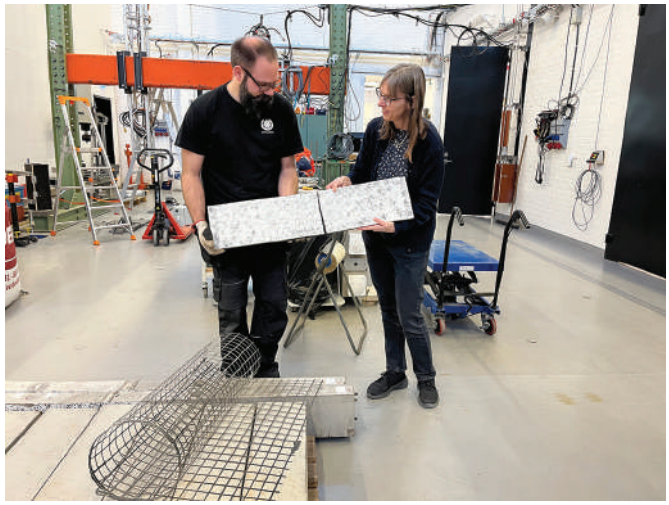


Image: Chalmers / Mia Halleröd Palmgren

Ms Lundgren and Sebastian Almfeldt at Chalmers are two of the authors of the scientific article describing a new method that facilitates calculations of complex structures of textile-reinforced concrete. Here they show a carbon fibre reinforced concrete slab. In the foreground, a textile reinforcement mesh made of carbon fibre can be seen.

Image: Chalmers / Sebastian Almfeldt

Test set-up where textile-reinforced concrete is loaded in the construction lab at Chalmers.

CALENDAR OF EVENTS

// Events in Asia

Trenchless Asia
16 to 17 July 2024
World Trade Centre Metro Manila
Metro Manila, The Philippines
Website: www.trenchlessasia.com

World of Concrete Asia
14 to 16 Aug 2024
Shanghai New International Expo Centre
Shanghai, China
Website: https://en.wocasia.cn

CBA Expo (ConsBuild Asia)
22 to 24 Aug 2024
Bangkok International Trade and Exhibition Centre
Bangkok, Thailand
Website: www.consbuildasia.com

ASEAN International Construction Machinery & Mining Equipment Exhibition
22 to 24 Aug 2024
Malaysia International Trade and Exhibition Centre
Kuala Lumpur, Malaysia
Email: enquiry@oneinternational.com.my

MBAM OneBuild
28 to 30 Aug 2024
Kuala Lumpur Convention Centre
Kuala Lumpur, Malaysia
Website: www.mbamonebuild.com.my

IBEW & BEX Asia
4 to 6 Sept 2024
Sands Expo and Convention Centre
Singapore
Website: www.ibew.sg / www.bex-asia.com

OS+H Asia
11 to 13 Sept 2024
Sands Expo and Convention Centre
Singapore
Website: www.osha-singapore.com

Construction Indonesia
11 to 14 Sept 2024
Jakarta International Expo
Jakarta, Indonesia
Website: www.constructionindo.com

BCT Expo (Building Construction Technology Expo)
18 to 20 Sept 2024
Impact Exhibition and Convention Centre
Bangkok, Thailand
Website: www.bct-construction.com

Asia Concrete Expo & Smart Modular Construction Expo
16 to 18 Oct 2024
Korea International Exhibition Centre
Goyang, South Korea
Website: www.asiaconcretex.com

Philconstruct
7 to 10 Nov 2024
SMX Convention Centre Manila &
World Trade Centre Metro Manila
Metro Manila, The Philippines
Website: www.manila.philconstructevents.com

bauma China
26 to 29 Nov 2024
Shanghai New International Expo Centre
Shanghai, China
Website: www.bauma-china.com

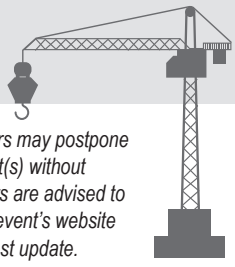
bauma Conexpo India
11 to 14 Dec 2024
India Expo Centre
Greater Noida, India
Website: www.bcindia.com

// Events outside Asia

Metalcon
30 Oct to 1 Nov 2024
Georgia World Congress Center
Atlanta, USA
Website: www.metalcon.com

World of Concrete
21 to 23 Jan 2025
Las Vegas Convention Centre
Las Vegas, USA
Website: www.worldofconcrete.com

bauma
7 to 13 Apr 2025
Munich Trade Fair Centre
Munich, Germany
Website: www.bauma.de



Note: *The organisers may postpone or cancel their event(s) without prior notice. Readers are advised to visit the respective event's website regularly for the latest update.*

WORLD OF CONCRETE ASIA

informa markets

SAVE THE DATE!

Contact Us

Exhibiting Inquiry
James Xiao
E: james.xiao@informa.com
T: +86 21 6157 7241

Visitor & Media
Sophia Li
E: Sophia.li@informa.com
T: +86 21 6157 7284

Rigist er Free Now !

Next Thailand's CBA Expo set for August 2024, along with Concrete Expo Asia

The second edition of CBA Expo – also known as ConsBuild Asia – will take place from 22 to 24 August 2024 at Bangkok International Trade & Exhibition Centre (BITEC) in Bangkok, Thailand. It will be held in conjunction with a new event dedicated to the concrete industry, Concrete Expo Asia.

CBA Expo 2024 will double its exhibition space to cover 8,600 sq m of area (indoor and outdoor), said the organiser, MB Global Marketings. The event is expected to attract over 4,000 trade buyers from Thailand and ASEAN countries, such as Cambodia, Vietnam, Myanmar and Laos.

The outlook for Thailand's construction industry in the next two years is looking positive. In March 2024, Krungsri Research (Bank of Ayudhya Public Company Limited) revealed that "the construction contractors can look forward to an improving business environment from 2024-2026, with growth driven by an expected 3-4% annual expansion in construction spending. This will be led by 3.5-4% growth in government spending on construction, guided largely by the Action Plan on Thailand Logistics Development 2023-2027.

"The focus will therefore be on megaprojects, most notably those connected to the development of the Eastern Economic Corridor (EEC). Private construction on both residential and commercial developments will also improve with 3-3.5% growth due to a better economic environment, strengthening consumer spending power and greater progress on government infrastructure projects. However, challenges will remain, notably in the form of the rising cost of labour and materials.

"In addition, higher fuel costs have kept transport overheads elevated, while over the longer term, the need to address climate change and the race to net zero will force contractors to invest more heavily in the technology needed to reduce consumption and to cut waste."

According to the organiser, a number of companies have confirmed their participation in CBA Expo 2024. These include:

- SDMIX (Thailand) Co Ltd, a manufacturer of concrete mixers, conveyors and mining equipment.
- Ammann Group, a global manufacturer of mixing plants, machines and services for the construction industry, with core expertise in road-building and transportation infrastructure.
- Siam Industrial Co Ltd, a company involved in the distribution and service of material transport, logistics and heavy machinery businesses, especially Teka concrete mixers.
- Kayo Shoji (Thailand) Co Ltd, a trading company for global industrial products, including construction equipment like shoring props, shoring towers and scaffolding system.
- Mouldmate Co Ltd, a manufacturer of forklift solid tyres and rubber tracks for agricultural and industrial machinery under the Tokai brand.
- Kawasaki Trading (Thailand) Co Ltd, which also serves as a sales representative and service provider of EarthTechnica stone grinding machine equipment.

Other exhibitors include Reentech Co Ltd, Chan MR Group, Donaldson Filtration (Thailand) Ltd, International Rubber Parts Co Ltd, and Minthong Supplies Ltd. ■

Website: www.consbuildasia.com / www.concrete-expoasia.com

ALL IMAGES: **The second edition of CBA Expo will take place from 22 to 24 August 2024 at Bangkok International Trade & Exhibition Centre, covering 8,600 sq m of area.**

MBAM ONEBUILD

28 ▸ 30 AUGUST 2024

KUALA LUMPUR CONVENTION CENTRE (KLCC)

MBAM ONEBUILD
EXCLUSIVELY FOR CONSTRUCTION & INFRASTRUCTURE
9TH EDITION

MALAYSIA'S LARGEST CONSTRUCTION & INFRASTRUCTURE B2B EXHIBITION

GROSS EXHIBITION AREA	EXHIBITING BOOTH	EXHIBITORS	TRADE BUYERS
5,500 sq.m	320	200	8,000

Here's why you must exhibit at the event:

- Co-located with the Malaysia International Hardware Technology Exhibition
- Meet key buyers including architects, builders, consultants, contractors, developers, agents, distributors, manufacturers, facilities managers, safety and compliance specialists
- Opportunity to network with Master Builders Association Malaysia (MBAM)'s 21,120 direct and indirect members, including 40 affiliated associations, corporations and associated industry companies in the construction and infrastructure industry. This diverse membership encompasses specialist subcontractors, building material suppliers, manufacturers, and trading companies

Secure Your Space Today at www.mbamonebuild.com.my

South Korea to host 2024 Asia Concrete Expo & Smart Modular Construction Expo in October

The upcoming Asia Concrete Expo & Smart Modular Construction Expo – an international concrete, cement and off-site construction technology trade show – will take place from 16 to 18 October 2024 at the Korea International Exhibition Centre (KINTEX) in Goyang, South Korea.

The event is jointly organised by the Federation of Korea Concrete Industry Cooperatives (FKCIC), Korea Institute of Civil Engineering and Building Technology (KICT), and KINTEX. The previous edition was held in 2021.

The 2024 Asia Concrete Expo & Smart Modular Construction Expo will cover approximately 10,000 sq m of area, with more than 100 local and international exhibitors. It is expected to draw about 10,000 visitors and buyers from Korea and globally.

Aimed to advance the concrete and modular construction industries, the event will showcase a wide range of concrete machines and equipment, concrete technologies and solutions, construction materials and methods, as well as innovative equipment and technologies for modular construction, especially in precast concrete (PC).

Various business programmes will also be available at the event, including conferences and seminars, import and export consultations, and on-site docent/guided tours with potential buyers. In addition, there will be a Korean concrete design competition, concrete group standard quality management education, concrete technology competition, and cement and concrete carbon neutral forums.

The 2024 Asia Concrete Expo & Smart Modular Construction Expo is supported by a number of government agencies and industry organisations, namely the Seoul Metropolitan Government, Ministry of SMEs and Startups, Korea Specialised Construction Association, Smart Modular Forum, Korea Concrete Association, Korea Civil Engineering Association, Korea Cement Association, Korea Remicon Industry Association, Korea Road Association, Korea Aggregate Association, and more.

According to the organisers, with the participation of the Smart Modular Forum (an organisation representing modular construction in Korea), the event is expected to be the largest exhibition in the country on PC manufacturing construction. More than 50 companies have currently completed their application to join the event, among which include BHS Sonthofen GmbH, Progress Group, R Steel, and Afinitas GmbH.

The organisers said the event has also been heavily promoted in other parts of Asia, such as Japan and Southeast Asia, aiming to attract participants from these regions. Furthermore, the Japan PC Creative Development Exchange is scheduled to bring a group of visitors during the event.

This year, Asia Concrete Expo & Smart Modular Construction Expo will be held in conjunction with Korea Metal Week, Korea International Construction & Industrial Safety Expo (K-Con Safety Expo), Korea Auto Industry & Global TransporTech Show, and Tool Tech+Smart Welding Automation Fair. ■

Website: www.asiaconcretex.com

ABOVE: **The upcoming Asia Concrete Expo & Smart Modular Construction Expo will be held on 16-18 October 2024 at KINTEX in Goyang, South Korea.**

LEFT: **The event will cover approximately 10,000 sq m of area, with more than 100 exhibitors. It is expected to draw about 10,000 local and international visitors and buyers.**

This year's event has also been heavily promoted in other parts of Asia, such as Japan and SE Asia, aiming to attract participants from these regions.

Thailand's BCT Expo to return in September 2024

The next edition of Building Construction Technology Expo (BCT Expo) – Thailand's annual international exhibition for the construction industry – is scheduled to take place on 18-20 September 2024 at the Impact Exhibition and Convention Centre in Bangkok.

Themed 'The Construction Industry Meeting Place', BCT Expo 2024 will occupy more than 5,000 sq m of exhibition space, gathering construction industry professionals from Thailand and Southeast Asia region. It is expected to attract over 4,000 attendees.

The event will also see over 150 international and local exhibitors across 10 construction clusters, ranging from earthmoving and demolition, lifting and handling, road construction, concrete and cement, materials, tools and equipment, digital construction, AI and robotics, construction services to smart facility management.

"Thailand's construction market is valued at THB1.37 billion or 7.6% of the country's GDP in 2023. The market expects to grow at an annual rate of 3% to 4%, driven by public infrastructure projects. There are currently some 108,000 construction companies registered in Thailand, of which 709 companies have the resources to undertake large-scale projects," said the organiser.

"The industry is also facing headwinds and challenges, which include rising costs, labour shortages, tight timelines, hazardous working conditions, strict health and safety protocols, and the need to hasten the adoption of technology to improve productivity while at the same time meeting expected net-zero emission targets."

It is against this backdrop that BCT Expo 2024 is organised to act as a bridge for the Thai and regional Southeast Asian construction industry to seek international collaborations and networking, bringing together marketplace, ideas, solutions, innovations and partnerships for its architecture, construction and engineering sectors.

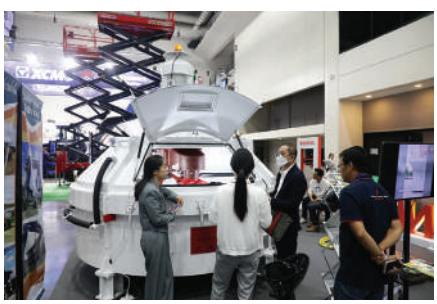
This year's event will feature a series of conferences and seminars conducted by various international and local industry partners, such as Asia Pacific Assistive Robotics Association, Southeast Asia Construction magazine, Federation of Thai Industries, Iron & Steel Institute of Thailand, Drone Association of Thailand, Technology Media, and PCS Security and Facility Services Limited, to name just a few.

The conferences will discuss a variety of construction-related topics, including robotics and AI; smart construction equipment and technology; designs, iron and steel trends; drones in construction; BIM trends; and smart facility management.

As in previous editions, one of BCT Expo's main highlights is its business-matching programme – which aims to benefit the exhibitors by providing more than 300 pre-arranged business meetings with key hosted buyers during the event. ■

Website: www.bct-construction.com

ALL IMAGES: **Themed 'The Construction Industry Meeting Place', the next BCT Expo is scheduled to take place on 18-20 September 2024 at the Impact Exhibition and Convention Centre in Bangkok, Thailand.**



bauma Innovation Award kicks off in May; deadline closes on 23 August 2024

On the occasion of bauma 2025, the leading associations of the German construction and construction equipment industry will present the 14th edition of bauma Innovation Award together with Messe München.

Innovations that have been presented to the public since 2022 or have not yet been published are eligible. The deadline for entries starts on 2 May 2024 and ends on 23 August 2024. Participation is only possible online. Entries can be submitted in the following categories:

- Category 1: Climate protection
- Category 2: Digitalisation
- Category 3: Mechanical engineering
- Category 4: Construction
- Category 5: Research

VDMA Construction Equipment and VDMA Mining, together with Messe München and the partner associations HDB, ZDB and bbs, are carrying out the multi-stage application process and will host the award ceremony on 6 April 2025 at the ICM in Munich, Germany.

All necessary information on the conditions of participation and the entry form are available on the website. ■

The award ceremony will be held on 6 April 2025 in Munich, Germany, prior to bauma 2025.

Website: www.bauma-innovationspreis.de

SOUTHEAST·ASIA
CONSTRUCTION

Southeast Asia Construction (SEAC) is a B2B news portal for the construction industry in Asia, targetted at contractors, engineers, equipment manufacturers and distributors, and other professionals in the industry. We provide multiple platforms for our clients to reach out to their target audience effectively.

Scan to visit our website

@southeastasiaconstruction
@southeastasiaconstruction
@tradelinkmedia
@southeastasiaconstruction

Geo Connect Asia 2024 draws global attendees; next event to return in April 2025

The fourth edition of Geo Connect Asia (GCA), the region's flagship trade event and conference for the geospatial, positioning and remote sensing industries, has attracted 2,785 visitors, delegates and speakers from 52 countries and territories.

Held at the Sands Expo and Convention Centre in Singapore on 6-7 March 2024, this year's GCA was co-located alongside Drones & Uncrewed Asia, Digital Construction Asia and the inaugural Marine & Hydro Asia.

With the theme 'Geospatial Driven Impacts: Underground, Land and Sea to Sky', GCA 2024 drew experts from Singapore-based and international companies, institutions, start-ups, and government agencies. Tech Talks spanning the entire geospatial spectrum, as well as presentations and panel discussions with 102 speakers, enabled pivotal discussions on the economic and societal impact of geospatial technologies.

"The mainstreaming of geospatial technologies has been a major theme of the 2024 event and is one that will accelerate as industry and governments successfully apply proven solutions," said Rupert Owen, co-founder of Geo Connect Asia. "The growing international positioning of Geo Connect Asia assists in exchanging experiences across regions. The additional focus on digital construction, marine & hydro and the UAV marketplaces also drives focus on the value of data acquisition and sharing to enhance accuracy and the on-time scheduling and delivery of key projects."

ALL IMAGES: **The fourth edition of Geo Connect Asia (GCA) concluded on 6 March 2024, drawing 2,785 visitors, delegates and speakers from 52 countries and territories.**

At the combined co-located shows, visitors were able to interact with different products and prototypes, including drones, remote sensing-based laser scanners, mapping systems and ground-penetrating radars, plus the technologies that make the development of these tools possible. A wide variety of spatial analysis, UAV traffic management and visualisation software, and satellite communications services were also exhibited.

The Tech Talks, UAV Innovation Theatre and Digital Underground Connect featured a line-up of fireside chats and keynote speeches, where industry professionals had robust conversations on topics such as how geospatial technology can be harnessed to improve life quality; the use of AI in construction technology; geospatial drivers in speeding up the decarbonisation agenda; and mainstreaming geospatial technology for healthcare, community and sustainable development.

Business matching was a key driver of success at GCA 2024, with exhibitors, speakers and visitors given abundant opportunities to connect, network and explore potential synergies. This allowed visitors to identify complementary strengths and lay the groundwork for future business collaborations.

"We are witnessing the exponential growth and transformative impact of geospatial technology across economies, infrastructure and everyday lives," said Scott Simmons, chief standards officer of Open Geospatial Consortium. "Geo Connect Asia serves as an excellent platform for industry leaders and stakeholders to build cross-border networks, explore innovative solutions, and propel the geospatial industry forward for a more sustainable and connected future."

The next edition of GCA is scheduled to take place on 9-10 April 2025 at the Sands Expo and Convention Centre, Marina Bay Sands, Singapore. ■

Website: www.geoconnectasia.com

IPAF launches global safety campaign for 2024

The International Powered Access Federation (IPAF) has launched its Global Safety Campaign for 2024, titled 'Crushing Can Kill!' It aims to raise awareness and reduce entrapment and crushing incidents involving mobile elevating work platforms (MEWPs), which have resulted in numerous fatalities and injuries over the past decade.

Led by Brian Parker, IPAF head of safety and technical, and Alana Paterson, head of health, safety and environment at Taylor Woodrow and chair of the IPAF International Safety Committee, the campaign emphasises the importance of training, proper planning, and adherence to safety protocols when operating MEWPs and using pedestrian control mode.

The new campaign aims to raise awareness and reduce entrapment and crushing incidents involving mobile elevating work platforms (MEWPs) globally.

Statistics over the past decade revealed 118 fatalities, 16 major injuries, and five minor injuries attributed to entrapment incidents involving MEWPs. The occupations most affected include MEWP operators, delivery drivers and technicians/engineers, emphasising the need for comprehensive safety measures across a variety of applicable industries.

In the last three years of fatal accident data, 68% of fatalities are attributed to 3a Mobile Vertical machines (Vertical lifts). While this is a significant shift from the previous data, IPAF is encouraged by new solutions coming onto the market for vertical type MEWPs.

The campaign highlights common causes of entrapment incidents, such as poor planning, inadequate training, complacency, and equipment malfunctions. To mitigate these risks, IPAF advocates for task-specific risk assessments, the correct selection of MEWPs, training of operators, and documented practice/rehearsal of rescue procedures.

Recognising the global reach of the campaign, IPAF has developed legislation-neutral guidance documents tailored for planners, employers, managers, supervisors, operators, rescuers, and training bodies. These resources aim to standardise safety practices worldwide and support the ongoing development of a new ISO standard for MEWP safety systems.

Additionally, IPAF has released a new Toolbox Talk focusing on the risks associated with operating MEWPs from ground controls with a person in the MEWP platform, as well as new guidance on the safe use of pedestrian controls. An Andy Access poster titled 'Danger Keep Well Clear!' has also been developed to reinforce the Toolbox Talk. These initiatives reaffirm IPAF's commitment to continuously improving industry safety standards and reducing the incidence of entrapment and crushing related accidents.

"We're not just launching a Global Safety campaign; we're reaching out to the individuals who stand on the front lines of safety every day – the MEWP operators and rescue personnel. Our aim is to give them the knowledge and tools they need to navigate their work environments safely and confidently,' said Mr Parker.

"By ensuring that this campaign resonates with those directly using the platform, we're taking an important step toward reducing and preventing entrapment and crushing related incidents."

As the campaign launches, IPAF urges industry participation, implementation of recommended safety measures, and the reporting of incidents to facilitate ongoing safety improvements. "Together, we can prevent and reduce entrapment and crushing related incidents and safeguard the well-being of operators and platform occupants in MEWPs." ■

New president for IPAF

IPAF has appointed Karel Huijser as its new president, succeeding Karin Nars. In addition, Pedro Torres will become vice president and Kai Schliephake deputy president.

"Safety is at the heart of our IPAF organisation. It is reflected by our mission to enable safe and effective use of powered access equipment worldwide, and our vision to be an industry-leading safety organisation for powered access," said Mr Huijser. "Put simply, safety not only concerns today but also the future – I call this sustainable safety. This involves implementing measures and practices that not only address immediate safety concerns but also aim to prevent potential hazards and risks. Sustainable safety emphasises the importance of considering the long-term impact of safety initiatives on the environment, society, and future generations." ■

Karel Huijser (second from right) is the new president of IPAF.

INTERNATIONAL BUILT ENVIRONMENT WEEK

4 – 6 September 2024 • Marina Bay Sands, Singapore

Asia's Most Anticipated Build Environment Week

The International Built Environment Week (IBEW) is organised by BCA International, a wholly owned subsidiary of the Building and Construction Authority (BCA), in partnership with RX Singapore. Widely regarded as the most comprehensive event for the built environment in Asia Pacific, IBEW is the ideal platform for the global community to converge and share knowledge, exchange experiences and explore business opportunities.

FIND OUT HOW TO GET INVOLVED

Follow us on: @ibewsg | www.ibew.sg

Cat H110 GC and H120 GC hammers designed for high performance, easy maintenance

Design updates for the new Cat H110 GC and H120 GC hammers help to increase operating reliability to deliver a low cost-per-hour solution for rock breaking and concrete demolition. Hydraulic efficiencies help enhance overall productivity in road construction, trenching and demolition applications, while quick access to maintenance areas helps reduce costs and boost hammer uptime.

Made from high-quality alloy steel, the H110 GC and H120 GC power cells undergo a two-stage heat treatment process to improve durability and lower service costs. Hydraulic components are shielded from damage by heavy-duty side plates. The Cat H120 GC is also equipped with a standard high-vibration adapter, allowing the hammer to withstand sustained high vibrations.

Large-diameter hammer tools – 100 mm and 140 mm for the H110 GC and H120 GC respectively – feature high frequency and impact power to quickly break through tough rock and concrete. Power combines with fast, impact frequencies – 350 to 700 blows per minute (bpm) for the H110 GC and 350 to 550 bpm for the H120 GC – to make short work of breaking through material, helping increase production and efficiency at the jobsite.

Both hammers are designed with a slip-fit and 90-degree rotatable lower bushing for simple replacement in the field and helps extend service life, thus reducing service time and costs. Daily tool inspection and grease points are accessible from the ground with the hammer mounted on the machine for greater safety, while maintenance areas are quick to access for simplified maintenance. Extending hammer life, reinforced connecting hardware and easy bolt tightening help to provide strong, durable joints.

The Cat H110 GC and H120 GC hammers are fully tested and validated with matched machines for better performance and compatibility. Recommended tool carrier weight for the H110 GC ranges from 10 to 18 t and from 18 to 30 t for the H120 GC. Minimum rated flows are 21 gpm (H110 GC) and 32 gpm (H120 GC).

The H110 GC has a minimum operating weight of 917 kg (top mount) and 801 kg (side mount), while the H120 GC features a minimum operating weight of 2,004 kg (top mount) and 1,827 kg (side mount). Minimum operating pressures for the hammers are 2,132 psi (H110 GC) and 2,277 psi (H120 GC). ■

Website: www.cat.com

LEFT: **The new Cat H110 GC and H120 GC hammers have been updated to enhance overall work productivity and simplify maintenance.**

BELOW: **Large-diameter hammer tools feature high frequency and impact power to quickly break through tough rock and concrete.**

Kleemann Mobiscreen MSS 502(i) EVO scalping screen

The new Mobiscreen MSS 502(i) EVO mobile scalping screen from Kleemann is optimised for the lower feed capacity range of up to 350 t/hr. A large feed hopper, a screening surface of 5.4 sq m, and a wide main discharge conveyor ensure excellent material guidance.

For high flexibility in the application, the speed of all conveyor belts is easily adjustable and users can perform a simple conversion from two to three final grain sizes. The wide setting range of the screen casing angle (15.4 – 20°) makes a high screening capacity combined with high product quality possible. A large selection of screening media also contributes to this.

Whether they are finger decks for clayey, excavated earth or square mesh for classifying decorative grit, the screen decks of the Mobiscreen MSS 502(i) EVO can be covered to match the individual application requirements. Mixed covering of the screen decks is also possible.

The new Mobiscreen MSS 502(i) EVO can be operated electrically, delivering zero CO2 emissions on the jobsite.

The user-friendly operating concept of the Mobiscreen MSS 802(i) EVO is used in the new MSS 502(i) EVO. Automatic mode for simple and fast production is a core element, together with the mobile operating unit, the optional radio remote control and the telematics solution for improved planning and analysis of the machine. A good view of transfer points and the material flow can be achieved at all times thanks to LED lighting (optional Premium lighting). Ergonomic access to all screen decks and maintenance-relevant components increases work safety and reduces downtime.

With a compact design and stepless drive control, the new scalping screen can be easily transported from one job to the next. On site, the interplay between mobile operating device and assembly-free folding out of the discharge belts pays off: thanks to the joystick control, the operator has a perfect view of the belt to be folded and can move it into position with great precision.

The hydraulic concept on the new Mobiscreen MSS 502(i) EVO guarantees high power transmission and lowers the operating costs. Easy access to all maintenance-relevant components, flexible refuelling from both sides, and simple and quick cleaning of the hopper discharge conveyor undersize through the use of a retractable chute ensure that downtime is kept to a minimum.

In addition, the electro-hydraulic, dual-power drive option enables the Mobiscreen MSS 502(i) EVO to run electrically, delivering zero CO2 emissions on site. A load-controlled fan also guarantees a reduction of the noise level and diesel consumption. Water spraying at the discharge conveyors reduces dust emissions significantly during machine operation, resulting in better working conditions for machine operators and higher levels of acceptance by local residents. ■

Website: www.wirtgen.com

Dingli upgrades electric scissor lifts with AC+ series

Dingli has upgraded its electric scissor lifts with the new AC+ series, which covers working heights from 8 to 16 m and capacities from 250 to 350 kg. Its overall widths range between 0.7 and 1.4 m.

The platform capacity for the AC+ scissor lifts has been increased by up to 40% compared to the original model, said Dingli. This new series is equipped with side and rear forklift pockets to enable easy and efficient transportation, and its lithium-ion battery pack offers a long duty cycle and fast charging.

The load sensing system on the new series provides better resistance to temperature and friction, added Dingli. The integrated, four-in-one motor controller features 40% reduction in connections and harnesses.

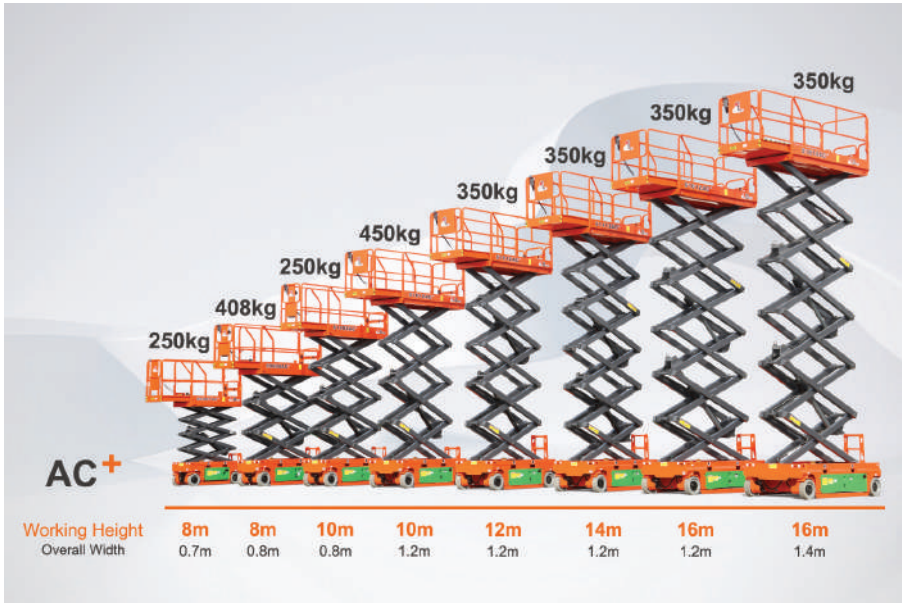
The AC+ series is also designed with a high-strength, robust tyre compound to ensure the durability of the tyre. The machine platform has a new control box with a larger display screen.

Other highlights include a highly efficient electric drive system, with 15% reduction in energy consumption and greater power density; as well as a highly efficient electric lift pump system, with 20% reduction in energy consumption and greater power density.

In addition, the new scissor lifts come with a hydraulic oil leak containment (suitable for applications with zero leak tolerance); an electric actuator steering system (featuring no hydraulic oil, faster steering speed and 66% reduction in energy consumption); and a gravity down energy recovery system (battery charge regeneration during platform descent).

With this new AC+ series, Dingli has renamed its small electric scissor lifts (e.g. the JCPT1612AC becomes the S1612AC+). The company said the entire series offers large capacities, high efficiency and energy conservation, high safety and enhanced environmental protection, easy transport, and improved durability. ■

Website: en.cndingli.com



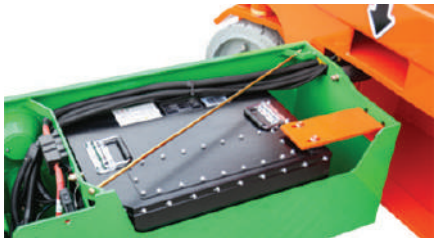
ABOVE: **The new Dingli AC+ scissor lift series covers working heights from 8 to 16 m and capacities from 250 to 350 kg.**

LEFT: **The side and rear forklift pockets on the AC+ scissor lifts enable easy and efficient transportation.**

ABOVE: **The platform's new control box has a larger display screen.**

LEFT: **The lithium-ion battery pack offers a long duty cycle and fast charging.**

The AC+ series is designed with a high-strength, robust tyre compound to ensure the durability of the tyre.



Jaso introduces J638PA luffing tower crane

Spanish tower crane manufacturer Jaso has introduced a new luffing model, the J638PA, which was developed in collaboration with its partners. The unit is available globally – in Asia, Oceania, Middle East, Europe, Canada and the US.

The J638PA features a maximum reach of 65 m, providing greater flexibility and access to heights. With a maximum load capacity of 32 t and a maximum tip load of 7.2 t at its full reach, this tower crane has been built to handle the most demanding projects with ease.

According to Jaso, the J638PA luffing crane is also designed with a strong focus on environmental responsibility. Its efficient operation and sustainable features align with the company's commitment to minimising environmental impact while maximising productivity.

In addition, the J638PA is equipped with Jaso's Optimus Line technology. This advanced technology ensures optimal performance, efficiency and safety, making the crane ideal for construction projects of all scales.

"Developed in collaboration with our partners, the J638PA is the result of shared expertise and a collective commitment to overcoming challenges," said Jaso. "Addressing technical, commercial, construction, logistical, safety and environmental considerations, this crane stands as a versatile, sustainable and technologically advanced solution." ■

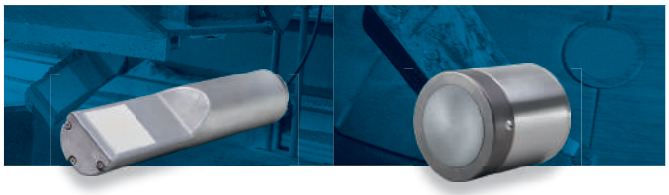
Website: www.jaso.com

The new Jaso J638PA luffing crane features a maximum reach of 65 m, with a maximum load capacity of 32 t and a maximum tip load of 7.2 t at its full reach.

The J638PA is equipped with Jaso's Optimus Line technology, which ensures optimal performance, efficiency and safety, making this tower crane ideal for construction projects of all scales.

Hydronix

World Leaders in Microwave Moisture Measurement



Hydro-Probe
Sensor for bins, chutes and conveyor belts

Hydro-Mix
Flush mounted sensor for mixers and conveyors

- Accurate, repeatable, real-time
- Easy to install & integrate
- Remote calibration & configuration
- Local service & support

Connectivity Analogue | RS 485 | Modbus | Web API* Ethernet/IP* | PROFINET*

enquiries@hydronix.com
hydronix.com

* requires Hydro-Hub or Hydro-View

Haulotte unveils new generation of HA20 RTJ boom lift

The new version of Haulotte HA20 RTJ rough terrain articulating boom lift has been completely redesigned to meet today's demanding jobsite requirements. This model features a working height of up to 20 m.

Versatile and easy to use, the HA20 RTJ is suitable for challenging outdoor terrain. With its articulated arm and 11.9 m horizontal outreach, the boom lift can overcome obstacles and access hard-to-reach working areas. Furthermore, the Haulotte Dual Reach option can increase load and tilt capacities.

On the jobsite, there are many situations where users need to carry a lot of weight in the basket while working on sloping ground. To tackle these challenges and boost productivity, Haulotte offers the Dual Reach option, now available on the new HA20 RTJ.

The Dual Reach option increases the load in the basket from 250 to 350 kg, and enables working on sloping ground up to 6°. Once the system is activated, the machine continues to elevate and operate smoothly, limiting the number of back-and-forth movements between the ground and the working area.

Equipped with standard four-wheel drive and two-wheel steering, the HA20 RTJ can move easily over all types of terrain. Its oscillating axle enables the machine to adapt to various conditions, keeping the wheels in constant contact with the ground.

The automatic differential lock provides extra traction on uneven or sloppy ground, allowing the operator to maintain full manoeuvrability and navigate obstacles without difficulty. The combination of a new engine and a new hydraulic architecture (axle drive) helps the boom lift retain its excellent rough terrain capabilities.

The HA20 RTJ is also equipped with all Haulotte safety features. Thanks to its proportional controls, the boom lift offers precise, jerk-free driving and guarantees a smooth approach to the working area. The Haulotte Activ'Lighting System comprises 10 LED spotlights, which make it easier for the operator to load and unload the machine in low-light conditions.

The Haulotte Activ'Shield Bar enhances operator safety. In a entrapment situation, the operator is pushed against the bar, and the machine stops automatically. The wide clearance protects the operator from being crushed.

The engine of the new HA20 RTJ (rated at less than 18.5 kW), combined with optimised mechanical and hydraulic systems, delivers optimised torque while reducing fuel consumption by 35-50%. In addition, the new HA20 RTJ PRO boasts a 97% recyclability rate.

Haulotte has also redesigned the boom lift's chassis and integrated an improved hydraulic architecture with axle drive. As such, the number of hydraulic hoses has been reduced by 35%, access to components and maintenance operations are facilitated, and downtime is reduced.

What's more, the HA20 RTJ PRO offers several on-board diagnostic solutions to facilitate fleet management and minimise downtime. These tools enable the collection of machine operating data, the resolution of fault code, and the rapid identification of troubleshooting:

- The SHERPAL telematics solution enables users to monitor the status of their machines remotely and in real time. It considerably reduces downtime by providing access to fault codes and actions to be taken. Telematics data are also useful for organising the routes of technical teams and preparing interventions.
- The Haulotte Activ'Screen on-board diagnostics tool gives access to machine parameters and provides key information on machine status in real time.
- Both functions are also available via the Haulotte Diag mobile application, which also offers advanced diagnostics with detailed resolution procedures. ■

Website: www.haulotte.com

MIDDLE: **The Haulotte HA20 RTJ articulating boom lift features a working height of up to 20 m.**

LEFT: **The Dual Reach option increases the load in the basket from 250 to 350 kg, and enables working on sloping ground up to 6°.**

The automatic differential lock provides extra traction on uneven or sloppy ground, allowing the operator to maintain full manoeuvrability and navigate obstacles without difficulty.

BEX ASIA
The Premier Built Environment Expo

4-6 September 2024
Marina Bay Sands, Singapore

The Future of Built Environment

Innovation • Digitalisation • Sustainability

JOIN US FOR 3 DAYS OF SOURCING, LEARNING AND NETWORKING AT THE PREMIER BUILT ENVIRONMENT EXPO IN S.E.A. – A MUST-ATTEND EVENT FOR ALL ARCHITECTS, CONTRACTORS, DEVELOPERS, FACILITY MANAGERS, ENGINEERS AND MORE

REGISTER YOUR INTEREST

Organiser
In the business of building businesses

Strategic Partner
Building and Construction Authority

An Event of
IBEW

An Initiative Under
BuildSG

Visit bex-asia.com to find out more

New range of scissor lifts from Manitou

Manitou has launched a new range of scissor lifts. It currently includes two models, the SE 0808 and SE 1008, with working heights of 8 m and 10 m respectively. The range is planned to be extended later this year to include a 12-m model (SE 1212).

"All three models benefit from Manitou's renowned quality standards. We have big ambitions in the scissor market, where demand is very strong. As a reminder, industrial 'scissor' models account for nearly 60% of the global aerial work platform market," said Samuel Viaud, product manager for Manitou Group's scissor lift range.

Designed to offer a low cost of ownership, the three models feature high-quality components. The machines are equipped with two AC motors, which are maintenance-free, greatly reducing servicing costs.

The new scissor lifts can operate on flat, stabilised ground, both indoors and outdoors. They are suitable for a wide variety of applications, including industrial maintenance and finishing work (electrical, plumbing, installation of fire protection systems, etc).

This range has also been designed for ease of use, thanks to a streamlined, intuitive control panel. A full-height gate and two handles attached to the machine ensure safe ascent and descent. The operator further benefits from an extendable sliding floor and an extra 90 cm of space, giving a total basket length of 2.54 m.

TOP (RIGHT AND LEFT): **The new range of Manitou scissor lifts currently includes two models, the SE 0808 (pictured) and SE 1008, with working heights of 8 m and 10 m respectively.**

ABOVE AND LEFT: **The new scissor lifts are suitable for a wide variety of applications and can operate on flat, stabilised ground, both indoors and outdoors. They are equipped with two AC motors, which are maintenance-free, greatly reducing servicing costs.**

To facilitate communication between the machine and the operator or technician, this connected range features integrated diagnostics and a colour screen that provides information on safety, battery consumption and maintenance. In addition, the machines are fitted with side sheaths that allow them to be moved quickly, enabling safe loading and unloading of trucks.

According to Manitou, these new models will be delivered throughout Europe from April 2024 onwards via the group's dealer network. The range will evolve by 2025, with distribution extending beyond Europe. ■

Website: www.manitou-group.com

11-13 SEP 2024

MARINA BAY SANDS

SINGAPORE

10.00AM – 6.00PM (11-12 SEP)
10.00AM – 5.00PM (13 SEP)

S+H ASIA

The 14th Occupational Safety+Health Exhibition for Asia

Concurrent Seminar

S+H ASIA Forum on Workplace Safety+Health

Safe+Scape: Driving a 360 Approach Towards Total Workplace Safety and Health

13 Sep 2024 | 9:00am – 5:00pm

REGISTER YOUR VISIT NOW!

(65) 6332 9620 osha@mda.com.sg www.osha-singapore.com

Concurrent exhibitions :

S+H ASIA Forum on Workplace Safety+Health

MEDICAL FAIR ASIA

MEDICAL MANUFACTURING ASIA

THE SINGAPORE WSH CONFERENCE 2024

Supported by:

MINISTRY OF MANPOWER

WSHCOUNCIL Tripartite Alliance for Workplace Safety and Health

SINGAPORE EXHIBITION & CONVENTION BUREAU

A+A

Held in:

SG Singapore Passion Made Possible

Organized by:

Messe Düsseldorf Asia

Indeco HP Fuel Saving hammers combine maximum productivity with minimum energy consumption

The HP Fuel Saving hydraulic hammers from Indeco combine maximum productivity with energy savings. They consume up to 20% less fuel compared to models from other manufacturers, with weight and performance being equal, said Indeco. This benefit can be achieved thanks to the upgraded hydraulic system, which allows the hydraulic power to be optimised and the engine speed of the operating machine to be reduced.

Such feature is even more clear-cut when comparing the Indeco hammer with gas or gas-oil powered hammers. The HP series has a single moving part, the distributor, in line with the piston. The internal oil distribution system has no grooves, no direction changes, no diameter reduction and an almost total absence of seals. All this means an extremely efficient hydraulic action with low friction.

The exact opposite occurs in gas-powered hammers, which have a distributor located away from the piston, divided into two or more parts, a complex hydraulic distribution arrangement and a large number of seals. These are the characteristics that cause an inevitable loss of energy and which, consequently, require working at high pressure and consuming more fuel.

LEFT: **The Indeco HP Fuel Saving hydraulic hammers are said to consume up to 20% less fuel compared to models from other manufacturers, with weight and performance being equal.**

BELOW LEFT: **The HP Fuel Saving hammers feature an upgraded hydraulic system, which allows the hydraulic power to be optimised and the engine speed of the operating machine to be reduced.**

The automatic speed-energy impact variation system is another highlight of Indeco hydraulic hammers, which are capable of adapting to the hardness of the rock, thereby making the best use of the impact energy to the advantage of productivity.

In a recent comparison of real data on the running costs of Indeco's largest demolition hammer, the HP 18000 Fuel Saving, and of its gas-powered counterpart, the company notes that the HP 18000 Fuel Saving hammer requires 18.3% less energy to achieve the same results. This translates into a saving of 22,200 l of fuel per year. So, if the combustion of just one litre of diesel produces approximately 2.3 kg of CO_2, in this specific case, the Fuel Saving technology delivers a reduction in emissions equal to 50,600 kg of CO_2 per year. ■

Website: https://indeco.it/en

Organised by:

Sustainable Events:

Part of:

A PAMERINDO INDONESIA TRADE EVENT

CONSTRUCTION INDONESIA

CONCRETE SHOW SOUTH EAST ASIA | INDONESIA

11 - 14 SEP 2024

Jakarta International Expo - Kemayoran, Indonesia

www.constructionindo.com

SCAN HERE TO PRE REGISTER

Advancing Industrial Sustainability

The 24th International Construction Structure, Building Technology, Engineering Procurement and Equipment Exhibition

Co-located with :

Special Co-located Shows :

Media Partner:

SOUTHEAST·ASIA CONSTRUCTION

For more info, please contact us

PAMERINDO INDONESIA
Jakarta

Rachel Pardede
+62 21 2525320
rachel@pamerindo.com

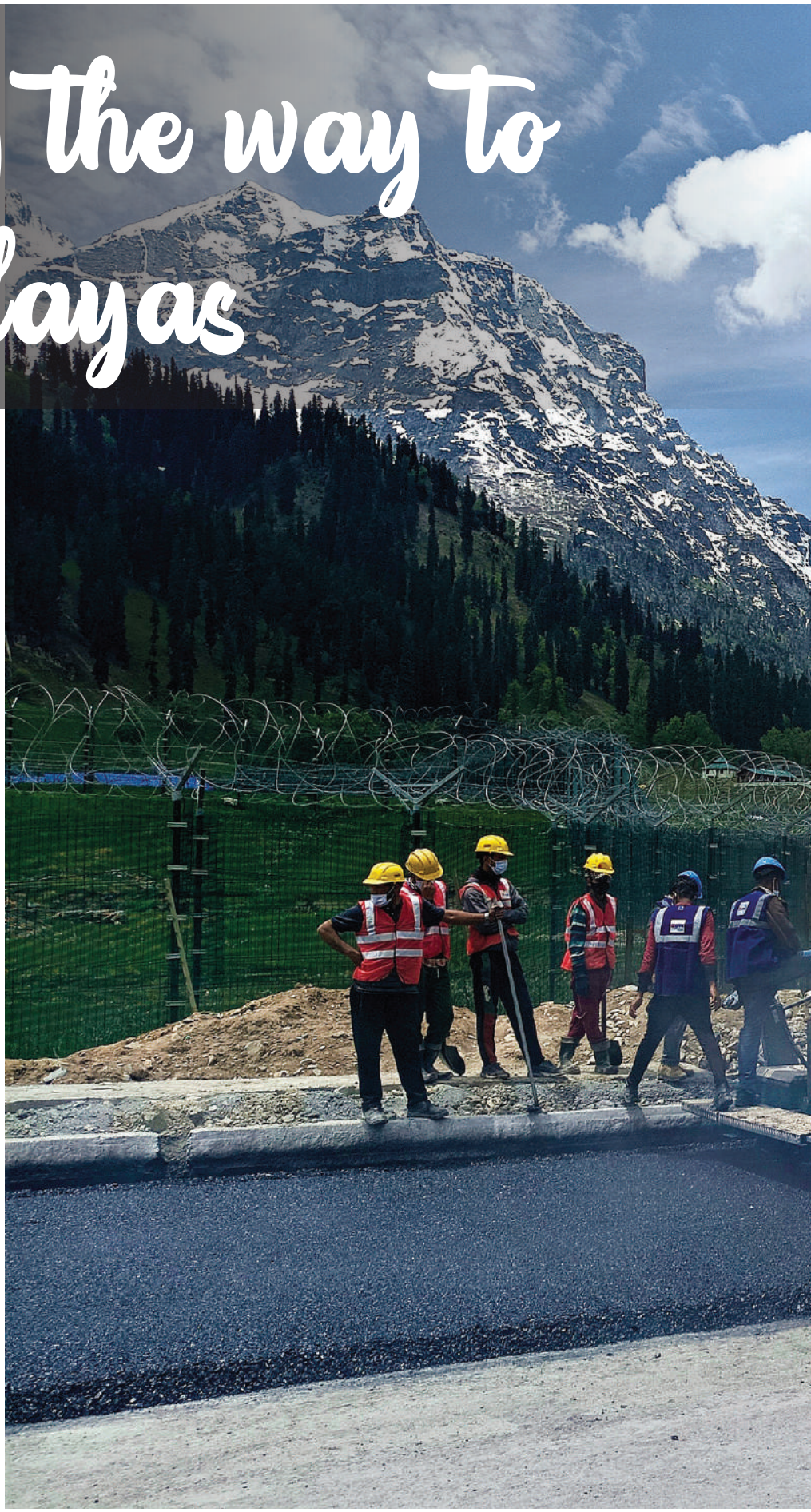
INFORMA MARKETS - ASIA
Singapore

Sam Yong
+65 8819 2568
sam.yong@informa.com

INFORMA MARKETS - Worldwide
London

Shaun White
+44 7976 887 088
shaun.white@informa.com

Paving the way to Himalayas



One of India's most ambitious tunnel projects is currently under construction in the Himalayas. With a length of approximately 13 km, the Zoji-La Tunnel will provide a weather-independent connection between the Ladakh and Kashmir regions.

Up until now, it usually took more than three hours for vehicles to cross the Zoji-La Pass. Between November and May, heavy snowfall, avalanches and landslides make it even impossible to cross the pass, meaning that the border region of Ladakh depends on airfreight for only six months of the year.

The new tunnel, which is being built at an altitude of close to 3,500 m in the Himalayas, will shorten the travel time between Srinagar (Kashmir) and Leh (Ladakh) to about 15 minutes and establish a safe, all-year-round connection between the two cities.

Paving in harsh conditions

Lead contractor Megha Engineering and Infrastructures Ltd relied on two road pavers from Vögele to carry out the asphalt paving work in this challenging location. A Super 1400i was deployed inside the tunnel, where the paving team laid down a 6-m-wide layer of dry lean concrete (DLC) with a thickness of 18 cm.

For the paving of the 16.4-km-long and 10.5-m-wide section outside the tunnel, including access roads and bridges, the contractor deployed a second Universal Class paver, a Super 1800-3i. In combination with an AB 600 TV extending screed, the

The Zoji-La Tunnel is being built at an altitude of close to 3,500 m in the Himalayas. Here, two Vögele pavers have been deployed for paving work inside and outside the tunnel under difficult topographic conditions and without disrupting the traffic flow.

The paving team laid down a total of three layers using the Super 1800-3i paver. Despite bends and uphill and downhill gradients, the machine's Niveltronic Plus system for automated grade and slope control assured true to grade and slope paving results across the entire working width. Thus the road level could always be maintained, even in this challenging terrain.

machine could perform well despite the difficult topography and weather conditions.

The paving team laid down a total of three layers with the Super 1800-3i: a 10 cm cement-treated sub-base layer (CTSB) was followed by an 11 cm binder course with a mix formulated especially for the terrain. Finally, a 6 cm surface course of bituminous concrete (BC) was paved on top. The mix used for paving consisted partly of material removed during the construction of the tunnel – which increased the cost-efficiency and sustainability of the project.

To ensure true to grade and slope paving of the three layers, the paving team took advantage of the Niveltronic Plus system for automated grade and slope control. This fully integrated system is precisely matched to the machine technology of the Vögele pavers and can be combined with a variety of different sensors.

The team used a cross-slope sensor and a height sensor to manage the bends and uphill and downhill gradients in the challenging terrain of the Zoji-La Pass. In combination with the cross slope, the measured height on one side of the screed delivered consistently accurate, true to grade and slope paving results across the entire working width. Thus the road level could always be maintained, even in this mountainous region.

Due to the heavy traffic, the route could not be completely closed during the paving work. As such, the paving team decided to pave the road in two lanes, one with a width of 5 m and the other with a width of 5.5 m, which allowed one lane to be kept open to traffic at all times. ■

Website: www.wirtgen.com

'24

METALCON

OCTOBER 30 - NOVEMBER 1

Georgia World Congress Center – Atlanta, Georgia

THE ONLY GLOBAL EVENT DEDICATED TO THE APPLICATION OF METAL IN CONSTRUCTION AND DESIGN

225+ EXHIBITORS **SHOWCASING THE LATEST IN ROOFING, SOLAR, ACCESSORIES, FASTENERS, WALLS, FRAMING & MORE!**

35+ **INFORMATIVE AND PRACTICAL SESSIONS PRESENTED BY TOP INDUSTRY EXPERTS**

"We come to METALCON to learn new ways to do old things. From talking to the people we buy machines from to the awesome education sessions, we always come away with great ideas to improve our business."

J. Waibel, T.T.&L. Sheet Metal

★★★★★

WWW.METALCON.COM | INFO@METALCON.COM | 617-965-0055

SCAN THIS QR CODE TO LEARN MORE & PRE-REGISTER AT METALCON.COM

'CAMPUS IN NATURE'

Surbana Jurong's new global headquarters is one of the latest engineering feats in Singapore. It features various innovative designs and was built using advanced construction technologies

Surbana Jurong (SJ) has officially opened its new global headquarters, located within CleanTech Park in Jurong Innovation District (JID), Singapore. Covering a built-up area of 1,200,000 sq ft, it can accommodate up to 4,000 onsite employees and the wider community.

For the first time since SJ's formation as a collective of built environment consultants in 2015, employees from different entities in Singapore finally congregate under one roof. The new campus has been designed with both the SJ community and the community-at-large in mind.

The campus serves as an incubator for real-world urban solutions to demonstrate the scalability of emerging technologies to the built environment industry. SJ is currently working with Singapore's Building and Construction Authority (BCA) to test-bed low-carbon technologies to save energy and improve occupant health.

Dubbed 'Campus in Nature', the new SJ Campus was designed by Safdie Architects working with SJ's architects. The civil and structural engineer for the project was KTP Consultants (a member of SJ), while the main contractor was Boustead Projects.

SJ's multidisciplinary team undertook much of the work that brought the campus to life, providing consultancy services from architecture, landscape architecture, engineering and project management, to workplace strategy, integrated facilities management and security services.

Situated on a previously undeveloped greenfield site, the SJ Campus design preserves more than half of the site's existing green space and replaces built-upon green areas with rooftop gardens, lush interior gardens and extensive exterior landscaping. At the outset, a detailed mapping and analysis of the site was performed to plot the specific location of the existing flora, including a Banyan tree estimated to be over 60 years old.

The 10 towers of the campus are linked by a pedestrian spine and enclosed courtyards, which allow for natural light and fresh air. Other facilities include a 1,000-seat multipurpose area, a junior ballroom, rooftop terraces, a team lounge, table tennis, and soon to be opened, a gym.

'Green' campus

SJ Campus has adopted one of the largest underfloor air distribution systems in Singapore. This provides efficient cooling from below to target occupied space and improve indoor air quality and additional energy savings of up to 16% of the cooling energy required. Other smart facilities management solutions include an Integrated Command Centre, where IOT devices leverage artificial intelligence and machine learning to monitor energy, water, occupancy patterns and indoor air quality to optimise carbon management and improve productivity. These active systems and natural design elements work in combination to achieve an overall energy saving of 41%. The campus is estimated to save 4.4 mil kWh/year operational energy savings, which is equal to avoiding 1,785 t of carbon dioxide per year, based on Energy Market Authority's grid emission factor.

SJ Campus has also integrated a next-generation solar photovoltaic (PV) system using bifacial PV panels, which can produce clean energy when illuminated on either of its surfaces. The solar rooftops serve as a test-bed for advanced PV technologies, energy storage and the deployment of a smart grid. Located in four towers, it has a combined energy yield of 389 MWh per year, which is equivalent to powering 120 three-room HDB flats every year. On-site renewable energy helps to offset Scope 2 emissions, saves energy costs and earns renewable energy certificates (RECs).

The project was awarded the BCA Green Mark Platinum Super Low Energy (SLE) and BCA-HPB Green Mark Platinum for Healthier Workplaces certification. The campus is designed for maintainability and deploys integrated facilities management to optimise operational efficiency. It is also WELL pre-certified by the International WELL Building Institute for having demonstrated a commitment to incorporate health and well-being features and practices.

A showcase of engineering marvels

SJ Campus was constructed in three phases: Phase 1 was completed in October 2022, Phase 2 in April 2023, and Phase 3 in May 2023. A ceremony was held on 13 March 2024 to mark the official opening of the campus.

It is one of the first large-scale, non-residential buildings in Singapore to fully adopt the integrated digital delivery (IDD), which involved a 'digital spine' linking project stakeholders throughout the building lifecycle. This resulted in a 12% improvement in overall productivity.

The design for manufacturing and assembly (DfMA) technology was also applied during construction, with the campus

TOP: **Aaron Foong, qualified person (structure) for the project and managing director of KTP Consultants, shares the engineering highlights of SJ Campus. KTP was appointed as civil and structural engineer for the project.**

OPPOSITE: **Surbana Jurong's new global headquarters in Singapore serves as an incubator for real-world urban solutions to demonstrate the scalability of emerging technologies to the built environment industry.**

LEFT: **SJ Campus' inverted pyramids form self-shading terraces, which reduce solar radiation by a significant 36%. They were built using the DfMA technology, comprising precast post-tensioned concrete beams and columns.**

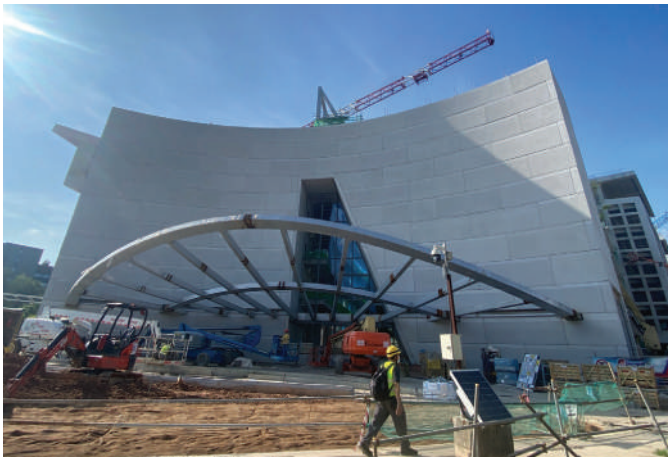
being one of the first projects in Singapore to fully adopt prefabricated mechanical engineering and plumbing (prefab MEP). The use of prefab chilled water system pump and ducting system generated about 6% reduction in manpower/man-days compared to the conventional MEP method.

Discussing the engineering highlights of SJ Campus, Aaron Foong, qualified person (structure) for the project and managing director of KTP Consultants, shared, "What is very unique about the structural framing is that we are able to use repetition in the concrete element sizes, the beams and the columns to create the geometry that is so different."

"It is one of our most challenging projects," he said. "If you look at the way that the building blocks are laid out, the engineers have actually applied productive technologies and there is a certain interaction between all the various elements that come together."

The main entrance is a key engineering complexity in SJ Campus. It features a large glass canopy, up to 16 m in length (with a span-depth ratio of 1:40), without any support of conventional tiebacks, thus requiring sophisticated parametric analysis.

"This ultra-slim canopy is different from the typical roof structures that use either tieback cables or columns," explained Mr Foong. "The three-dimensional profiling of it enables us to come up with this sort of functional engineering artwork."



ABOVE: **SJ Campus was constructed in three phases. The development covers a built-up area of 1,200,000 sq ft.**

LEFT AND BELOW: **The main entrance is a key engineering complexity in SJ Campus. It features a large glass canopy, up to 16 m in length (with a span-depth ratio of 1:40), without any support of conventional tiebacks, thus requiring sophisticated parametric analysis.**

Having no tiebacks or columns means there is more space on the ground, Mr Foong pointed out. "It is also more appealing aesthetically, creating a grand statement at the entrance."

He added that the installation of the whole canopy, which took about two months, had to be performed "meticulously, stage by stage, to ensure that the curvature of the structure would not cause the glass to break."

At Tower 1, the A-frame structure stabilises both sides of the campus by acting as the 'spine' to withstand any movements of the buildings. It also gives the building a unique spatial quality and allows a column-free space for the spine.

To navigate the challenge of high heat and glare from the tall glass windows at the spine, a careful and strategic performance-based simulation was conducted to optimise the building massing which considers the windows on each side of the campus, the treatment and material of glass, and other shading optimisation strategies. The result is picturesque green views with less heat and glare, and overall thermal comfort.

SJ Campus' inverted pyramids – the stacks of cantilevered blocks resembling an 'upside-down' building – were constructed using the DfMA technology. These structures form self-shading terraces, reducing solar radiation by a significant 36%.

Built with precast concrete beams and columns, it reduced the time and resources needed, compared to conventional on-site construction. To minimise carbon emissions from the transportation of the precast materials, beams and columns were

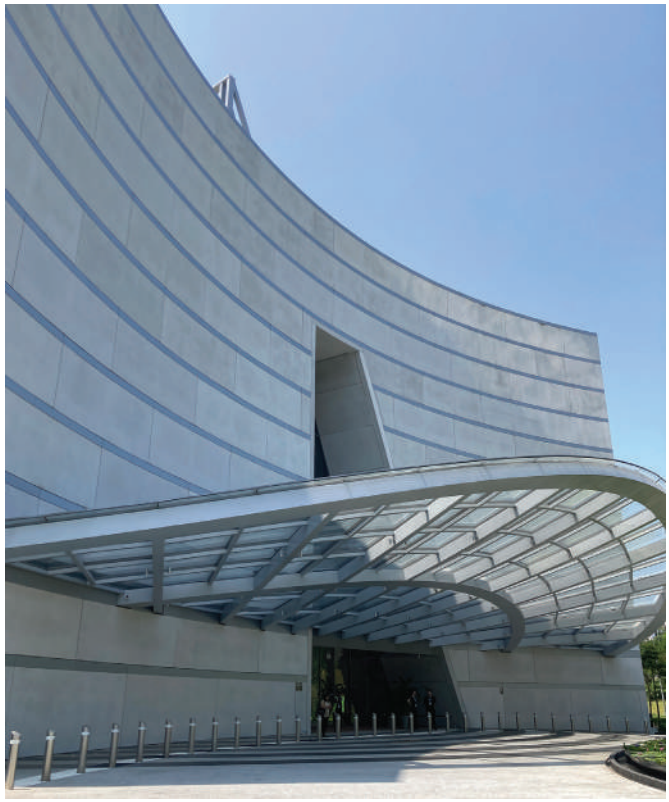


Image: SEAC

cast on a site adjacent to the campus.

"Additionally, we applied the post-tension technology to these inverted pyramids in order to prevent the long-term deformation posed by such geometry," said Mr Foong.

What truly keeps the campus 'stitched' together is the central spine, which is long, curved and supported by trusses, columns, arches and tie beams.

"The central spine is made up of a series of A-frame steel spine, which caters to the movement between the eastern block and the western block," Mr Foong further explained. "It gives that sense of space, as the shape itself opens up the entire thoroughfare for people to walk through, to enjoy the surroundings around them."

The intricate integration of the 10 tower blocks into the slender central spine – comprising multiple steel, concrete, glass and ethylene tetrafluoroethylene (ETFE) – features complex structural engineering analysis, design, detailing and construction.

Image: Tim Hursley

Another highlight of SJ Campus is a multi-storey hanging block that expands the space for use. "It is a very clever way to use airspace because you'll have a lot of usable space below it," said Mr Foong. "With an innovatively positioned warren truss at the top, it hangs three storeys of usable office space, without having any footprint on the ground. This enables the entire atrium space to grow even larger."

On the whole, this project is "very unique, as you're looking at a symphony of sorts," described Mr Foong. "Unlike in typical engineering applications, where most elements are straight." For SJ Campus, it is an "ensemble of all different engineering elements that must come together and yet be stable."

Having overcome so many challenges to successfully deliver such an iconic landmark, Mr Foong said, "The greatest satisfaction from the perspective of an engineer is the validation of our design. Both the public and the private can really enjoy the outcome of innovative engineering and a product that is sustainable, highly productive and highly liveable." ■

Website: www.surbanajurong.com

Image: Tim Hursley

ABOVE AND LEFT: **The central spine, which is made up of a series of A-frame steel spine, keeps the campus 'stitched' together. It caters to the movement between the eastern block and the western block.**

ABOVE AND RIGHT: **The SJ Campus official opening ceremony was held on 13 March 2024.**

All images: Surbana Jurong (unless stated otherwise)

'PROTECTING' SEPANG RACE CIRCUIT

Completed in February 1998 and inaugurated in March 1999, the Sepang International Circuit – now known as Petronas Sepang International Circuit – is a popular sports venue in Malaysia and regularly hosts top-level car, motorcycle and cycling events, such as the Formula 1 Grand Prix (F1), MotoGP, Super GT, World Touring Car Cup (WTCR), and Asia Road Racing Championship (ARRC).

The circuit, designed by renowned architect Hermann Tilke, features 5,543 m, 15 corners and eight straights and two high-speed stretches, with vehicles capable of reaching a speed of more than 300 km/hr during races.

Special coating system

Last year, Mapei was involved in the preparation work for the Petronas MotoGP

LEFT: **The Petronas Sepang International Circuit is a popular sports venue in Malaysia, which regularly hosts top-level car, motorcycle and cycling events.**

BELOW: **To help prepare for the 2023 Petronas MotoGP Grand Prix of Malaysia, Mapei's Mapecoat TNS Race Track coating system was applied to protect the kerbs and runoff areas around the circuit.**

Article courtesy of Realta Mapei International 101

Grand Prix of Malaysia 2023. The company provided its Mapecoat TNS Race Track coloured coating system to protect the kerbs and runoff areas around the circuit. This is an acrylic waterborne, rapid film-forming, coloured coating specifically developed for marking asphalt roadways of road racing circuits.

The coating ensures that the areas treated remain durable and resistant to slip and maintain their surface roughness over time, including in wet conditions. The mechanical properties of the film, combined with its high resistance to potentially harmful and aggressive chemical agents (oil and fuel), make Mapecoat TNS Race Track an ideal solution for protecting surfaces which are regularly cleaned to ensure the riders' safety.

According to Adrian Tew of LLT Specialists Sdn Bhd, the coating contractor on the project, the major advantages of the Mapecoat TNS Race Track are "its easy application (even inexperienced workers for this product were able to apply it easily) and its fast-curing properties, which helped in this project especially due to the short time frame left for application operations. Malaysia's hot weather had increased the curing time as well, which made this property much needed at that point of time.

"Besides, the product is approved by FIA, the International Automobile Federation, which helped in the specification of the project. Last but not least, Mapecoat TNS Race Track was able to ensure high durability."

He said the main challenges on the job were "the limited time frame, as the project needed to be completed before the MotoGP event that only left us with a time frame of 10 days, and the exposure of the surfaces to weather agents that were beyond our control."

The owner of the project also chose the Mapecoat TNS Race Track because its formulation meets all the certification and safety standards required by FIA (Fédération Internationale de l'Automobile) and FIM (Fédératon Internationale de Motocyclisme) for products used to mark out the road surface of motor racing circuits.

Another reason was rapidity, which guaranteed short application times for the coating and, as a result, shorter preparation times for the circuit. In fact, Mapecoat TNS Race Track technology is based on special components that help the product form a film very quickly so that surfaces may be opened to foot traffic much sooner than those with traditional acrylic systems.

What's more, obtaining the right colour for this application was made possible thanks to the extensive range of colours available and the ColorMap automatic colouring system that allows any colour to be created. ■

Website: www.mapei.com.sg

Note: Some products mentioned in this article are available in the Singapore market. Please contact the customer service representative at Mapei Far East or visit the company's website for more information.

ROCKIN' DOWN THE HIGHWAY

The North-South Expressway project is a critical thoroughfare in Vietnam that will link over 32 cities from Hanoi to Ho Chi Minh City. It is the country's most important transportation corridor, and road contractor Son Hai is responsible for paving the highway and slipforming safety barrier walls.

Son Hai recently slipformed a 55 km safety barrier wall for one of the sections of the expressway. The contractor deployed a new Power Curber 5700-D to carry out the job. This is said to be the first time a slipform machine has poured a barrier wall in Vietnam.

Previously, most barrier walls in Vietnam were precast. With the 5700-D machine, Son Hai has poured 500 m daily with three rotating shifts of 12-person crews. The slipforming method has increased the quality and speed of production for Son Hai.

TOP AND ABOVE: **The North-South Expressway is Vietnam's most important transportation corridor, with some sections still under construction. A Power Curber 5700-D slipform machine is being used by road contractor Son Hai to slipform safety barrier walls, increasing the quality and speed of production for this major infrastructure project.**

ABOVE AND BELOW: **This is said to be the first time a slipform machine has poured a barrier wall in Vietnam. The Power Curber 5700-D has been working on several sections of the expressway, operating three shifts per day.**

During a jobsite visit from Pham Minh Chinh, Prime Minister of Vietnam, Son Hai introduced the Power Curber 5700-D. The contractor also requested that the Road Construction Ministry and Prime Minister allow all highway barrier walls to be poured by machine rather than by hand.

The Nha Trang – Cam Lam section, where the Power Curber 5700-D worked, was completed in mid-2023, approximately three months ahead of schedule. Since then, the 5700-D has been moved to other sections of the expressway and continues to operate three shifts per day.

Son Hai's first Power Curber was an 8700, a model that was manufactured over 20 years ago. This multipurpose slipform machine was designed for use with three or four tracks. It was deployed for various offset and paving applications, similar to the Power Curber 7700 currently in production. Son Hai's 8700 still operates daily, and Power Curbers still provides product support and parts for the machine. ■

Website: www.powercurbers.com

SMOOTH OPERATOR

There's only one place you'll find the heavy hitters of concrete and masonry this January: **Vegas, baby — at World of Concrete 2025**, the largest and only annual international event dedicated to your business. Be here to mix with industry giants. Get your hands on the latest technologies revolutionizing safety, performance and speed. And learn what it takes to not only claim a piece of our industry's massive projected growth but dominate the field.

Join the power players of concrete and masonry.

Learn more about WOC

View International Events

WORLD OF CONCRETE®

informa markets

EXHIBITS: JANUARY 21-23, 2025
EDUCATION: JANUARY 20-23
LAS VEGAS CONVENTION CENTER

REGISTER AT:
WORLDOFCONCRETE.COM

TRANSFORMING HS 873 HD

Liebherr in Hong Kong has overhauled an existing HS 873 HD duty-cycle crawler crane for China Geo-Engineering Corporation

China Geo-Engineering Corporation in Hong Kong has taken advantage of the Liebherr Transform service and ordered a complete overhaul of its 23-year-old Liebherr HS 873 HD duty-cycle crawler crane. This is just one in a series of the company's fleet of duty-cycle crawler cranes to be overhauled at Liebherr in Hong Kong – all of which are over 20 years old.

Even after 23 years of service, the HS 873 HD was found to be structurally good and so the customer decided to incorporate an upgrade in the process. "We only needed modest investments for an overhaul to get the machine working again. Consequently, we decided to upgrade its engine, from 480 kW to 605 kW and installed a second slewing gear," explained German Leung, general manager of the foundations department at China Geo-Engineering Corporation.

With this increase in engine power, the strength and versatility of the HS 873 HD was greatly enhanced, making it well prepared for construction sites of today. "Basically, all our machines – HS 873 HD, HS 883 HD and HS 853 HD – are being sent to Liebherr one by one for overhaul so they will function like new," said Mr Leung.

He added, "About six years ago, I received information from colleagues at Liebherr Hong Kong that they can take our crane directly to their factory. We highly appreciated this arrangement from Liebherr."

The incorporated repair and maintenance workshop at Liebherr (HKG) Limited added to the convenience of the project as all work could be carried out in one location. All processes relating to the dismantling, reconditioning and assembly of the machine

were performed by Liebherr's own staff on site. Here, a team of experts manages the entire planning and implementation of Transform projects – from consultation through to installation, technical support and service.

Liebherr Transform provides an upgrade, modification and overhaul service to breathe new life into customers' existing machines. It is available for crawler cranes (up to 400 t), deep foundation equipment and duty-cycle crawler cranes. The service includes a comprehensive range of structural, electrical, mechanical, ergonomic and digital modifications. With innovative technologies and expertise, the machines can be reconditioned to become stronger, faster, smarter and greener.

"This machine is completely overhauled and functions as new. So, we are very satisfied with the overhaul programme Liebherr Transform," said Mr Leung. ■

Website: www.liebherr.com

OPPOSITE: **German Leung of China Geo-Engineering Corporation on site with the transformed HS 873 HD crane.**

TOP: **The 23-year-old HS 873 HD duty-cycle crane ready for an overhaul at the Liebherr facility in Hong Kong.**

ABOVE: **Liebherr Transform provides an upgrade, modification and overhaul service to breathe new life into customers' existing machines. It is available for crawler cranes (up to 400 t), deep foundation equipment and duty-cycle crawler cranes.**

SENNEBOGEN 825 E DEMOLITION EXCAVATOR

BELOW: **The new Sennebogen 825 E Demolition excavator with a telescopic crawler undercarriage offers high stability. The machine has a reach of 14 m.**

MAIN: **Suitable for use on urban construction sites and in confined spaces, the 825 E Demolition features compact dimensions and an operating weight of 38 t.**

Sennebogen has expanded its range of demolition excavators with the new 825 E Demolition. Featuring a reach of 14 m and excellent manoeuvrability, this new model offers high stability thanks to its telescopic wide-track undercarriage. The machine is not only ideal for selective demolition of buildings using demolition grabs, demolition hammers or pulverisers, but is also well suited for sorting tasks.

The 825 E Demolition has an operating weight of 38 t and compact dimensions, making it suitable for use on urban construction sites and in confined spaces. The machine is also equipped with an innovative quick-change system: a wide range of attachments, including the demolition hammer, can be used flexibly and easily changed by the operator from the cab within a short time.

Safety is achieved through the stable undercarriage with an overall width of 4.2 m, as well as through the machine cab that can be raised by 2.7 m and tilted by 30 degrees. This allows the operator to work ergonomically, leaning back in the seat with a clear view of the attachment. In addition, the robust construction of the machine and safety features ensure safe working in the demolition area.

Thanks to the hydraulically lowerable counterweight, the transport weight of the 825 E Demolition can be reduced by 10 t, and thus the machine can be easily transported without a special permit. There is no need to dismantle the equipment either, as it can be transported in one piece on a low-loader. The 825 E Demolition can also be ready for use immediately without any set-up work. ■

Website: www.sennebogen.asia

SOUTHEAST•ASIA
CONSTRUCTION

Southeast Asia Construction (SEAC) is a B2B news portal for the construction industry in Asia, targetted at contractors, engineers, equipment manufacturers and distributors, and other professionals in the industry. We provide multiple platforms for our clients to reach out to their target audience effectively.

Scan to visit our website

@southeastasiaconstruction
@southeastasiaconstruction
@tradelinkmedia
@southeastasiaconstruction

ADVERTISERS' INDEX

MESSE MÜNCHEN

OUR COMPETENCE, YOUR INNOVATION.

bauma CHINA, Shanghai, SNIEC
November 26–29, 2024

SHAPE THE INDUSTRY AND BE AN EXHIBITIOR

Apply now !

International Trade Fair for Construction Machinery, Building Material Machines, Mining Machines and Construction Vehicles.

www.bauma-china.com

bauma CHINA

The Worldwide Leader in Concrete Paving Technology

GOMACO

GOMACO offers the full range of concrete slipform pavers, curb and gutter machines, trimmers, placer/spreaders, texture/cure machines, and bridge/canal finishing equipment. GOMACO equipment features our exclusive and proprietary G+® control system, created in-house by our software engineers from the wants and needs of contractors paving in the field. At the heart of GOMACO equipment is our passion for concrete and our commitment to our customers. We look forward to visiting with you at Bauma in Munich, Germany, about your upcoming paving projects and your concrete paving equipment needs. Our worldwide distributor network and our corporate team always stand ready to serve and assist you.

CONCRETE STREETS AND HIGHWAYS | AIRPORT RUNWAYS | CURB AND GUTTER | SIDEWALKS
RECREATIONAL TRAILS | SAFETY BARRIER | BRIDGE PARAPET | BRIDGE DECKS | IRRIGATION CANALS
GOMACO CORPORATION IN IDA GROVE, IOWA, USA | 712-364-3347

www.gomaco.com | info@gomaco.com