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One Day **Piling Technical Seminar** on

ADVANCES AND LATEST TECHNOLOGIES IN PILES CONSTRUCTION

VENUE: RAMADA HOTEL BALLROOM, 9.00AM TO 5.00PM

DATE: 31 AUGUST 2017 (THURSDAY)

PDU/STU POINTS: TO BE ADVISED

REGISTRATION FEE: **\$80 ONLY**

REGISTRATION LINK: <https://www.cma.sg/e/geospiling>

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Register**

Introduction

Challenges in the deep foundation construction such as deep socketing in hard rock, boulder formation, limestone cavity, increasing need to construct deeper and deeper pile etc, are not uncommon in Singapore. Many of such challenges could be overcome by advances and new technologies developed over the past few years. This technical seminar aims to provide the industry with firsthand information from the experts of invited piling machine manufacturers. This seminar also aims to educate our industry with the state-of-the-art piling technologies that is available to meet the objective of increased productivity, enhanced safety and meeting high standard required for more and more challenging projects. www.cma.sg/e/geospiling

SEMINAR PROGRAM

08:30 – 09:00 Registration

09:00 – 09:10 Welcome address by GeoSS President

09:10 – 09:20 Opening address by Commissioner of Building Control/BCA Group Director

09:20 – 10:05 MHWirth's Advances on Foundation Drilling by Reverse Circulation Drilling Technology - by Mr Willi Schmitz

Pile top drill rigs (PBA) are the efficient solution for deep and large diameter drilling in mixed and hard formations, both onshore and offshore. Pile diameters from 0.6 m to 7.0 m and drilling depths of up to 500 m can be realized with them. MHWirth's PBAs are applied in a broad range of applications, such as high rise buildings, bridges and port constructions, offshore foundation drilling for windmills and platforms and reinforcement drillings for water dam restoration, furthermore for shaft drilling for mining applications. Using the robust and straight-forward reverse circulation (air-lift) drilling method, MHWirth sets standards for cost effectiveness and versatility in drilling large diameters and great depths.

10:05 – 10:35 Tea/Coffee Break

10:35 – 11:20 IMT's Latest Technologies for More Reliable and Highly Productive Foundation Works - by Mr Luca Urbani

IMT has developed their latest technologies for their machines which will be show cased in this seminar. These new machines are much simpler than ones mounting an MHPU base and have more powerful motors compared to similar-sized machines mounted on excavator, thus resulting in greater productivity. They have a completely different layout which favours maintenance, with less down time and greater safety. They are also more flexible and are more easily adaptable to different kinds of drilling different from telescopic kelly bar, making the conversion to CFA, crowd winch, DWG, or vibroflotation much easier. IMT machines in LCA configuration for the implementation of power lines, pre-drilling for oil fields and gas extraction in landfill will be included.

11:20 – 12:05 TEG's Innovative Construction Technique on Large Diameter Bored Piles in Hard Rock Using Multi-stage Boring and Telescopic Segmental Casing in Limestone Formation - by Mr Alan Wang

Construction of large diameter bored pile up to 2.5m diameter in hard granite is often not preferred in view of the difficulty in coring through the hard rocks. A new technique has been developed in which a smaller diameter borehole is first core through the rock to form a pilot core. The borehole is then engaged to the required diameter using single- or multiple-stage reamers. The reamer is guided by specially designed guiding casing or a centraliser ; Cavities are common feature in limestone formation. It poses many challenges in bored pile construction because of bore hole instability and excessive over-break during the concreting. Conventional temporary steel casing can only be installed up

to the rock head and not able to provide protection within the cavities. To overcome such problem, a telescopic segmental casing was developed. Using this technology, temporary casing with slightly smaller outer diameter could be extended through the limestone to encase the bored pile within the cavity zone. Multiple casing could be extended if more than one cavity is found within the limestone formation.

12:05 – 12:30 Q&A for morning session

12:30 – 14:00 Lunch & Networking at Seminar Room/Exhibition Booths

14:00 – 14:45 Soilmec's Innovations for Piled Foundation System - by Mr Andrea Di Eugenio and Mr. Alessandro Ditillo

Soilmec sets up the new generation of Duty Cycle Cranes, designed to satisfy the needs of all users looking for high performances combined with safety, ergonomics and respect for the environment. Soilmec also invested its best resources in a multidisciplinary team involved in a new generation design for the models in the top end of its range. This presentation aims to share Soilmec's innovation with the DMS control system manages the different work cycle phases for an improved productivity, etc. The excellence design useful to build the best tool to create added value to the customers will also be shared in this presentation.

14:45 – 15:30 Bauer's Overview of the State of the Art Double Rotary Head Drilling System (Cased CFA) - by Mr Franz-Werner Gerressen

The principle on how a double-rotary-head drilling system (cased CFA) works will be explained in this presentation. Major application for the cased CFA system is the secant pile wall construction. Cost and time savings are key advantages. Using the system in a special variation as the "Front-of-the-Wall system (FOW)" will allow one to get even more advantages. FOW system allows to drill a pile wall in confined areas and close to existing structures. The technical presentation will highlight required equipment as well as typical application references.

15:30 – 16:00 Tea/Coffee Break

16:00 – 16:30 Jean Lutz's Latest Revolutionization of Instrumentation and Improvement of the Management of Advanced Works for the various piling and soil improvement works - by Mr Mark Lutz

Besides traditional way of monitoring the works on a jobsite, new techniques have appeared in the last decade. The main disruptive technologies concern on one hand the on-line and precise location of the underground treatment by verticality and GPS measurements, and on the other hand, the massive development of information and communication tools. Through these new technologies, it is now possible to check in real time the quality and progress of the works on the jobsite, the key parameters of the machines, to reduce human error and to increase drastically the productivity.

16:30 – 17:00 Q&A for afternoon session

17.00 – Adjournment for the day

SPEAKERS



Mr Willi Schmitz (MHWirth) is Senior Sales Manager for RC Drilling. His experience covers a broad range of technologies and products, including reverse circulation drilling, pile-top drill rigs, air-lift drill rigs and water-well drill rigs. He provides close consultation to customers and advances the development of MHWirth's pile top drilling solutions. He holds degree in machine construction studies from RWTH Aachen, Germany.



Mr Luca Urbani (IMT) is the Chief Design Engineer at IMT srl. He is responsible for the design of the drill rig in all main aspect, feasibility verifications, framework design and relative structure verification. He is an inventor and held several patents in utility model and industrial invention. He graduated with a Bachelor degree in Mechanical Engineering from l'University Politecnica delle Marche.



Mr Alan Wang (TEG) is the President of SINOVO GROUP, CSR TEG Heavy Industry (S.E.A) Pte. Ltd. and TEG (Far East) Pte. Ltd. He is also partner of CRRC foundation machinery and responsible for overseas marketing management and strategic business development. He obtained his degree in machinery engineering from North university of China and second degree in International Trading from Capital University of Economics and Business in China, and holds a MBA degree from NTU.



Mr Andrea Di Eugenio (Soilmec) is Director of the Crane & Hydromill Division, which develops duty cycle crawler cranes and related technologies for diaphragm walls, ground improvement, piles excavation, pile driving, soil digging. He has extensive expertise in project management, product development and product marketing strategy. He holds a M.Sc. in Electrical Engineering from Bologna University and a Master in Business Administration from Bologna Business School.



Mr Alessandro Ditillo (Soilmec) is Director of Large Diameter Pile Engineering Division. He established the R&D Division of Soilmec. He is the inventor of 16 family patents in all the major foundation fields: micropiling, displacement & TCT, CSP, bored piles, diaphragm wall, machine & multifunctional designing, energy and safety. He is Member of CEN Working Group WG03 of TC151 involved in EN16228 standard. He holds a M.Sc. in Mechanical Engineering from Bologna University and Executive Master in Technology and Innovation at BBS in Bologna.



Mr Franz-Werner Gerressen (Bauer) is Director of Method Development, BAUER Maschinen, Germany. He started Department of Method Development for BAUER Maschinen with main focus on methods like CSM or FDP, Cased CFA, but also for slurry wall, piling and soil improvement in countries all over the world. At DFI, he is a member of soil mixing committee and board member of DFI-Europe. He graduated from civil engineering at the RWTH Aachen (Technical University).



Mr Marc Lutz (Jean Lutz SA) is CEO and Technical Director of the Jean Lutz Company. He has 20 years of experience in the area of instrumentation for special foundations and development of signal processing solutions.

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ADVANCES AND LATEST TECHNOLOGIES IN PILES CONSTRUCTION

31 August 2017, Ramada Singapore at Zhongshan Park

9:00AM to 5:00PM

Registration Form

Salutation (Please circle): _____ Family Name: _____ Given Name: _____
Prof /Dr /Mr /Ms

Name to be Printed on Cert: _____

Organization : _____ Designation : _____

Mailing Address : _____

Postal/Zip Code : _____ Country : _____

PE/Re/RTO No : _____ Dietary Requirements : _____
(Please Circle One)

Telephone : _____ Fax: _____ Email : _____

Payments are to be made in **Singapore dollars (S\$)** as quoted below.
Registration Fees: SGD \$80.00

Please register early to avoid disappointment

Payment Method:

- Please complete the registration form and submit it to the Secretariat by mail, fax or email.
- Full payment must be accompanied with registration form in order to secure a seat at the Seminar. Invoice will be issued upon receipt of payment.
- All registrations are on a first-come-first-served. We regret that there will be no refund for withdrawal/cancellation. Replacement of participant is allowed 3 days prior to the Seminar.
- The Organiser reserves the right to postpone or cancel the Seminar without prior notice.

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