





Supported by Ministry of Manpower, WSH Council, NUS SHE Alumni, and IOSH S'pore Branch

# Seminar on Tower Crane Safety 2011

#### **PROGRAMME DETAILS**

23 June 2011 (Thursday)
Full day
9.00 am – 5.00 pm
NUS Auditorium
6 STUs (Confirmed)
6 SDUs (To be Confirmed)
6 PDUs (To be Confirmed)
\$150.00 (IES Member / SHE Alumni), \$180.00 (Non-Member)

# **INTRODUCTION**

There were several crane related accidents recently in Singapore. MOM, WSH Council together with five established companies will share their experience / case studies relating to the safety of tower crane operation in different perspectives ranging from manufacturer, builder to client. This seminar is intended to share some best practices on the safe use of tower cranes. It would be useful for those who are involved in the tower crane industry, especially Crane Inspectors, Construction Site Project Managers, Supervisors, Design Engineers, and Safety Officers. It aims to provide a holistic approach to understand the roles of various stake holders in order to complement each other and optimizing the safe use of tower cranes.

# TARGET AUDIENCE

Managers, Engineers and Technicians, who are involved in Design, Project Management and Installation, of Tower Cranes. Also useful for Resident Engineers / Technical Officers and Safety Officers.

# SEMINAR PROGRAMME

TIME	DESCRIPTION	
8.30am – 8.55am	Reception and Registration	
9.00am – 9.15am	Welcome Speech by Er Ho Siong Hin (WSH Commissioner)	
9.15am – 10.00 am	Introduction of SS 559:2010	
	By Mr Chan Yew Kwong (Ministry of Manpower)	
10.00am – 10.45am	Sharing on the Implementation of Appointed Person from the Approved Crane	
	Contractor's (ACC) Perspective	
	By Mr Jason Heng (General Manager of Soon Douglas Pte Ltd)	
10.45am – 11.15am	Tea Break	
11.15am – 12.00am	Tower crane planning for construction sites from a builder's perspective	
	By Benjamin Cheuk (STRAITS Construction Singapore Pte Ltd)	
12.00pm – 12.40pm	Panel Q&A (Panel Chairman Chan Yew Kwong)	
12.40pm – 1.40pm	Lunch	
1.40pm – 2.25pm	Tower Crane Anti-collision & Data Logger	
	By Mr Lim Meng Fei (Technical Manager of TAC Control Systems Pte Ltd)	
2.25pm – 3.10pm	Implementation of Safety in Modern Tower Cranes and Best Practices for the	
	Industry	
	By Mr Christoph Schneider (Head of Project Department of Liebherr-Werk Biberach GmbH)	
3.10pm – 3.35pm	Tea Break	
3.35pm – 4.20pm	Client's prospective of Tower Cranes	
	By Mr John Henry Birchall (Director Safety & Health in Keppel Land International Ltd)	
4.20pm – 5.00pm	Panel Q&A (Panel Chairman)	
	End of Programme	

## SPEAKERS' PROFILE

#### Er. Ho Siong Hin



Er. Ho Siong Hin is the current Commissioner for Workplace Safety and Health. He holds a concurrent position as the Divisional Director for the Ministry of Manpower's Occupational Safety and Health (OSH) Division.

Er. Ho is a Mechanical Engineering graduate from the University of Auckland, New Zealand. He joined MOM in 1982. In 2005, Er. Ho was appointed to his current position to lead OSH reform in Singapore. The key changes include a push for greater ownership by industry for OSH outcomes and the implementation of risk management across all industry sectors. Er. Ho was instrumental in the formation of the WSH Council in which he is a member. Er. Ho also oversees the establishment of the WSH Institute with a mission to enhance WSH through Knowledge, Innovation and Solution. All these efforts had led to a significant reduction in the fatal accident rates from 4.9 deaths per 100,000 workers in 2004 to 2.2 deaths per 100,000 workers in 2010.

In the regional and international arena, Er. Ho has presented many papers on OSH matters, including China, Hong Kong, Canada, Europe and Australia. Er. Ho was elected Vice President of the International Association of Labour Inspections (IALI) in 2008.

Er. Ho is the President of the Institution of Engineers Singapore (2011-2012). He is a member of the Professional Engineers Board and Chairman of the Advisory Committee to the Chemical Engineering Department of Ngee Ann Polytechnic. He is also a member of the Singapore Accreditation Council by SPRING and chairs the Council Committee on Inspection Bodies.

# Mr. Chan Yew



Chan Yew Kwong is the Deputy Director (Construction Safety) of OSH Specialist Department, OSH Division. He has been with the OSH Division for about 26 years. His 26 years' working experience involves inspection of construction worksites, shipyards, chemical and other manufacturing factories, investigations into fatal/serious accidents, development of safety management systems and safety auditing.

As Deputy Director, he plans and ensures that the strategies, programmes and activities of the Construction Safety Branch in the key areas of standards, research and best practices are effective in contributing to the control of workplace hazards and ensuring the safety and health of the Singapore workforce.

Mr Chan is also very involved in the development and promotion of OSHrelated Singapore Standards. He is the Chairman of the SPRING's General Engineering & Safety Standard Committee, and a member of the Building and Construction Standards Committee.

#### Mr. Jason Heng

Mr. Jason Heng is currently the General Manager of Soon Douglas Pte Ltd and also the Group HSSE Manager of Tiong Woon Corporation Holding Ltd. He has over 14 years of professional experience in the field of construction and also workplace safety and health (WSH) and is a Registered Workplace Safety and Health Officer with the Ministry of Manpower. Mr Jason Heng is currently also a member of the National Crane Safety Taskforce which has been setup to specifically raise standards of Crane Safety in Singapore and also actively contributed to the work of various technical and professional committees such as with the Mobile Crane Workgroup, Tower Crane Workgroup and also the Workgroup for CP for Safe Lifting Operations

#### Mr. Benjamin Cheuk



Mr Benjamin Cheuk (B Eng, Civil) is a Senior Project Manager working for Straits Construction Singapore Pte Ltd. He has managed a number of complex, large-scale, high-rise public housing projects, including the largest public housing project awarded by the HDB in recent times in terms of contract value – Clementi N4C8 (contract value: \$370 million; 2234 dwelling units). One of the projects which he has managed, Queenstown RC21, has been conferred the second highest ever CONQUAS score by the BCA, under the public housing category. He is a firm believer that strict quality control, meticulous project planning, and effective implementation of good WSH practices are the key pillars in project management.

#### Mr. Lim Meng Fei



Mr Lim Meng Fei, Electronics Engineer, is currently the Technical Manager for TAC Control Systems Pte Ltd that supplies TAC-3000 Anti-collision, Zone and Boundary protection system. He has been involved in design and development of anti-collision systems for the past 10 years utilizing his 20 years of embedded design experience for factory automation and data collection systems in the manufacturing and banking sectors that requires high reliability and high level of security.

#### Mr. Christoph Schneider



Mr Christoph Schneider, head of project department of Liebherr Werk Biberach will An Expert Engineer Examiner of Tower Cranes as approved by the German Society for Safety and Accident Prevention by Order of the Federal Ministry of Labor.

Mr. Schneider graduated with degrees in Civil and Structural Engineering: Specialization in massive type of construction and structural steel engineering from the Technical University Munich, and at present he is responsible for overseeing the formulation, planning and organizing of special projects involving complex tower cranes operation and development in Liebherr-Werk Biberach. He has more than 25 years of experience in structural steel design and tower cranes application. He has also conduct lectures in his field of knowledge in the German university in Ulm & Biberach. He is also a member of the ISO technical committee in Germany.

## Mr. John Henry Birchall



John has been a safety professional since 1991 when he joined the waste management industry as a Regional Quality Assurance, Health and Safety Manager. From there he moved into the Chemical industry as the UK, Quality, Safety and Environment Manager for a Norwegian company. It was during this time that he completed his Masters Degree in Occupational Safety and Health at Greenwich University. He then went on to complete a Diploma in Environmental Management with the British Safety Council. In the past few years in Singapore, John was the Senior Safety Manager on the iconic Marina Bay Sands Integrated Resort project, serving as the advisor to the Executive Project Management Team and acting as the conduit between said management and the relative Singapore Government Department. Moreover, he was the Vice-Chair in the "WSH Sub-committee for the Marina Bay Area for Development Projects" under the construction and Landscaping committee of the WSH Council. John is presently the Director (Safety& Health) for Keppel Land International, one of the largest developers in the Region.

# **SYNOPSIS**

#### Introduction of SS 559:2010

By Mr Chan Yew Kwong (MOM)

SS 559 : 2010 "Code of Practice for the safe use of tower cranes" is a revision of the SS CP 52 which was first published in 1995. The new SS 559 gives recommendations for the safe installation and use of tower cranes, including self-erecting tower cranes. It also covers the selection of tower cranes, planning of installation (including site specific design work), erection, climbing, inspection (including testing), maintenance, operation, and dismantling, as well as safety measures to be taken during the execution of all the above functions. This paper will focus on the important recommendations and how they can assist owners and users of tower cranes achieve better lifting safety using tower cranes.

#### Sharing on the Implementation of Appointed Person from the Approved Crane Contractor's (ACC)

#### Perspective

By Mr Jason Heng (General Manager of Soon Douglas Pte Ltd)

Soon Douglas (Pte) Ltd had started the appointment of an Appointed Person before the launch of the SS 559 - Safe Use of Tower Cranes in September 2010. With the fresh experience of having going through the selection, assessment and finally appointed an Appointed Person for the erection, dismantle and jacking of tower cranes at various project sites, we would like to share with the stakeholders on the whole journey of the implementation from the ACC perspective.

#### Tower crane planning for construction sites from a builder's perspective

By Benjamin Cheuk (STRAITS Construction Singapore Pte Ltd)

In this paper, Benjamin will share his experience and thoughts pertaining to the key factors that the site project management team ought to consider in determining the deployment and selection of tower cranes for the project. He will also talk about the key factors that tend to have a major influence on, firstly, where to plant the tower crane with respect to the building block, and secondly, the costs incurred over the duration of the project, and which are payable to the tower crane supplier.

#### Tower Crane Anti-collision & Data Logger

By Mr Lim Meng Fei (TAC Control Systems Pte Ltd)

- Risk against performance
- Real-time risk assessment and effectiveness of anti-collision control
- Information from data-logger

To effectively prevent crane to crane or object collision, there has to be a compromise with speed to some extent. Therefore, balancing between working safely and working fast is required in order to lower potential risk of collision. How does the choice between risk and performance implicate to companies?

#### Implementation of Safety in Modern Tower Cranes and Best Practices for the Industry

By Mr Christoph Schneider (Head of Project Department of Liebherr-Werk Biberach GmbH)

The speaker will share his experience in implementation of Safety in Modern Tower Cranes according to EN 14439.

#### Client's prospective of Tower Cranes

By Mr John Henry Birchall (Keppel Land International Ltd)

For decades Tower Cranes have been used as a means to transport materials when constructing high rise buildings. The number of failures globally even today is an alarming rate, in Singapore alone between 2006 and 2009 there was no less than 8 tower crane related fatalities.

The aim of this session is to discuss how a developer/client can have a significant influence to ensure that the necessary processes and procedures are in place prior to awarding a contract.

Then upon award what can be done from a monitoring and control perspective thus taking a proactive stance rather than reactive when it goes wrong.

# **Registration Form**

Seminar on Tower Crane Safety 2011			
Date : 23 June 2011 (Thursday)	: 23 June 2011 (Thursday)		
Time:9pm to 5:00pm	: 9pm to 5:00pm		
Venue : NUS Auditorium			
Fees *:\$150.00 (IES Members/SHE Alumni)\$180.00 (Non-Members)	3)		
Please register online/mail/fax the completed form by <b><u>16 June 2011 before 3pm</u></b> to:			
Address: IES Academy 70 Bukit Tinggi Road, IES Building, Singapore 289758. Attention to : Nicholas Ng (Tel) 6463 9211 (Fax) 6463 9468			
Participant Details			
Name : NRIC :			
Company : Designation:			
Address 1			
(For mailing of invoice and receipt)			
Address 2 :			
(For mailing of Certificate – If different from Address 1)			
Postal Code : M	<u>ale / Female</u>		
Mobile :   Fax :			
Email :			
Please indicate :	(if applicable)		
Affiliated member Organization Membersh	ip No.:		
□ Non-member □ Tick h	ere if sponsored by company		
Contact Person Details (if different from participant)			
Name : Designation:			
Tel : Fax:			
Email :			
Payment Details			
Bank / Cheque No.: Amount (\$):			
* All Fees are inclusive of 7 % GST. Cheque should be made payable to: <b>"IES"</b> or <b>"Institution of Engineers, Singapo</b>	re"		
Acceptance of Terms and Conditions for Registrations of IES Academy's E I agree to abide by the Terms and Conditions for Registration of IES Academy's Events.	<u>vents</u>		
Name : Signature:			

#### **TERMS & CONDITIONS COURSE REGISTRATION**

#### **Registration**

Any registration, whether on-line or fax will be on a *first-come-first-served basis* and will only be confirmed upon receipt of full payment by The Institution of Engineers, Singapore (IES) unless otherwise invoice to company.

All registrations must be submitted with duly completed registration form.

Email registrations will not be accepted.

#### **Closing Date & Payment**

The closing date of the event will be 7 days prior to event commencement date. Cheques should be crossed 'A/C payee only' and made payable to '**Institution of Engineers**, **Singapore' or 'IES'**, with the <u>*Title of The Event indicated*</u> <u>*clearly written on the back of the cheques*</u>, and submitted with the duly completed registration forms to:

#### IES Academy 70 Bukit Tinggi Road Singapore 289758

#### **Confirmation of Registration**

Confirmation of registration will be given 7 days prior to the commencement date via email. If you do not receive the said confirmation email, you are required to contact IESA general admin immediately at 6463 9211 (office).

IESA reserves the right to allow only confirmed registrants to attend the Event.

#### Withdrawals/Refunds of Fees

Notice of withdrawal must be given in writing to IESA. Policy on refund of course fee is as follows:

- FULL refund if we receive your written notice of withdrawal at least <u>7 days</u> before the commencement of the Event.
- > **NO** refund otherwise.

No show of participant would not be accepted as reason for withdrawal/refund.

Replacement is allowed but restricted to once only. Replacement will be allowed only if written notice is received by us at least 3 days before the commencement of the event. However, when an IES member is replaced by a non-member, the participant has to pay the difference in the relevant fees at least 3 days before the commencement date.

#### **Cancellation/Postponement**

Changes in Venue, Dates, Time and Speakers for the Events can occur due to unforeseen circumstances. IES reserves the full rights to cancel or postpone the Event under such circumstances without prior reasons. Every effort, however, will be made to inform the participants or contact person of any cancellation or postponement.

Fees will be refunded in FULL if any Event is cancelled by IESA.

#### **Enquiries**

For further enquiries, please contact IESA general office at Tel: 6463 9211.