



# ACI SHOTCRETE NOZZLEMAN CERTIFICATION PROGRAM, SINGAPORE

Supported by Building and Construction Authority 



**1<sup>st</sup>** to bring this to Asia  
**3<sup>rd</sup>** time in Singapore  
**5** years validity

**INTERNATIONAL RECOGNITION**  
as professional craftsmen

**INDICATES: SAFETY & QUALITY**  
Knowledge and capability to properly apply shotcrete

Shotcrete is used in many projects in Asia today. However, the quality of the shotcrete applied is sometimes suspect and there are unfortunately no standardised quality control methods to evaluate freshly placed shotcrete.

In this respect, a select group of experienced and acknowledged shotcrete experts has been approved by the American Concrete Institute (ACI) to act as examiners for the ACI Shotcrete Nozzleman Certification Program.

This program is focused on specific key elements of the shotcrete process such as knowledge, skills and abilities. It will be conducted by Prof. Marc Jolin.

*Marc Jolin is an Full Professor in the Department of Civil and Water Engineering at Laval University, Canada and an active member of CRIB (Research Center on Concrete Infrastructures) . As an ACI Examiner and ASA Educator, he has conducted numerous Shotcrete Nozzleman Certification sessions. Jolin is the past-chair of the C660, Shotcrete Nozzleman Certification, and chair of the ACI committees 506, Shotcreting. His research and development interests include shotcrete, infrastructure durability, rheology and calcium aluminates cement.*

## To be certified, you will need to meet the following requirements:

1. A passing grade on the ACI written examination, and
2. Successful completion of the ACI (practical) performance examination.

**8-9 OCT 2015**

10 sign-ups required to conduct the course  
(RSVP by 23 Sep)

LIMITED TO  
**20 PAX**

TRAINING FEE  
**S\$3,500**

to be paid upfront upon registration

REQUIREMENT  
**500 hours experience**

in wet-mix shotcrete hand nozzling

## The program requires knowledge in the following areas of Shotcrete construction:

1. Basic concrete technology
2. Shotcrete Equipment
3. Environmental conditions and precautions
4. Inspection and preparation of surfaces
5. Shotcrete placement, principles, techniques
6. Communication
7. Finishing and tolerance controls
8. Safety
9. Testing / quality
10. Curing



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**Tentative Programme**

**8-9 October 2015**

<b>Day 1:</b>	
<b>8:30</b>	<b>Registration. Collect course material</b>
<b>9:00</b>	<b>Workshop - commence Basic concrete technology, placement, surface preparation, equipment, safety, etc</b>
<b>10:00</b>	<b>Coffee Break</b>
<b>10:30</b>	<b>Workshop</b>
<b>12:30</b>	<b>Lunch</b>
<b>14:00</b>	<b>Workshop</b>
<b>15:00</b>	<b>Coffee Break</b>
<b>16:00</b>	<b>End of Workshop</b>

<b>Day 2:</b>	
<b>7:30</b>	<b>Written exam</b>
<b>9:30</b>	<b>Coffee Break</b>
<b>10:45</b>	<b>Depart to Spray Site for Hands-on shooting</b>
<b>12:00</b>	<b>Start of Shooting test</b>
<b>16:00</b>	<b>End of Workshop</b>