

## Organisation

Head of Course: CUC International Centre for Geotechnics and Underground Construction, CH-7320 Sargans, + 41 81 734 14 14

**Date: Tue 4<sup>th</sup> to Thu 6<sup>th</sup> September 2018**

**In case of less than 10 participants, the course cannot take place.**

Registration: latest two weeks prior to the course

Course Location: Hagerbach Test Gallery Ltd.  
Polistrasse 1, CH-8893 Flums Hochwiese

Application: By application form on the EFNARC website [www.efnarc.org](http://www.efnarc.org)

Fees: CHF 3'900.— per person  
CHF 3'400.— EFNARC-members

Fee includes:

Course tuition by CUC providing a summary of all contents of the certification. Assessment of participants as basis for certification. Certification by EFNARC and publication on EFNARC website

Course fees are payable to CUC and must be paid in advance of the course.

Accommodation: Hotel accommodation is arranged on behalf of the participants. Meals and transfers from the hotel to the Test Gallery are included in the price of the course, however, transfers to and from the airport and cost of overnight stay are not included.

Cancellation: Cancellations are only accepted in written form and must be received by CUC at least 21 days before the course starts. In all other cases the course fee cannot be refunded.



## EFNARC Nozzleman Examiner Certification

**Tue 4<sup>th</sup> to Thu 6<sup>th</sup> September 2018**

**In case of less than 10 participants, the course cannot take place.**

Target Group: Experts with considerable experience in sprayed concrete application

Course Location: Hagerbach Test Gallery Ltd.  
Polistrasse 1, CH-8893 Flums Hochwiese  
Switzerland

Phone: +41 (0)81 / 734 14 14

E-mail: [info@hagerbach.ch](mailto:info@hagerbach.ch)



## EFNARC Nozzleman Certification Scheme

Sprayed concrete applications are one of the most essential activities in underground construction. The nozzleman has significant influence during the last production step of the sprayed concrete; controlling the quality of the sprayed concrete and also the economical outcome for the contractor.

EFNARC is the first organisation to develop guidelines for the Certification of Nozzlemen for wet sprayed concrete application which is most common in underground constructions.

On behalf of **EFNARC** the International **C**entre for Geotechnics and **U**nderground **C**onstruction (**CUC**) is offering Examiner Assessment and Accreditation for the Nozzleman Certification Scheme.

The EFNARC Nozzleman Certification Scheme is not a Training Course; it will only offer certification to Nozzlemen who have already gained the necessary experience and can demonstrate their technical knowledge and practical ability. The Scheme has been developed in recognition that the Construction Industry requires a means of identifying expert Nozzlemen. The Scheme is currently limited to wet, robotic sprayed concrete and has been developed primarily for the European market, although it will have a wider application.

The Scheme will operate through National Examiners who will assess Nozzlemen for their theoretical and practical skills at their workplace. The first stage of the scheme is to identify and accredit suitable Examiners through the attendance of an EFNARC Examiner Assessment Course. Nozzleman Certification will follow the successful accreditation of Examiners.

Examiner Assessment is a two and a half day course starting at 2.00 pm on day 1. Participants should arrive at their designated hotel in time for a mid-day pickup.

## Program

### Day 1

---

Tuesday  
Arrival, 02.00 pm

Welcome  
Introduction to course procedure  
Concrete technology (theory)

### Day 2

---

Wednesday  
08.00 am to 05.00 pm

Concrete technology (practical demonstration)  
Sprayed concrete application (theory and practical)  
Assessment of sprayed concrete application  
Operation of EFNARC Nozzleman scheme

### Day 3

---

Thursday  
08.00 am to 04.00 pm

Assessment of participants:

- Theoretical (written test)
- Practical (assessment of Nozzleman)
- Oral examination