



**PERSATUAN KEBANGSAAN KONKRIT SIAP BANCUH MALAYSIA  
NATIONAL READY-MIXED CONCRETE ASSOCIATION OF MALAYSIA**

## **Concrete Defects: Testing & Repair**

Date : 17 & 18 Jan 2018  
Time : 9:00 a.m. to 5:00 p.m.  
Venue: NRMCA Training Room

### **Who Should Attend**

- Supervisory & Management personnel in ready-mixed concrete industry.
- Clerks-of-work / construction site supervisor.
- QA / QC engineers, consultants & architect representatives.
- JKR engineers.

### **Course Fees**

- RM950.00 + 6% GST per participant for NRMCA Members. RM1,100 + 6% GST for non-members.
- Fees inclusive of training materials, lunch, morning and afternoon breaks.
- Please pay in favour of "NRMCA" and assist to bank in to Hong Leong Bank accounts No. **369 0000 5264**
- Kindly fax the bank in slip together with your address to Mr. Daniel Lee at 603 7960 7882 or email to [finance@novabizservices.com](mailto:finance@novabizservices.com) in order for NRMCA to identify your payment and issue receipt accordingly.

**Venue of Training:** Training Room, NRMCA, Kota Damansara,  
13-1, 1st Floor, Jalan Sepah Puteri 5/1B,  
Pusat Dagangan Seri Utama PJU 5,  
Kota Damansara, 47810 Petaling Jaya,  
Selangor Darul Ehsan, Malaysia.

### **SBL Scheme**

Companies must apply directly to HRDF. SBL Scheme will be based on the individual merit of each application.

**Duration** : 2 Days

**Course Structure** : 8 Modules class room based.



**PERSATUAN KEBANGSAAN KONKRIT SIAP BANCUH MALAYSIA  
NATIONAL READY-MIXED CONCRETE ASSOCIATION OF MALAYSIA**

## **Concrete Defects: Testing & Repair**

**Trainer: Mr. Parnam Singh B.E. (Hons), MSc (Civil) U. K.**

Mr. Parnam Singh graduated from the Queen's University of Belfast, U.K. in 1989. He is a registered Civil Engineer with the Board of Engineers Malaysia and The Institution of Engineers Malaysia. He has more than 27 years of experience in the assessment and repair of concrete structures. He served L&M Structures Sdn Bhd as Technical Manager from 1990 to 2000. He is currently the General Manager of RNC Technology (M) Sdn Bhd, leading a team of managers and engineers specializing in concrete assessment and repair technology.

He has spent a life-long career exploring and investigating faults and failures in concrete and has spent several years majoring in forensic engineering. He has published more than 36 technical papers which were presented at national and international seminars and conferences.

Mr. Parnam is the Past President of the American Concrete Institute, KL Chapter, and member of the Concrete Society of Malaysia (MCSM) and Asian Concrete Federation (ACF). He is a registered Specialist Trainer with National Ready Mixed Concrete Association of Malaysia (NRMCA).

Mr. Parnam has also been engaged by the National Defence University as Adjunct Lecturer and member of their Industry Advisory Panel and Panel of Project Examiners since 2014. He is a Universiti Malaya Certified Business Coach and has successfully applied his skills in coaching subordinates, entrepreneurs and individuals from different sectors of the construction industry.

### **Course Objectives**

This course is designed for personnel engaged in the ready mixed concrete industry. The first objective of this course is to expose participants to a series of new generation additives and materials for concrete. Properties of fresh concrete including a detailed description of the different parameters related to bleeding and setting time of concrete are also included in the course. Factors related to testing are discussed in detail to highlight the need to understand the importance of proper test procedures for both fresh and hardened concrete. For compliance testing and interpretation of cube and core samples reference is made to the latest JKR specifications. In this course an attempt is also made to explain the essentials of concrete waterproofing which is useful when dealing with challenges related to concreting of basements and water retaining structures. Proper curing and protection of concrete which is extremely important for durable concrete is discussed in detail with emphasis on the need for a safe work place and environmental best practice in concrete delivery. Finally, problems and solutions related to poor quality concrete are highlighted to equip participants with best practice guidelines for addressing issues related to poor quality concrete.



**PERSATUAN KEBANGSAAN KONKRIT SIAP BANCUH MALAYSIA  
NATIONAL READY-MIXED CONCRETE ASSOCIATION OF MALAYSIA**

## **Concrete Defects: Testing & Repair**

Date : 17 & 18 Jan 2018  
Time : 9:00 a.m. to 5:00 p.m.  
Venue: NRMCA Training Room

### **Course Outline**

#### **Day 1**

##### **Introduction and Pre-Course Assessment**

- **Module 1: Concrete Technology;** types of cement, admixtures special additives and new generation materials
- **Module 2: Properties of Fresh Concrete;** setting time, bleeding, hydration, drying shrinkage, plastic shrinkage
- **Module 3: Control Tests and Tolerances;** sampling, slump test, compacting factor test, vebe test, bleeding of concrete, cube test, indirect tensile test, creep test
- **Module 4: Interpretation of Cube and Core Test Results;** how to interpret results for compliance testing based on JKR specs.

#### **Day 2**

- **Module 5: Concrete Waterproofing;** properties of concrete, porosity, permeability, special additives and new generation materials for concrete waterproofing
- **Module 6: Curing and Protection of Concrete;** hot weather concreting, curing techniques, causes and prevention of cracks, protecting concrete against premature deterioration
- **Module 7: Work place Safety and Environment;** work place safety and hazards, basic safety precautions for concreting, environmental best practice in concrete delivery, placing and disposal
- **Module 8: Common Problems and Solutions;** shrinkage, excessive bleeding, durability, dusting, surface crazing, random cracking, repairing cracks in concrete



**PERSATUAN KEBANGSAAN KONKRIT SIAP BANCUH MALAYSIA  
NATIONAL READY-MIXED CONCRETE ASSOCIATION OF MALAYSIA**

## **Concrete Defects: Testing & Repair**

### **REGISTRATION FORM**

Date : 17 & 18 Jan 2018

Time : 9.00 a.m. to 5.00 p.m.

Venue: NRMCA Training Room

Company : \_\_\_\_\_

Address : \_\_\_\_\_

\_\_\_\_\_

Contact Person: \_\_\_\_\_ Mobile \_\_\_\_\_

Contact Email: \_\_\_\_\_ Tel: \_\_\_\_\_

1. Name : \_\_\_\_\_

Position : \_\_\_\_\_

2. Name : \_\_\_\_\_

Position : \_\_\_\_\_

3. Name : \_\_\_\_\_

Position : \_\_\_\_\_

4. Name : \_\_\_\_\_

Position : \_\_\_\_\_

**For Registration & Enquiry,**  
Please Contact: Mr. Eric Wong  
Mobile: 019 357 5793  
Email: nrmcam@gmail.com