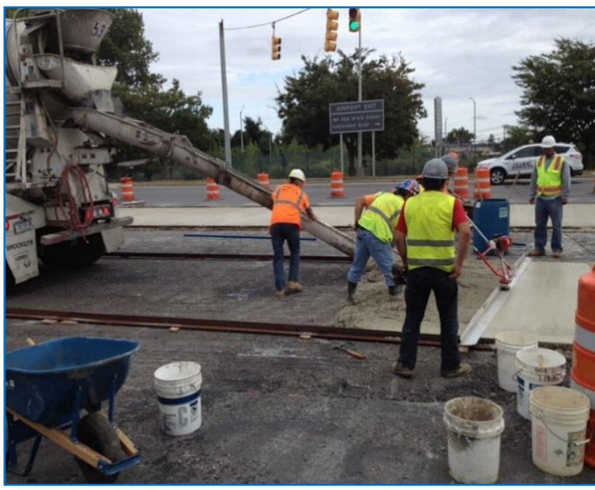
Tel No:+97126654546 |Fax No:+97126654182|Email: training@cmc-me.com|www.cmc-me.com



SC084:

Techniques for Pavement Rehabilitation

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Training Description:

This intensive training course covers maintenance, rehabilitation and pavement life; typical surface distress in flexible pavements; cracking in flexible pavements; retardation of reflective cracking treatments; and asphalt reinforcement techniques.

Course participants will be able to recognize surface distortions in flexible pavements, disintegrations of flexible pavements and loss of surface skid resistance; enumerate the typical distresses in rigid pavements; illustrate cracking of rigid pavements, surface deformation in rigid pavements and disintegration of rigid pavements.

Through various practical sessions, you will be able to identify the cause and treatment on loss of surface skid resistance; recognize the types of surface dressing; illustrate pavement strengthening; and carryout concrete overlay over rigid or flexible pavement. Finally, AASHTO overlay design method according to the AASHTO guide of pavement structures and AASHTO mechanistic-empirical pavement design guide will be discussed.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Apply and gain systematic techniques for pavement maintenance, rehabilitation and strengthening
- ✓ Discuss maintenance, rehabilitation and pavement life
- ✓ Identify the typical surface distress in flexible pavements
- ✓ Interpret cracking in flexible pavements covering crack sailing/filling–general, alligator (fatigue) cracking, edge cracks, paving join and widening cracking, reflective cracks, slippage cracking, shrinking cracking, linear wheel path cracks and helical or diagonal cracks
- ✓ Carryout retardation of reflective cracking treatments and asphalt reinforcement techniques
- ✓ Recognize surface distortions in flexible pavements, disintegrations of flexible pavements and loss of surface skid resistance
- ✓ Illustrate cracking of rigid pavements, surface deformation in rigid pavements and disintegration of rigid pavements
- ✓ Discuss the cause and treatment on loss of surface skid resistance
- ✓ Explain the types of surface dressing including the UK and austroads surface dressing design methodology, AASHTO chip seal design, asphalt institute surface dressing (chip seal) design, equipment and construction sequence of surface dressing, adhesivity test and quality control test for surface dressing and type of failures of surface dressing
- ✓ Illustrate asphalt overlay design methods over flexible pavements and asphalt overlay over rigid pavement covering deflection method, effectiveness thickness methods, deflection procedures and British practice
- ✓ Carryout AASHTO overlay design method according to the AASHTO guide of pavement structures and AASHTO mechanistic-empirical pavement design guide

Training Designed for:

This course is intended for engineers working in road construction, construction supervision of road projects and those who are involved in transportation and pavement including practitioners from regional

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and local government agencies, consultants, suppliers/vendors, researchers, faculty members and transit agency professionals.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Practical sessions will be organized during the course for participants to practice the theory learnt. Participants will be provided with an opportunity to carryout various exercises using the "Empirical Equation for Flexible & Rigid Pavement" and "Pavement Analysis and Design" simulators.

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

- PRE-TEST
- Introduction
  - Road Maintenance & Rehabilitation, Pavement Life, Typical Surface Distress in Flexible Pavements
- Cracking in Flexible Pavements
  - Crack Sailing/Filling–General, Alligator (Fatigue) Cracking, Edge Cracks, Paving Join & Widening Cracking, Reflective Cracks
  - Slippage Cracking, Shrinking Cracking, Linear Wheel Path Cracks, Helical or Diagonal Cracks
- Retardation of Reflective Cracking Treatments & Asphalt Reinforcement Techniques
  - Geosynthetics for Asphalts, Stress-Adsorbing Membrane, Fibre Reinforced Membrane
- Recap

DAY TWO:

- Surface Distortions in Flexible Pavements
  - Rutting, Corrugations &Shoving, Local Depressions, Upheaval, Utility Cut Depressions
- Disintegrations of Flexible Pavements
  - Ravelling, Potholes
- Loss of Surface Skid Resistance
  - Polished Aggregates, Bleeding or Flushing
- Recap

DAY THREE:

- Cracking of Rigid Pavements
  - Linear Cracking, Corner Cracking, Joint Cracking & Extrusion of Joint Seal, D-Cracking, Multiple Cracking, Cracking of Fresh & Hardened Concrete, Cracking of Hardened Concrete Caused by Other Factors
- Surface Deformation in Rigid Pavements
  - Causes, Treatment
- Disintegration of Rigid Pavements

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- Scaling, Spalling

❖ Recap

DAY FOUR:

❖ Loss of Surface Skid Resistance
- Cause, Treatment

❖ Surface Dressing
- Types of Surface Dressing, UK Surface Dressing Design Methodology (RN 39), Austroads Surface Dressing Design Methodology, AASHTO Chip Seal Design
- Asphalt Institute Surface Dressing (Chip Seal) Design Equipment & Construction Sequence of Surface Dressing, Adhesivity Test & Quality Control Test for Surface Dressing, Type of Failures of Surface Dressing

❖ Asphalt Overlay Design Methods Over Flexible Pavements
- Asphalt Institute Deflection Method, UK Highways Agency Deflection Method, Asphalt Institute Effective Depth Method

❖ Recap

❖ Practical Sessions
- This hands-on and includes simulator, real-life case studies and exercises

DAY FIVE:

❖ Asphalt Overlay Over Rigid Pavement
- Asphalt Institute Effective Thickness Method for Asphalt Overlay Over Rigid Pavement
- Asphalt Institute Deflection Procedure for Asphalt Overlay Over Rigid Pavements, British Practice Regarding Overlays on Rigid Pavements

❖ AASHTO Overlay Design Method
- According to the AASHTO Guide of Pavement Structures, According to the AASHTO Mechanistic-Empirical Pavement Design Guide

❖ Course Conclusion

❖ POST-TEST and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:
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