

## ISAP Working Group WG2: Meeting on Cold Recycling of RAP

30<sup>th</sup> September 2012 before ISAP 2012 Fortaleza

**Chairmen: Gabriele Tebaldi (University of Parma, I)**  
**Elie Hajj (University of Nevada, USA)**  
**Kim Jenkins (University of Stellenbosch, ZA)**

### **Morning Session 08:30 to 12:30: HOT RECYCLING**

#### ***Presenters:***

1. Dr. Rebecca S McDaniel (NCSC) - Design Procedures
2. Dr. Elie Y. Hajj (UNR) - Evaluation of Performance properties
3. Dr. Alessandro Marradi (UniPi) - Field Performance (45 mins each)

#### ***Key Subjects covered in Presentation:***

- Characterization of RAP materials for mix design purposes
  - Evaluation of RAP aggregate properties
  - Evaluation of RAP binder properties
- Mix Designs
  - Laboratory mixing process
  - Materials handling and procedure
  - Rejuvenators
  - Superpave mix design for RAP mixtures
- Mechanical testing of asphalt mixtures containing RAP
  - Mixture resistance to moisture damage
  - Mixture resistance to rutting
  - Mixture resistance to fatigue cracking
  - Mixture resistance to thermal cracking
  - Mixture resistance to reflective cracking
- Construction practices and techniques
  - RAP management
  - RAP variability
  - RAP fractionation
  - Sampling and testing frequency
  - Plant production of asphalt mixtures with RAP
  - Placement and compaction
  - In-place densities
- In-service performance of asphalt pavements containing RAP
  - Field performance of RAP mixes in comparison to control mixes
  - High RAP pavements performance

## **Afternoon Session 13:30 to 17:30: COLD RECYCLING**

### ***Presenters:***

1. Prof Kim Jenkins (UStell) - LAB
2. Dr Dave Jones (UCD) - Research including APT
3. Dr. Valmir Bonfim (ANE) - Construction Practices and Techniques
4. Mr Dave Collings (Loudon Int) - FIELD: Designing Projects and Case Study in South America
5. Martin Diekmann (Wirtgen) - FIELD: Machine Operation and Case Studies Globally  
(35 mins each)

### ***Key Subjects covered in Presentation:***

- Overview of research focus areas with respect to cold recycling **of RAP** (note emphasis):
  - Laboratory
  - Field, including 1) Trials 2) APT and 3) LTPP
- Key findings emanating from research and how they feed into:
  - Mix design protocols
  - Structural design methods
  - Specifications
- Implementation of research – manuals, documentation, projects
- Cross-cutting issues to be highlighted:
  - 100% RAP (CIR) versus Granular or Gran+RAP (FDR) materials – proportion and focus in your country
  - Emulsion versus Foamed Bitumen binders
  - In place versus in plant applications
  - Active filler usage: type and application