EAPA activities

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Motto: Asfaltové vozovky – bezpečná cesta k prosperitě
Introduction

- European asphalt standards
- EAPA Task Group Rejuvenators
- EAPA paper “The ideal project”
Asphalt standards

- The European Asphalt Standards (EN 13108) were published by CEN / NSB’s on 30 June 2016

- European Commission has rejected the publication of the product standards EN 13108-1 to -7 + EN 13108-9 in the OJEU because additional values / categories were included in several tables

- According to the CPR article 27 Levels or classes of performance: *The Commission may adopt delegated acts in accordance with Article 60, to establish classes of performance in relation to essential characteristics of construction products*
Asphalt standards

- The European Commission will choose the **delegated act** option
- 20 October 2017 meeting with European Commission representatives
- Publication in OJEU: end 2018 or beginning / mid 2019
- Versions of EN 13108:2016 **cannot** be used for CE-marking until they are published in OJEU
Rejuvenators can be used to optimise the reuse of reclaimed asphalt in asphalt production.

Rejuvenating additives: increase addition of reclaimed asphalt to asphalt mixtures and to restore the rheological properties aged binder from reclaimed asphalt.

The goal of this document to provide the asphalt industry guidance to select rejuvenators that are fit for purpose and examples how to determine the amount of rejuvenator needed.

Substantial contributions of CZ.
The Ideal Project

EAPA paper “The ideal project” provides

- Tools for increasing the durability of asphalt pavements
- By providing good examples
  - in all stages of the project
  - from the design preparation stage
  - until maintenance
Goal of the paper

Durability of asphalt pavements is very important

- Better availability of the road network
- Roads should be built to last for a very long period
- Maintenance needed has to be reduced

Goal:

- More effective and efficient use of material
- Lower Carbon footprint (better for the environment)
- Less need of resources
- More value for money
Goal of the paper

To encourage
- All working in the asphalt industry
- All the road authority side

to contribute to
- making asphalt pavements more durable

By using available techniques and procedures and the available technologies
Tendering procedure

The lowest bid
- Only results in lowest possible / allowable quality
- It does not result in a real high quality
- It does not stimulates the use of the latest technology and innovation

To achieve a higher quality
- Road authority should ask for it
- Use best “quality/price” ratio or bonus/malus-system
- Use functional requirements
- Use Green Public Procurement criteria
Asphalt transport

- Avoid temperature differentials in mixture (cooling)
- Avoid mixture segregation (loading)
- Use Material Transfer Vehicles when needed (to avoid stops)
- MTV can remix asphalt to get uniform mixture (again)
- Unload truck in a correct way
- Know where your trucks are to avoid stops of the paver
Paving operation

- Balance plant production, transport, paving and compaction in such a way that a constantly moving paving operation is possible without stops and starts
- MTV can create buffer to avoid stops/starts
- Good paver set-up
- Maintain constant paver speed
- Stops can lead to unevenness and cooling down of mix
- Hand raking should not be done unless absolutely necessary
Asphalt temperature

- Asphalt temperature behind screed (IR)
- Displayed on paver or 4G mobile phone
- Uniform asphalt temperature important to be able to compact the asphalt uniformly

In Norway and Sweden bonus when the temperature is uniform and penalty when not uniform: “Risk areas”
Compaction

- Good compaction is essential for all pavement layers
- It increases stiffness of the layers, without hardly any additional material cost
- It increases the resistance to permanent deformation
- It improves the fatigue behaviour
- It reduces water permeability of the asphalt layer
- It minimises or prevents moisture damage

Uniform compaction is important
Information technology to assist roller driver

A Continuous Compaction Control System with GPS can also show (and store):

- Stiffness values as a map
- Temperature of asphalt, speed of roller, amplitude & frequency as a map
- Trend of stiffness values
- Exact geographical position
- Number of passes
- Date and time of passes

Task of roller driver is very important
Other items influencing durability

- Project planning
- Asphalt production
- Joints and edges
- Bond and tack coats
- Quality Control / Quality Assurance
- Process Control
- Operation / Maintenance
  - Local Maintenance
  - Major maintenance
  - Treatment Selection Guidelines
Conclusions

- With the tools and knowledge we have available, we can deliver a (very) high quality road infrastructure to reduce maintenance activities.
- Contracts often do not stimulate innovations and do not contribute to the use of the latest technology.
- We can build more durable asphalt pavements.
- We / the road authority can save money.
- We need contracts that allows us to show what we can do.