Innovation in the Asphalt Industry

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European Asphalt Pavement Association (EAPA)
Our tasks

• Be the trusted voice of the European Asphalt Industry
• Participate in European standardisation and legislation activities
• Represent its members in the institutions of the EU
• Promote the effective and sustainable use of asphalt and new developments
• Collect, exchange and promote knowledge as well as best practices
• Improve the image of “asphalt” in Europe
To quantify positive effects of upgrading the road pavement infrastructure.

Show positive effects in terms of growth and jobs. Every Euro invested in construction generates €3 in total economic activity.

Show positive effects on
- Safety
- Noise Reduction
- Comfort

FEHRL-EUPAVE-EAPA publication on CO2 savings by maintaining and upgrading roads

Position Paper and Press Release

FEHRL, the Forum of European National Highway Research Laboratories, today released a joint publication with FEHRL (the European Asphalt Pavement Associations and EUPAVE) entitled “Road pavement industries highlight huge CO2 savings offered by maintaining and upgrading roads.”

The publication highlights that road pavements have a key contribution to make in reducing CO2 emissions from road transport. The three associations emphasise that smooth, well-maintained road surfaces lead to lower rolling resistance, and thus lower emissions from vehicles. Upgrading and maintaining roads should be part of any strategy to reduce road transport emissions. This calls for increased investment in roads and greater alignment of policies on CO2 with policies for upgrading and maintenance of roads.

FEHRL Infrastructure Research Meeting (FIRM 19) 26-28 March 2019, Brussels
Innovation on road materials

- Contribution of Road Pavements to reduce CO$_2$ emissions
  - Rolling Resistance depends mainly on surface texture and evenness
- Proper maintenance and upgrading to replace “bad” surface conditions with “good” ones
  - e.g. a new even and smooth surface can be expected to reduce fuel use up to 5%
  - different scenarios available
- Important projects: MIRIAM, COOEE, ROSE, Rijkswaterstaat...

COOEE test section measurements showed: MPD from 0.5 to 0.75, average in Denmark is 0.945. RR reduction 11-25%. Fuel consumption reduction potential 2-5%. 

Innovation in Asphalt Industry
Low-footprint materials

- Alterpave: Recycled materials (e.g. reclaimed asphalt pavement) and by products (e.g. slags). Alternative green binders such as waste engine oils and bio-fluxing agents

- Biorepavation: Alternative binders used to facilitate the use of recycle asphaltic pavement with the same level of performance in comparison to conventional solutions with petroleum bitumen

**ASPHALT ≠ TRASH-PHALT !!**
Low temperature asphalt

- Release of fume is reduced by around 50% for each 12°C reduction in temperature. So a temperature reduction of 25°C can lead to fume emission reduction of about 75%.

- WMA and Half Warm Asphalt reductions of: 20%-40% in CO₂, 20%-35% in SO₂, up to 50% in volatile organic compounds (VOC), 10%-30% carbon monoxide (CO) and 60%-70% for nitrous oxides (NOx)

- Tests for asphalt aerosols/fumes and polycyclic aromatic hydrocarbons (PAHs) indicated significant reductions of 30%-50% compared to HMA.
Digitalisation

New advances in M2M communication.

All machine data can be recorded for fleet management. The data like delivery quantities, loading times, arrival times, etc. can be used to check whether the right material is delivered at right time at right place and the collected data can be used to improve planning and calculation tools.

Data can be used as a controlling, documentation and reporting tool.

It is fundamental to manage information and not simply data. Current discussions to define this.
Innovation on service life

Self-healing asphalt

Performance

Original pavement

Self-healing pavement

Time
Innovation on end-of-life
Regulation and standardisation

Sustainability of construction works – Environmental product declarations – Core rules for Road Materials - Part 1: Bituminous Mixtures

EN XXXXX-XX

CEN TC227/WG6
Best wishes for FEHRL

- Congratulation from EAPA for 30 – as we see it - successful years of FEHRL
- Continuation of good collaboration with FEHRL and the FEHRL-Team in future
- Still a lot to do together, because “not all stakeholders are aware that the good old road is still and will be an essential part of future European mobility solutions, and that it could provide innovative solutions and has to be treated at least with sufficient care”

- All the best for the next 30 years!
EAPA Symposium 2019
6 June 2019 in Paris
“The future of the asphalt industry”

E&E Congress 2020
12 – 14 May 2020 in Madrid
“Asphalt 4.0 for future mobility”