Stone Mastic Asphalt

Course feedback

Specification update
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Discussion
  Expanded panel
Performance of some SMA says we are DUMB.
SMA - why a course?

- basically a technology transfer from Europe
- not only one European approach
- increased interest locally
- start-up problems
- some lack of understanding of basics
- need to fix the platform of knowledge
# Usage of SMA’s in Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Area (10^6m^2)</th>
<th>% 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>14</td>
<td>1.1</td>
</tr>
<tr>
<td>Germany</td>
<td>&gt;100</td>
<td>8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>Norway</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Poland</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Spain (BBM)</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>50</td>
<td>18</td>
</tr>
</tbody>
</table>

Equates to > 27 000 km of single lane roads
SMA’s functional surface characteristics

- good skid resistance (safety)
- an even surface (driver comfort)
- low noise (environmental & comfort)
- durability - rut free (pavement performance)
- improved visibility (safety)
Three day SMA course
SMA course at Stellenbosch

- Ingeborg Schröder - BP Germany
- High local input
- 46 delegates
  - client bodies
  - suppliers
  - consultants
  - contractors
  - students
What is a real SMA?

According to Dr. Zichner 1960’s:

- self supporting stone skeleton
- bitumen rich mastic (“glue”)
- low voids content (impermeable)
- efficient stabilisation of the mastic
  - during transport, construction
  - prevent segregation
Course contents

- Functional / structural requirements of surfacings
- SMA mix design - spatial approach
- Production, transport and construction
- Problems and failures
- Local experience
- Cost benefit
SMA problem areas

- mix design
- aggregate requirements
- specification status and developments
- smaller window for manufacture and construction
  - tighter quality control
So where to with SMA’s

- standardise the design approach
- allow for changes to the current specification
- develop manufacture and placing guidelines
- get ASPASA together in getting SMA’s to work in SA