The German Bitumen Forum
Co-operation in partnership

Mr. Reinhold Rühl
The German Bitumen Forum

- History, Members
- Co-ordinated projects
- Exposures on workplaces
- Low Temperature Asphalt
- Some 'political' aspects
- Outlook, more Information
In 1996 limit values for fumes and aerosols arising from work with hot bitumen were on the agenda and according to EU criteria bitumen would remain in the group of suspected carcinogens.

The German BITUMEN Forum was founded.
The German Bitumen Forum

Members

Producer of
• bitumen
• asphalt
• sheetings

User of bitumen
• paving companies
• roofers
• construction companies

• Health and safety org.
• trade unions
• ...

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Co-ordinated projects

⇒ determination of EPA-PAH in the bitumen,
⇒ animal inhalation experiments,
⇒ epidemiological study,
⇒ dermal absorption of fumes and aerosols from bitumen
⇒ BGFA bitumen-human-study,
⇒ measurement of fumes and aerosols from bitumen,
⇒ ...

and above all

The promotion of Low Temperature Asphalt
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Exposures on workplaces*

*Fumes and aerosols from bitumen (95 percentile);
limit value 10 mg/m³, suggested by the BITUMEN Forum

<table>
<thead>
<tr>
<th>Activity</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of bitumen</td>
<td>2.6 mg/m³</td>
</tr>
<tr>
<td>Production of asphalt</td>
<td></td>
</tr>
<tr>
<td>Control centre</td>
<td>0.8 mg/m³</td>
</tr>
<tr>
<td>(Inside the asphalt plant)</td>
<td>30.5 mg/m³</td>
</tr>
<tr>
<td>External Area</td>
<td>0.7 mg/m³</td>
</tr>
<tr>
<td>Transport of asphalt</td>
<td>4.3 mg/m³</td>
</tr>
</tbody>
</table>
## The German Bitumen Forum
### Exposures on workplaces*

<table>
<thead>
<tr>
<th>Rolled Asphalt</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Paver operator</td>
<td>6.5 mg/m³</td>
</tr>
<tr>
<td>Screed operator</td>
<td>10.4 mg/m³</td>
</tr>
<tr>
<td>Roller driver</td>
<td>2.6 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gussasphalt</th>
<th>Limit value suspended, suggested by the BITUMEN Forum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tapster (mechanical)</td>
<td>61.4 mg/m³</td>
</tr>
<tr>
<td>Screedman (mechanical)</td>
<td>40.4 mg/m³</td>
</tr>
<tr>
<td>Smoother (manual)</td>
<td>35.9 mg/m³</td>
</tr>
<tr>
<td>Filling (manual)</td>
<td>38.0 mg/m³</td>
</tr>
</tbody>
</table>

*fumes and aerosols from bitumen (95 percentile); limit value 10 mg/m³
Exposures on workplaces*

Bucket-Transport 12,8 mg/m³

Gussasphalt

Smother 35,9 mg/m³

*fumes and aerosols from bitumen (95 percentile)
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Low Temperature Asphalt*

*Fumes and aerosols from bitumen (95 percentile); limit value 10 mg/m³

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Paver Operator

Screed Operator

mg/m³

Conventional Asphalt

Low Temperature Asphalt
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Low Temperature Asphalt

... the way to reduce

energy consumption

CO2
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Low Temperature Asphalt

... and
- less wear of the plant;
- hardly any ageing of the binder;
- less emissions on the mixing plant;
  less but not least
- less fumes and aerosols at the laying process.

The best way for health and safety
The German Bitumen Forum
Low Temperature Asphalt*

*Fumes and aerosols from bitumen (95 percentile)
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Some 'political' aspects

The Forum’s work is clearly acknowledged by the Ministry for Labour and Social Affairs and the committee of hazardous substances because ...
...  

- all groups, which are affected by bitumen, are involved; this makes a deviating from the goals of the forum very heavy;  
- studies will uncover possible deficiencies in the present classification or protective measures;  
- all results are made public.
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Future Tasks

Working together

• for a safe handling with bitumen
  and

• for the promotion of low temperature asphalt
to minimize emissions, energy consumption
  and CO₂-production
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more information

Poster Session
Poster 4 - 3

www.bfg-strassenbau.de

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