


Global emulsions markets

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outline

- Introduction
- The markets today
- Driving factors
- Answers from the industry
- Conclusion

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Introduction

- International Bitumen Emulsion Federation
- An association formed in 1996
- Members from 19 countries
- 75% of the volumes worldwide



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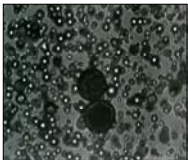


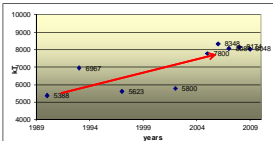
The IBEF around the World

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The markets today

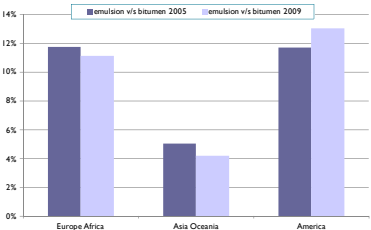
- A delivery mechanism
- A long story that dates back from the 20's
- A joint work with the oil and the chemical industry

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The markets today

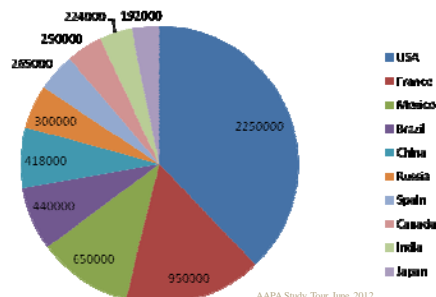
- 8 million MT / year
- i.e. 9% of the road bitumen volumes



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The markets today

- The main players



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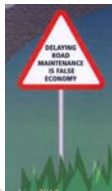
Driving factors

- The need for pavement preservation
- Increasing maintenance needs
- An adverse economical context
- Health requirements and safety issues
- Environmental context

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Driving factors

- The need for pavement preservation
 - Most of the inland transportation is made by roads 85.3% of passengers 73.8% of goods (Europe)
 - Pavements need to be maintained in due time



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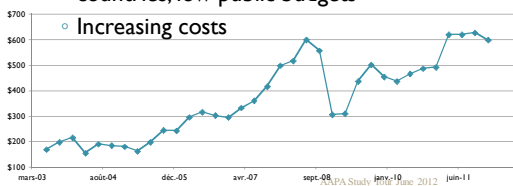
Driving factors

- The need for pavement preservation
- Increasing maintenance needs
 - Along with the growth of the economy
 - Along with the growth of the road networks
 - By 2050, China's road network will cover over four million kilometres, compared to the current 1.7 million kilometres, and the quality of road transportation will be on a par with that of developed countries. Vice Minister of Communications Hu Xijie said on Monday.
 - Hu was outlining the development of China's road transportation network in the first half of the 21st century in his address to the 2002 China Road Transportation Development Forum (CRTDF).

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Driving factors

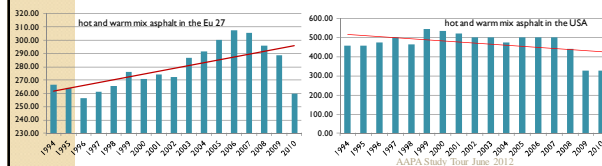
- The need for pavement preservation
- Increasing maintenance needs
- An adverse economical context
 - Economical crisis, debt challenge in Western countries, low public budgets
 - Increasing costs



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Driving factors

- The need for pavement preservation
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Driving factors

- The need for pavement preservation
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- Health requirements and safety issues

International Agency for Research on Cancer



October 18, 2011

Occupational exposures to bitumens and their emissions

* [...] This strong mechanistic evidence led to the classification of occupational exposures to straight-run bitumens and their emissions during road paving as "possibly carcinogenic to humans" (Group 2B).*

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Driving factors

- The need for pavement preservation
- Increasing maintenance needs
- An adverse economical context
- Health requirements and safety issues
- Environmental context
 - Reducing carbon dioxide emissions
 - Kyoto protocol: -8% in 2012 v/s 1990
 - Achievement: -6,2% in 2008 (EU15), -1,4% in 2009 (EU27)
 - Aims for the future: -20% in 2020 (EU27) or more(- 30%)



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Answers from the industry

- The need for pavement preservation
- Increasing pavement maintenance needs
 - Bitumen emulsion techniques are ideally suited for pavement maintenance
 - Micro surfacing, surface dressing, cold in place recycling



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Answers from the industry

- An adverse economical context
 - Emulsion techniques are affordable



technique	micro surfacing	micro surfacing 2 layers	chip seal	very thin asphalt concrete	HMA
cost / m ² €	2,04	3,04	2,33	6,20	7,90



technique	micro surfacing	chip seal	chip seal 2 layers	HMA 30 mm
cost / m ² €	2,45	2,30	4,00	4,14

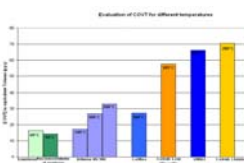


technique	micro surfacing	chip seal	UTFC	HMA
cost / y ² \$	1,50-3,00	1,50-2,00	4,00-6,00	3,00-6,00

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Answers from the industry

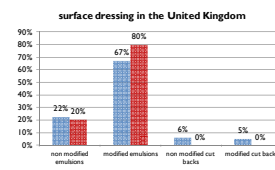
- Health requirements and safety issues
 - Low temperature provide with low emissions



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Answers from the industry

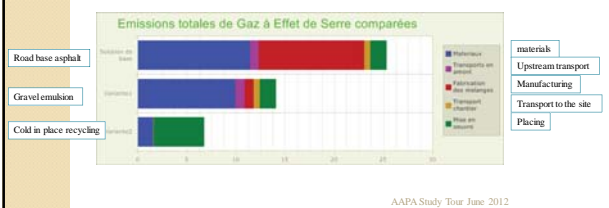
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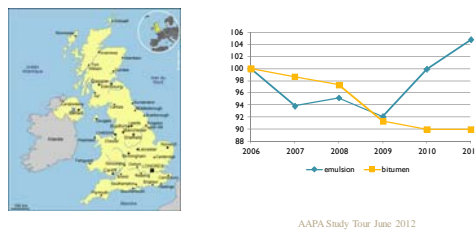
Answers from the industry

- Environmental context
 - Reducing carbon dioxide emissions



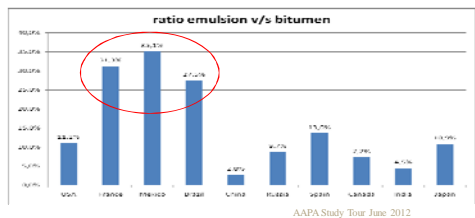
Conclusions

- The bitumen emulsion techniques have their role to play within a difficult financial context



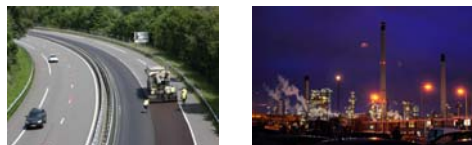
Conclusions

- The bitumen emulsion techniques have their role to play within a difficult financial context
- Wide room for increase



Conclusions

- The bitumen emulsion techniques meet HSE challenges
- The bitumen emulsion techniques need to meet new challenges
 - High traffic roads
 - Quality of the bitumen



Thank you



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