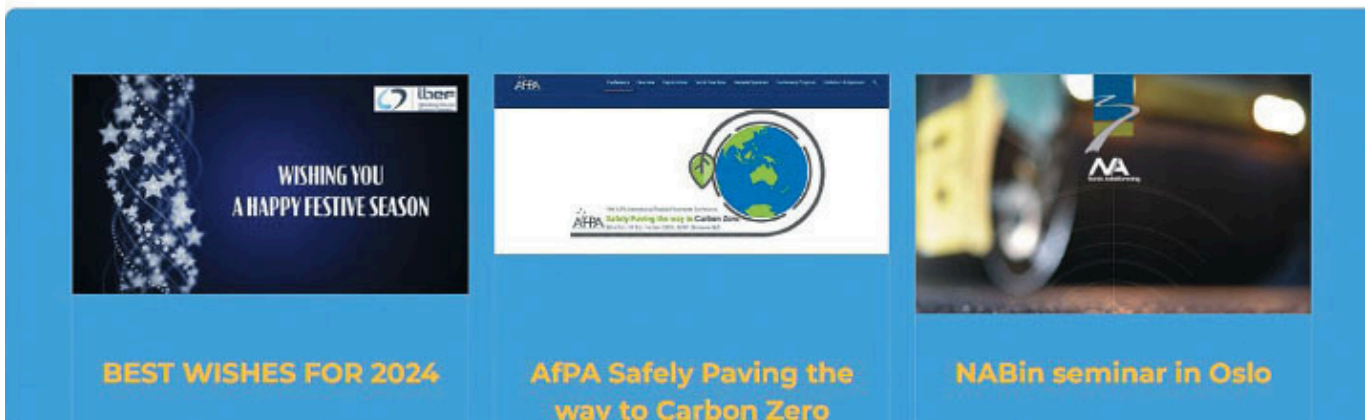
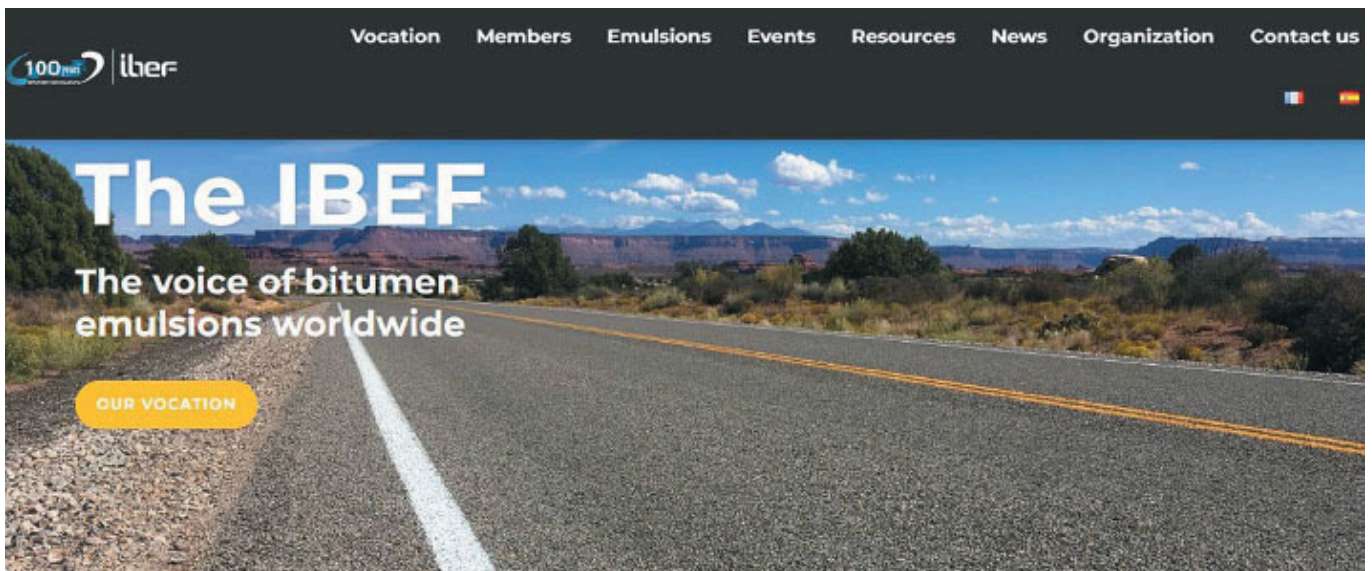


IBEF Paves Way for Ecological Roads, Studies Sustainability of Asphalt Emulsions

BY HAMIDREZA SAHEBZAMANI AND XAVIER GUYOT



IBEF website is a great resource for the pavement preservation industry

The international road industry has undergone a remarkable transformation, evolving from dusty pathways to a sophisticated network of highways, byways and city streets that connect communities and facilitate the movement of goods and people. At the core of this progress lies a key ingredient that has played a pivotal role in enhancing the longevity and performance of surfaced roads: **bitumen emulsion**.

Recently, the emulsion industry celebrated the 100th anniversary of the patent of modern bitumen emulsion. In 1923, Hugh Alan McKay, an English chemist at Shell, came up with a groundbreaking formulation — 70 percent bitumen and 30 percent water — that closely mirrors the mixtures used in contemporary road construction. This invention, known as **Asphalt Cold Mix**, marked the birth of modern bitumen emulsion and paved the way for the expansive road networks and their preservation that we witness today.

IBEF PROMOTES EMULSIONS

The International Bitumen Emulsion Federation (IBEF) is a non-profit association, serving as the key player connecting bitumen emulsion producers worldwide through their national associations and partners.

IBEF's primary mission is to promote the widespread use of bitumen emulsions. This is achieved by leading a global community of associations and companies, publishing sector news, participating in international conventions, hosting technical events and trade fairs, and providing technical publications and specialist works.

IBEF's strategic approach revolves around the creation, expansion and enrichment of a global community dedicated to advancing knowledge in bitumen emulsion techniques. This involves not only helping existing connections, but also establishing new ties with organizations that share similar visions.

Its focus extends to industry-related associations such as **The Asphalt Institute, Asphalt Recycling & Reclaiming Association, FP² Inc. International Slurry Surfacing Association, National Center for Pavement Preservation** in the United States, and **European Asphalt Pavement Association, EB, RSTA, ALA, ASEFMA, PIARC, ERF, CILA**, and others internationally.

IBEF actively encourages its members to spread its messages at the local and regional levels, raising a wider understanding of the benefits and applications of

bitumen emulsions. Adopting the digital era, the federation seeks to build a robust virtual network among its members and partners, providing a platform for proactive engagement and knowledge exchange.

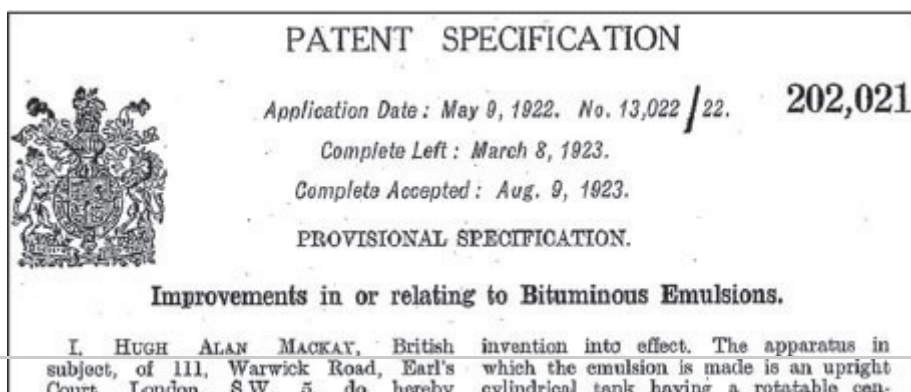
A key aspect of IBEF's strategy involves capitalizing on opportunities to transfer members' knowledge, encompassing best practices, experiences and specific skills, to contribute to the overall development of the bitumen emulsion industry. This strategic framework aims not only to strengthen the community but also to create a market environment that fosters sustained growth in the industry.

WEBINARS FROM IBEF

IBEF has been at the forefront of promoting technology transfer within the industry. Over the past few years, the federation has organized several technical webinars focused on bitumen emulsion. The latest one, held in December 2023, showcased a highly interactive platform with engaging questions and answers. Divided into three insightful sections, the webinar delved into crucial aspects of bitumen emulsion applications.

Dennis Day from the **Road Emulsion Association in the United Kingdom**

discussed the use of bitumen emulsions to extend pavement life in the context of Pavement Durability. **Stéphane Charmot** from **Ingevity** in China shared valuable insights into the sustainable use of bitumen emulsions for pavement rehabilitation techniques. **Darcy Rogers** from **Road Science** in New Zealand provided a comprehensive overview of the environmental and social impact of emulsion use in New Zealand. **Xavier Guyot**, the IBEF executive director, presented global figures and usage statistics of bitumen emulsion, offering a glimpse into the industry's current state and future forecasts. **Arlis Kadrmas**, the IBEF technical coordinator, addressed the eagerly anticipated sustainability white paper, providing an update on the workgroup's progress.



Original patent application for asphalt emulsion from Great Britain, 1923, a century ago

IBEF'S SUSTAINABILITY WHITE PAPER

In response to the growing emphasis on sustainable practices, IBEF has established a task group dedicated to crafting a white paper on the environmental sustainability of bitumen emulsions. Comprising technical experts from various countries utilizing bitumen emulsions for pavement preservation and paving applications, this group is compiling information across three pillars:

- **Pavement Durability**
- **Pavement Structural Improvement, and**
- **Environmental and Social Impact.**

Pillar One focuses on how bitumen emulsion applications extend the life of pavements. From prime and bond ("tack") coats, to traditional preservation treatments such as surface dressings and micro surfacing, these applications contribute to enhanced pavement durability.

Pillar Two delves into sustainability of Pavement Structural Improvement applications, including cold mix, cold in-place recycling, cold central plant recycling and full-depth base stabilization techniques. These applications, some done in-place, not only save energy in haul costs, but also utilize bitumen emulsions at reduced temperatures.

Pillar Three addresses the environmental and social impacts of using bitumen emulsions, encompassing energy savings, reduced environmental footprint, improved working conditions and social benefits such as odor reduction, enhanced safety, reduced noise, and minimized traffic disruption.

Upon completion, the white paper will serve as a comprehensive guide summarizing the environmental sustainability of bitumen emulsions in paving applications. Through its initiatives and commitment to sustainability, IBEF continues to play a pivotal role in advancing the bitumen emulsion industry, ensuring that our roads not only endure, but contribute to a more sustainable and interconnected future.

IBEF WEBSITE INDUSTRY RESOURCE

The IBEF website, found at www.ibef.net in three languages, is a comprehensive platform dedicated to bitumen emulsion. Within its digital confines, one can explore an extensive array of knowledge, resources and literature relating to bitumen emulsion.

The website contains numerous references, documents and literature about bitumen emulsion, including statistics on the usage of bitumen and bitumen emulsion over the past decade. This invaluable resource not only provides information but also acts as a central hub for industry enthusiasts, broadcasting announcements for upcoming events and webinars.

Furthermore, the site ensures accessibility to recorded sessions and presentation files, enhancing the learning experience. Navigating through the IBEF website is an enriching journey, offering insights to those seeking a deeper understanding of bitumen emulsion.

A DYNAMIC FORCE GLOBALLY

In conclusion, the IBEF stands as a dynamic force committed to advancing the knowledge and utilization of bitumen emulsion techniques globally.

As we reflect on our strategies to create a strong and interconnected community, we emphasize the importance of collaboration and shared vision.

In our journey to promote the use of bitumen emulsion, we extend an earnest invitation to companies and organizations worldwide to join our society. The success of our mission relies on the collective efforts and expertise of our members, and we are eager to welcome new partners into our fold.

Together, we can contribute to the growth and sustainability of the bitumen emulsion industry, creating a road network that not only endures but paves the way for a more resilient and connected future. Everyone's support is invaluable, and we look forward to building a thriving community that champions the widespread adoption of bitumen emulsion in the road and pavement industry.

Mark Your Calendar for ISAET '24 This November

Plan now to attend ISAET '24, the **8th International Symposium on Asphalt Emulsion Technology**, to be held in Arlington, Va., Nov. 4-6, 2024.

ISAET '24 will take place at the Hyatt Regency Crystal City near Washington Reagan National Airport in Alexandria. A group block room rate of \$245 per day plus taxes will open in Summer 2024.

Organized under the auspices of the Asphalt Emulsion Manufacturers Association (AEMA) and the International Bitumen Emulsion Federation (IBEF), ISAET '24 will build on the success of the First World Congress on Emulsions held in Paris in 1993, and it will be the seventh in a series of symposia dedicated to the international asphalt emulsion industry.

The symposium will embrace research and practice on manufacturing, use and performance of asphalt emulsions. The 2024 conference will provide a forum for discussion of leading research work, encourage presentation of case studies demonstrating the implementation of research into practice, and foster discussion on producing better performing and cost-effective asphalt emulsions.

For more information, visit www.aema.org/mpage/2024ISAET.

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