

Bituminous products industry celebrates 30 years of Sabita stewardship

Since its inauguration in 1979, the Southern African Bitumen Association (Sabita) has forged a unique unity of purpose across the full spectrum of this country's bituminous products sector.

Sabita's tactical focus has remained flexible and adaptable throughout its 30-year history to ensure optimum response to changing political and economic circumstances. However, the association's overall guiding strategy since inception has changed little, the objectives being to create and nurture an environment in which the bituminous products industry, road owners and road users received maximum benefit. At different times varying emphasis has therefore been given to four pivotal elements of Sabita's overall strategy:

- technology development to ensure that cutting edge products and processes were developed and implemented to underpin excellence in the bituminous products industry;
- education, training and technology transfer to foster an informed sector, to develop competence and to foster a sustainable human capital resource pool;
- contact with decision makers in government, public and private sectors and organised industry to promote the social and economic upliftment value of asphalt roads;
- social responsibility, including health, safety and environmental preservation, sustainable practices and resource conservation.

Within this framework, Sabita's development underwent three distinct phases.

1. 1979 to mid 1980s: Establishment and consolidation:

During this period Sabita, in consultation with industry representatives under inaugural Chairman Peter Faure and executive director Bill Gresty, developed mechanisms aimed at creating a framework for communication and interaction, and to establish a unified goal of excellence.

The association's Constitution evolved to define and refine its mandate to represent the bituminous products sector, and was focussed on identifying areas which could best benefit the interests of members, and then implementing strategies to achieve this.

A milestone in this process was the formation of the Bituminous Materials Liaison Committee (BMLC), an association of leading practitioners which fostered the exchange of technical and system information and aired common problems. At the same time the Society for Asphalt Technology (SAT) was created to establish a forum through which individual engineers, technicians and technologists could transfer knowledge and competence.

It was also during this period that Sabita took its first steps in developing a strategy of engagement with all levels of government, aimed at inculcating a culture of belief in the wide-ranging social and economic benefits of a well-maintained road network. This key focus area has been refined and further

developed throughout Sabita's history, generating the comprehensive benefits of government's resulting realisation that cost-effective road spend – for both construction and maintenance – has a direct and positive impacts on economic growth. The ensuing investment in road infrastructure fulfilled another objective: the development of markets to fulfil the needs of Sabita members.

Much of this process was guided by executive director Piet Myburgh, who took up his appointment in October 1981 and served under a number of chairmen until his retirement in September 2006. Myburgh, an engineer with the Cape Provincial Roads Department for 17 years, brought to his new role a unique “broad picture” understanding of the technological demands of a good road network, the importance of its maintenance and of the vital role played by such a network in the country's economic well-being.

Through his efforts and strategic understanding Sabita established itself not only as an authoritative and influential mouthpiece for the southern African roads sector. Under Myburgh's stewardship the Conference on Asphalt Pavements for Southern Africa (CAPSA) evolved to facilitate the cross-pollination of local and international technology.

Myburgh's influence was further entrenched through his motivation of bodies such as, *inter alia*, the Asphalt Research Strategy Task Force (AREST), social development initiatives such as the Local Councillor Empowerment Programme (LCEP), the Road Pavements Forum (formerly the BMLC), the Asphalt Academy, and the prestigious Sabita Award for Outstanding Achievement in bituminous product technology.

2. 1987 to 2001: Accent on technology development, education and training and communications

Sabita initiated the first AREST in 1987 to plan and direct asphalt related research. Its composition of members, researchers and technology leaders from the road authorities spawned a program that grew in momentum and cost for the next decade. Early projects, in association with road authorities and the CSIR Transportek, included technology focussed heavy duty asphalt pavements, emulsion treated bases, polymer modified bases and operational issues covering the effects of fluctuating funding, performance of premium pavements and the performance of modified binders.

To deliver this program Rob Vos was appointed technical director to lead the programme. To ensure the outputs matched the requirements of members and their customers and to remain relevant in a changing environment, a series of ARESTs were held in 1988, 1991, 1995 and 1997, a dynamic approach that allowed Sabita to selectively target new areas including social and developmental aspects.

The fruits of the core research were driven into practice with an extensive implementation and training programme. Papers were presented internationally, and technical manuals on the usage of the technology were published by Sabita

and presented through seminars across the region. These technical manuals have since become standard reference documents. Notable outputs include:

- LAMBS (Large aggregate mixes for bases) to provide a cost-effective solution to an increasingly aggressive pavement environment experiencing ever greater traffic loadings;
- GEMS (Granular emulsion mixes) to improve the structural strength characteristics of emulsion treated granular materials, including sub-standard materials;
- Technical guidelines for seals using homogenous modified binders , presenting a consensus view on specifications, test methods and guidelines for the construction of seals;
- Porous asphalt mixes, also known as “open-graded plant mix seals” were introduced to improve wet skid resistance and reduce noise pollution;
- Technical guidelines for the specification and design of bitumen rubber asphalt wearing courses ;
- An easy to use computer programme to calculate the economic advantages of sealing a road surface. This was followed by one providing robust long term economic assessment on the use of “holding actions”;
- Developments in the viscosity grading of bitumens, and improved polymer modified binder & bitumen rubber specifications were published.

The significant investment required for these research programmes was funded through special subscriptions from the sponsor members (oil companies).

On the operational side, guidelines and systems were developed for product performance guarantees and appropriate standards for the selection of road surfaces.

In 1997 a Sabita/CSIR project catalogued 220 000 km of “unidentified” roads, highlighting the plight of impoverished rural communities and the social and economic impacts of sub-standard roads on mobility, high accident rates, elevated road user costs and constrained development of commercial nodes.

Apart for the “hard core” technology development, supportive educational initiatives were launched. Sabita’s flagship undertaking in this arena was the establishment of a Chair in Pavement Engineering at the University of Stellenbosch, which has run from 1993 and had Professor Steve Emery as first incumbent, followed by Professor Martin van de Ven in 1995 until the Chair was taken up by the South African National Roads Agency Limited (SANRAL). Labour enhanced construction methods and training material was also developed for the surfacing sector to promote maximised employment opportunities in road construction and surfacing.

Much of the ground-breaking work which marked this period in Sabita’s history was both initiated and disseminated through the Bituminous Materials Liaison Committee (BMLC), a body driven by Sabita and the CSIR and dedicated to identifying needs and then formalising and directing research programmes. Later expanded as the Road Pavements Forum (RPF, 1999) to include aggregate and concrete producers, this valuable instrument continues to inform the industry and to draw its most experienced practitioners into ongoing undertakings to refine and improve best available technology and practice.

While the broad strategies outlined above remain at the forefront of Sabita's strategic vision, changing political, economic and social imperatives with the advent of the new millennium dictated a renewed emphasis on the sustainability of the bituminous products industry, and focussed on:

- human capital development to counter the shortage of skilled engineers in the industry at large, but also including local and provincial government departments. Sabita was also pivotal in establishing the Conference on Asphalt Pavements for Southern Africa (CAPSA), today one of the world's most respected forums for the exchange of bituminous products knowledge;
- developing and implementing protocols for worker safety, health and environmental conservation (HSE) to align South Africa with global best practice.

2. 2000- Focus on sustainability and social consciousness

In 2001 the Asphalt Academy Trust (AsAc) was launched as a joint venture between Sabita and the CSIR to broaden the scope of education and training programmes formerly undertaken by Sabita and the Chair at Stellenbosch University. AsAc is recognised today as the premier education and training arm of the industry, and in the past three years alone has delivered courses to more than 2 000 delegates.

In 2002 Sabita inaugurated its Centre for Occupational Safety, Health and Environmental Conservation (COSHEC). Representing all relevant industry sectors, COSHEC appointed leading industry stakeholders to oversee the development and implementation of self-regulation policies focussed on:

- safe working practices;
- bitumen safety training;
- the transport, handling and disposal of penetration grade bitumen;
- development of an incident reporting database;
- defining alternative products to coal tar, which has been identified as carcinogenic.

During the CAPSA'07 Trevor Distin, appointed to replace Piet Myburgh on his retirement in 2006, launched the association's HSE Charter.

With wide-ranging experience in the bituminous products industry Distin took up his appointment with a strong awareness of international demands for higher industry awareness of HSE issues and sustainability. His input in formulating the Sabita HSE charter made it a formal document which dictates compulsory self-regulating compliance of all members with global standards of safe working practices. These provisions are aligned with both South Africa's statutory requirements and global best practice. The Charter is linked to a certification scheme using independent auditors to measure compliance, and to initiatives to encourage consulting engineers to implement the Charter requirements in their project specifications.

In recent years the dominating imperative of sustainability – which includes optimum utilisation of diminishing resources, energy conservation through innovative technology, cost-efficient delivery and ensuring that current practice forms a foundation for future growth – has directed much of Sabita's, and the bituminous products industry's activities. These initiatives will now be driven by CEO Saied Solomons, with 30 years of experience in the oil industry, who was appointed to succeed Trevor Distin in 2008. With extensive international links to the bituminous products industry, Solomons is firmly committed to implementing, and then entrenching, a culture of awareness that sustainable practices are inextricably linked to bottom line commercial success.

It is against this background that Sabita this year celebrates its 30th anniversary, and to mark the occasion Sabita will host a members' conference at the Arabella Western Cape Hotel and Spa, Kleinmond, from 16-18 August.

The conference will be structured around specific themes, with invited experts making presentations. The themes are:

- skills depletion and employment creation;
- compatibility of industry products and sustainable practice – a world view;
- a national benchmark for safe practice and audits;
- long life asphalt pavements to reduce traffic disruption;
- means to reduce reliance on non-renewable resources.

The conference will conclude with resolutions that will be incorporated into future Sabita plans.