



THE SOUTH AFRICAN COAL ASH ASSOCIATION (SACAA)

No 22, August 2008

ASH @ WORK

COMMUNIQUÉ OF THE SOUTH AFRICAN COAL ASH ASSOCIATION
from your Editors and President of the SACAA

Editorial

For those of you unaware of the incident, Wayne Truter, one of our Council members, was severely injured during a robbery at his house last month when gangsters tried to kill him. Only the quick and brave action on his part prevented his guests being injured or killed. Best wishes Wayne for a speedy and complete recovery of body and soul!

During the last quarter SACAA held a technical meeting at the SAICE offices in Midrand. The topic was "Foamed Concrete" and we had a good turnout. Details on the meeting and on the particular technology, appear elsewhere in this issue.

According to a press release by the European Coal Combustion Products Association (ECOBA), the REACH-Regulation (Registration, Authorisation, Evaluation and Restriction of Chemicals) came into force on 1st June 2007. The aim of the regulation is to improve the protection of human health and the environment. All chemicals, including coal combustion products (CCPs), manufactured in or imported into the EU are subject to this safety, health and environmental (SHE) regulation and have to

be registered at the European Chemicals Agency (ECHA). The registration requires information on the properties and the potential risks of the substances. In Europe, non registered substances cannot be placed on the market after 1st June 2008. The full press release features under the ECOBA item in this issue. Exporters in the RSA need to be aware of this new requirement.

Council Meeting

The 86th Council meeting was held at Ash Resources, Ferndale on 7 August 2008. The main issues arising from the meeting are:

- Unfortunately, due to pressure of work, Santie Gouws of CNCI, resigned from Council. Stanley Moeketsie of Lafarge has also left the Council. Hopefully, after the AGM, there will be some new members to serve on Council.

Please let us have names and nominations of those willing to serve on the Council. Forms were sent out with the AGM notification.

- SARS has confirmed that the SACAA was exempt from tax for the years 2005, 2006 and 2007, as per Income Tax Assessments IT 34 received.
- SACAA's finances are sound and for the year 2007/2008 showed a profit of R8997.
- Associate membership of the European Coal Combustion Products Association (ECOBA) has been approved. The ECOBA logo is to be added and web-linked to the SACAA website, and *vice versa*. More details on ECOBA appear further down in this issue.

Feedback: Lecture - "Foamed Concrete", 30 July 2008

Mr Lynton Cox of Foam Concrete Limited, Rochester, Kent, England, presented an in-depth discussion on the attributes and applicability of foam concrete by discussing various projects employing foamcrete.

Particularly impressive was the long distances foam concrete could be pumped and the speed with which jobs could be completed. According to Lynton, fly ash plays a crucial role in all his formulations as it aids pumping and flow.

Foam Concrete formulations can be designed to provide a range of densities 350 - 1600 kg/m³ and compressive strength between 0.2 - 12 N/mm².

For further details visit his website: www.foamconcrete.co.uk

This successful meeting concluded with refreshments sponsored by Ash Resources.

ACI Award

A paper by Malvar and Lenke, titled "*Efficiency of fly ash in mitigating Alkali-Silica-Reaction based on chemical composition*" was the winner of the American Concrete Institute's 2008 Wason Medal for Materials Research (published in *ACI Materials Journal* V 103 No 5 Sept - Oct 2006 pp 319-326). The publication is available on the internet or can be viewed at CNCI.

Nigerian Investment

It is reported (Sylvester Haskins in *Engineering News*, 16 - 22 May 2008) that a 45% stake in local BEE cement supplier, Sephaku Cement, was obtained by Nigerian cement supplier Dangote Cement. Sepaku will invest R3 billion in a 2,2 million t/a greenfield cement manufacturing plant in the RSA. Production is expected to commence in 2010. More details on this new venture can be expected during September 2008, when the company intends listing on the JSE.

Botswana's Mmamabula Plant

Delays are expected to arise in the construction of the new coal-fired Mmamabula power plant in Botswana. CIC Energy experience problems in the financing of the new venture. Thus the supply of ash will also be delayed.

Standardisation, the k-value concept

The UK Quality Ash Association (UKQAA) has a committee looking into the k-value concept that is used in Europe to quantify the cementing efficiency of materials. According to their findings "the range of k-values for fly ash in use throughout the EU is frankly bewildering; k-value is one of the most variable constants the UKQAA has ever encountered." (source: UKQAA Newsletter No 21, Oct 2007)

SA's Carbon Emissions

"SA is one of the biggest carbon emitters in the developing world, spewing out 450 Mt of CO₂ equivalent a year - nearly 1% of the total 49 000Mt produced globally" (Jacqui Pile in Financial Mail, 8 August 2008). Due to the expected increase in power generation and growth in industrialisation, the emission is estimated to grow to 1600 Mt of CO₂ equivalent a year by 2050. While South Africa, as a developing country, can grow without a cap on its emissions under the Kyoto Protocol, mitigating efforts can be expected to be required. It is in this regard that cabinet approved the long-term mitigating scenario (LTMS) plan to reduce carbon emissions to 1300Mt by 2050. Various options for the LTMS have been investigated by the Energy Research Centre of the University of Cape Town. Amongst these are a carbon tax, more energy-efficient industrial processes, renewable energy sources (biofuels, solar panels, etc) improved vehicle efficiencies and improved public transport.

ECOBA Press Release

"Coal Combustion Products and REACH"

On 1 June 2007, the REACH-Regulation (Registration, Authorisation, Evaluation and Restriction of Chemicals) entered into force. The overriding goal of the regulation is to improve the protection of human health and the environment from the risks of chemicals while enhancing the competitiveness of the EU chemicals industry. By this, all chemicals manufactured in or imported into the EU have to be registered at the European Chemicals Agency (ECHA). The registration requires information on the properties and the potential risks of the substances.

Coal Combustion Products (CCPs) are being produced in coal-fired power stations which burn either hard or brown coal. CCPs are produced during the coal combustion process either from the mineral parts of the coal or as a result of desulphurisation of flue gases from the power stations. The annual production in EU 27 is estimated to amount to about 100 million tonnes. CCPs are mainly utilised in the building material industry, in civil engineering, in road construction, for construction work in underground coal mining as well as for recultivation and restoration purposes in open cast mining. By this, they are placed on the market and for many applications they are subject to REACH.

Each producer or importer of coal combustion products (CCPs) placed on the market as construction materials have to pre-register and to register their substances. The pre-registration requires information on the substance identity, the tonnages and the name and address of the producer. The registration requires i.a. comprehensive information about toxicology and ecotoxicology of the substances.

In Europe, non-registered substances cannot be placed on the market after 1st June 2008 any more! For CCPs, since they are already registered in the European Inventory of the Existing Commercial Chemical Substances (EINECS) the deadline for registration is extended to 30 November 2010. This is only true if the producer pre-registers during the period of 1 June to 30 November 2008.

A project group is dealing with the details for the pre-registration of CCPs. Members of the project group are i.a. representatives of the associations BDEW, VGB, BVK, BV Gips, EuroGypsum and ECOBA. The work of the project group is aiming at the formation of European consortia for the common registration of calcium sulphate including natural and FGD gypsum as well as for coal ashes (fly ash, bottom ash, boiler slag).

European producers and importers of coal combustion products are invited to join these consortia and to share the data about toxicology and ecotoxicology of the substances. For this it is recommended that interested parties use the same substance identification to find themselves in the same Substance Information Exchange Forum (SIEF)."

Our readers are advised to tap into the wealth of information that can be found at ECOBA's website: www.ecoba.org

Last Snippet

"Had every American household turned off the lights during Earth Hour on March 29, it would have prevented more than 16 500 tons of CO₂ from entering the atmosphere." (Featured on the cover of the March 2008 issue of *Sky*, DELTA's in flight magazine.)

FORTHCOMING EVENTS

Excellence in Concrete Construction - through Innovation, Kingston University, London, 9 - 10 September 2008

Full details at <http://cmrg2008.kingston.ac.uk>

International Conference EuroCoalAsh 2008, Warsaw, Poland, 5 - 9 October 2008

This conference is organised by the Polish Coal Combustion Union in conjunction with the European Coal Combustion By-products Association (ECOBA). The conference covers all aspects of coal fly ash, especially in the European Union.

Website: www.eurocoalash.org

ICCRRR 2008, Cape Town, 24 - 28 November 2008

Website: www.civil.uct.ac.za/icrrr

World of Coal Ash (WOCA) 2009, Lexington, Kentucky, USA, 4 - 7 May 2009

A call for papers has been sent out by the American Coal Ash Association (ACAA).

Website: www.worldofcoalash.org

IN THE NEXT ISSUE

We hope to look at a topic suggested by our readers. **So, how about it? We are still waiting!**

YOUR SACAA COUNCIL 2007/8

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Disclaimer: *The views expressed in this newsletter are not necessarily those of the Council of the South African Coal Ash Association*