

Newsletter

What's new?

AshTech 2006: The UKQAA identified a need for an International Conference on ash technology resulting from a research project in conjunction with Hatterall Associates. This research looked at the utilisation of coal fired power station products throughout the world. There has not been such a conference in the UK since the 1980's. AshTech84 was very successful and there were many interesting and useful papers presented, the conference proceedings are still a highly useful source of reference material. Therefore, the UKQAA has decided to host AshTech 2006 in Birmingham.



AshTech 2006 will be held at the Hippodrome Theatre in the centre of Birmingham. The venue is within easy access of numerous hotels, national rail and road links, a vibrant nightlife, restaurants, etc. A call for papers was first made in January 2005. If you are interested in presenting a paper, sponsoring or exhibiting at AshTech, please see our dedicated web site at www.ashtech2006.org.



The conference is designed to be non-profit making and the UKQAA would welcome papers and delegates from all around the world.

Online registration and hotel bookings will be enabled in the next few days. The deadlines for submissions to the conference are as follows;



AshTech 2006 Timetable

Date	Action
1 December 2005	Abstracts deadline
1 February 2006	Notification of acceptance
1 March 2006	Final agenda for conference
1 April 2006	Final papers for publication Presenter information sheet
31 March 2006	Deadline for early bird registration
17 April 2006	Power Point presentations due
15-17 May 2006	AshTech 2006 conference
1 July 2006	Publish CD of papers

For further information about AshTech 2006, please visit our web site or contact us.



Environment Agency and Waste Issue

The Environment Agency (EA) and waste issue is an issue now some 6 years old and little has changed over the period. The Electricity Supply Industry (ESI) through the Association of Electricity Producers and the Joint Environmental Programme in conjunction with the UKQAA has had a series of informal meetings with the EA in order to try to resolve the various issues. Due to the legal situation the EA have not been able to change their stance to any extent.

The possibility of a WRAP type protocol has receded, as the EA felt these are not appropriate for 'non-hazardous wastes'. However, there is now a Thematic Strategy Review being carried out across the European Union (EU). This promises guidelines on when a material is considered a waste or a product. An announcement is expected in September 2005, but will be subject to 'comitology', or committee review to work out the details. A UKQAA position paper is being prepared that should be available in the very near future that will explain both sides understanding of the problem.

It is a pity that EU Directives, in this case the Waste Framework Directive, are not drafted properly when originally written to prevent the bureaucratic problems and the detrimental effects on the markets that are occurring.

Standardisation work

BS EN450-1 and 2, Fly ash for concrete, were finally published in March 2005. As these new standards are harmonised, all conflicting standards will have to be withdrawn. This will mean BS3892 Part 1 will be withdrawn around February 2006 as it will conflict with EN450:2005. However, there is a special category of ash within the new standard that is effectively an identical material called Category S ash. The UKQAA is in the process of producing a Technical Datasheet on the use of fly ash to EN450-1:2005 in concrete.



Due to a number of changes in various documents, e.g. BS EN450-1:2005, BRE revising Special Digest 1, etc BS8500 is being revised to incorporate these changes. It is hoped during this revision that more concretes mixes suitable for a wider range of 'exposure' conditions will be result and that the standard could be simplified to as much as possible. It is unlikely that this revision will be available until the spring of 2006, due to the number of changes taking place.

UKQAA and Research

New research project proposals seem to have reduced in recent years, with the demise of ENTRUST and PII project funding. There is a new round of DTI funding for research which we are involved in. The major problem with these projects is the DTI contract requirements, which are too complex and bureaucratic.

New research proposals under consideration are more work on the thaumasite form of sulfate attack, especially the effects on temperature on the reaction. Similarly, work on pryritic clays and the thaumasite reaction of which we have a particular interest as to whether PFA prevent such reactions in lime stabilised soils. Another similar project looks at the stabilisation of hazardous waste streams.

Datasheets

Technical Datasheet 1.1: This is in preparation and gives details of the requirements for both the producer and user of EN450-1:20005 in conjunction with BS EN206-1, Specification for Concrete. BS EN450-1:2005 contains much that is similar to the previous version; however, it now permits the use of co-combustion ashes which have more testing requirements than coal ash. In addition, BS3892 Part 1 PFA has now been incorporated into the EN as Category S fly ash. This allows fly ash for use in concrete to be CE marked.

Technical Datasheet 1.2: This is also in preparation. The UKQAA carried out a major testing exercise in 1999 on both BS3892 Part 1 and EN450:1994 PFA. These were tested in many ways to the standard. In 2004

we decided to carry out a limited repeat of the work, using the same PFA sources where possible.

This work has shown that PFA performance has not changed significantly during the period. However, all was not straightforward, because it was clear that CEM I had changed. Fortunately, some of the original samples from the 1999 work were still in store and these were re-tested and showed the ash performance had changed by <1%.

Technical Datasheet 1.3: This takes an overview of recent applications for fly ash. Many major infrastructure contracts have used PFA in recent years; these include Heathrow Terminal 5, the M6 Toll road, the Channel Tunnel Rail Link and a variety of other applications. One of the common reasons for using PFA is to reduce the heat of hydration and therefore cracking problems in thick sections of concrete. However, it must be remembered that PFA is a pozzolanic material and in most applications will improve the long term durability of a structure.

Technical Datasheet 8.1: This looks at the sustainability credentials of ash products. Coal fly ash is used for its many technical benefits in the main; however, it often is a direct replacement for naturally occurring materials. This reduces the overall environmental impacts of quarrying virgin

aggregates. This is especially true in cement production, where the ash can form raw material as a silica source in the cement kiln feed and/or be added to the cement to take advantage of the pozzolanic properties of ash.

Where have we been?

This is the first newsletter for some many months. The reason for the delay is it simply has been a very busy year so far! This involved attending a number of conferences around the world.



During 2005, the UKQAA have sponsored both the World of Fly Ash conference in Kentucky, USA and the Dundee University - Global Construction - Ultimate Concrete Opportunities conference. In addition we gave a presentation at the Polish CCP Union conference in Poznan, the ECOBA conference in Brussels and the CIWM seminar in London.

The Polish CCP Union conference took place in March 2005 in Poznan. It was cold and wintery weather, but it was an excellent hotel and venue and we were treated to a sight seeing tour around the city. We gave a paper on "[The Equivalent concrete performance concept to EN206](#)" which is available following the link.

The World of fly ash conference took place in mid April 2005. For the first time ever, this conference was jointly organised by the University of Kentucky (confusingly known as UK) and the American Coal Ash Association (ACAA). With over 500 delegates from around the world it was an interesting mix of commercial and academic papers. The weather was kind and the company, organisation and food was excellent, as one expects in the USA. The UKQAA paper was titled "[European Legislation in the UK - a threat or an opportunity?](#)", and is available using the link. The full set of conference papers are now available and can be purchased in CD format from the World of Coal Ash site;

<http://www.worldofcoalash.org/registration/proceedings.html>

The ECOBA conference in Brussels in early June covered some very specific areas of ash from coal fired power generation. Again we gave a paper titled "[Blocks made in UK - 100 % utilization of bottom ash](#)".

On 11 June 2005 we attended the CIWM seminar on Waste Definitions, at which we gave a paper titled "[Pulverised Fuel Ash - an issue of definition?](#)", which can be downloaded



following the link. This covered the current situation brought about by the UK implementation of the Waste Framework Directive -see Environment Agency and Waste issue above.

If you have any suggestions, comments, queries, etc about the work of the UKQAA please contact us as follows:

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Please note the new phone numbers - our old numbers will be switched off in November!