



Abatement in Action

Hosted by Sherwod Forest Crematorium

on behalf of the Burial & Cremation Education Trust (BCET)



On Thursday 22nd June Georgina Bembridge (right) Manager of the UK's first fully abated crematorium, welcomed delegates to the Jubilee Hall, Ollerton for the second of four planned 'Abatement In Action' days organised by the BCET. Divided into two groups, the first made their way to the nearby Sherwood Forest crematorium whilst the second remained to hear presentations by Andrew Mallalieu (left) of Facultatieve Technologies and Steve Sheridan of Furnace Finance Ltd. Andrew began by explaining the development route that resulted in his company recommending activated carbon reagent injection in preference to fixed or fluidised bed systems.



Put simply, activated carbon removes substances by a process of adsorption (not absorption). The large number of tiny pores that exist in each carbon particle provide a vast surface area upon which mercury and dioxins can cling. The carbon is introduced into the exhaust flueways as a constituent of a powdered reagent and mercury bearing particles are separated, then transferred to a 202 litre drum which requires replacement and disposal after about 250 cremations. But before we reach this point an intricate network of pipes and technical equipment are required and, not surprisingly, this was what most delegates had come to see. Whilst Steve Sheridan of Furnace Finance Ltd. outlined the leasing packages his company offers to meet the costs of installation and maintenance delegates were anxious to see if their crematoriums could accommodate it without major alterations.

But not all the equipment will be housed internally. The air-blast cooler will be sited outside: perhaps on the roof or in the service yard. For those planning to abate all their cremations question time revealed the prospect that some significant savings might be made in gas consumption. Since 1996 crematoria have been required to ensure that combustion gases leaving the primary chamber are retained in the secondary chamber for 2 seconds at a temperature of 850°C. For those crematoria fitting mercury removal systems there is talk that a 50°C reduction would be justified and Tim Morris, the ICCM's chief executive, confirmed the Institute was ready to fund independent monitoring of emissions at Sherwood Forest to substantiate this claim. The results would be submitted to Defra for assessment. If accepted savings of between 10% to 15% in annual fuel bills are expected.



Graham Pratt, Crematory Manager, explains the IT system

| | |
|------------------|------|
| 31 December 2007 | 10% |
| 31 December 2008 | 20% |
| 31 December 2009 | 40% |
| 31 December 2010 | 60% |
| 31 December 2011 | 80% |
| 31 December 2012 | 100% |

These are early days for crematoria as they contemplate Defra's annual percentage benchmarks set last year - see table left - for phasing cremation abatement in the UK leading to a minimum 50% (circa 208,000 annual cremations) by 31 December 2012.

You can do the sums for yourself but if Defra is expecting a commitment that upwards of 20,000 cremations will be abated by the end of next year it is likely to be disappointed. Industry indications are that Sherwood Forest apart only Haycombe (Bath) and Chorlton-cum-Hardy (Manchester) and the new build in South Lanarkshire would have upgraded leaving a shortfall of some 15,000 non-abated cremations.



B



F



Section of connecting ductwork



I



D



J



E



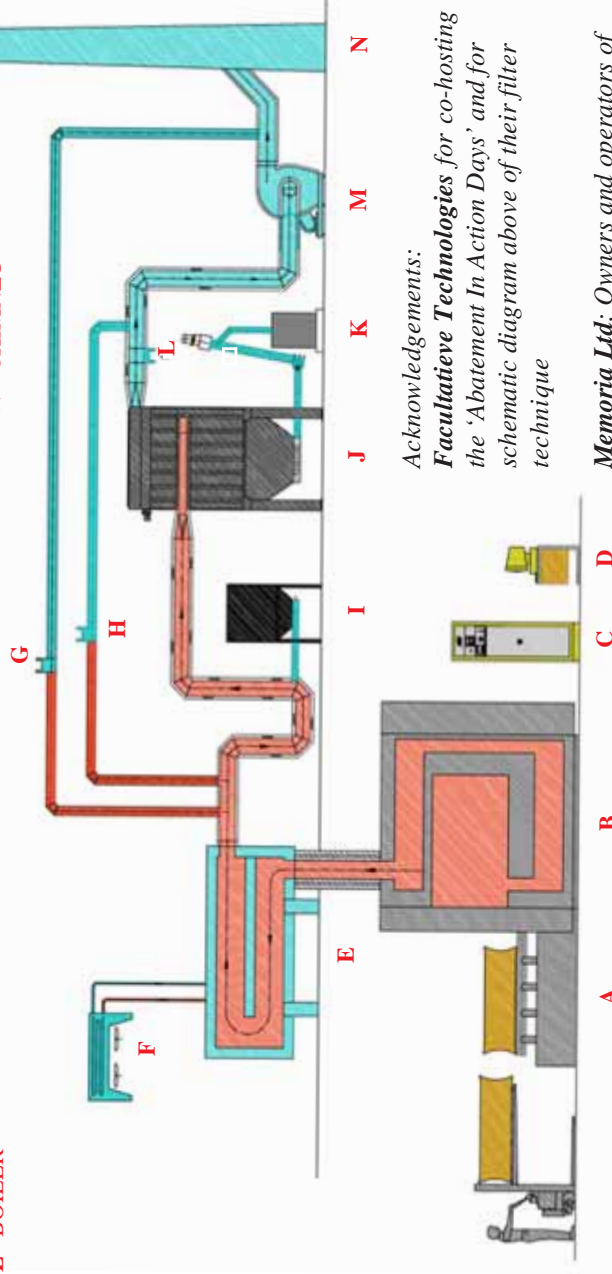
K

FILTER TECHNIQUE

- A - LOADER
- B - CREMATOR/INCINERATOR
- C - ANALYTICAL PANEL
- D - PROCESS CONTROL
- E - BOILER

- F - AIR BLAST COOLER
- G - TOTAL BYPASS DAMPER
- H - PRE-HEAT FILTER BYPASS
- I - REAGENT

- J - BAG FILTER
- K - SPENT REAGENT
- L - FGT ISOLATION DAMPER
- M - I D FAN
- N - CHIMNEY



Acknowledgements:

Facultative Technologies for co-hosting the 'Abatement In Action Days' and for schematic diagram above of their filter technique

Memoria Ltd: Owners and operators of the Sherwood Forest Crematorium and for use of the photographs above of installations on site