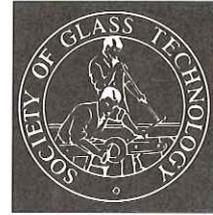


SGT NEWS



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REDSTON AWARD 1992

Every year, the London Section combines an enjoyable social evening with remembrance and recognition. This year, SGT president Neil McDonnell presented the Redston Award to Ted Millard, in recognition of his many years dedication and service to the Section. Ted, who has twice been chairman of the Section, is well known as works manager of Lewis & Towers Ltd.

The Redston Award was donated by Eric Katz, founder and owner of Epsom Glass Industries, in memory of his close friend and colleague Gerald Redston who died tragically in a car crash.

The evening was made all the more enjoyable by a talk entitled 'The Markets for Glass Packaging' by Robin Moorby, market development manager at United Glass.

Robin illustrated clearly how in recessionary times, the consumer selects on grounds of high quality and how in food and drink consumables, glass packaging plays a very strong role. Safety, strength, appearance, convenience and reusability are all positive marketing attributes.

Ted Millard (right) receives the Redston Award from Neil McDonnell.



FURNACE EXHAUST GAS TREATMENT

Recycling, the acceptable environmental face of the glass industry, has so far diverted attention from the smoking chimney. Other industries are facing stricter emission controls which will have to be anticipated in the plans for new furnaces with lives that will extend into the next century. Brian Heap from the Procedair Division of Stein Atkinson Stordy highlighted the problems and potential solutions in a recent presentation to the Yorkshire Section.

Government legislation on protecting the environment and the work of the EC Environment Commission (DGXI) have integrated pollution controls for land, air and water and introduced the principle that the polluter pays. The realism of crippling costs to implement anti-pollution measures and their effect on competitiveness led to BATNEEC, *the best available techniques not entailing excessive costs*.

Limits on flue gas pollutants have been proposed for new plants and rebuilds from 1995 and all furnaces from 2000. These are initial sightings and do not take in European and global influences which can only tighten limits. The solutions come all the way along the process from choice of batch materials, to cleaner burning and the end of the pipe systems which are Procedair's speciality.

Particulates are the visible components from the chimney which impact most on the local populace but this is an area where technology is capable of reducing annual levels to current weekly levels. The

proposed limits are (in mg/m³) 100 for the UK, TA Luft (1986) 50 and the steel industry is currently 30.

Electrostatic precipitation, applying a negative charge to particles then passing through a screen of wire anodes, reduces levels by 80%. Cooling the waste gas reduces the volume and enables 90% removal. The heat exchanged when cooling the flue gas can be used to preheat cullet and so contributes towards running costs.

Bringing the temperature down to 250°C allows modern filter fabrics to be used. The most efficient of these can reduce particulate content by 95%. Filters are cheaper to run than precipitators, can be maintained on-line but have a limited operating temperature.

Acid rain-creating compounds such as sulphur dioxide, chlorine and fluorine are invisible but damage a wider area. The proposed limits for SO₂ are 1750mg/m³. Incinerators and coal-fired boilers are currently 300 and incinerators have a 1993 target of 25. Cl target values are 75mg/m³ in five years and 50 in the next decade. Hospital incinerators, currently 50, have to be 5 in 1993. For F, the limit is 20 in five years and 5 in 10. The aluminium industry is 1 with proposals for 0.1.

Flue gas desulphurisation processes will almost always take out any Cl and F at the same time. A separate water scrubber for halogens would lead to effluent disposal problems. Reacting the waste gas with lime particles in a Venturi tower creates gypsum which is exhausted at the filtering stage. The acid gas scrub can be up to 90% effective and meets emission targets with margins for future stiffer limits.

The Procedair system, which takes in the scrub and filter method, costs £500,000-£600,000 and running costs are recovered from savings in cullet preheating.

Regulations on emissions are unavoidable and some investment in cleaning equipment is inevitable. The good relations with the local community and authorities should maintain the viability of urban factories, emphasise the benefits of glass and promote a cleaner environment.

President:
Mr N M McDonnell,
CEng, MIMechE,
FSGT.

Honorary Secretary:
Mr W Simpson,
FSGT, FICeram,
FIIM, FBIM.

Honorary Treasurer:
Mr M D Thew.



SCIENCE AND ART IN GLASS

A multi-disciplinary gathering took place at the Royal Institution of Great Britain to explore the common ground between the arts and sciences and reconcile the separate paths they have taken during the 20th century.

The symposium looked at the different attributes of glass from the perspective of artists, architects, scientists and technologists. The impact the material has made on society was reinforced many times over.

Transparency, form, utility, colour, structure and novelty were the session titles which provided the framework for delegates from different disciplines. A selection of papers under each were, respectively: Jim Ainslie from British Telecom on glassfibre telecommunications; Dale Chihuly on glass as an artistic medium; Sir Alastair Pilkington on the technology of glass and windows; Sebastian Strobl on medieval stained glass and its preservation; John Finney on the use of neutrons in determining the structure and dynamics of glass; and Jerzy Zarzycki on the development of low temperature routes to glasses. Three lunchtime lectures on: The 17th century breakthrough in batch production of spectacle lenses; glass furniture; and geometrical models of glass formation, were also presented.

Nearly 30 poster papers on even more subjects supported the seminars.

The success of the conference was in bringing together the diverse workers of glass, raising their awareness of other directions being taken and raising the understanding of such a dominant material. The random, long range unpredictability was reinforced many times by the scientists, the freedom of the architect in bringing light and bringing the environment closer to interiors emphasised and the texture, precision malleability and variability of glass as a medium for the artist was reinforced.

Proceedings of the conference are available from the Royal Institution. Submitted poster papers will be published in the April 1993 issue of *Glass Technology*.

The conference was organised by Professor Neville Greaves and sponsored by BIOSYM Technologies, British Glass, Daresbury Research Services, Emhart Glass, Pilkington, Rutherford Appleton Laboratory, Society of Glass Technology and Unilever Research.

ESG PAPERS

Fundamentals of the glass manufacturing process 1991: Proceedings of the first conference of the European Society of Glass Science and Technology (ESG) are now available from the SGT. They contain 58 papers on the following topics: Physical properties and analysis; crystallisation; structure; surface treatment; the role of the operator in modern computer-based control systems; process control; process modelling; and furnaces and melting.

Copies are available from the ESG founding societies (DGG, SGT and USCV) at the equivalent of £50 for members and £60 for non-members.

PHOTOGRAPHIC RECOLLECTIONS

A number of letters have been received, identifying well-known characters and attempting to fix the date of the dinner pictured in SGT News No 5. Dr K L Loewenstein (easily identifiable) is "pretty certain that this was ... the 1945/46 season" while Mr B E Moody "guesses the date to be probably 1948"; Mr G E Walker's "guess ... is 1949 at the Talbot". All agree that it must be before 1951 when ladies were first invited to attend and dinners became dinner dances.

Mr R W Douglas is ninth from the left on the top table, "the Honorary Secretary (Moody) or standing at the back on the far left "awaiting his turn as Professor of Glass Technology" (Loewenstein).

There is insufficient space here to go into all the permutations and a more detailed article will appear in *Glass Technology* in due course.

And now here is another photographic recollection ... the Midlands Section dinner, 1936.

MARCH DIARY DATES

LONDON: The annual dinner and dance takes place on Friday March 12 at Sopwell House, St Albans.

MIDLANDS: Mike Tuffey of Sismey and Linforth will discuss combustion control systems for small furnaces. Venue: Pedmore House, Stourbridge; Date: Monday March 1.

NORTH WEST: Hand made glass is the theme of a presentation by Maurice Wallage of Glassworks Equipment on Thursday March 18.

YORKSHIRE: Barry Johnson will talk about Maul Technology machinery on Thursday March 4. Venue: Rockware Glass, Worktop.

IN PRINT

The February 1993 edition of *Glass Technology* will contain F J Davies' keynote speech on the European container glass industry, supported by a look at competition policy and its impact on British industry. Papers on the determination of copper in glass and the reactive vaporisation of sodium tetraborate are also included.

Physics and Chemistry of Glasses has papers on network theory of sodium silicates, Raman spectra of lithium phosphate glasses, crystallisation and glass forming ability of As-Se-Te, crystallisation to form glass ceramics, water content and phase separation, effect of iron on the electrical properties of sodium silicate glasses, hydrogen reactivity as a structural probe and co-ordination of Ti in titanate glasses.



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