

TECHNICAL EXCHANGE MEETING

GR&DC, JUNE 1982

CONCLUDING DISCUSSION

Friday, 11th June

14.00 p.m. - 16.15 p.m.

Chairman: A.L. Heard

Secretary: P.H. Gannaway

Present: Delegates

Session Co-ordinators

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SESSION 1 - CIGARETTE DESIGN

Tobacco Smoke Characterisation:

GR&DC reiterated its request for ideas on on-line sampling techniques; surveillance of other industries may be profitable. Priorities for work, agreed in session, were confirmed.

Ultra-Low Delivery Products:

Expanded tobacco - agreement that there should be further investigation of cigarettes from 100% tobacco in terms both of cigarette properties and of manufacturing problems. In particular:

- (i) B&W would advocate an entire span from 0% to 100% to allow models to be constructed;
- (ii) ITL are interested in blending and the variability introduced at various inclusion levels.

Smoking sensations - the meeting confirmed that there is wide support for this work.

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SESSION 2 - HUMAN SMOKING STUDIES

Smoking Behaviour Studies:

It was agreed that collaborative tests would be discussed outside of the Technical Exchange Meeting. There will be a conference or workshop in Spring, 1983 (details to be finalised by Dr. M. Oldman and Mr. W. Deines).

It was agreed that Dr. T. Hirji and Dr. W. Schneider will collaborate on "smoking mechanics" since both GR&DC and Hamburg are interested in this subject.

Smoke Retention Studies/Smoke Aerosol Physics

No further comment.

Physiological and Respiratory Monitoring

It was agreed that the chemical stimuli which affect the lungs should be identified.

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SESSION 3 - PRIMARY PROCESS RESEARCH AND NIR ANALYSIS

Effects of Processing on Chemistry and Flavour Characteristics -  
Interaction of Brazilian and GR&DC Programmes:

Souza Cruz will advise the date of a conference to be held at the end of 1983/beginning of 1984 once the data from flue-cured tobacco (Year 1) and air-cured tobacco (Year 2) have been assessed.

Weight Saving and Expansion Processes - Fundamental Factors:

It was agreed that all companies represented will be sent a full list of physical parameters of potential use in defining tobacco particles.

ITL was given clarification that the role of expanded tobacco in ultra-low delivery products included stem as well as lamina. GR&DC advised that there is a project on hand using Rothmans' shredded stem; two reports have already been issued.

Internal Structure of Cigarettes and Tobacco Particles - Basic Study of Size Reduction Processes:

No further comment.

Models of Heat and Mass Transfer in Dryers - Basic Study of Wetting, Drying and Cooling Processes:

There was considerable discussion aimed at clarifying the aims of the GR&DC modelling work. Dr. Hook stressed that the closeness of fit to experimental data was only as close as necessary to be sure that all basic processes within equipment are understood. Once the fundamentals of these tobaccos are known, reliable use of such models could be expected by the CAC countries. ITL had carried out similar studies on the ITM Dryer and the results may influence the GR&DC model.

While discussing modelling, the opportunity was taken to update delegates on the intended conference to replace the Combustion Conference. This will be a Conference aimed at seeing the application of all modelling work related to the cigarette. Thus, an attempt will be made to touch on broad areas where modelling is of benefit:

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- (i) the model for physical properties of the tobacco rod;
- (ii) for the smoker, the overall effects of different smoking pattern on delivery and of different inhalation pattern on smoking.

The final proposals from Dr. Baker and Dr. Schneider for the Conference will be considered at the Research Conference (August, 1982) with a view to its being held during Spring to Summer, 1983.

Near Infra-Red Analysis - Off-line and On-line Applications:

ITL expressed a wish to participate in the collaborative study (contact Dr. P. Dunn).

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SESSION 4 - SECONDARY RESEARCH

Test Method Development:

Following the audit/survey of QC/Test Methods to be performed by GR&DC, status in Operating Companies would be reported and concentration of future work would be focussed on gaps identified.

Ventilated Cigarette Technology:

GR&DC confirmed that activity will be terminated in 12 to 18 months. Delegates expressed little interest in the detailed evaluation of, for instance, the Hauni Laser by GR&DC. Until technology transfer to the less developed countries of the Group is improved, there is a continuing need for GR&DC to develop technology for them.

BAT Hamburg expressed interest in "state of the art" surveillance generally. All companies have a specific need for "on-line" monitoring of Hauni laser-ventilated cigarettes.

Secondary Research - New Work Areas:

Basically, GR&DC is looking for directions based on the needs of all Operating Companies. No comments were forthcoming on the projects tentatively proposed in this Session.

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SESSION 5 - BIOLOGICAL RESEARCH

Introduction:

There was agreement that a further main objective should be "to ensure that our products compare favourably with those of competitors".

GR&DC agreed to circulate information on the studies relating to Atherosclerosis (Professor Caro) to all delegates.

Leaky Lung:

Proposals agreed.

Smoke Inhalation Studies:

GR&DC will circulate information on low delivery cigarettes, expanded tobacco, reconstituted tobacco and sidestream, when available, to all delegates.

Mutagenecity:

No further comment, except to note that Dr. Thornton will visit Canada in July, when the programme conducted by Dr. Billimoria will be reviewed and integrated where possible with GR&DC.

Passive Smoking:

No further comment.

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SESSION 6 - NITROSAMINES/REDUCED SIDESTREAM/FILTER RESEARCH

Nitrosamines:

No further comment.

Reduced Sidestream:

BAT Hamburg expressed a view that the objective as stated, i.e. the reduction of visible sidestream, was not the prime objective in all cases. In Germany, for example, the prime need is for a reduction in irritation, etc., caused by sidestream. For BAT Hamburg and for Wills (Australia) the order of priority could be:

1. Less annoyance/irritation (to the eyes);
2. Less after-smell;
3. Reduced visible sidestream.

There was considerable discussion since GR&DC experience to date suggests that eye irritation and after-smell are a function of particulate material, i.e. visible sidestream. Further evidence will be sought in the planned programme.

Alternative fillers - No further comment.

Methods for Sidestream Smoke Constituents - No further comment.

Low Sidestream Products - No further comment.

Subjective Assessment of Products - BAT Hamburg saw no difficulty in supporting the considerable allocation of research effort planned in this whole area.

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SESSION 7 - FILTER RESEARCH

The meeting reaffirmed its support for those elements of the Filter Programme which either extended fundamental understanding or offered new concepts for product development by the CAC laboratories. BAT Hamburg were interested in the various filters proposed to meet their needs e.g. high PD/low FE - and needed time to assess the samples.

ITL certainly required high PD/low FE filters but was as yet unsure as to the acceptability/performance of the CSF.

Wills (Australia) could see a commercial need for a low carbon monoxide cigarette in view of the pending legislation; interest in the CSF approach will be explored.

Filter Technology:

Programme Review - No further comment.

Polypropylene Tow - Souza Cruz wished to change "Over 60,000,000 cigarettes have been sold, seemingly without complaint" to "... seemingly without comment" since the final result of consumer/market research was not yet available. It was postulated that as the product using the polypropylene filter was in a low-price brand the consumers were more tolerant.

LOCO Cigarettes/CSF/1 Filter - See discussion points above under Filter Research.

Spin Moulding - No further comment.

Filtrona:

GR&DC requested that any information/samples handed out by Filtrona to Operating Companies should be advised so that it is possible to monitor that Company's activities with respect to filters.

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SESSION 8

Since time had not permitted notes to be produced on this final session,  
no discussion took place.

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GENERAL OVERALL CONCLUSIONS

Mr. Heard re-stated the objectives of the week's proceedings, i.e.

- (i) To demonstrate in detail the current work and future plans of GR&DC across a very broad front;
- (ii) To gain the comments and, where possible, agreement of delegates who would then go back to their Companies for final comment;
- (iii) As a result, to reduce the amount of detailed discussion of the GR&DC Work Programme at the forthcoming Research Conference.

It was recognised that "Technical Exchange Meeting" was probably not the correct title for the week's activities and something like "GR&DC Work Programme Review" might have been more appropriate. Technical exchanges had taken place on specific subjects, e.g. Flavour Workshop in Hamburg, or were planned, e.g. Combustion/Design Modelling. Souza Cruz felt that there was still a need for a Technical Exchange Meeting format in which all countries exchanged experience. The subject would be discussed at the August R&D Conference.

General comments showed that delegates felt they had received a good insight into the GR&DC Programme, both current and immediate future. Improvements for the future of this meeting could include some idea of resource allocation for each topic and the issue of pre-papers to reduce the information given at each presentation.

As far as timing of the presentations and laboratory site visits were concerned, the timetable had been acceptable. A short break during the morning and late afternoon sessions is probably desirable.

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