



PROJECT 1000 RESEARCH INVESTIGATIONS WITH SHORT-TERM OBJECTIVES

1200 Smoke Studies

AWG. (3) A further series of samples of cigarettes from Belgium were tested and a File Note written.

1500 Design of Cigarettes

SRE/NF. (1) Work has commenced on the examination of methods of controlling the combustion pattern of cigarette paper.

1600 Evaluation of Commercial Cigarettes

AWG. (3) A further series of samples of cigarettes from Holland were tested and a File Note written.

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PROJECT 4200 THE OPTIMISATION AND CONTROL OF CIGARETTE MANUFACTURE

4210 The Effects of Tobacco Properties

AWG/FR. (1) R. & D.E. constructional work on tobacco temperature at making has been completed and successful preliminary tests have been made. The heating equipment is now awaited from the suppliers.

4220 The Effect of the Machine

AWC. (12) The final series of measurements of vibration on a Mk.8 M.C.M. operating at 3,000 c.p.m. was stopped by the sudden failure of the vibration measuring equipment.

DBN. (13) A paper break stoppage sheet has been drawn up which is filled in by the machine crew at each paper break. This will enable a detailed analysis of paper breakages to be carried out.

AWC. (14) The modified woven nylon suction bands have operated successfully on Mk.8 machines running at 2,500 c.p.m. A specification was prepared for the manufacture of the bands. A report was written.

4230 Efficiency Improvement

AWC/DBN. (2) A report was written on the analysis of data on stoppages from four Southampton Branch machines.

4240 Instrumentation and Machine Control

AEY. (3) Work on the measurement of tobacco moisture at entry to rod continues. An electrode system has been fitted to a cigarette making machine. The necessary electronic circuits are being constructed.

RGB. (5) A full specification has been completed and has been circulated to a number of data logger manufacturers. Firm price quotations are expected by 21st June, 1968.

RGE. (6) Circuit card sub-assemblies and chassis work is complete and fitted within an instrument case for the prototype gravimetric weight control for Mk.8 MCM. Wiring of the unit is now in progress.

JKM. (7) In order to examine the operation of the ecreteur control system at higher speeds, height and pressure transducers have been set up with appropriate electronic equipment to enable the movement of the ecreteur knife to be compared with pressure changes in the air cell. The system has been developed to the stage where useful records of height and pressure can be obtained simultaneously on a U.V. oscillograph.

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4250 Quality Measurement and Inspection  
AWG. (2) A second report was issued on the performance of the Molins scintillation type weight control. Molins have now further modified the unit in an attempt to reduce the drift and the work continues.

4270 New Concepts  
FR/DBN. (2) An alternative method of manufacturing annular cigarettes has been investigated and samples have been made by this means for testing in the laboratory.

DBN. (3) Work has commenced on the modification of a making machine to study possible methods of controlling the cigarette paper.

AWG. Unprogrammed  
Meetings have been held at Millbank and at Molins on the subject of the noise emitted from machinery. A draft noise specification for machines was discussed.

PROJECT 4300 PACKAGING STUDIES AND PRODUCT DEVELOPMENT

4310 Study of the Overwrap  
NF/DEC. (4) Work on the study of heating seal (Part II) has been reported. It has been shown that "viscose fusion" is far less of a problem with I.C.I. Propafilm 'C' than with MSA(H)T.

DEC. (6) Work on the influence of external conditions on flavour transmission in polypropylene-based films has been reported. The shelf lives of simple flavour components are quoted in terms of "half-life" and have been studied in the absence of fixatives.

DEC. (7) A study of the flavour distribution and transmission characteristics of menthol in polypropylene overwrapped packs is in progress.

DEC. (8) A programme to examine the storage conditions of packed cigarettes is in course of being prepared.

4320 Study of Carton Materials

NF. (4) The evaluation of mechanical properties of H.L. packs (Part II) has been completed. The sensitivity of a panel of smokers to changes in H.L. pack rigidity properties has been measured.

DEC. (5) The evaluation of mechanical properties of cup packs (Part I) is now awaiting further materials.

NF. (6) The evaluation of crease depth on properties of H.L. packs has been completed. Creasing conditions have been recommended for specification purposes on a trial basis.

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- 4320 Study of Carton Materials (continued)  
NF. (7) In connection with the examination of specification requirements for carton board, questionnaires have been constructed in conjunction with S.C.L. and distributed among Marketing and Production area representatives.
- 4330 Package Design  
DEC. (4) Work is continuing on design aspects of the flexible pouch-pack for pipe tobacco.
- 4340 Bonding and Finishes  
NF. (1) Approximate costings have been obtained for hot melt adhesive coatings pre-applied to H.L. blanks. A brief examination of heat seal lacquer coatings is underway.  
NF. (2) Laboratory work and assessments on a testing device for heat resistance of carton board lacquer have been completed.

PROJECT 4400 FILTER MANUFACTURE

- 4410 Preliminary Studies  
FH/DEC/HGH. (3) A survey and preliminary examination of methods of retaining water in filters have been completed and a report prepared.  
FH/DEC/HGH. (7) Work on Project BATEAU is continuing with the aim of completing the specification of the materials and design of the proposed filter.
- 4420 Improvement of Existing Process  
PGC. (1) Experiments have been performed to investigate the possible occurrence of seam slip of the filter paper wrap after the long folder in the rod forming section during the filter manufacture.
- 4430 Machine Development  
FH/PGC. (5) Initial trial manufacture of viscose staple fibre filters grafted with P.F.I. have been carried out and the first samples made on the Flock Filter machine. Different methods of feeding the staple fibre have been tried but are not yet adequate.  
PGC. (7) Experiments have been carried out to compare the Mexican Cone applicator with the normal Gelanese type for filter manufacture.
- 4450 Quality Measurement and Product Control  
FH/AWC. (2) and (4) A draft standard test procedure for the evaluation of rod forming equipment has been produced and is in course of amendment to a completed standard test procedure.  
FH/AWC. (3) A standard test procedure for the evaluation of tow opening equipment has been prepared and used in trials in Germany.

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PROJECT 4500 ASSESSMENT OF NEW EQUIPMENT

4520 Primary Plant

AWC. (1) A report was issued on the experimental work done in R. & D.F. on the elimination of screens from coolers.

AWC. (2) The work under (1) has been extended to a factory scale test in Liverpool.

4530 Cigarette Machines and Ancillaries

AWC. (6) A report was issued on the evaluation of a compensated pneumatic/hydraulic weight control. The pipework has been modified to overcome the problem of accumulation of dust in the connecting pipes.

FR. (7) The testing of the "Large" Vokes discharger has been completed.

4540 Packaging Machines

DFC. (1) The Molins simplified drum has now been incorporated in the R. & D.F. packing machine and its evaluation is in progress.

FH/DFC/NF. (2) The evaluation of the R. & D.F. modified H.L.P. is complete and a report has been prepared.

PROJECT 6000 APPLICATION OF NEW DEVELOPMENTS

6210 Air Dryers

FH/RWH. (1) A production comparison of moisture control during C.R.S. par-drying, using the R. & D.F. steam cylinder dryer and the R. & D.F. air dryer, has been carried out on behalf of Southampton Branch.

Following these production trials a feasible layout for a C.R.S. air dryer in Southampton Branch has been proposed.

6220 Continuous Moisture Meters

AFY. (13) The prototype measuring head unit has been sent to Louisville. A report has been issued.

6300 Secondary Manufacture

RWH. (4) Tests on the in situ drying of trays of cigarettes using dehumidified air and a ducted cigarette trolley are finished. Within the cost limit proposed generally adequate control could not be achieved.

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Cigar Manufacture

JKM.

(4) The conversion of the cigarlet equipment to Tripoli's requirements was completed in April but final testing was delayed by late delivery of sample production mouthpieces. These arrived in June and, now that they have been found to run satisfactorily, the equipment can be despatched. Tests with anchor wrap samples for Tripoli will be continued on the R. & D.F. assembler.

JKM.

(5) Delivery of the rollers with four grooves is expected at the end of June. One set will be sent to Honduras and the other will be tested in the R. & D.E. cigarlet assembler.

DBN.

Unprogrammed

A 25.0 mm circumference Mk.8 garniture has been modified into a calibrated garniture and has just commenced production use in Liverpool Branch.

FH.

Unprogrammed

A study of the U.K. cigarette manufacturing processes has been undertaken.

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R.S.

Laboratory Block

Layout and partitioning modified - Labs. 25/26.  
Autoclave installed - Lab.7.  
Floors refurbished - Labs. 7/25/26.  
Mods. to fume extract and layout completed - Lab.13.  
Stripping and varnishing Lab. external window frames  
commenced.

Development Halls

New milling machine installed - Workshop.  
Ducting for Mezzanine extension commenced - D.H.2.

Solvent Distillation Building

Extension to external switchgear completed.  
Climbing film evaporator installed.

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