

BATCO

COMBINED QUARTERLY REPORT

JULY, AUGUST, SEPTEMBER, 1967

Development Engineering and Process Research Groups,  
together with Manufacturing, Quality Control and Packaging.

FH/1W.

25th September, 1967.

100257906

PROJECT 1000 RESEARCH INVESTIGATIONS WITH SHORT-TERM OBJECTIVES

1300 Filter Studies

FH/HGH/CWA. (14) Encapsulated menthol has been applied to cigarettes in the form of a strip painted on the paper. Tests have also been carried out in which spherical capsules have been added to acetate filter rods during manufacture.

FH/HGH/CWA. (15) Q.C. examination of filters containing menthol capsules has been carried out.

PROJECT 2000 ANALYTICAL RESEARCH STUDIES

2100 Tobacco

FH/AWG. (9) Studies are in progress of the use of absolute humidity in tobacco manufacture. Problems have arisen from variations in the use of the term in the published literature.

2400 Development of Equipment

F.R. (5) The evaluation of the 4-port Louisville-type smoking machine has been completed.

PROJECT 4100 THE OPTIMISATION AND CONTROL OF TOBACCO PROCESSING

4110 Leaf and Lamina Processing

R.W.H. (2) Work on comparing the effect of some process variables on two different grades has been completed.

4130 Cut Tobacco

R.W.H. (1) Dryer control studies are delayed awaiting replacement equipment. Early results are being collated.

4140 Instrumentation for Plant Control

E.B.W. (2) An infra-red thermometer type ITC-11 has been on loan from B. & K. Instruments Ltd. for assessment. Its performance proved satisfactory and an order for such an instrument to cover the range 50-212° F. has been placed.

4150 Quality Measurement for Product Control

AWC/RWH. (1) Results of initial centrifuge filling value tests are now complete.

R.W.H. (3) The evaluation of the pycnometer is continuing.

A.W.C. (4) The review of Standard Test Procedures remains open.

A.W.C. (5) The experimental work on the development of the shatter test is completed.

PROJECT 4200 THE OPTIMISATION AND CONTROL OF CIGARETTE MANUFACTURE

4210 The effects of Tobacco Properties

AWC/FR. (1) The programme on the effect of the temperature of the tobacco at making has been delayed by the suppliers. An alternative manufacturer is now designing equipment and arrangements have been made to undertake limited tests using the Mk.8 SM.

A.W.C. (2) Work is proceeding on the effect of tobacco moisture content at making.

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4210 The effects of Tobacco Properties (continued)

A.W.C. (3) The experiments on the effect of tobacco strand length on cigarette making machine performance are continuing.

4220 The Effect of the Machine

D.B.N. (6) The four calibrated garnitures have been installed in Southampton Branch and are working satisfactorily. A series of tests will be performed on the machines equipped with these garnitures to check the uniformity of cigarettes between one machine and another.

F.R. (8) Tests on the performance of a Mk.8 SM. using modified rails have been completed.

D.B.N. (9) A pneumatic device (based on the PATRA design) for measuring the paper tension on a Mk.8 MCM has been drawn up and is being constructed.

A.W.C. (10) Measurements are being made on the effect of high cigarette making machine speed on the position of the condensed end.

F.R. (11) A modification has been made to the air entry of the Mk.8 SM. and tests are proceeding.

4230 Efficiency Improvement

A.W.C. (1) Because of the loss of efficiency in the 1964 type Mk.8 which is attributable to tobacco blockages in the chimney, the effect of various modifications is being examined.

4240 Instrumentation and Machine Control

AEY/DBN. (1) The gravimetric weight control has been running successfully without attention for some weeks and the initial test programme completed.

AEY/JKM. (2) The photo-electric system constructed to measure height of ecretage return is being evaluated.

A.E.Y. (3) Further work has been carried out on electronic circuit to measure moisture content at entry to the garniture but the system is not yet completed.

AEY/JKM. (4) A differential transformer height measuring unit fitted to ecretageur knife on Mk.8 M.C.M. to measure changes of knife position while running. Recorder fitted to output of electronic measuring unit to record height changes. The system is being evaluated.

10025/908

4250

Quality Measurement and Inspection

EBW/AEY.

(1) Further work has been done on hydrostatic firmness tester voltage sensing and amplifier circuits. Cigarette holder has been modified and new rubber sleeves are being tested.

A.W.C.

(2) The experiments using the scintillation counter type weight control have continued. However, despite the modifications made by Molins, the mean weight has shown a steady drift. Also, the "voids in the tobacco rod" circuit have drifted.

A.W.C.

(3) An evaluation of several sub-standards for the measurement of room relative humidity has been completed.

A.W.C.

(5) Comments have now been received from the U.K. Branch factories on the Standard Test Procedure for suction bands for Mk.8 MCMs. The S.T.P. has been issued.

A.W.C.

(6) The comparison between the "range of two" and the Solartron computer for the evaluation of individual cigarette weight performance continues.

A.W.C.

(7) Work on the application of the Solartron Computer to measure the within cigarette tobacco density has been completed.

A.W.C.

(8) The draft of a Standard Test Procedure for simplified trough has been prepared.

4270

New Concepts

FR/CNB.

(1) Experimental quantities of cigarettes have been produced on a modified Mk.8 MCM and tested. Further experimental samples have been requested. An examination has been made into an alternative method using a modified Mk.5 MCM.

A.W.C.

Unprogrammed

At the request of Southampton Branch, measurements were made of the floor vibration on the Making Floor (top storey). The performance of the Hauni "Baby" cigarette making machine is being evaluated.

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4250

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PROJECT 4300 PACKAGING STUDIES AND PRODUCT DEVELOPMENT

4310 Study of the Overwrap

D.E.C. (3) Work on the physical testing of polypropylene-based films has been completed.

NF/DEC. (4) The heat sealing requirements i.e. time and temperature, for Propafilm 'C' wrapped H.L. packs have been studied and optimum conditions defined. The effect of heat sealing on the varnished carton board has been studied in the laboratory and the results are being compared with the performance of identical materials on the WMH.2.

D.E.C. (6) Work on the influence of external conditions on flavour transmission of polypropylene-based films is continuing.

D.E.C. (7) The examination of the sealing performance of polypropylene-based films on S.C. packs is complete.

4320 Study of Carton Materials

N.F. (4) Work on objective testing of packs has been completed. The corresponding subjective assessments are nearing completion.

N.F. (5) An examination of the possible use of white lacquered foil for cigarette bundling has been carried out.

N.F. (6) Work on the examination of H.L. pack creasing conditions has commenced.

4330. Package Design

DEF/NF. (4) A development proposal for flexible pipe tobacco pouches has been accepted and a survey of suitable materials commenced.

4340 Bonding and Finishes

N.F. (1) A small number of heat seal coated H.L. blanks have been obtained from Chambon and are being evaluated.

DEC/NF. (2) A testing device for heat resistance of carton board lacquer is being developed from the information obtained under 4310(4) above.

4350 Product Development - Cigarettes

D.E.C. (2) Filters for Project TWAIN have been made and no further work is at present planned.

D.E.C./N.F. Unprogrammed

A number of tear tapes for use with polypropylene-based film have been examined. Improvements in the solvent/adhesive system are desirable and a short laboratory exercise is under way.

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PROJECT 4400 FILTER MANUFACTURE

4410 Preliminary Studies

FH/DEC/HGH. (3) Filters containing water have been made using paper coated with magnesium chloride, lithium chloride and a mixture of lithium chloride and P.E.I. These filters are being examined.

FH/PGC/JKM. (4) Initial trials to see if it was possible to manufacture granular filters of low density materials with a high pressure drop have been brought to a completion. Information of the methods used have been recorded so that they may be continued if required. The BONDEX machine produced reasonable filters out of milled polyurethane foam.

4420 Improvement of Existing Process

P.G.C. (2) Information from the study of the variables of cellulose acetate filter manufacture has been recorded from the results of the initial investigations.

4430 Machine Development

P.G.C. (4) The Hot Melt Apparatus has been installed on a Mk.5 filter machine and trials started to improve the reliability of sealing and prevent adhesive accumulation.

FH/PGC. (5) The investigation has been started on the Flock filter machine for filters of improved quality and selectivity. The normal paper has been acetylated for initial tests.

P.G.C. (6) The tests for the evaluation of the performance of the SETTA filter cigarette assembler are nearly completed.

PROJECT 4500 ASSESSMENT OF NEW EQUIPMENT

4530 Cigarette Machines and Ancillaries

JKM/CNB/AWC. (5) Production cigarettes are being produced in R. & D.E. with standard No.4 cork tipping coated with Heatfix 224. Production trials with printed heat fix tipping have been delayed pending a decision on the specification for the printed material.

FR/CNB/AWC. (6) The tests on the Sellotape Automatic Bobbin Splicer have been completed and the unit returned to Molins.

AWC. (7) The Study Group report on Automatic Cigarette Inspection has been issued.

FR/AWC/CNB. (8) The examination of the performance of the Vokes Standard Discharger has been completed.

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- 4540            Packaging Machines  
N.F.            (1) Change parts for the speeded up H.L. packer are still awaited from Molins.  
FH/DEC/NF.    (2) The Molins H.L. packer is now operating without the drum and an evaluation programme has been started.

PROJECT 6000    APPLICATION OF NEW DEVELOPMENTS

6200           Primary Manufacture

6210           Air Dryers.

- FH/RWH.       (1) Work on the Southampton Branch air dryer is under discussion with Southampton Branch. Further, evaluation work may be called for.

6220           Continuous Moisture Meters

- A.E.Y.        (3) The Copenhagen meter has been installed by Copenhagen and commissioned by R. & D.E.  
A.E.Y.        (9) The measuring head unit for Hong Kong has been assembled but the metering unit is held up awaiting indicating meters and recorders.  
A.E.Y.        (10) A metering unit for R. & D. is under construction.  
A.E.Y.        (11) The meter for Wills, Bristol, has been reallocated to U.F.Co. (South), Johannesburg. Final details for scalings are awaited.  
A.E.Y.        (12) The two meters for Wills, Australia are being constructed.

6240           Tobacco Treatments

- R.W.H.        (1) Different production methods for realising filling power improvement by spraying C.R.S. with water prior to par-drying are being compared.

6300           Secondary Manufacture

- F.H.          (1) Calculations of the theoretical performance characteristics of the C.V.C. dryer have been completed.  
F.H.          (2) Cost comparisons have been carried out covering the various methods available for cigarette drying.

6500           Cigar Manufacture

- J.K.M.        (2) The Molins filter hopper for the second filter inserter for Johannesburg has not been delivered.  
J.K.M.        (3) The R. & D. cigaret assembler has been modified for the use of heat seal anchor wrap and promising results have been obtained. Completion of this work has been delayed by labour shortage.

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BUILDING MAINTENANCE AND SERVICES

R.S.

Laboratory Penthouse

Roof stripped and recovered.

No other major work has been done.

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