

COMBINED QUARTERLY REPORT

APRIL, MAY, JUNE, 1967

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

FM/MJ.

29th June, 1967.

100257915

BATCo document for Province of British Columbia 11 November 1999

PROJECT 2000 ANALYTICAL RESEARCH STUDIES

2100 Tobacco

FH/ANG. (9) A literature survey has been commenced in connection with the consideration of the use of absolute humidity in tobacco manufacture.

2400 Development of equipment

F.R. (4) A 4-Port Louisville smoking machine has been constructed and handed over to the laboratory for assessment.

PROJECT 4100 THE OPTIMISATION AND CONTROL OF TOBACCO PROCESSING

4110 Leaf and Lamina processing

R.W.H. (2) Results from experiments on the effect of grade and shatter are being studied.

4120 Stem processing

R.W.H. (1) The effect of water sprays, prior to par drying on, C.R.S. filling power has been examined. Water additions raising the moisture content up to about 45% have given rise to increases in filling power corresponding roughly to 1% filling power per 1% additional moisture content.

4130 Cut tobacco

R.W.H. (1) Equipment faults have delayed feed forward control of moisture load variations to an air dryer.

4140 Instrumentation for Plant Control

A.E.Y. (1) Work on the construction and testing of a feeder for continuous moisture meter has been completed.

E.B.W. (2) An instrument for the infra-red measurement of tobacco temperature is on order. To reduce the delay a further instrument is to be obtained on loan for a limited period.

4150. Quality measurement for product control

ANG/RWH. (1) The experimental work on the application of the centrifuge test to filling value is proceeding.

R.W.H. (3) The evaluation of pycnometer results continues.

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 now proceeding after the elimination of some equipment variables.

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PROJECT 4200 THE OPTIMISATION AND CONTROL OF CIGARETTE MANUFACTURE

4210 The effects of tobacco properties

AWG/FR. (1) The programme on the effect of the temperature of the tobacco at making is still dependent on suppliers.

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

4220 The effect of the machine

NEW/AWC. (3) A report has been issued on the effect of higher speeds (2,500 c.p.m.) on a pre-1964 Mk.8 cigarette making machine.

A.W.C. (4) A second report has been issued on the effect of the shoe on the uniformity of density within the cigarette.

D.B.N. (6) Two garnitures have been installed in the Southampton Branch but due to staff difficulties and pressure of production this has been reduced to one. The other three will be installed in the Autumn. The opportunity will be taken to make slight modifications to the garnitures. These will give improved running from the operators point of view and are as a result of experience in running the two garnitures which were installed.

F.R. (8) Rails have been made and comparative tests are now being made with Molins rails on the Mk.8 SM.

D.B.N. (9) There is nothing to report on dynamic tension on cigarette paper.

4240 Instrumentation and machine control

NEW/AEY/DBN. (1) An interim report has been issued and further work has been undertaken on alternative weight control for Mk.8 M.C.M. A means has been found of electronically filtering out the "vibration" noise from the out-of-balance signal. Thus it has been found that simple, rigid rubber mounts are satisfactory. A few running tests have been done using this filter but it has been difficult to keep control of the operational sequence due to the malfunctioning of the counter/control unit. This is being rebuilt and also a start will soon be made to increase the performance of the weigher-to-ecreteur movement electronic circuits.

A.E.Y. (2) A photo-electric tobacco level monitor for the measurement of flow of ecretage return has been built with its associated circuit and is being tested.

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- A.E.Y. (3) Work on the measurement of tobacco moisture at entry to rod continues. Prototype electrodes have been tried but were not entirely successful.
- A.E.Y. (4) A suitable transducer has been purchased for the continuous measurement of creteur height but the application is dependent upon the availability of labour.
- AEY/AWG. (5) A report has been issued on the long-term stability trials on the Kappa meter AB.68.
- E.B.W. (6) High temperature calibrations for the Kappa AB.68. have been completed.
- AEY/AWG. (7) A report has been issued on the Shaw small sample moisture meter.
- 4250 Quality measurement and inspection
- EBW/AEY. (1) Work on the development of a hydrostatic firmness tester for routine measurement is continuing. An electronics unit for zoning the signals is under construction. This has been delayed by the delivery of circuit components.
- A.W.C. (2) The evaluation of the scintillation counter type weight control continues and has shown several faults, which are being examined by Molins.
- A.W.C. (3) An evaluation of several sub-standards for the measurement of room relative humidity has been completed.
- NEW/AWG. (4) A report has been issued on the standard for the Firmness Profile Integrating Tester.
- A.W.C. (5) The issuing of the Standard Test Procedure for Mk.8 suction bands has been delayed whilst awaiting comments from the U.K. Branch factories.
- 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) The routine application of the Solartron computer to the measurement of within cigarette tobacco density continues.
- 4270 New concepts
- FR/GNB. (1) Work is now proceeding on a Mk.5 to attempt to make an annular cigarette directly. Work is also proceeding to make an annular cigarette indirectly on a Mk.8.
- F.R. Unprogrammed
- One 12-port smoking engine has been built and despatched to Australia and a further engine has been built and is being used by R. & D.E. for smoking trials.
- A.E.Y. An Operator's Handbook for the Continuous Moisture Meter has been issued to supplement the Equipment Handbook.

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3A.

4250 Quality measurement and inspection

J.K.M. Unprogrammed

Some preliminary tests on a modified Hauni "Manuela" using heat seal tipping for the assembly of mouthpiece cigarlets have given promising results. The suction drum of the R. & D. E. assembler is to be fitted with heaters so that tests can be made at standard low speed production conditions.

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PROJECT 4300 PACKAGING STUDIES AND PRODUCT DEVELOPMENT

4310 Study of the Overwrap

DEC. (3) The work on the physical testing of polypropylene-based films is now complete. The results indicate little change in mechanical properties of polypropylene based film during storage up to three months.

NF/DEC. (4) A study of the effect of heat sealing on varnished board has commenced.

DEC. (6) Work is proceeding slowly but satisfactorily. The concept of a flavour "shelf-life" is being developed.

DEC. (7) Wrapping of 100 mm S.C. packs on the W.M.H.2 has been partially successful and a reasonable shelf life obtained.

4320 Study of Carton Materials

NF. (4) A number of objective tests have been devised to obtain information on mechanical properties of hinged-lid packs. A number of preliminary subjective assessments have also been made.

NF. (5) A machine evaluation of a white lacquered foil has been made on the Molins hinge-lid packer.

4330 Package Design

NF/DEC. (1) Work on the evaluation of smaller H.L. packs has been completed.

DEC/NF. (2) Studies of bonded soft cup packs have been taken to the end of laboratory scale work.

4340 Bonding and Finishes

NF. (1) Laboratory work has come to a temporary halt pending the acceptance and purchase of further parts for the Dixon coater to enable hot melt coatings to be handled.

4350 Product Development - Cigarettes

DEC. (2) No further details in connection with Project TWAIN have yet been received.

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PROJECT 4400 FILTER MANUFACTURE

4410 Preliminary studies

FH/DEC. (1) A survey has been completed of the likely interest in bonded paper filters throughout the world. The results from this survey are in course of compilation and it would appear that there is very good reason for discontinuing further work on this project at this stage pending firm enquiries.

NEW/FH. (2) A small sample of an encapsulated adhesive has been obtained from N.C.R. This was tried on the machine but was only found to be activated by the application of heat. This particular system appeared to have no advantage over the use of thermoplastic bonding materials.

4420 Improvement of existing process

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

4430 Machine development

F.H. (2) Please see 4410(1) above.

P.G.C. (4) The installing of the hot melt apparatus on a Mk.5 filter machine has been started.

PROJECT 4500 ASSESSMENT OF NEW EQUIPMENT

4530 Cigarette machines and ancillaries

NEW/AWC. (3) A report has been issued on the operation of a Mk.8/PA.7RO at 2,500 c.p.m.

A.W.C. (4) A report on further life tests of nylon suction bands on Mk.8 cigarette making machines has been issued.

J.K.M. (5) Various samples of heat seal tipping, both cork powder and printed, supplied by Samuel Jones Ltd. have been run successfully on the PA.7RO at 2,000 and 2,500 c.p.m. Samples have been sent to Millbank in order that the manufacture in R. & D.E. of production cigarettes with printed heat seal tipping may be started. So far, only very short test runs have been possible.

F.R. (6) Molins automatic bobbin splicer has been fitted by Molins to Mk.8 No. OM.25003 and is undergoing test.

NEW/AWC. (7) The Study Group have completed their examination on Automatic Cigarette Inspection.

FR/AWC/CNB. (8) A standard pneumatic discharger on the Mk.8 SM. has been fitted and is under test to determine if it has any advantage with respect to the earlier discharger fitted to the Mk.8 SM.

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PROJECT 4500

4540

Packaging machines

N.F.

(1) The H.L. packer with simplified drum is still awaited from Molins.

FH/DEC/NF.

(2) The drawings of parts to enable the heated drum to be removed are complete. The necessary parts are now being manufactured.

PROJECT 6000 APPLICATION OF NEW DEVELOPMENTS

6210

Air Dryers

FH/RWH.

(1) and (3) Designs for C.R.S. dryers for Southampton and India have been advanced. Further work is dependent on the outcome of discussions being held in Southampton Branch.

6220

Continuous moisture meters

A.E.Y.

(3) The installation of the instrument in Copenhagen was delayed due to local problems, which have now been overcome; the equipment is being installed.

A.E.Y.

(7) Two additional measuring heads were supplied to Wills in May.

A.E.Y.

(8) An additional measuring head was supplied to Players in May.

6300

Secondary manufacture

F.H.

(1) Theoretical calculations are being carried out in order to predict the likely performance of the C.V.C. plant under abnormal operating circumstances.

6500

Cigar manufacture

J.K.M.

(2) The two cigarlet assemblers and one of the filters inserters for Johannesburg were completed and despatched at the end of April.

Delivery of the Molins filter hopper for the second filter inserter is not expected before the end of July. Tripoli are considering marketing mouthpiece cigarlets in which the tobacco rods are 100 mm long instead of the standard length of 85 mm. R. & D.E. have designed the necessary modifications to the assembler.

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R.S.

BUILDING MAINTENANCE AND SERVICES

Laboratory block

Filter rod cutter provided for Laboratory 6.  
Window frames being re-oiled.  
Ladies cloakroom redecorated - basement.  
New gas bottle trolley built.

Development Hall  
No.1.

High speed fan installed for fume extract.  
BATEX project continuing.  
Window frames being re-oiled.  
Radio-chemical Laboratory - structure completed.  
Installation of services by R. & D.E. 90%  
complete.

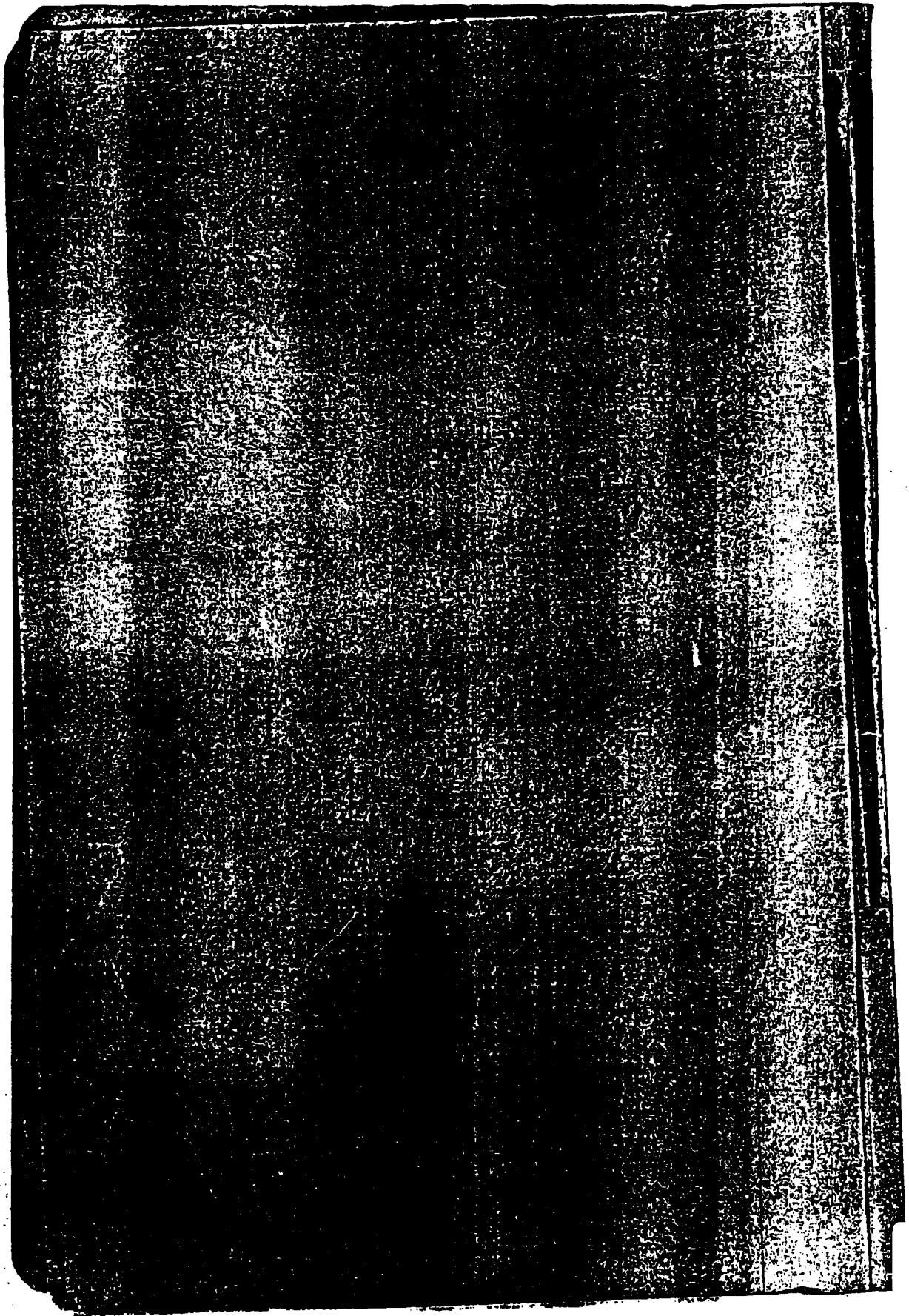
Development Hall  
No.2.

Window frames being re-oiled.

General

Benches being made for Radio-chemical Laboratory.  
Garage and Carpenters' Shop redecorated.

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