CHARGE NUMBER: 2105

PROGRAM TITLE: EXTRUDED FILTERS DEVELOPMENT

PERIOD COVERED: June 23 - July 18, 1971

PROJECT LEADER: G. L. Mathe

DATE OF REPORT: August 9, 1971.

PROJECT TITLE: Flush Fluted Single Filter (FFM-4)
WRITTEN BY: G. L. Mathe

The requested batch of tobacco arrived and new samples made, and submitted to Analytical for evaluation. Due to the unforseen, heavy work load in the Semi-Works, the samples were not produced in time to receive analytical data during this reporting period.

We expect, if the data is favorable, to make and pack the candidate during the next period.

G. L. Mathe

PROJECT TITLE: Foam Filters (Little Cigars, etc.)
WRITTEN BY: M. L. Eisenberg

A. Die Experimentation

Work has continued on the minimization of the buildup of foamed polyethylene around the die faceplate orifice.

A new concept was tried[1] involving the use of a Teflon "S" sheet surrounding the orifice and held in place with a retaining ring. The ring's center hole was machined oversize and countersunk to avoid contact of the metallic surface with the extrudate.

Several runs were made with this type of equipment and the results were very promising. Little buildup was encountered and observation tracked this material to the initial startup where a little foam adhered to the metallic retaining ring. There was no continuing buildup while running at all, which indicates that this problem is approaching its solution. Further work will be done during the forthcoming period, involving Teflon sputtering of the pin tip to eliminate internal friction.

[1] Book 4898, p. 45

B. Pin Modification

The pin design, calling for a removable tip, has been completed by Engineering Design Services and has been fabricated by West Engineering.

This modification allows us to vary, by changing tips, the thickness of the internal safety ribbon. The modification also gives us the ability to send the tip out for Teflon coating, while at the same time we can still extrude.

The Teflon coating, or similar coating, is being tried to lessen the internal buildup which occurs before threading of the tow.

M. L. Eisenberg

PROJECT TITLE: Flavors
WRITTEN BY: M. L. Eisenberg

A proposal was made by members of the Granular Filter Materials Group to dispense small particles onto tow in extruded filter. Their desire is to formulate a method for evenly dispensing flavored particles in the plug and having them fall out into the smoke stream.

A preliminary attempt was made using a high pressure paint sprayer which gave good results, but could only be used for short duration due to a dust problem.

A second attempt was made with our carbon dispenser but this gave uneven results.

More work will be done on this during the next period.

M. L. Eisenberg

PROJECT TITLE: Multifilter Carbon Fall-Out
WRITTEN BY: G. L. Mathe

Machine modification is completed in reversing the plastic and the carbon plug hoppers, which was made in order to eliminate initial carbon dust on the wrapping paper.

Sample cigarets were made using the hot-melt line and checked against the control. The first results were discouraging, since the carbon count on the experimental cigarets were actually higher than on the control. Examination revealed, that the hot-melt lines were solidified before their depression onto the flute channels. Further work will be done to select and try more suitable hot-melt or wax material.

G. L. Mathe

PROJECT TITLE: Slant/Deep Fluted Filters
WRITTEN BY: G. L. Mathe

Several additional runs were made with good results. Many of the points of difficulty have been surmounted. Hardware for the new proposed configuration with only 12 flutes has been fabricated and first trial production made with nominal results. Process refinement work will continue on this project on schedule.

G. L. Mathe

REFERENCES

M. L. Eisenberg	4898	40-46
H. Rapp	5196	21-23
A. Gergely	4674	44-46

/ad