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BCH/JJ

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Project PIMICE 902.01.164.

Report on discussions with De Mauduit (Mme Le Gars) to identify paper options which will give smoke delivery at 15 - 16mg PMWNP following the change from Blend 384 to Blend 384 with 6% MND.

Option 1

Retain 95JP (monoammonium phosphate additive) but increase chalk loading to 25%.

This paper should allow the product to meet target deliveries but there is a question as to it having the required tensile strength (>1000g/mm).

De Mauduit state they cannot predict the tensile strength of such a paper. They would need to manufacture and test but feel the increase in chalk loading relative to present loading in 95JP should not have a drastic effect on tensile strength.

Option 2

Use sodium citrate as the paper burn additive instead of the usual 1:1 sodium/potassium citrate mix.

De Mauduit confirm that a paper using sodium citrate additive will burn more slowly than a comparable paper using mixed citrate additive. Consequently, using 95, 0.5CF with sodium citrate additive instead of mixed citrate additive should reduce the puff number relative to 95JP but increase the puff number relative to existing 95, 0.5CF.

Option 3

To use 0.3% citrate burn additive rather than 0.5% additive.

De Mauduit is loath to go below 0.5% additive, no matter whether it is mixed or sodium citrate, as below this level there are extreme control problems and hence they will not guarantee the application level.

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Option 4

Change burn additive in present paper (95JF) from monoammonium phosphate to disodium hydrogen phosphate.

At either the 0.5% or 1.0% levels De Mauduit believe that disodium hydrogen phosphate (Eglodan) slightly increases paper burn rate relative to papers containing the same levels of monoammonium phosphate. However, Eglodan does not increase burn rate to the same extent as citrate additives.

Option 5

To use 95, 0.5CF paper but with reduced permeability specification.

Using the Cigarette Design Program and basing the calculation on existing data from a product using 95, 0.5CF it was determined that a paper with permeability at 55CU would be required to achieve 15mg PMWF. If 16mg PMWF is required the paper permeability would have to be 37CU.

Action

Based on the conversation with De Mauduit and the calculations using the Cigarette Design Program it has been decided to obtain suitable papers to test Options 1, 2, 4 and 5.

Papers Required.

- TWO (2) BOBBINS OF EACH PLEASE.  
JIM
1. Furnish - flaxhemp/woodpulp  
Width - 26.75mm  
Substance - 30g/M<sup>2</sup>  
Chalk load - 25%  
Permeability - 80 CU  
Additive - monoammonium phosphate 0.5%
  2. Furnish - flaxhemp/woodpulp  
Width - 26.75mm  
Substance - 30g/M<sup>2</sup>  
Chalk load - 21%  
Permeability - 80 CU  
Additive - sodium citrate 0.5% measured as ANHYDROUS CITRIC ACID.
  3. Furnish - flaxhemp/woodpulp  
Width - 26.75mm  
Substance - 30g/M<sup>2</sup>  
Chalk load - 21%  
Permeability - 80 CU  
Additive - disodium hydrogen phosphate 0.5%

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4. Furnish - flaxhemp/woodpulp  
Width - 26.75mm  
Substance - 30g/M<sup>2</sup>  
Chalk load - 21%  
Permeability - 60 CU  
Additive - 1:1 sodium/potassium citrate mix 0.5%. *measured as*  
ANHYDROUS CITRIC ACID.

*Real*

B.C. HARDING

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