Mr. G.O. Brooks

GOB/JJ 17th July, 1981

Mr. S. Candish,
Imperial Tobacco Limited,
P.O. Box 6500,
Montreal,
P.Q.,
Canada H3C 3L6.

Dear Stan,

CO Reduction

I was talking to Bob Wade during his current visit and he asked how much progress had been made with low carbon monoxide cigarettes. You may have read the recent progress reports which show that very low CO cigarettes can be made whilst retaining reasonable tar delivery.

He mentioned that a more immediate problem was reducing the CO/TAR ratio to below 1:1 for your current full flavour cigarettes. The Project LOCO designs were obtained, partly as a result of using the PIT computer programme. The most important factor seems to be filter ventilation and I have plotted CO/TAR ratio versus filter ventilation and filter P.D. in the attached figures 1 and 2. These results were obtained by computer calculation using State Express 555 in figure 1 and a current 5mg product in figure 2. The predictions show that if a reduction in filter P.D. is compensated by filter ventilation, the CO/TAR ratio is markedly reduced. Indeed, this concept appears to have been used by Philip Morris for Marlboro in a worldwide ventilation programme. They used zone perforated tipping (non-visible) producing a ventilation of 10 - 15% and achieved a 2 - 3mg tar reduction whilst maintaining filter pressure drop at 6.5cm W.G. and paper permeability at 25 C.U.

The current work suggests that this is a simple means of improving the ratio whilst maintaining your current deliveries.

The paper permeability for S.E. 555 is 45 C.U.

You may already be following this line of thought and if so, this will only be confirmation of the approach, but I felt it worthwhile to write just in case.

With kind regards,

Yours sincerely,

G.O. BROOKS

cc. Bob Wade.
N.o.o. cc Dr. L.C.F. Blackman

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