

*Spuck*

## THE DEVELOPMENT AND COMMERCIAL PRODUCTION OF BARCLAY

### INTRODUCTION

This is a brief history of the technical groups contributions to the development and commercial introduction of BARCLAY. It covers the technical problems that had to be solved and recognizes the major contributors to the project.

### THE INVENTION

The BARCLAY filter is the brainchild of Bob Johnson, Research Scientist in the Product Department of R&D. Johnson, with powerful encouragement from Bob Sanford, Vice-President of R&D, was seeking a filter for ultra low tar cigarettes that would give better draw characteristics than those conventionally used. Two avenues appeared promising. The first was to perform all smoke attenuation via a ventilated plastic mouthpiece. The second, which eventually evolved to the current grooved filter design, was to channel ventilating air along the filter periphery in some fashion. Johnson prepared numerous samples with a small hand operated mold and selected two designs for more detailed evaluations. One was the grooved filter as we now know it, the other was the same filter but with the grooves adjacent to the tobacco column. Both versions were evaluated by small consumer panels; mouth end grooves at 4 mg tar and tobacco end grooves at 7.5 mg tar. The two cigarettes were perceived as very similar in taste level and character, but the cigarettes with tobacco end grooves suffered from smoke bleeding through the tipping perforations after a puff. We were sufficiently encouraged by the results from the mouth end grooves to authorize development of a machine to make sufficient grooved filters for large-scale consumer evaluations.

### MACHINERY DEVELOPMENT

The production of grooved filters requires, in addition to grooving apparatus, modification to the standard filter making operation. Indeed, unless the base filter is prepared to tightly controlled specifications, the subsequent grooving operation fails. Jack Sexstone and Tom Lewis designed the current grooving machines which process approximately 500 filter rods/minutes. Butch Bryant, Kurt Manecke, Jim Sullivan, and Phil Willis worked closely with Sexstone and Lewis in defining the filter rod and modifying the rod makers. Specific changes included increasing plasticizer level from the typical 7-11% up to 13-15%, adding Estrobond C to the plug wrap, replacing heat seal plug wrap adhesive with PVA, (heat seal comes apart during grooving), and using an improved plasticizer applicator designed by Jim Sullivan.

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