

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington
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July 1, 1981

To: T. L. Capeletti

From: J. W. Bower

Subject: Valform Process

Let's discuss
J. W. Bower

The Valeron Corporation has developed a new powder metal process which is advertised to provide near 100% densities. Unofficial costs indicate that the process is very cost competitive. The biggest question at this time appears to be the limited number of material specs that can be processed. Further investigation is definitely indicated for two reasons:

- potential cost savings
- advertised end-product characteristics similar to those produced by the Parmatech process

In late May, I informally asked Valeron to look at three parts: XSG slide blocks, M/700 scope bases, and M/700 scope mount rings. Valeron has both an investment casting division - Valcast - and a high density powder metal division - Valform. Both divisions were requested to estimate prices on the same parts:

	<u>Valcast</u>	<u>Valform</u>
slide block	\$2.52/each	\$1.40/each
scope base	1.97	1.15
scope ring	1.32	.84

In addition to the lower blank cost, the Valform proposals specified a part requiring fewer secondary operations.

Valform has further expressed a desire to look at the M/7400 breech bolt and the M/700 bolt assembly. I have accepted their offer to supply, free of charge, blanks for us to finish machine and test.

The Valform process differs significantly from Remington's powder metal process. Powders are poured into molds which are sealed and evacuated. Isostatic compaction then produces semi-dense parts ready for sintering. Sintering takes place in a vacuum furnace, purportedly producing parts with virtually 100% density. Valform's main business is making cutting tool blanks.

There does appear to be a limitation on the materials that are available. Valform specified the slide block as D-2 tool steel, and the scope base and ring as T-316 stainless. They are proposing the 7400 breech bolt as D-2.

I expect to visit the Valform plant in Monument, Colorado, as part of the upcoming trip to Millett Industries.

JWB:ws