

CC: R. E. Fielitz
H. K. Boyle
J. W. Bower✓
W. H. Coleman
R. H. Collins

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REMINGTON ARMS COMPANY, INC.
FIREARMS PROCESS RESEARCH DIVISION
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FLEXIBLE RECEIVER MANUFACTURING SYSTEM

Development of Basic Data for the Commercial Project is still expected to be complete by July 1, 1984. A decision was made in the May 1984 Process Research Planning Meeting to delay project authorization to the first half of 1985, if possible. This delay is due to two major mechanical problems encountered with the prototype Snyder CNC machine. The first problem was a clutch failure in the spindle drive unit believed to be caused by insufficient lubrication and the second was a spindle bearing freeze-up caused by improper assembly. The machine is again running but these delays have pushed the beginning of receiver machining tests at the Snyder's plant into mid June.

SMALL PARTS "FMS"

No significant changes since last month's report.

SERIAL NUMBER RECORDING SYSTEM - PHASE II

No significant changes since last month's report.

GFM AUTOMATION

Work continues by both Remington and EDL personnel to reduce system cycle time. Work has begun to obtain firm costs for the second robot system.

FLEXIBLE ASSEMBLY SYSTEM

Use of a vision system on this project continues to be scrutinized.

AUTOMATED BIRCH FINISHING

Using the rotary bell atomizers, pigmented stain was sprayed electrostatically on birch fore-ends with good results. The parts were evenly coated except for one area which can be

corrected with indexing changes. Further tests will check the sprayability of the stain on short and long stocks.

AUTOMATED SANDING

Foster-Miller, Inc's concept for the slack belt sanding of fore ends has been dropped from further consideration. Recalculation of economics based on experiments at the 3M C.A.M. Center yielded low returns, primarily due to the inability of the slack belt to reach the more difficult areas.

Development work with Gebrüder-Hau of West Germany is continuing. They are considering two systems, one for long stocks and one for fore ends. They have proposed a \$6M test program to determine feasibility.

We have been working with ASEA in determining the feasibility of robotic sanding. Samples were sent and tests were conducted. ASEA reported, however, that due to the complex nature of gunstock geometry, robotic sanding is not yet feasible.

CUT CHECKERING DEVELOPMENT

The six spindle CO.RE.MA. fore end checkering machine is ready for M/870 Restyle Trial and Pilot use. The machine will be moved to the production area by approximately June 1.

The four spindle Bostomatic stock checkering machine is nearing completion. The floating heads are complete and the fixture is being assembled. Work remaining includes assembly to the machine, programming and debugging.

LONG STOCK MACHINING

The Heian NC router has been reassembled after its second contact band failure. Design changes were incorporated to prevent future failures. The machine will be monitored during the first few weeks of production use.