

LIMITED DISTRIBUTION
Circulate to Staff

REMINGTON ARMS COMPANY

RESEARCH DEPARTMENT

FOURTH QUARTER PROGRESS REPORT - 1981

DECEMBER 21, 1981

REMINGTON ARMS CO
RECEIVED

DEC 21 1981

ILION RESEARCH DIVISION

Distribution

J.P. Glas
W.T. Cole
W.H. Coleman II
P.F. Cunningham
R.B. Hartman

P.A. Lewis
A.D. McDonald
K.W. Soucy
C.B. Workman

REMINGTON ARMS COMPANY
RESEARCH DEPARTMENT
FOURTH QUARTER PROGRESS REPORT - 1981

Highlights

	<u>Page</u>
• A fully instrumented test at Pencader Plant producing 12 ga. extrudate was just conducted as part of the Polymer Process and Body Cutoff Study. A similar test is to be conducted at Bridgeport after some analysis of the data has been performed.	1
• A Primer Basics Program analysis of Federal primers indicated the frequency of piercing higher than thought earlier. Federal pierced primers are less likely to leak and therefore not evident. Anvil rigidity is the suspected difference.	2
• Ilion Gallery testing of 97,500 12 ga. promotional rounds primed with the integral anvil battery cup has been completed with no misfires experienced.	3
• An experimental AH&P run of 8 ga. plastic basewad industrial shells was successful based on gaging and head pull specifications. Product acceptance tests of plant loads are presently underway.	4
• Competitive offerings require introduction of Extended Range Shotshell 12 ga. 3" 1-7/8 ounce buffered shot loads in 1982.	4
• A second Extended Range Center Fire cartridge, the 223 Rem 55 gr. PSPBT, has been experimentally loaded with satisfactory results.	5
• Trial and pilot production and acceptance tests of the "Viper" rim fire have been completed with satisfactory results. Production startup is planned for February, 1982.	5

REMINGTON ARMS COMPANY
RESEARCH DEPARTMENT
FOURTH QUARTER PROGRESS REPORT - 1981
AMMUNITION

New Unibody Shotshell Process

The present RXP® shotshell body manufacturing process contains a number of inherent disadvantages which result in high costs and prevent extension to other than 12 gauge product. The new unibody process has been developed to overcome these disadvantages. It will be extended to all gauges and gives Remington the opportunity to have a single process for all shotshell bodies.

Development work on 12 gauge bodies is complete, and trial and pilot is scheduled on the Production machine in January following completion of the installation in Bridgeport.

Repeat testing of 20 gauge product to assure a quality design has revealed that the safety margin on cap-to-body integrity is not as big as desired. At elevated temperatures in oversize chamber guns, some caps were pulled from bodies. It will be necessary to modify body forming tooling to correct this problem.

An 8 gauge experimental run is scheduled to begin on December 21 on the Semi-works machine.

Experimental 28 gauge bodies are being developed on Semi-works equipment. Tooling modifications are planned to reduce present mouth defects and excessive fisheyes. Heading experiments have started preparatory to loading preliminary product.

First try 16 gauge tooling is 90% complete.

Polymer Process and Body Cutoff Study

The main objective of this program is to eliminate body cutoffs and increase productivity of the extrusion system. So far, effort has not centered on improving the polymer but on improving the way in which it is processed. A project has been in progress with DuPont (ETL) and efforts have concentrated on understanding extrusion dynamics to help increase productivity and better filtration in an effort to reduce body cutoffs by permitting higher draw work ratios with minimum visual defects.

Research Department

- 1 -

December 1981