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S. M. Alvis

May 1, 1956

MONTHLY REPORT - PROCESS RESEARCH SECTION MONTH ENDING APRIL 30, 1956

METAL FINISHING AND COLORING

Electro-Deburr and Polish

An experimental electro-deburring and polishing system has been set up for carbon steel in the Process Research Lab. Attempts will be made to deburr and polish Spts.-58 Receivers in one operation. If successful, the process lends itself to conveyorization so that the Receiver could be deburred, polished and colored in one line.

A beaker scale bath has been used for deburring and polishing aluminum. Excellent results have been obtained on Spts.-58 Grip Caps. Aluminite coloring of the electro-polished surface produces unusually good appearance.

BARREL PROCESSING

An order has been placed for carbide barrel locators to drive barrels during drilling and turning. The carbide driver in the locator is shrunk in a steel adapter to reduce the amount of carbide and make it replaceable as necessary.

The third Nadia barrel straightening machine has been turned over to Production as an inspection unit for Quality Control.

POWDER METAL TOOLING

To insure adequate tooling for high quantity production powder metal components, three sets of tooling for pressing have been ordered.

Redesigned carbide inserts for the Barrel Guide Ring dies have been successful and all gage tooling is being changed to this design.

MACHINABILITY

Coolant evaluation tanks with individual pumps are nearly completed on the test lathe. Preliminary data are prepared for setting up the evaluation equipment.

CONFIDENTIAL

-2-

May 1, 1956

J. M. Alvis

MACHINABILITY Continued

Sintax ceramic turning tools have been received for evaluation.

General

A "Seal-active" magazine cap has been designed and a model built. The principle of this cap is a selector inside the cap body to drive a tighter seal when the gases are set off.

POWDER METALLURGY

The Stokes 640 press has been received and installed in the Laboratory. Tooling to press the M/11-48 Sear has been placed in the press and is operating satisfactorily.

Battelle has reported they have been able to reproduce their earlier success in preventing decarburization. They still do not have all the variables under control.

The production facility is operating satisfactorily. Process information has been turned over to Chem. & Met. to provide procurement information for purchasing to schedule larger powder purchases.

FIELD MANUAL - MODEL 572

Technical copy has been roughed for servicing the M/572 in the field. The usual format has been followed; namely, the Disassembly, Reassembly, with necessary precautions for replacement parts. A list of probable malfunctions, their cause and correction is also included.

REMINGTON STANDARDS - ARMS

The location of significant hand character stampings for all current model guns

CONFIDENTIAL

S. M. Alvis

-3-

May 1, 1956

REMINGTON STANDARDS - ARMS Continued

has been compiled by Process Engineering. These stampings indicate the final test phases subsequent to the warehousing of a firearm. This tabulation will be issued as a general information sheet in the Remington Standards Manual.

E. K. Wheat, Supervisor
Process Research Section

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