FIREARMS

Model 1100 Weighted Lt-20, 28 & 410 Skeet Guns

Components have been received from the Model Shop. Guns are being assembled and readied for testing.

XSG

Bolt velocity tests of an integral piston gas system were successful. Initial bolt velocities using two .078 orifices were comparable to a control M/1100 using two .086 orifices.

A new A3 prototype is being prepared which will include the modified gas system dimensions and processing sequence (grind piston after heat treat), revised locking system dimensions to prevent cam web cracking, bump set action springs, stronger extractor spring, a new material for the O-ring, a Model 1100 feed latch system and urethane buffer. Assembly is scheduled for the last week of October.

A new magazine spring retainer which also functions as a detent for the magazine cap has been sent to the Model Shop. This part replaces four parts performing these functions on the M/1100 and is considerably easier and safer to remove than the standard spring retainer. Production parts would be injection molded out of Delrin. Legal advises us this design may be patentable.

Model 870 All Gauge Wood Cosmetics

All drawings are ready for transmittal pending formal approval. Working prints have been provided to P.E. & C.

Model 3200 Skeet Sets

Specifications have been checked on the first five Trial & Pilot Skeet sets and we have fired 1,000 rounds per set on the skeet field. Bird breaking ability has been excellent. Significant problems to date have been "shell slips by ejector" malfunctions and marginal indent on bottom barrels. The marginal indents (approximately .010 inch) have not resulted in "fail to fire" malfunctions.

Testing of five additional sets will begin early in October.

Models 7400-7600

All parts for the 15 gun function test have been completed. Guns will be assembled and tested following completion of the 3200 Skeet set test.

Nylon 66 Improvements

A Research N/C machine is down for repairs and has delayed fabrication of powder-metal barrel mounted scope mounts and nylon bolt handles with the lock-open device. Additional handles are needed to run an environmental creep test to determine the cause of bending problems with the initial parts. Handles with a metal pin insert will be prepared as a contingency design. We have also requested Du Pont to supply a sample of ST-801 nylon with fiber-glass reinforcement. This material which is still in the experimental stage should have much better creep properties.

The barrel mounted scope mount was tested for repeatability of point of impact in a high temperature test. A standard receiver mount was used for a control. During the 10 minute temperature cycle, the gun with the barrel mounted scope shot into the same hole for 13 shots at 25 feet. The control gun drifted to a point 3 inches from the original point of impact.

Model 1100 Target Grade Styling

All drawings for wood cosmetics and receiver markings are complete and transmitted. New model designations are SA, S-T, TA and T-T.

Model 1100 and 870 Improvements

Further problems were experienced by Production in assembling spring retained feed latches. We have designed an assembly tool (now being made in the Model Shop) and have modified the latch design for use with this tool. A stress relief hole has also been added to the root of the slot based on recommendations from the vendor. New latches have been ordered.

One hundred and fifty M/1100 carriers of thicker material (.055 vs. .047) have been gallery tested and shipped. Performance was satisfactory and an additional lot of 150 is being assembled to fire controls.

Testing of M/870 fore end tubes with no braze (spot weld only) was unsuccessful. The present spot welds were intended for location only during the brazing operation. Another spot will be added and welding parameters changed to provide a stronger weld joint. We will retest after these assemblies are available.

Model 870 Competition Trap

The latest stock, fore end and barrel assembly drawings will be furnished to Process Engineering this month.

Target-grade triggers are in test in the Test Lab. Live firing tests have started.

Shotgun	Trigger Pull at Start	Rounds	Present Trigger Pull
870	1.08#	1000	1.9#
1100	2.92#	210	2.87#
1100	4.08#	-	-

A fail to connect and a double click safety were encountered on the first two guns. It was found that the trigger was not returning to the rear which was caused by over-adjustment of the new pounds pull adjustment screw. Methods of preventing over adjustment are being investigated.

Model 700-600 Fire Control

Redesigned fire controls that have adjustment for pounds pull, fixed trigger and sear engagement and fixed trigger overtravel are being tested.

Two different designs of bolt locks that allow the rifle to be unloaded with a safety in the "ON SAFE" position will be ready in October for testing and evaluation by Marketing.

Mechanical Trap

Marketing has requested the return of the lever cocked, solenoid release traps that are in field test. Questionnaires requesting information on the operation of these traps will be returned at this time and will be evaluated as they are received.

Production has requested vendor quotes on parts for the hand cocked model which is scheduled for January introduction.

Process Research

ASEA Manipulator

Three proposals on polishing equipment have been received, ranging from $30M to $50M. None are completely satisfactory and will have to be refined. Five month deliveries were quoted. We are awaiting for ASEA to respond to a suggested gripper design.

Barrel Drill Line

The vendor was visited September 5 and 6. Designs are nearly complete. Finished prints should be in Ilion by October for approval.

Bench Rest Bullets

Approximately 57,000 6mm bench rest bullets have been shipped to the warehouse.

Labor and material standards are currently being re-evaluated by Industrial Engineering to update increased cost of material and direct labor.