CENTER FIRE RIFLES

MODEL 742X RIFLE - AUTOLOADING CENTER FIRE
(Introduction 1976)

R & D reported that fabrication of prototype parts for the Model 742X is progressing. Six rifles will be assembled and tested this fall. These will include the two Frame sizes. It is planned to design for only one Frame size and this will be incorporated into the next lot of prototype rifles.

The Study Group Chairman reported that optimum conditions for initial introduction of the Model 742X only are being developed through use of the EVAL IV computer program. Also product cost reduction efforts are continuing through process and product design reviews. Reports on both subjects follow.

R & D reported that the cost reduction effectiveness to date has been in the area of standard material costs (Exhibit 1). Since proposed volume of production being considered has varied from very low to full replacement, work to date on standard labor and capital investment reductions has not been extensive.

One proposal to reduce material costs on the Frame is to electron beam weld plates together to form the basic starting blank. Samples have been made and looked good. Sulfur free steel is needed for the welding but sulfur is needed in the steel for machining. A machinability versus economics computer program has been ordered to assist in this evaluation. The welding equipment vendor is considering welding together finish machined plates.

Production reported on the EVAL IV computer program economic evaluations. Selling price volume relationships and product costs have been supplied by Marketing, R & D and Production. Two basic manufacturing concepts have been evaluated - the straight line and the job line. The straight line would be capable of producing 100,000 guns per year and total investment would be made initially. On the job line, investment varies with volume produced, however product cost is higher than on the straight line (the straight line is more economical at high volume production.) All these factors have been evaluated from about 4,000 to 100,000 units per year. The highest return on investment occurs at low volume on the job