

NAME OF SYSTEM:

**Microform Engineering Drawings
Support**

ORIGINATOR:

**Marine Corps Supply Activity
United States Marine Corps
Philadelphia, Penna. 19146**

OBJECTIVE. To provide a microfilm system that will effectively support the inventory control and procurement functions of the Marine Corps Supply Activity.

BACKGROUND. The Marine Corp's Supply Activity at Philadelphia has been providing logistic support for the Corps since Thomas Jefferson's administration. Although certain supply and logistics services (especially catalog standardization), have been transferred to the Defense Supply Agency, the military services manage material and support items peculiar to their individual needs. Thus, the services develop their requirements, arrange for the procurement of specified material and supply items, and insure that adequate inventory levels are maintained to meet projected usage. The Supply Activity at Philadelphia performs this vital function for the Marine Corps.

Among its many diverse duties, the Inventory Management Activity is responsible for maintaining a library of technical reference information on material and supply items used by the Corps. Engineering drawings form an important link in this management process and serve as a focal point for the provisioning, cataloging, and procuring activities. As new items enter the inventory for the first time, the contractor furnishes appropriate engineering drawings for use in the provisioning and cataloging process. Later, when subsequent invitations to bid are required, sets of pertinent drawings support the procurement process.

For many years, drawings used for procurement actions were reproduced in hard

copy paper form and in many different sizes. As specifications for new items became more complex, the supporting drawings necessarily increased in number. Further, broad interest in some procurement actions created the need for multiple bid sets. These developments, plus the increase in space needed to house the drawings inventory, precluded any early, satisfactory solution.

The space problem was eliminated with the conversion of the engineering drawing inventory to aperture card format. However, bid sets in support of procurement actions continued to contain reproduced paper enlargements of aperture card engineering drawing images and slowed down the processing action.

As the use of aperture cards and associated equipment increased throughout industry, the inventory management activity has expanded the use of microform to all phases of the engineering drawing operation.

THE NEW METHOD. The improved system is designed particularly to improve the reaction time in procurement actions. Manufacturers' inputs to the system consist of both full-size paper copies of engineering drawings and aperture cards, as provided in the contract. The Defense Supply Agency (DSA) furnishes aperture cards in the standardized format with prepunched identification codes.

Drawings received in paper format are sorted into compatible sizes and recorded on 35-mm. microfilm. The exposed film is developed in a microfilm processor, with a Uniprinter used to make duplicate negatives. Both manual and semimanual devices are employed to mount the individual frames in the coded aperture cards, which are keypunched to permit machine sorting and other manipulations. The keypunch coding includes the standard engineering drawing number and the manufacturer's five digit identity, which facilitates interchange of filmed drawings with other agencies. Duplicate microfilm positives are used in the working file with the original negatives preserved as the master file.

The present collection numbers about one million cards housed in conventional upright file cabinets. To satisfy bid set requirements, a machine sorting program using coded index cards identifies the aperture card drawings pertinent to a procurement action. The selected working aperture cards are then duplicated on a 041 card-to-card reproducer and verified for accuracy. The working cards are returned to the file and the reproduced cards are enclosed in the total procurement package and mailed to prospective bidders.

Internal searches, usually at the request of technicians, deal with maintenance, provisioning, and cataloging matters and may re-

quire working size hard copy printouts, which are produced on an enlarger-printer. In other instances, technicians may wish to study the data by means of an enlarged image on a viewer.

REMARKS. The use of microform in aperture card format has contributed significantly to the faster and more economical methods of satisfying both internal and external requirements of the Marine Corps Supply Activity. The system illustrates the space saving advantages as well as the flexibility and convenience of collecting, packaging, and shipping large numbers of engineering drawings—often on a limited time schedule.

MICROFORM ENGINEERING DRAWINGS SUPPORT

