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TWENTY-SIXTH REPORT TO CONGRESS
(January 1 through June 30, 1965)

OF THE

DEPARTMENT OF DEFENSE

In accordance with section 2455, Title 10, U.S.C.
(formerly section 8 of Public Law 436, 82d Congress)

ON THE

DEFENSE CATALOGING AND
STANDARDIZATION ACT OF 1952

SUBCOMMITTEE FOR SPECIAL INVESTIGATIONS
OF THE
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES
EIGHTY-NINTH CONGRESS
FIRST SESSION



AUGUST 14, 1965



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LETTER OF TRANSMITTAL

ASSISTANT SECRETARY OF DEFENSE,
Washington, D.C., August 14, 1965.

HON. L. MENDEL RIVERS,
*Chairman, Committee on Armed Services,
House of Representatives.*

DEAR MR. CHAIRMAN: As prescribed by section 2455, title 10, United States Code (formerly sec. 8 of Public Law 436, 82d Cong.), there is transmitted herewith the 26th Semiannual Report on the Department of Defense Cataloging and Standardization Programs. This report covers the period from January 1 through June 30, 1965.

Reports on these two programs have been combined in accordance with the provisions of section 2455. Inasmuch as the Congress, in its legislation, directed that the Secretary of Defense report any other data which he considers will best inform Congress of the status of the cataloging and standardization programs, there is included information concerning such DOD programs as shakedown, NATO codification, item entry control, and provisioning screening. These programs are directly associated with the development and/or utilization of cataloging or standardization data and have been initiated to provide an additional means to insure more effective utilization of materiel resources.

Sincerely,

PAUL R. IGNATIUS,
*Assistant Secretary of Defense
(Installations and Logistics).*

TWENTY-SIXTH REPORT TO CONGRESS OF THE DEPARTMENT OF DEFENSE ON THE DEFENSE CATALOGING AND STANDARD- IZATION ACT OF 1952

FEDERAL CATALOGING PROGRAM

During the reporting period, 179,737 item identifications were added to and 267,955 deleted from the active portion of the Federal Catalog System. This resulted in a systemwide ending inventory of 4,203,208 active item identifications, a net decrease of 88,218. This total includes Federal stock numbers assigned to items of the civil agencies, and to items that are centrally managed, stored, and issued by the Department of Defense. It also includes Federal stock numbers that are assigned only for management reference purposes or local procurement purposes to items not stocked.

In addition to the 4,203,208 active Federal stock numbers, approximately 744,000 inactive stock numbers were included in the central screening files at the Defense Logistics Services Center at the end of the period. Requests from departmental activities for provisioning screening and for normal item identification processing and stock number assignment are screened against both active and inactive item identifications in a single processing cycle. In many cases the matching of incoming data to inactive item identifications makes possible the reactivation of inactive numbers, thus avoiding the assignment of new stock numbers.

The Department of Defense ending item inventory for this reporting period was 3,838,767 of the net active 4,203,208 item identifications in the system, reflecting a net decrease of 101,718 DOD items. This was the result of 159,587 additions to, and 261,305 deletions from, items actively managed by the Department of Defense.

ITEM REDUCTION

The net decrease of 88,218 item identifications in the active portion of the Federal Catalog System, and of 101,718 Department of Defense items, reflects the largest reduction in items reported in any semiannual period since the inception of the Federal cataloging program in 1952. This is the result of continued and successful item analyses and review efforts to eliminate unnecessary items from the supply systems of the Department of Defense, and to control and restrict the entry of new items into the supply systems.

ANALYSIS OF ACTIVE ITEMS

As of the end of the period, and within the total of 3,838,767 Department of Defense identifications, there were approximately 3,420,000 which reflected items subject to central procurement, storage, and

issue. Of this total, approximately 196,000 were designated as having no requirement for future procurement, and will become inactive when existing stocks are exhausted.

ITEMS USED BY THE MILITARY SERVICES

The following table reflects the total quantities of active items recorded in the central files of the Federal Catalog System for the Army, Navy, Air Force, and Marine Corps as of the 30th day of June for the years 1962 through 1965. The figures include items for which the military services operate as their own inventory managers and also those items for which the military services operate only as retail managers. In the latter situation the Defense Supply Agency or the General Services Administration performs the integrated management function on behalf of the military services:

Military services	June 30, 1962	June 30, 1963	June 30, 1964	June 30, 1965
Army.....	1,038,895	1,081,828	1,105,439	1,122,632
Navy.....	1,240,276	1,367,067	1,306,287	1,366,280
Air Force.....	2,130,843	1,866,785	1,713,246	1,599,866
Marine Corps.....	278,362	274,909	260,180	263,104

COMMONALITY OF ITEMS AMONG THE MILITARY SERVICES

The total shown for each military service includes many stock numbers which are used, also, by one or more of the other three services and are, therefore, included in their totals as well. The degree to which this commonality currently exists among the services is revealed by the following table:

Military service	Total	Used also by one or more of the other services	Percentage common- ality
Army.....	1,122,632	377,014	33.6
Navy.....	1,366,280	333,409	24.4
Air Force.....	1,599,866	372,389	23.3
Marine Corps.....	263,104	176,146	66.9

ITEMS MANAGED BY THE DEFENSE SUPPLY AGENCY

Of the 3,838,767 items recorded in the central files as being used by the Department of Defense on June 30, 1965, 2,411,387 items or 62.8 percent were in the 291 commodity classes assigned to the general cognizance of the Defense Supply Agency for integrated materiel management. Of these, 1,368,926 items or 56.8 percent have been identified for central management by DSA and 223,900 items or 9.3 percent have been designated by DSA as authorized for local procurement, either from the General Services Administration or from commercial sources.

Within the classes assigned to DSA, arrangements exist between DOD and GSA for GSA to furnish the central supply support in the 12 Federal supply classes of paint and handtools for those items

formerly designated for integrated management by DSA. There are 30,888 items currently recorded in these classes for GSA support.

ITEMS MANAGED BY THE CIVIL AGENCIES

As the central processing office for the Federal Catalog System, the DLSC reviews, screens, approves, and assigns Federal stock numbers to item identifications generated in the civil agency program which is supervised by the General Services Administration. At the end of the reporting period, the central files included 364,441 item identifications recorded as being used by civil agencies only, and an additional 189,286 items used in common with DOD, or a total of 553,727 items. During the reporting period identifications were added for 40,310 items entering the civil agency supply systems and 29,413 identifications were deleted, resulting in a net addition of 10,897 items.

FEDERAL CATALOG SYSTEM IMPROVEMENTS

A number of actions have been taken during the period to improve the quality, accuracy, responsiveness, efficiency, and utilization of the Federal Catalog System.

ADP redesign program

The plan to modernize, expand, and improve the existing automatic data processing system through the use of additional reference number codes and more sophisticated data processing techniques was noted in our previous report. The major improvement effort during the current reporting period was necessarily directed toward the development of the procedures, ADP programs, and conversion plans required for the implementation of the new ADP system.

The requirements of the ADP redesign program for additional codes and more efficient processing controls required a complete change in the format of the present Federal Catalog System DD 635 detail and trailer cards. Present detail and trailer cards were designed to accommodate the minimum amount of identification and intelligence data required during the initial phase of establishment of the Federal Catalog System. Codes and other informational elements required as the system developed were placed wherever space was available in the card. This resulted in an illogical grouping of data leading to less efficient processing and controls. The new formats are designed to present all information in a logical sequence, providing more efficient receipt, processing, dissemination, and extraction of data. Data elements can be expanded and new data added under the new redesign format without disturbing the logical sequence of data required for more responsive and efficient ADP operations. The new format also provides space for the two-character NATO country code for use if and when the United States adopts the 13 digit NATO stock number.

A seminar was held in Battle Creek during the week of April 19-26 to review the ADP redesign system with participants of the Federal Catalog System. Seventy-eight representatives of the military services, the defense supply centers, other Department of Defense activities and civil agencies attended the seminar. Problem areas and recommendations were discussed and resolved. The final specification of the system was developed, incorporating the agreements

reached at the seminar. Additional seminars are scheduled to indoctrinate the various levels of operating personnel from the field activities in the requirements, procedures, and processing techniques of the new system.

During the reporting period, chapters 4 and 6 of the Federal Manual for Supply Cataloging were revised and a new chapter 9 was developed and forwarded to the printer for publication and distribution. The revised chapters contain the changes in rules and procedures and punching instructions required for the preparation and processing of data under the redesigned system. The new chapter provides all the input and output codes, definitions, and instructions required to identify the proposed input transactions submitted for processing and the resulting output actions returned to participating activities.

Advance copies of the new and revised chapters were furnished to the participating activities to assure that the reprogramming and redesigning of their operations will proceed in accordance with the schedule established for the implementation of the redesigned data processing system.

It will be necessary to convert all existing central and field catalog data files to reflect the format changes and additional information and codes prescribed by the ADP redesign program. Also, new ADP programs will have to be developed incorporating the controls and improved processing techniques to be employed under the new system. In order to assure sufficient time for the extensive reprogramming required centrally and by the field activities for the implementation of the new system the target date has been extended from July 31 to October 31, 1965.

Installation of hypertape

During this period, DLSC installed hypertape units for use in the Center's computers. Hypertape can record approximately twice the amount of data previously recorded on standard tape and has reduced considerably the time required to process cataloging actions. Use of hypertape has cut the running time on DLSC's equipment approximately 20 percent and has reduced the catalog master screening files from 40 to 24 reels.

High speed document printer system

The reproduction and distribution of descriptive method item identifications through a high speed document printer has been in use at the Center since October 1964. This system has reproduced and distributed 2,119,000 cards for original, revised, and canceled item descriptions processed during this reporting period. It is estimated that approximately 12.4 cards are reproduced for each item description. This figure includes the multiple cards for long descriptions and the cards reproduced for the multiple users recorded on an item identification.

Additional use of the high-speed document system is under investigation. Present indications are that this equipment can be used for other purposes such as the preparation of reports and other similar type documents.

Federal supply classification (FSC)

A continuing progressive survey of the Federal supply classification system, design, and structure has produced significant revisions to approximately 24 FSC classes. In addition, the following six new FSC classes were established:

Class 3690—Specialized ammunition and ordnance machinery and related equipment.

Class 1376—Bulk explosives.

Class 1377—Cartridge and propellant actuated devices and components.

Class 1615—Helicopter rotor blades, drive mechanisms, and components.

Class 3685—Specialized metal container manufacturing machinery and related equipment.

Class 5961—Semiconductor devices and associated hardware.

These revisions and additions of FSC classes resulted from recommendations of the Defense Supply Agency, military services, and civil agencies, and will contribute significantly to promoting increased effective supply management of items in these classes.

Code for manufacturers

Cataloging Handbook H 4-1, Federal Supply Code for Manufacturers (name to code), has been made available in magnetic tape format to all supply activities and agencies equipped to utilize it. This magnetic tape edition of the basic and supplementary publications does not replace the published handbook, but serves as an advance copy, available to the receiving activity about 6 weeks prior to the published distribution. The distribution of the magnetic tape format is by means of Autodin.

Manufacturers numbering systems

The first and second quarterly supplements to Cataloging Handbook H 7, Manufacturers Part and Drawing Numbering Systems, were published during this period. The two supplements contained part and drawing numbering systems for 31 manufacturers, accounting for 361,684 part number references and 307,967 Federal stock numbers. Including the basic publication, 58 manufacturers have been covered so far, accounting for a total of 1,238,119 part number references and 1,078,407 Federal stock numbers.

Quality of the Federal catalog

Efforts to eliminate duplicate item identifications continued during the reporting period, resulting in the cancellation of 10,519 Federal stock numbers; 3,500 cancellations resulted from the manufacturers' assistance in verification of catalog data (MAVERIC) project and 7,019 cancellations from the DLSC reference number review project.

Performance goals by FSC class designed to increase the submittal of descriptive type item identifications were developed and implemented as a result of joint interservice, GSA, and DSA committee action. The individual goals will be used by the responsible activities as a basis for attaining an overall ratio of 60 percent descriptive method item identification and 40 percent reference method item identification submittals.

As an auxiliary to the performance goals, a format for a quarterly report was developed which will list by military service and DSA

individual activity performance against established goals for each FSC class. The goals and report developed will provide management with additional means for greater administrative surveillance and control over the performance of individual cataloging activities.

FEDERAL SUPPLY CATALOG—ADP

A task group was established at the Defense Supply Agency Data Systems Office, Columbus, Ohio, to develop a uniform ADP catalog specification for use by all defense supply centers in the processing of identification and management data required for the publication of the DOD section of the Federal Supply Catalog. A complete revision of chapter 7, which contains the instructions for the format, content, and preparation of the book-type Federal Supply Catalog, was prepared and forwarded to the printer for publication. The revised chapter 7 contains rules and procedures for the processing of data by the DSC's in accordance with the standard ADP specification developed by the task group.

RECORDING OF STANDARDIZATION DECISIONS

A total of 473,833 Military Supply Standard decisions were recorded in DLSC files since the implementation on November 1, 1964, of the procedures for implementation of standardization decisions noted in our previous report. Of the total, 408,241 MSS decisions were recorded during this reporting period.

The above figures represent the retroactive updating of all file records consistent with standardization decisions and replacement data for nonstandard items which were not already recorded in the DLSC files. The retroactive updating has been completed and processing in this area is now current. Standardization decisions are promptly recorded and disseminated to recorded users of the items as soon as the MSS publications are received in DLSC for processing.

MECHANIZED CHARACTERISTIC SCREENING

A full-scale test was conducted by the Defense Logistics Services Center to determine the feasibility of an automated system for the receipt, editing, screening, recording, and printing of descriptive method item identifications.

Approximately 28,000 variable resistor items were machine language coded and placed on magnetic tape. New variable resistor items were also encoded and processed by automatic means against the 28,000 items. The system included a mechanized edit which checked for the accuracy and acceptability of the replies and for positive relationship between different replies. It mechanically screened incoming data against the current file of data to determine whether the item, or a similar item existed in the system. The screening program included tables of acceptable limits or variations of reply which increased the scope of screening so that near like items could be associated and acceptable substitute or replaceable items could be determined. Results of the editing and screening programs were mechanically printed in the form of approved DD 146 cards with FSN's assigned, or lists of associated, matched, or rejected items.

The major conclusion derived from the test is that the requirements for mechanized characteristic screening can be applied feasibly and economically to a machine operation. This form of mechanization will lead to improvements in capability, speed and quality of item identification processing.

Another major finding of the test is the practicability of integrating the mechanized characteristic screening with the reference number screening system to create a completely mechanized process for purposes of item identification, item entry control, provisioning screening, and item standardization.

A mechanized screening system, beyond the limits imposed by the conducted test, is currently under development. When completed and implemented, the total system will achieve the potentials noted in the test conclusions.

MATERIEL UTILIZATION

Continuing improvements in the Federal Catalog System have enhanced the utilization program.

The contractor inventory utilization screening test was developed to explore the potential for mechanizing the screening of Government-owned property. This could be accomplished only through the use of catalog file data.

A test is currently underway to utilize DOD assets to satisfy MAP requirements. The success of this too, as in contractor inventory, hinges on the use of catalog file data. Utilization of excesses for this requirement is expected to materially reduce dollar expenditures.

The PLUS program continues to result in increased utilization of materiel. During the past 6 months, 67,644 items of requirements and assets were matched. This is 18,065 items greater than the first 6 months of the fiscal year. The interchangeability and substitutability file plays a major role in this process. Offers of the available assets resulted in transfers of 29,035 items in the amount of \$64,432,170. This is \$13,230,575 greater than the first 6 months of the fiscal year and \$49,658,415 greater than the last 6 months of fiscal year 1964.

PROVISIONING SCREENING

During this reporting period, 1,241,343 manufacturers' part numbers were screened against the master file in support of provisioning actions. This represents a 36-percent increase over the part numbers screened during the previous reporting period. Approximately 28 percent of the part numbers were matched to existing Federal stock numbers.

This screening service is not limited to provisioning actions. It is also available for use when item identification data is required from the central file for a Federal stock number. A total of 472,777 part numbers were screened against the master file during this reporting period for purposes other than provisioning.

A military specification titled "Provisioning Screening Data To Be Furnished by Government Suppliers" has been fully coordinated and approved and will be published at an early date. The military services and defense supply centers will include this specification in contracts for equipments being procured that require provisioning action when it is desired that the contractor prepare the screening data for submittal to DLSC.

Matching part numbers to items already stock numbered in the central file saves the Government money by making unnecessary the preparation of item identifications and costly requests for technical data when the items have already been identified in the Federal Catalog System. The savings accomplished as a result of provisioning screening are reported under the DOD cost reduction program.

Additional savings are effected to the extent that unnecessary procurements are avoided when the items matched are screened against military service long supply assets including excess and are found to be available excess at another military installation. Existing assets were found against approximately 7 percent of all FSN's matched during this reporting period.

PARTICIPATION IN NATO CODIFICATION SYSTEM

The NATO nations were advised of the Federal catalog ADP redesign program and the resultant change in the EAM card formats at the 14th meeting of the NATO Panel on Codification of Equipment held at NATO Headquarters, Paris, France, January 25-29, 1965.

An OASD (I. & L.) representative, and two DLSC representatives, one expert cataloger and one expert data processing individual, attended a special meeting of subpanel A held in Paris, May 24-26, 1965, to make presentations on the Federal catalog ADP redesign. Twenty-five representatives of eight nations were briefed on the details of the redesigned catalog data processing system by the U.S. representatives. During this meeting, agreements on the use of the new input/output card format and additional codes were reached with the NATO nations. Only relatively minor changes to the Federal Manual for Supply Cataloging were proposed and agreed to in order to make the new system acceptable for inter-NATO nation use.

During the reporting period, DLSC screened against its central files 109,083 numbers (part numbers of Federal stock numbers), processed 151,857 user actions, furnished the pertinent EAM file data, and reviewed 1,224 proposed original item identifications under international agreements. The Government contractor furnished the foreign governments 126,022 copies of descriptive item identification cards.

As of June 30, 1965, a gross total of 597,067 registrations of NATO and other friendly nations as users of a net of 394,534 different Federal stock numbers was recorded. Of this latter total, 61,504 were used both by one or more U.S. activities and by one or more foreign governments.

Item technical analysis (Project Shakedown)

Project Shakedown, an item technical analysis technique designed to achieve maximum commonality, interchangeability and substitutability of items, is operational in 10 Federal supply classes (FSC's).

As of June 30, 1965, the review of 325,000 Federal stock numbers (FSN's) in the existing 10 FSC's resulted in the following actions:

	This report period	Cumulative total
FSN corrections.....	30,151	111,242
FSN's eliminated.....	1,726	21,722
FSN's determined to have interchangeable and substitutable relationships.....	3,217	5,373
FSN's assigned "Standard" standardization code.....	5,043	9,889
FSN's assigned "Limited Standard" standardization code.....	322	615
FSN's assigned "Nonstandard" standardization code.....	933	2,791
Military Supply Standards published.....	157	283
New submittals for FSN assignment rejected as duplicate of existing FSN's.....	547	1,515

DOD ITEM ENTRY CONTROL

The DOD Item Entry Control Office has completed the review and evaluation of its pilot test to determine the utilization and effectiveness of designating a single DOD activity to make a technical review of all proposed new items in selected commodity areas. On the basis of the findings documented during the test, it is now proposed to extend the technical review concept and to consolidate the Project Shakedown effort with the item entry control program.

Realizing that item entry control, to be effective, must be made an inherent part of the many management decisions that take place during the entire life cycle of materiel, the Item Entry Control Office has initiated a program to correlate these several item entry control functions, i.e., research, engineering, production, maintenance, etc., and to obtain the support and cooperation of all applicable organizational components within the DOD. Current planning and studies indicate that major benefits will accrue to the DOD logistics system in the form of increased effectiveness and significant cost avoidances.

DEFENSE STANDARDIZATION PROGRAM

THE OFFICE OF TECHNICAL DATA AND STANDARDIZATION POLICY

The Office of Technical Data and Standardization Policy completed its first year of operation during this reporting period. Listed below are some representative management actions taken by this Office since the last report.

ENGINEERING DRAWINGS

A new specification for procurement of drawings, MIL-D-1000, was approved March 1, 1965, and will supersede the very widely used drawing specification MIL-D-70327 on November 1, 1965. The new specification provides three major changes that are expected to reduce the cost of drawings considerably:

(a) Drawings may be purchased only for specific intended uses listed in the specification, and need contain only the detail needed to satisfy those intended uses. This precludes purchase of costly detailed drawings when they are not needed.

(b) Drawings prepared in accordance with contractors' normal practices are to be ordered unless a firm requirement exists to use the usually more costly military drawing practices.

(c) Drawings that exist prior to award of a contract are to be accepted when they comply with minimum standards established in the specification. This will help preclude unnecessary redraw of drawings that are usable in their original form.

PUBLICATION OF POLICY DIRECTIVE

In the previous report, it was stated that "Department of Defense Directive 4120.3: Defense Standardization Program," was being rewritten to provide standardization policy in keeping with current conditions.

On April 23, 1965, the Department of Defense announced issuance of this new directive which brings standardization policy into phase with the current development-production-supply environment, and defines policy to give optimum effect to standardization in the functions of design, development, procurement, production, inspection, supply, maintenance, and disposal.

In collaboration with the Office of Technical Data and Standardization Policy, the military departments and the Defense Supply Agency are developing implementing instructions which will result in interrelation of all major functions affecting items, systems, and processes. Future reports should reveal elimination of duplication of effort in items entering, and currently in, the military system as a result of the new directive.

PARTS APPROVAL

Military standard MIL-STD-749A, "Preparation and Submission of Data for Approval of Nonstandard Electronic Parts," was approved for issuance as a fully coordinated document on June 1, 1965. Heretofore, contractors submitted data in accordance with the differing requirements, appearing in numerous specifications, of the several services, in order to obtain permission to use nonstandard electronic parts in the design of electronic equipment. This document standardizes the content, arrangement, and procedures which contractors will follow for all services.

SYSTEMS RELIABILITY

Military standard MIL-STD-785, "Requirements for Reliability Program Plan (for Systems and Equipment)," was approved June 30, 1965. This fully coordinated standard, which supersedes seven other documents, completes a program initiated in January 1962. The objective of this program was to consolidate and standardize all reliability requirements for systems and equipments, appearing in numerous service specifications and standards for the purpose of—

(a) eliminating conflicts in stating similar requirements invoked on a single contractor by several services; and

(b) reducing the number of documents in the area of reliability to a minimum.

This program involved the development of five documents and the supersession of 16 existing documents. These five documents cover the latest technology in the reliability field and enhance mission effectiveness of military systems and equipments.

PILOT TEST FOR ENGINEERING DATA RETRIEVAL SYSTEM

A pilot test of a DOD engineering data and retrieval system is being conducted at 20 R.D.T. & E. and production engineering installations, both military and industry. The purpose of the system is to encourage the use of existing information by making it readily available. This will prevent redundant research and development, duplication of data already procured, and the duplication of documentation by many contractors.

The system involves indexing on microfilm engineering data describing common items so that by describing the engineering characteristics of a desired item, it can rapidly be determined if a satisfactory item is already in existence. The purpose of the pilot test is to determine the feasibility of this concept, to ascertain costs, and to determine the user acceptance of such a system. The test is scheduled for completion November 30, 1965.

EXPANSION OF 26-WEEK ACCELERATED COORDINATION PROCEDURES

An accelerated coordination procedure recently applied to selected electronic parts specifications has been extended to all fast-moving technological areas. As a result of the successful completion of 22 electronic parts specifications through the application of this 26-week procedure, the Office of Technical Data and Standardization Policy has requested a planned schedule of a followon effort to include priority actions required in all areas subject to rapid technological change. This followon effort will represent a significant increment and be the means for establishing a continuous effort.

STANDARD GENERAL REQUIREMENTS FOR ELECTRONIC EQUIPMENT

A program to simplify 12 general specifications for electronic equipment and to consolidate all the common requirements appearing in these documents has been underway for sometime. To date, 17 requirements, from a planned number of 84, have been standardized and appear in standard MIL-STD-454. This program is scheduled to be completed by March 1968.

These common requirements are, for the most part, stated differently and some may lag the state of the art. Manufacturers who are under contract with various segments of the Department of Defense, have the problem of analyzing each of the requirements to determine whether similar requirements are, in fact, the same or different. This is done by thousands of different manufacturers every time a new issue of 1 of the 12 specifications is printed. This is very costly and time consuming.

The objective of this project is to standardize all the common requirements and publish them in standard MIL-STD-454, leaving the peculiar requirements in the 12 individual specifications.

SPECIFICATIONS REVIEW

A cleanup program for standardization documents 7-10 years old reached the halfway point on schedule, and 2,637 of the 5,322 documents (or 50 percent) were reviewed. Of these, 35 percent (939) were canceled or are in the process of cancellation, 30 percent (772) require

amendment or revision, and 35 percent (926) are applicable without change. Completion of the program is anticipated September 30, 1965, at which time a recurring 5-year review is anticipated.

The 7 to 10 year program is a followon to the "10-year plus" document review (4,905 documents), completed in 1964, which resulted in cancellation of 50 percent of the documents, a revision of an additional 23 percent, and the determination that 27 percent required no modification.

Comparison of results of "10-year plus" document review and the halfway point of the 7-10-year document review

[In percent]

Standardization document review program	Canceled or scheduled for cancellation	Revision required	Applicable without change
10 years plus	50	23	27
7-10 years old ¹	35	30	35

¹ Includes only reviewed documents.

DATA TRAINING COURSE

The first class of the 4-week defense data managers course, established at the Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, is scheduled to begin August 9, 1965. Students must have actual or anticipated assignment to a top-level management position in an element where integrated data management is a concern. The course is designed to train DOD personnel in the principles, policies, and procedures for improved management of data and documentation associated with military materiel and systems.

REVIEW OF QUALIFIED PRODUCTS LISTS

The Office of Technical Data and Standardization Policy has initiated a study to evaluate implementation of current policy relative to the qualification process required under 2,000 specifications. Questionnaires have been dispatched to the three military departments and the Defense Supply Agency to determine length of time qualified products lists remain in force, conditions under which producers are required to requalify, extent to which departments police qualification actions, justifications used to substantiate qualification requirements, and extent to which qualification requirements are waived.

Replies to the questionnaires will be evaluated to determine if qualification approval and qualified products lists are, in fact, necessary and, if so, is the extent of current coverage required. Evaluation will also reveal whether current criteria governing the qualification process is valid and what changes are necessary to more effectively utilize the qualification process.

LIBRARY OF OBSOLETE SPECIFICATIONS

On July 1, 1965, the Department of Defense established an archival service for superseded military specifications and other standard documents required for contractual obligations. The repository is located with the Defense single distribution point for specifications

at the Naval Supply Depot, Philadelphia, Pa. Microfilm will be used for storage, and record, thus reducing floorspace needs and facilitating indexing and distribution. For the first time, this facility will provide a single source for copies of superseded specifications previously issued by all military services. Industry requests for such copies must be certified by cognizant military contracting office to control distribution of outdated documents.

ILLUSTRATIVE STANDARDIZATION ACCOMPLISHMENTS

During this reporting, approximately 1,600 projects were completed. The following are illustrative examples of the results of some of these projects:

Diesel engines.—A review of 102 engines manufactured by 20 miscellaneous diesel engine manufacturers resulted in the designation of 82 or 80 percent as nonstandard. Of the 20 engines retained as standard, descriptions were revised to delete the common accessories and attachments thus eliminating the unnecessary duplicate purchasing of accessories generally available through normal commercial channels. Coordination with the various manufacturers and collaborations with the using services revealed that the 20 selected engines satisfy military requirements.

Diesel marine fuel oil.—Military specification MIL-F-0016884D has been revised to include the use of "cracked" material as well as straight-run, hydrogen-treated distillates or blends of these materials. Cracked materials are defined as those which have been broken down by chemical processes to simpler compounds. By this action the procurement base will be broadened by increasing the sources of crude petroleum that may be refined so as to yield the desired end product. This will additionally reduce costs.

Laundry and drycleaning equipment.—The Department of the Army and Air Force have agreed to use a common drycleaning dry tumbler. The selection was made in favor of a lower cost item and will result in an annual procurement savings of \$19,000.

X-ray film.—A completed study by the Defense Medical Supply Center has resulted in tightened requirements for speed and fogging of film and improved quality assurance controls. This action will reduce the possibility of diagnostic error through the use of more reliable film.

Sling, cargo net.—During the course of an item reduction project, the military departments agreed to adopt the use of a square mesh type cargo net, thereby eliminating two or three types of nets heretofore used.

Block, tackle.—The cost of tackle block used in certain special operations has been reduced by substituting permanently sealed prelubricated bearings for a lubrication fitting. In this way machining operations heretofore necessary to provide a grease channel and well have been eliminated.

Telephone cable.—Combat effectiveness has been improved by the issuance of military specification MIL-C-55425(EL). This new specification provides for a compact and lightweight cable which permits combat troops to increase the amount of wire laid in a given period of time and facilitates voice communication in combat zones. This new four-wire cable used in automatic switching systems eliminates the two previously used twisted pairs of wire.

Centrifugal pump.—The establishment of military specification MIL-P-52375 will result in the replacement of four pipeline pumps with a single pump. This single pump increases pipeline capacity, pressure, and reliability and is capable of pumping either water or petroleum products. The use of one pump rather than four improves pipeline operations and decreases logistic support necessary for pipeline systems.

Shelf life of rubber products.—Military Handbook 695 has been issued and provides vital information relative to time periods during which rubber products may be stored without deterioration. In the field of specialized rubber items, which are used in countless devices, both military and commercial, a gap of knowledge has existed relative to shelf life. This document provides information so sorely needed in this field.

Established reliability program for electronic parts.—The military departments, in collaboration with both manufacturers and users of solid tantalum capacitors, have agreed to revise military specification MIL-C-39003, an "established reliability" document.

Publication of this revision will result in the cancellation of MIL-C-26655, a conventional solid tantalum specification and specification sheets of MIL-C-38102, a Minuteman reliability document used by the Department of the Air Force. Further, it will provide a single specification for solid tantalum capacitors where three have existed; the new one specifying a quantitative level of reliability for each item.

This is the first step in a program to integrate into reliability specifications conventional electronic parts with a quantitative reliability requirement. This program effectively relates the reliability of conventional parts to the higher reliability of parts needed for weapons systems.

Air monitor.—A more accurate and smaller standard portable air sampler with a lower unit cost has been developed and defined under military specification MIL-T-23752, tritium air monitor, portable. In a recent procurement (NObs-92419) using MIL-T-23752, the Navy spent \$883,176 less for these monitors than it would have spent had the equipment been procured to the previous design.

Generators.—Military specification MIL-G-21912(DOCKS), generators and generator sets, electrical, was revised to provide a fully coordinated procurement document for this equipment. The revision incorporated a change in requirements to cover a brushless type of field excitation which eliminated sliprings, brushes, and brush holders. Further, since sparking at the brushes poses a problem in radio interference suppression, the DOD now avoids the cost of eliminating this interference.

Attack fuel line platform.—The ever-increasing amount of mechanical equipment required to conduct an amphibious assault has resulted in an accompanying need for large quantities of fuel in the early stages of the assault. Transferring fuel from ship to shore in drums is inadequate. Floating hose systems are subject to tactical hazards, such as installation of hose in other than calm seas is difficult; floating hose is vulnerable to enemy action, friendly boats, and moderate seas; and the hose is easy to detect. The need to correct these weaknesses led to the development of a bottom laid, ship-to-shore, bulk fuel delivery system utilizing lightweight steel pipe which is laid from special steel platforms. Military specification MIL-P-82013(DOCKS), platform, pipe launching and retrieving, submarine

fuel lines, was prepared to provide a procurement document for these steel platforms.

Quality assurance, small craft.—Feedback data from using activities reporting large numbers of defects, deficiencies, and evidence of poor workmanship resulted in the development of seven military book form standards on classification of defects for small watercraft. These standards cover 36-foot LCP(L)MK II landing craft, 26-foot personnel boat MK III, 16-foot wherry, 40-foot personnel boat, MK V, 26-foot motor whale boat, MK IX, 40-foot utility boat, and 33-foot utility boat. Benefits from these developments include standardization of inspection interpretations, records of inspection, quality assurance, reduced inspection costs, and fewer in-service failures.

Precision machining.—The establishment of standard procedures and techniques for using a roller devibrator has resulted in an improved quality of work and a reduced metal removal cost when machining long shafts of comparatively small diameter where lack of rigidity results in excessive vibration which is detrimental to tool wear, surface finish, and metal removal rates. Savings result from a decrease of approximately 30 percent in metal removal time. Improvement in the quality of work (surface finish) is considered to be an equally important factor.

Radiographs and visual soundness requirements.—The military departments have agreed upon radiographic and visual soundness requirements for cobalt-chromium alloy liners (for small arms barrels). MIL-STD-1257 has been published which contains standard radiographic negatives for comparison with negatives of production liner castings to determine acceptability of the castings. This will eliminate misinterpretation of negatives encountered through use of the now superseded Springfield Armory Standard 109.

Drive belts.—Considerable savings will be realized by the agreement of all Government agencies to issue specification ZZ-B-190, "belts, V, engine-accessory-driver." Belts that have heretofore been available only from the original equipment manufacturer will now be subject to competitive bidding. Additionally, the new specification provides for simplified packaging procedures which will result in a significantly reduced amount of required storage space.

Mass property control system for missiles and space vehicles.—MIL-M-81183 establishes a system for management control of data submitted and data format of mass properties (relating to weight, balance, and inertia) for missiles and spacecraft. It further establishes a classification system by separating vehicles as to size and type for the purpose of simplifying requirements and providing a practical means for specifying requirements for the small, less complex missiles. This specification will be used for all missile and space vehicle programs procured by the Government.

Servicing unit, auxiliary power, aircraft.—MIL-S-58081 was prepared to permit competitive procurement of a lightweight aircraft systems servicing unit that is air transportable, thus increasing the mobility and flexibility of the Army tactical operations.

Air conditioner, compact, lightweight, 18,000 B.t.u.'s per hour.—This is one of a family of compact lightweight units developed to maintain required environmental conditions for sensitive electronic and other equipment in vans, huts, and shelters and is designed to satisfy requirements for compatibility with chemical, biological, and radiological filtering devices. MIL-A-52344A updates the air conditioner require-

ments to reduce the noise level and to permit extended operations in an abrasive and salt air environment.

Air conditioners; wall- or base-mounted, self-contained, multipackage, standard weight, air-cooled, 6,000 B.t.u.'s per hour.—MIL-A-52424 describes a family of multipackage air conditioners developed to maintain environmental conditions for sensitive electronic and other equipment in vans, huts, and shelters and is designed for installation into limited space. The unit is more compact and lighter in weight than others of equal capacity. Storage space is also reduced to a minimum.

Photographic surveillance system, airborne.—MIL-P-55415 describes detailed requirements and test procedures for equipment to automatically take day and night aerial photographs from an airborne vehicle. The specification will permit competitive bidding and the test procedures will insure equipment with maximum reliability. In addition, the specification requires maximum use of standard parts, materials, and processes for efficient supply and maintenance of the equipment in the field.

Control converter.—MIL-C-55260 describes a dual optical and photoelectrical transducer which generates a variable frequency signal. The frequency of this signal is proportional to the ratio of the ground speed to the altitude of the vehicle in which it is installed. Scanner, converter, LA-209() converts the signal frequency to a direct current voltage. The specification also incorporates test procedures.

Systems operating unit LA-205() detector, light intensity LA-210().—MIL-S-55293 provides for a central control for the functions and indications of the photo system. During day missions, it receives the output signals from detector, light intensity LA-210() and scanner, converter LA-209() and generates signals which operate and control the camera; during night missions, it controls the time interval between the ejection of the flash cartridges, sets the image motion compensation for the camera, and maintains the photo system for 6 seconds after turnoff, to insure that the camera is still operating when the last flash cartridge explodes. A photoelectric cell and an amplifier are used to produce a signal proportional to the average terrain brightness below the airborne vehicle to set the camera shutter speed and lens aperture from optimum exposure according to existing light conditions.

Correlation unit, data recording LA-209().—MIL-C-55292 is an airborne unit which displays photographic exposure numbers and manually recorded flight data for exposure between frames on airborne camera film. Command signal inputs initiated by a ground-based integrated guidance and control system actuate a counter correlating such exposure with airborne vehicle geographical coordinate data. The correlation unit is intended for use with the MQM-58A, airborne surveillance system (multipurpose) as a component of the photographic surveillance system, airborne KS-59() and is installed in the data unit chamber of the aerial camera lens cone.

Coder-burst transmission group.—Coder-burst group AN/GRA71 which provides the means for preparing coded messages and a facility for automatic keying of a transmitter, heretofore available on a sole source basis (original equipment manufacturer), will now be subject to competitive bidding. This is being accomplished through the recent issuance of MIL-C-55416 which covers the five components

that make up the group. Considerable procurement savings will be realized through the issuance of this specification.

Radio receiver for vehicular use.—Revision to military specification MIL-R-55099 covering a lightweight, compact, rugged, immersion-proof radio receiver designed for vehicular operation has been published. This new revision calls for modular construction and printed wiring techniques. This has reduced the size of the receiver resulting in saving of space in vehicles, and will serve to increase combat effectiveness.

NUMBER OF SEPARATE SPECIFICATIONS CONSOLIDATED INTO SINGLE SPECIFICATIONS

During this reporting period, 127 separate specifications were consolidated into 44 specifications for use throughout the Department of Defense. Since the passage of Public Law 436, 82d Congress (now title 10, United States Code, ch. 145), 3,015 specifications have been consolidated into 1,121 specifications.

REDUCTION IN NUMBER OF SIZES, KINDS, AND TYPES OF ITEMS THAT ARE GENERALLY SIMILAR

Coordinated decisions were made during this period under the policies and procedures of the DOD standardization program to eliminate 88,266 items from the DOD supply systems. The decisions are recorded in Military Supply Standards. Unilateral decisions by the Departments resulted in the identification of an additional 13,374 items for elimination from departmental supply systems.

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