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U.S. Department of Commerce
National Institute of Standards and Technology
(formerly National Bureau of Standards-NBS)
Office of Standards Services

COMMERCIAL STANDARD CS242-62

**STANDARD STOCK COMMERCIAL 1 3/4-INCH THICK STEEL
DOORS AND FRAMES**

Commercial Standard CS242-62, Standard Stock Commercial 1 3/4-inch Thick Steel Doors and Frames, was withdrawn by the U.S. Department of Commerce in August 1980.

ANSI/SDI 100, Recommended Specifications Standard - Steel Doors and Frames, was used to replace CS242-62 (ANSI/SDI A250.8-1998, Steel Doors and Frames replaced ANSI/SDI 100-1991).

The following standards may also be of interest: ANSI/SDI A250.7-1997, Nomenclature: Standard Steel Doors and Frames and, SDI 106-1999, Recommended Selection and Usage Guide for Standard Steel Doors. For assistance and additional information on related standards and sources, contact:

Steel Door Institute (SDI)
c/o Wherry Associates, Inc.
30200 Detroit Road
Cleveland, Ohio 44145-1967, USA
Telephone: (440) 899-0010
Fax: (440) 892-1404
<http://www.steeldoor.org>

American National Standards Institute (ANSI)
25 West 43rd Street, 4th Floor
New York, New York 10036, USA
Telephone: (212) 642-4900
Fax: (212) 398-0023
<http://www.ansi.org>

8.d.(2) of the OMB Circular that the meeting will be concerned with matters of the type described in 5 U.S.C. 552(b)(1). This determination was made pursuant to a delegation of authority from the Office of Management and Budget dated June 25, 1973, issued under the authority of Executive Order 11686 dated October 7, 1972, and continued by Executive Order 11789 dated February 21, 1974.

Dated: August 14, 1980.

Walter L. Baumann,
Acting Advisory Committee, Management
Officer.

[FR Doc. 80-25236 Filed 8-18-80; 8:45 am]
BILLING CODE 6320-32-M

CIVIL AERONAUTICS BOARD

[Docket 34141]

Application of Trans-Panama, S.A.; Hearing

Notice is hereby given pursuant to the Federal Aviation Act of 1958, as amended, that a hearing in the above-entitled proceeding is assigned to be held on October 7, 1980, at 9:30 a.m. (local time), in Room 1003, Hearing Room A, North Universal Building, 1875 Connecticut Avenue, N.W., Washington, D.C., before the undersigned administrative law judge.

Dated at Washington, D.C., August 14, 1980.

Elias C. Rodriguez,
Administrative Law Judge.

[FR Doc. 80-25231 Filed 8-18-80; 8:45 am]
BILLING CODE 6320-01-M

DEPARTMENT OF COMMERCE

Maritime Administration

National Oceanic and Atmospheric Administration

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Merchant Marine and Fisheries Capital Construction Funds; Applicable Rates of Interest on Nonqualified Withdrawals

Under the authority in section 607(h)(4) of the Merchant Marine Act, 1936, (46 U.S.C. 1101), as amended by section 21 of the Merchant Marine Act of 1970 (94 Stat. 1031), we hereby determine and announce that the applicable rate of interest on the amount of additional tax attributable to any nonqualified withdrawals from a capital

construction fund established under section 607 of the Act shall be 10.36 percent, with respect to nonqualified withdrawals made in the taxable year beginning in 1980.

The determination of the applicable rate of interest with respect to nonqualified withdrawals was computed according to the joint regulations issued under the Act (48 CFR Part 391 § 391.7(e)(2)(ii)) by multiplying 8 percent by the ratio which (a) the average yield on 5-year Treasury securities for the calendar year immediately preceding the beginning of such taxable year, bears to (b) the average yield on 5-year Treasury securities for the calendar year 1970. The applicable rate so determined was computed to the nearest one-hundredth of 1 percent.

Dated: August 11, 1980.

Samuel B. Nemirow,
Assistant Secretary for Maritime Affairs.
Richard A. Frank,
Administrator, National Oceanic and
Atmospheric Administration.
Donald C. Lubick,

Assistant Secretary of the Treasury.

[FR Doc. 80-24940 Filed 8-18-80; 8:45 am]
BILLING CODE 2610-15-M

DEPARTMENT OF COMMERCE

International Trade Administration

Consolidated Decision on Applications for Duty-Free Entry of Scientific Articles

Correction

In FR Doc. 80-24104, at page 53192, in the issue of Monday, August 11, 1980, on page 53193 in the middle column, the sixth full paragraph now reading "Docket No.: 79-00062." is corrected to read "Docket No.: 80-00062."

BILLING CODE 1505-01-M

National Bureau of Standards

Status Report on Withdrawal of Voluntary Product Standards

AGENCY: Department of Commerce,
National Bureau of Standards.

ACTION: Maintenance, Retention,
Replacement, and Withdrawal of certain
Voluntary Product Standards.

On June 19, 1980, the Department of Commerce (Department) announced in the Federal Register (45 FR 41475-8) the withdrawal, effective August 18, 1980, of 80 documents classified as Voluntary Product Standards. The withdrawal announcement was made in accordance with a revisions to the Procedures for

the Development of Voluntary Product Standards (15 CFR Part 10) which was announced in a separate notice in that same issue of the Federal Register (45 FR 41401-08) and which went into effect on June 19, 1980. The revised Procedures specify six criteria which must be met for the department to sponsor the development or maintenance of a standard. Section 10.13 of the revised Procedures provided that within the period ending August 18, 1980, interested parties could submit a request to the director of the National Bureau of Standards (NBS) to retain a particular standard or standards in accordance with those specified criteria. Several such requests have been received, and determinations have been reached on those requests as indicated below.

Based on proposals from the proponent organizations identified after the following titles, the following product standards will continue to be sponsored by the Department:

- PS 1-74, Construction and Industrial Plywood; American Plywood Association
- PS 20-70, American softwood Lumber Standard; American Lumber Standards Committee
- PS 56-73, Structural Glued Laminated Timber; American Institute of Timber Construction
- PS 73-77, Carbonated Soft Drink Bottles; Glass Packaging Institute

Based on documented activity within a private standards-writing organization, the following standards will be retained by NBS for the stated periods of time to permit the orderly transfer of sponsorship of such standards from the Department to the identified organizations:

- PS 13-66 Uncorded Slab Urethane Foam for Bedding and Furniture cushioning; American society for Testing and Materials; 24 months
- PS 15-66, Custom Contact-Molded Reinforced-Polyester Chemical-Resistant Process Equipment; Society of the Plastics Industry; 12 months
- PS 17-66, Polyethylene-sheeting (construction, Industrial, and Agricultural Applications); Society of the Plastics Industry; 12 months
- PS 23-70, Horticultural Grade Perlite; the Perlite Institute; 12 months
- PS 24-70, Melamine Dinnerware (Alpha-Cellulose Filled) for Household Use; Society of the Plastics Industry; 12 months
- PS 25-70, Heavy-Duty Alpha-Cellulose-Filled Melamine Tableware; Society of the Plastics Industry; 12 months
- PS 27-70, Mosaic-Parquet Hardwood Slat Flooring; American Parquet Association; 6 months
- PS 29-70, Plastic Heat-Shrinkable Film; Society of the Plastics Industry; 12 months
- PS 30-70, School Chalk; the Crayon, Water Color and Craft Institute, inc.; 18 months
- PS 31-70, Polystyrene Plastic Sheet; Society of the Plastics Industry; 12 months

- PS 34-70, Fluorinated Ethylene-Propylene (FEP) Plastic Lined Steel Pipe and Fittings; Society of the Plastics Industry; 12 months
- PS 36-70, Body Measurements for the Sizing of Boys' Apparel; Mail Order Association of America; 24 months
- PS 42-70, Body Measurements for the Sizing of Women's Patterns and Apparel; Mail Order Association of America; 24 months
- PS 45-71, Body Measurements for the Sizing of Apparel for Young Men (Students); Mail Order Association of America; 24 months
- PS 46-71, Flame-Resistant Paper and Paperboard; American Society for Testing and Materials; 18 months
- PS 51-71, Hardwood and Decorative Plywood; Hardwood Plywood Manufacturers Association; 24 months
- PS 52-71, Polytetrafluoroethylene (PTFE) Plastic; Society of the Plastics Industry; 12 months
- PS 53-72, Glass-Fiber Reinforced Polyester Structural Plastic Panels; Society of the Plastics Industry; 12 months
- PS 54-72, Body Measurements for the Sizing of Girls' Apparel; Mail Order Association of America; 24 months
- PS 57-73, Cellulosic Fiber Insulation Board; American Hardboard Association; 6 months
- PS 58-73, Basic Hardboard; American Hardboard Association; 6 months
- PS 59-73, Prefinished Hardboard Paneling; American Hardboard Association; 6 months
- PS 60-73, Hardboard Siding; American Hardboard Association; 6 months
- PS 62-74, Grading of Diamond Powder in Sub-Sieve Sizes; Industrial Diamond Association of America; 12 months
- PS 63-75, Latex Foam Mattresses for Hospitals; American Society for Testing and Materials; 24 months
- PS 64-75, School Paste; the Crayon, Water Color and Craft Institute, Inc.; 18 months
- PS 65-75, Paints and Inks for Art Education in Schools; The Crayon, Water Color and Craft Institute, Inc.; 18 months
- PS 67-76, Marking of Gold Filled and Rolled Gold Plate Articles Other Than Watchcases; Jewelers Vigilance Committee; 36 months
- PS 68-76, Marking of Articles Made of Silver in Combination with Gold; Jewelers Vigilance Committee; 36 months
- PS 69-76, Marking of Articles Made Wholly or in Part of Platinum; Jewelers Vigilance Committee; 36 months
- PS 70-76, Marking of Articles Made of Karat Gold; Jewelers Vigilance Committee; 36 months
- PS 71-76, Marking of Jewelry and Novelties of Silver; Jewelers Vigilance Committee; 36 months
- CS 68-62, Artists' Oil Paints; Artists Equity Association, Inc.; 18 months
- CS 130-60, Color Materials for Art Education in Schools; The Crayon, Water Color and Craft Institute, Inc.; 18 months
- CS 138-55, Insect Wire Screening; Insect Screening Weave Association; 12 months
- CS 151-50, Body Measurements for the Sizing of Apparel for Infants, Babies, Toddlers and Children (for the Knit Underwear Industry); Mail Order Association of America; 24 months
- CS 192-53, General Purpose Vinyl Plastic Film; Society of the Plastics Industry; 12 months
- CS 201-55, Rigid Polyvinyl Chloride Sheets; Society of the Plastics Industry; 12 months
- CS 227-59, Polyethylene Film; Society of The Plastics Industry; 12 months
- CS 245-62, Vinyl-Metal Laminates; Society of the Plastics Industry; 12 months
- CS 257-63, TFE-Fluorocarbon (Polytetrafluoroethylene) Resin Molded Basic Shapes; Society of the Plastics Industry; 12 months
- CS 268-65, Hide Trim Pattern for Domestic Cattlehides; National Hide Association; 12 months
- CS 274-66, TFE-Fluorocarbon (Polytetrafluoroethylene) Resin Sintered Thin Coatings for Dry Film Lubrication; Society of the Plastics Industry; 12 months
- R 2-62, Bedding Products and Components; National Association of Bedding Manufacturers; 12 months
- R 192-63, Crayons and Related Art Materials for School Use (Types, Sizes, Packages, and Colors); the Crayon, Water Color and Craft Institute, Inc.; 18 months
- The following standards have been replaced by standards published by private standards-writing organizations and, therefore, Department of Commerce sponsorship is no longer needed for them:
- PS 26-70, Rigid Poly (Vinyl Chloride) (PVC) Profile Extrusions replaced by ASTM D 3678-78, Specification for Rigid Poly (Vinyl Chloride) (PVC) Profile Extrusions
- PS 43-71, Fluorinated Ethylene-Propylene (FEP) Plastic Tubing replaced by ASTM D 3296-74, Specification for FEP-Fluorocarbon Resin Tubing
- PS 47-71, Heat-Shrinkable Fluorocarbon Plastic Tubing replaced by ASTM D 2902-75, Specification for Fluorocarbon Resin Heat-Shrinkable Tubing
- PS 55-72, Rigid Poly (Vinyl Chloride) (PVC) Plastic Siding replaced by ASTM D 3679-79 Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding
- CS 11-63, Moisture Regain of Cotton Yarns replaced by ASTM D 1909-77 Standard Table of Commercial Moisture Regains for Textile Fibers and ASTM D 2494-74 Standard Method of Test for Commercial Weight of a Shipment of Yarn or Man-Made Staple Fiber
- CS 21-58, Interchangeable Taper-Ground Joints, Stopcocks, Stoppers, and Spherical-Ground Joints replaced by ASTM E 675-79 Standard Specification for Interchangeable Stopcocks and Stoppers, ASTM E 676-79 Standard Specification for Interchangeable Taper-Ground Joints, and ASTM E 677-79 Standard Specification for Interchangeable Spherical-Ground Joints
- CS 75-56, Automatic Mechanical-Draft Oil Burners Designed for Domestic Installations replaced by ANSI Z 91.2-1978 Performance Requirements for Automatic Pressure Atomizing Oil Burners of the Mechanical-Draft Type
- CS 191-53, Flammability of Clothing Textiles replaced by ASTM D 1230-61 (1972) Test for Flammability of Clothing Textiles
- CS 202-56, Industrial Lifts and Hinged Loading Ramps replaced by ANSI MH14.1-1978 Industrial Loading Dockboards (Ramps)
- CS 206-57, Vinyl Chloride Plastics Garden Hose replaced by ASTM D 3901-80 Standard Consumer Product Specification for Garden Hose
- CS 236-66, Mat-Formed Wood Particleboard replaced by ANSI A 208.1-1979 Mat-Formed Particleboard
- In the absence of any request for retention or maintenance, the following standards will be withdrawn, as previously announced, on August 18, 1980:
- PS 4-66, Standard Stock Light-Duty 1-3/8-and 1-3/4-inch Thick Flush-type Interior Steel Doors and Frames
- PS 6-66, Trim for Water-Closet Bowls, Tanks and Urinals (Dimensional Standards)
- PS 29-70, Glass Stopcocks with Polytetrafluoroethylene (PTFE) Plugs
- PS 39-70, Steel Bi-fold Closet Door Units, Frames, and Trim
- PS 40-70, Package Quantities of Green Olives
- PS 41-70, Package Quantities of Instant Mashed Potatoes
- PS 44-71, Paper Ice Bag Sizes
- PS 45-71, Package Quantities of Cubed, Sized, Crushed, and Block Ice
- PS 49-71, Portable Picnic Coolers
- PS 50-71, Package Quantities of Toothpaste
- CS 5-65, Pipe Nipples; Brass, Copper, Steel, and Wrought Iron
- CS 46-65, Hosiery Lengths and Sizes Excluding Women's
- CS 234-61, Measurements for Stretch Socks and Anklets
- CS 242-62, Standard Stock Commercial 1-3/4-Inch Thick Steel Doors and Frames
- CS 269-65, Aluminum Alloy Chain Link Fencing
- R 46-55, Tissue Wrapping Paper
- R 222-46, Hot-Rolled Carbon Steel Bars and Bar-Size Shapes
- R 264-61, Standard Sizes of Oil-Hardenable Flat, Ground Tool Steel Stock
- In accordance with section 10.1(e) of the revised Procedures for the Development of Voluntary Product Standards and by agreement with the Consumer Product Safety Commission, the Department will retain sponsorship of the following two Product Standards until such time as arrangements for their sponsorship by a private standards-writing organization can be made:
- PS 66-76, Safety Requirements for Home Playground Equipment
- PS 72-76, Toy Safety
- For further information contact: James E. French, Office of Engineering Standards, National Bureau of Standards, Washington, D.C. 20234, Telephone: (301) 921-3272.

WITHDRAWN

Commercial Standard CS242-62

**Standard Stock Commercial 1³/₄-Inch
Thick Steel Doors and Frames**

A recorded
voluntary standard of the
trade published by
the U.S. Department
of Commerce



For sale by the Superintendent of Documents
U.S. Government Printing Office, Washington 25, D.C. Price 10 Cents

**U.S. DEPARTMENT OF COMMERCE
BUSINESS AND DEFENSE SERVICES ADMINISTRATION
OFFICE OF TECHNICAL SERVICES
Commodity Standards Division**

With the cooperation of the
National Bureau of Standards

EFFECTIVE DATE

Having been passed through the regular procedures of the Commodity Standards Division, and approved by the acceptors hereinafter listed, this Commercial Standard is issued by the U.S. Department of Commerce, effective April 15, 1962.

LUTHER H. HODGES, *Secretary.*

COMMERCIAL STANDARDS

Commercial Standards are developed by manufacturers, distributors, and users in cooperation with the Commodity Standards Division of the Office of Technical Services, Business and Defense Services Administration, and with the National Bureau of Standards. Their purpose is to establish quality criteria, standard methods of test, rating, certification, and labeling of manufactured commodities, and to provide uniform bases for fair competition.

The adoption and use of a Commercial Standard is voluntary. However, when reference to a Commercial Standard is made in contracts, labels, invoices, or advertising literature, the provisions of the standard are enforceable through usual legal channels as a part of the sales contract.

Commercial Standards originate with the proponent industry. The sponsors may be manufacturers, distributors, or users of the specific product. One of these three elements of industry submits to the Commodity Standards Division the necessary data to be used as the basis for developing a standard of practice. The division by means of assembled conferences or letter referenda, or both, assists the sponsor group in arriving at a tentative standard of practice and thereafter refers it to the other elements of the same industry for approval or for constructive criticism that will be helpful in making any necessary adjustments. The regular procedure of the division assures continuous servicing of each Commercial Standard through review and revision whenever, in the opinion of the industry, changing conditions warrant such action.

SIMPLIFIED PRACTICE RECOMMENDATIONS

Under a similar procedure the Commodity Standards Division cooperates with industries in the establishment of Simplified Practice Recommendations. Their purpose is to eliminate avoidable waste through the establishment of standards of practice for sizes, dimensions, varieties, or other characteristics of specific products; to simplify packaging practices; and to establish simplified methods of performing specific tasks.

STANDARD STOCK COMMERCIAL 1 $\frac{3}{4}$ -INCH THICK STEEL DOORS AND FRAMES

[Effective April 15, 1962]

1. PURPOSE

1.1 The purpose of this Commercial Standard is to establish nationally recognized standard sizes and construction requirements for standard stock commercial 1 $\frac{3}{4}$ -inch thick steel doors, frames and accessories, for the guidance of producers, distributors, architects, builders, and the public in general. It is also intended to provide a uniform basis for guaranteeing compliance through certification and labeling; and to promote economies in production, distribution, and use through wider utilization of these standard items.

2. SCOPE

2.1 This standard provides requirements for standard stock commercial 1 $\frac{3}{4}$ -inch thick steel doors, frames and accessories that are considered to be manufacturers' regular stock items and not subject to variations for special needs. These stock items are intended for applications in which commercial steel doors are generally used. This standard does not cover doors and frames which are commonly referred to as "custom hollow metal" which are manufactured to users specified requirements. The standard covers material, sheet metal thicknesses, sizes and types of doors and frames, general construction requirements, preparation of doors and frames for hardware, and labeling provisions.¹

2.2 It is intended that approval drawings will not be required for these stock items and that the manufacturers' published details, together with this standard will provide all needed information. However, approval drawings may be specified or provided when desired.

3. STANDARD SIZES

3.1 Opening sizes.—Doors and frames shall conform to the standard opening sizes given in Table 1.

TABLE 1.—Standard Opening Sizes¹

WIDTH & HEIGHT	WIDTH & HEIGHT	WIDTH & HEIGHT
2'0" x 6'8"	2'0" x 7'0"	2'0" x 7'2"
2'4" x 6'8"	2'4" x 7'0"	2'4" x 7'2"
2'6" x 6'8"	2'6" x 7'0"	
2'8" x 6'8"	2'8" x 7'0"	2'8" x 7'2"
3'0" x 6'8"	3'0" x 7'0"	3'0" x 7'2"
3'4" x 6'8"	3'4" x 7'0"	3'4" x 7'2"
3'6" x 6'8"	3'6" x 7'0"	
3'8" x 6'8"	3'8" x 7'0"	3'8" x 7'2"
4'0" x 6'8"	4'0" x 7'0"	4'0" x 7'2"

¹ Sizes shown are for single doors only, for pairs of doors use twice the width indicated.

¹ This standard does not include provisions for the erection of doors, frames and accessories. However, it does include manufacturers' recommendations for storage and erection. Also, this standard does not apply to steel doors, as covered by Commercial Standard CS211-57 (Flush Type Interior Steel Doors and Frames), or any of the following: Metal clad doors (kalamein wood metal covered), industrial doors of the single sheet panel type.

3.1.1 Method of measuring opening.

3.1.2 Width.—The width of openings shall be measured from inside to inside of frame jamb rabbets. For example the width shall be 24 inches for a 2-foot opening and 28 inches for a 2-foot 4-inch opening.

3.1.3 Height.—Height of openings shall be measured from the lower end of the jamb to the head rabbet on the frame. The height shall be 80 inches for a 6-foot 8-inch frame, 84 inches for a 7-foot frame, and 86 inches for a 7-foot 2-inch frame.

3.2 Door sizes.—Doors shall be sized so as to fit the above opening and allow a $\frac{1}{8}$ -inch clearance at jambs and head of frame. This is considered to be a nominal clearance, subject to ordinary commercial variations. A clearance of *not more than $\frac{3}{4}$ -inch shall* be allowed between the bottom of the door and the lower end of the jamb.

4. REQUIREMENTS

4.1 Material.

4.1.1 Steel.—Steel shall be of cold-rolled or hot-rolled steel sheets, pickled and oiled, and may be electrolytic zinc coated and phosphatized.

TABLE 2.—Thickness of steel for component parts

	Minimum gage of sheet metal	
	Gage No. ²	Equivalent Gage thickness
Door Frames	16	0.0598
Reinforcements for surface applied hardware ¹	16	.0598
Doors—hollow steel construction (see 4.2.1.1) Panels and stiles	18	.0478
Reinforcements for surface applied hardware ¹	16	.0598
Doors—composite construction (see 4.2.1.2)		
Perimeter channel	18	.0478
Surface sheets	22	.0299
Lock and strike reinforcements	16	.0598
Hinge reinforcements	³ 10	.1345
Flush bolt reinforcements	16	.0598
Glass moldings	20	.0359
Glass muntins	22	.0299

¹ WHEN REQUIRED, as for door closers and door holders.

² The gage numbers are from the Manufacturers Standard Gage for Steel Sheets, published in the latest issue of the Steel Products Manual for Carbon Steel Sheets of the American Iron & Steel Institute. Copies of the Steel Products Manual are obtainable from the American Iron & Steel Institute, 150 East Forty-Second Street, New York 17, N. Y.

³ Lighter gages may be used if formed to a channel-shape and/or a U-shape that provides rigidity equivalent to that of flat reinforcements of specified minimum thickness.

4.2 Door types, designs and constructions.—Doors shall be of either the flush type, flush panel type, or recess panel type, as described in succeeding paragraphs. The shapes or designs of the doors are not covered by this standard. However, it is intended that the designs and constructions shall be those consistently employed in the manufacture of the product as offered and furnished to the trade. Such commercial designs and constructions shall include a sound deadening treatment, and suitable methods of stiffening where the type of stiffening to be used is not described.

4.2.1 Flush type.—Flush type doors shall be of either the hollow steel construction or the composite metal face construction as specified below.

4.2.1.1 Hollow steel construction.—Each face of the doors shall be formed from a sheet of metal, the thickness of which shall be in accordance with Table 2. Longitudinal joints shall be welded and dressed or filled, or be internally welded with visible joints. Top and bottom of the door may be either welded flush, or be closed with recessed spot welded channel end closures. Doors shall be stiffened. (See 4.2).

4.2.1.2 Composite metal face construction.—Cores shall be made of a solid structural mineral or fibrous material, and be surrounded by a perimeter channel as specified in Table 2. Suitable reinforcing for application of the hardware as specified herein shall be provided. Surface sheets for doors shall consist of two stretcher leveled formed steel sheets of thicknesses as specified in Table 2.

Surface sheets shall be bonded to the core by means of a waterproof resorcinol adhesive, or equivalent, under pressure, and also shall be welded to the perimeter channel around all four edges of door. The welding on both longitudinal edges of door shall be dressed to make welds invisible.

4.2.2 Flush panel type doors.—Flush panel type doors shall be made only of hollow steel in either the stile and rail construction or the stile and panel construction as specified below.

4.2.2.1 Stile and rail construction.—The stiles and rails shall be either mitered or butted. When mitered they shall be welded and ground smooth at the corners, when butted they shall be horizontally stiffened with U-shaped end closures. Unmitered joints may be left visible. Panels shall interlock with the stiles and be stiffened. (See 4.2.) Surface of panels and stiles shall lie in parallel planes, but panels may be recessed an amount no greater than the thickness of the stile metal.

4.2.2.2 Stile and panel construction.—Stiles shall be butted against the panels the full length of the door, and be horizontally stiffened with U-shaped end closures. Panels shall interlock with the stiles, or be jointed to the stiles by internal welding, and shall be stiffened. (See 4.2.) Surfaces of panels and stiles shall lie in parallel planes, but panels may be recessed an amount no greater than the thickness of the stile metal.

4.2.3 Recess panel type doors.—Recess panel type doors shall be of hollow steel construction as specified below.

4.2.3.1 Stiles and rails.—The stiles and rails shall be either channels or rectangularly shaped sections, either mitered or butted. When mitered they shall be welded and ground smooth at the corners, when butted they shall be horizontally stiffened with U-shaped end closures. Unmitered joints may be left visible.

4.2.3.2 Panels.—Panels shall interlock with the stiles and shall consist of metal faces with a resilient separator. Panels shall be nominally $\frac{3}{8}$ -inch thick.

4.3 Frames.—Frames shall be either knocked down or welded.

4.3.1 Knocked down type.—Knocked down frames shall have joints that interlock rigidly when locked in place, so as to maintain

alignment of parts and provide functionally satisfactory performance of completed frames when field assembled. Knocked down frames should be shipped unassembled.

4.3.2 Welded type.—The headers and jambs of welded frames shall be secured at the corners either by internal welding of faces or by welded splice plates. Joints at jambs and headers shall be further secured at the webs either by welding or by mechanical interlock. Faces of frames at junction of head and jamb shall present neat line joints.

4.3.3 Anchors.—Frames shall be provided with not less than three anchors per jamb, the anchors being as required for the adjoining wall construction. The design of anchors shall be in accordance with each manufacturer's regular practice, and they shall be of 18 gage, or heavier, steel, not less than 0.0449-inch thick. All frames shall be provided with a floor anchor on each jamb for fastening to the floor when required.

4.4 Preparation of doors and frames for hardware.—Doors and frames shall be mortised, and shall be fully prepared for locks and strikes, as specified in the following sub-paragraphs. Location of hinges and locks shall be as established by individual manufacturers. This standard does not cover preparation for surface applied hardware (other than reinforcing) which is normally installed as a field operation.

4.4.1 Lock sets.—Mounting and location of locks shall be in accordance with the latest edition of American Standards Association Specification for (Metal) Door and Frame Preparation for Door Locks and Flush Bolts, A115.-1959.²

4.4.1.1 Bored or cylindrical lock and latch sets.—Locks shall conform to Series 161 of the latest edition of Federal Specification FF-H-106.³ The lock front shall be $1\frac{1}{8}$ -inch by $2\frac{1}{4}$ -inches and have two mounting holes for No. 8-32 machine screws, sheet metal screws or self tapping screws. The screws shall be spaced on $1\frac{3}{8}$ -inch centers and be symmetrically located about the center line of the lock front and the vertical centerline. Panel piercing for locks shall be backset $2\frac{3}{4}$ -inches, and be $2\frac{1}{8}$ -inches in diameter, the circumference of which shall be interrupted at two diametrically opposite points on the horizontal center line by two cuts with a maximum of $\frac{5}{32}$ -inches in width and extending to an overall maximum dimension of $2\frac{1}{4}$ -inches across the center line of the opening. Suitable internal reinforcing shall be provided by the door manufacturer to prevent collapse of the door panels under the normal stresses imposed by installation of the lockset.

4.4.1.2 Mortise locks.—Mortise locks shall conform to Series 86 of the latest edition of Federal Specification FF-H-106.³ The lock front shall be $1\frac{1}{4}$ -inch x 8 inch x $1\frac{5}{16}$ -inch and have two mounting holes for No. 12-24 machine screws, sheet metal screws or self tapping screws. The screws shall be spaced on $7\frac{1}{4}$ -inch centers symmetrically located about center line of lock front and on the

² For sale by the American Standards Association, Inc., 10 East 40th Street, New York 16, New York.

³ Copies of Federal Specification FF-H-106, Hardware, Builders', Locks and Door Trim, can be obtained from the Business Service Center, Regional Office Bldg., General Services Administration, 7th & D Sts., S. W., Washington 25, D. C.

vertical center line. Preparation for locks shall be identical on both faces of door, and shall be backset $2\frac{3}{4}$ -inches. The preparation shall accommodate locks of all functions. Full escutcheons shall be used. Suitable internal reinforcing shall be provided by the door manufacturer to prevent collapse of the door panels under the normal stresses imposed by installation of the lockset.

4.4.1.3 Mortise integral type locks.—Mortise integral type locks shall conform to Series 140 of Federal Specification FF-H-106 (of the latest issue). The lock front shall be $1\frac{1}{4}$ -inch x $4\frac{1}{2}$ -inch x $\frac{3}{16}$ -inch and have two mounting holes for No. 12-24 machine screws, sheet metal screws, or self tapping screws. The screws shall be spaced on $3\frac{1}{4}$ -inch centers symmetrically located about center line of lock front and the vertical center line. Preparation for locks shall be identical on both faces of door, and shall be backset $2\frac{3}{4}$ -inches. The preparation shall accommodate locks of all functions. Suitable internal reinforcing shall be provided by the door manufacturer to prevent collapse of the door panels under the normal stresses imposed by installation of the lockset.

4.4.1.4 Mortise unit type locks.—Mortise unit type locks shall conform to Series 90 of the latest edition of Federal Specification FF-H-106. When doors are prepared for mortise unit type locks they shall have an opening $1\frac{3}{4}$ -inches high and $3\frac{1}{2}$ -inches long and shall have two mounting screw holes $\frac{3}{8}$ -inches in diameter located $2\frac{1}{2}$ -inches on centers vertically spaced for $2\frac{3}{4}$ -inches backset. Preparation shall be uniform on both faces of door for this lock and shall accommodate all lock functions. Suitable internal reinforcements shall be made to the door to accommodate this type of lock.

4.4.1.5 Lock strikes (or provision for lock strikes).—Frames shall be prepared to accommodate a lock strike with maximum dimensions of $4\frac{7}{8}$ x $1\frac{1}{4}$ -inches, with a $3\frac{3}{8}$ -inch wide lip in the center of the plate. Center line of strike shall be located $40\frac{5}{16}$ -inches above finished floor. Holes for mounting strikes shall be spaced on $4\frac{1}{8}$ -inch centers symmetrically located about the center line of the strike and shall be tapped for No. 12-24 machine screws. Strike reinforcements shall be recessed to accommodate strike plates $\frac{3}{32}$ -inch thick without dust boxes. Strike jamb stops shall be pierced for at least two rubber or plastic bumpers, which shall be furnished by frame manufacturer. Strike and hinge reinforcements shall be protected by mortar guards inside the frame for use in masonry construction.

4.4.2 Hinges.—All doors and frames shall be prepared for the field application of three regular weight hinges, size $4\frac{1}{2}$ x $4\frac{1}{2}$ -inches, by means of machine screws to both doors and frames.

4.4.2.1 Universal hanging.—All doors in this specification may be made suitable for universal hanging by having hinge mortises the full thickness of the door and a bull nose or double bevel strike stile. Where doors are so prepared, fillers shall be furnished with the door to fill the space from the back edge of the hinge to the opposite face of the stile. Mortise reinforcements, where required, shall be concealed and be designed and constructed so as to develop

the necessary strength to support the attached units in a suitable manner.

4.5 Finishing.—All doors and frames shall be chemically treated for good paint adhesion and all visible surfaces shall be finished with high quality metal primer, either air dried or baked on.

4.6 Workmanship.—The workmanship of all doors and frames identified as being in accordance with this Commercial Standard shall be neat in appearance and functionally satisfactory.

5. LABELING

5.1 In order to assure the purchaser that he is getting a commercial type $1\frac{3}{4}$ -inch thick steel door and frame of the quality specified herein, fabricators may individually or in concert with their trade associations, issue certificates, or mark each door unit by stamp, or label as conforming to this standard.

The following wording is recommended for the label:

This commercial $1\frac{3}{4}$ -inch thick steel door and frame conforms with all requirements of Commercial Standard CS 242-62 as developed by the trade under the Commodity Standards Procedures of the U.S. Department of Commerce.

(Name of Fabricator)

5.2 Underwriters' labeled doors and frames.—Labeled doors and frames shall be in accordance with the foregoing standards, except that they shall conform with the Underwriters' Laboratories, Inc., requirements in all respects, including gages, insulation, and type of hardware. The presence of the authorized Underwriters' Laboratories, Inc. label on a door or frame shall be acceptable evidence of compliance with this Commercial Standard.

6. MANUFACTURERS' RECOMMENDATION FOR STORAGE AND ERECTION

6.1 The following practices are recommended by the manufacturers.

6.1.1 Doors and frames should be stored at the site on wood sills or on floors in a manner that will prevent rust and damage.

6.1.2 Frames should be installed plumb, rigid, and in true alignment, and be fastened so as to retain their position and clearance during construction of partitions. Frames in masonry walls should be filled with mortar as the wall is laid up. Frames in solid plaster or steel stud walls should be completely filled with plaster.

HISTORY OF PROJECT

The standard was initiated by the Steel Door Institute which, on October 20, 1958, requested the cooperation of the Commodity Standards Division in its preparation. A draft of the Institute's proposal was circulated to representative manufacturers, distributors and users on March 18, 1959, for advance consideration, and

to bring out suggestions for making it generally acceptable to the industry as a whole. Suggested changes and additions were embodied in a second draft of the proposed standard, which applied specifically to certain widely used types of stock doors, thus placing outside of its scope various other stock doors and "custom hollow metal" doors made in accordance with users specifications. Following its circulation to the trade on December 11, 1959, further modifications were developed in line with the consensus of suggestions received, and were embodied in the Recommended Commercial Standard for Standard Stock Commercial 1 $\frac{3}{4}$ -Inch Thick Steel Doors and Frames, TS-5442A.

Upon circulation to the trade on April 5, 1961, the recommended standard was widely endorsed by representative firms throughout the industry, but a number of constructive suggestions for further improvement were also received. These items were embodied in the standard by means of a list of recommended changes, TS-5442B, which was circulated on September 8, 1961. It was adopted by all who had previously endorsed the standard and the amended standard was also accepted by a substantial number of additional firms. No further modifications were proposed, and the list of acceptors was considered sufficiently representative of the industry as a whole to insure the successful application of the standard. It was, therefore, announced on February 23, 1962, to become effective April 15, 1962.

Project Manager: C. G. Hemmer, Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce.

Technical Adviser: S. F. Booth, National Bureau of Standards

STANDING COMMITTEE

The function of the Standing Committee is to review prior to circulation for acceptance, changes proposed to keep this standard abreast of progress. Comments concerning this Standard, and suggestions for its revision, may be addressed to any member of the Committee listed below or to the Commodity Standards Division, Office of Technical Services, U.S. Department of Commerce, which acts as Secretary for the Committee.

WERNER H. LESSER, The Steelcraft Manufacturing Co., 8017 Blue Ash Rd., Cincinnati 42, Ohio (Chairman).

JAMES H. KAY, Amweld Building Products, 100 Plant Street, Niles, Ohio.

V. BRAUN, Fenestra, Inc., 4040 W. 20th Street, Erie, Pa.

JAMES F. DORAN, Aetna Steel Products Corp., P. O. Box 88, Pottsville, Pa.

LOUIS A. HAMILTON, Mesker Brothers, 6002 N. Lindbergh Blvd., Hazelwood, Mo.

H. W. WEHE, Overly Manufacturing Co., Greensburg, Pa.

THOMAS F. MCNULTY, The American Hardware Corp., New Britain, Conn.

GEORGE E. WHEATLEY, Lockwood Hardware Co., Fitchburg, Mass.

DAVID H. ESKIN, Pres., D. H. Eskin Co., Inc., 1255 Tremont St., Boston 20, Mass.

JOHN J. HEALY, V. P., Gardner Hardware Co., 515 Washington Ave., North Minneapolis, Minn.

R. B. DOSCH, Vice Pres., Manhattan Construction Co., of Texas, 1811 Crawford Street, Houston 2, Texas.

MICHAEL A. GARIUP, Vice Pres., Gariup Construction Co., 3965 Harrison Street, Gary, Ind.

WITHDRAWN

ACCEPTANCE OF COMMERCIAL STANDARD

CS242-62 Standard Stock Commercial 1 1/4-Inch Thick Steel Doors and Frames

It acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this Commercial Standard.

Date _____

Commodity Standards Division
Office of Technical Services
Business and Defense Services Administration
U. S. Department of Commerce
Washington 25, D. C.

Gentlemen:

We believe that this Commercial Standard constitutes a useful standard of practice, and we individually plan to utilize it as far as practicable in the

production¹ distribution¹ purchase¹ testing¹
of this commodity.

We reserve the right to depart from the standard as we deem advisable.

We understand, of course, that only those articles which actually comply with the standard in all respects can be identified or labeled as conforming thereto.

Signature of authorized officer _____

(In ink)

(Kindly typewrite or print the following lines)

Name and title of above officer _____

Organization _____

(Fill in exactly as it should be listed)

Street address _____

City, zone, and State _____

¹ Under score the applicable words. Please see that separate acceptances are filed for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interest, trade associations, trade papers, etc., desiring to record their general support, the words "General support" should be added after the signature.

TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance:

1. *Enforcement.*—Commercial Standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices, and the like.

2. *The acceptor's responsibility.*—The purpose of Commercial Standards is to establish, for specific commodities, nationally recognized grades or consumer criteria, and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the standard, where practicable, in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function, performed by the Department of Commerce in the voluntary establishment of Commercial Standards on a nationwide basis is fourfold: First, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active, valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or of the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.

ACCEPTORS

The manufacturers, distributors, users, and others listed below have individually indicated in writing their acceptance of this Commercial Standard prior to its publication. The acceptances indicate an intention to utilize the standard as far as practicable, but reserve the right to depart from it as may be deemed desirable. The list is published to show the extent of recorded public support for the standard, and should not be construed as indicating that all products made by the acceptors actually comply with its requirements.

Products that meet all requirements of the standard may be identified as such by a certificate, grade mark, or label. Purchasers are encouraged to require such specific representations of compliance, which may be given by the manufacturer whether or not he is an acceptor.

ASSOCIATIONS (General Support)

American Institute of Architects, Washington, D. C.
 American Specification Institute, Chicago, Ill.
 Associated General Contractors of America, Inc., Washington, D. C.
 Carolina Lumber & Building Supply Association, Charlotte, N. C.
 Modular Building Standards Assn., Washington, D. C.
 Montana Chapter, American Institute of Architects, Billings, Mont.
 National Builders' Hardware Association, New York, N. Y.
 Steel Door Institute, Cleveland, Ohio
 Steel Service Center Institute, Cleveland, Ohio

FIRMS AND OTHER INTERESTS

Aetna Steel Products Corporation, Pottsville, Pa.
 Aichel Steel & Supply Co., Jacksonville, Fla.
 Aibers Construction Co., St. Louis, Mo.
 Alco Building Products Co., Cincinnati, Ohio
 Amweld Building Products, Niles, Ohio
 Andersen Construction Co., Council Bluffs, Iowa
 Anderson, Ted D. Construction Co., Kokomo, Ind.
 Apex Building Contractors, Inc., Newport News, Va.
 Archer, T. S., Co., Richmond, Va.
 Architectural Hardware, Inc., Columbus, Ohio
 Associated Builders, Inc., Anderson, Ind.
 Atlantic Building Co., Inc., Charlotte, N. C.
 Aton Bros. Construction Co., Inc., Springfield, Mo.
 Auch, Geo. W., Constructors, Detroit, Mich.
 Austin Building Co., Dallas, Tex.
 Barker-Cochran Construction Co., Inc., Greensboro, N. C.
 Barlow-Meagher Co., Inc., New York, N. Y.
 Barnes Construction Co., Inc., Grand Rapids, Mich.
 Baron Steel Co., Toledo, Ohio
 Baumer, Herbert, Architect, Ohio State University, Columbus, Ohio
 Baystone Construction, Inc., Muncie, Ind.
 Bean, R. E., Construction Co., Inc., Keene, N. H.
 Beck, Henry C., Construction Co., Phoenix, Ariz.
 Berg Construction Co., Inc., Juneau, Alaska
 Bernard Construction Co., Barberton, Ohio
 Bial, George F., Architect, Hasbrouck Heights, N. J.
 Bildisco, Elizabeth, N. J.
 Bilt-Rite Steel Buck Corp., Brooklyn, N. Y.
 Binswanger Glass Co., Memphis, Tenn.
 Bommer Spring Co., Inc., Landrum, S. C.
 Bornstein, Ale, Inc., Constructors, Louisville, Ky.
 Braun Manufacturing Co., Inc., Chicago, Ill.

Brust & Brust, Architects, Milwaukee, Wisc.
 Buehner Block Co., Salt Lake City, Utah
 Buie Building Material Co., Inc., Houston, Tex.
 Building Material Products Distributors, Inc., Philadelphia, Pa.
 Burden, George H., Co., Inc., Construction, Little Rock, Ark.
 Bush Construction Co., Norfolk, Va.
 Byrne Doors, Inc., Ferndale, Mich.
 C. & D. Engineered Products, Inc., New Castle, Pa.
 California Builders Hardware Co., San Francisco, Calif.
 Camlet, Thomas J., Architect & Engineer, Garfield, N. J.
 Canady Construction Co., Charleston, S. C.
 Cannon & Mullen, Architects, Salt Lake City, Utah
 Carlson, Rockey, Inc., Des Moines, Iowa
 Carmichael Construction Co., Akron, Ohio
 Carmichael Construction Co., Hastings, Nebr.
 Carr, Homer Construction Co., Carthage, Mo.
 Casco Co., Boise, Idaho
 Ceco Steel Products Corp., Chicago, Ill.
 Central Indiana Hardware Co., Inc., Indianapolis, Ind.
 Christenson Construction Co., Kent, Ohio
 Click Construction Co., Inc., Elizabethton, Tenn.
 Coast Line Steel Prod., Inc., Maspeth, N. Y.
 Coile, Forest & Associates, Architects, Newport News, Va.
 Cole Construction Co., Detroit, Mich.
 Columbia Building Co., Bellefontaine, Ohio
 Commercial Builders, Inc., Williston, N. Dak.
 Conrad & Cummings, Architects, Binghamton, N. Y.
 Craig, W. M. Co., Contractors, Gulfport, Miss.
 Crenshaw & Jost, Engineering & Architecture, Pekin, Ill.
 Cross Construction Co., Inc., Morgantown, W. Va.
 Dawson, Johnson & Kibler, Inc., Portland, Maine
 Day & Zimmermann, Inc., Builders, Philadelphia, Pa.
 Dealers Service of Arkansas, Inc., Jonesboro, Ark.
 Delph Hardware & Specialty Co., Charlotte, N. C.
 Dennis Construction Co., Yuma, Ariz.
 Dent Hardware Co., Fullerton, Pa.
 Detroit Edison Co., Detroit, Mich.
 Dexter Lock Division, Grand Rapids, Mich.
 D'Lauro, Frank A., Construction Co., Philadelphia, Pa.
 Dollar, Bonner, Blake and Manning, Architects, Wilmington, Del.
 Door Engineering, Norfolk, Va.
 Drape Construction Co., Waverly, Iowa
 Dusing & Hunt, Inc., LeRoy, N. Y.

Empire Door Co., Brooklyn, N. Y.
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 Faulkner Clark Material Sales, Lexington, Ky.
 Fenestra, Inc., Erie, Pa.
 Fentron Industries, Inc., Seattle, Wash.
 Fire Doors, Inc., East Detroit, Mich.
 Flannagan, Eric G., & Sons, Architects & Engineers, Henderson, N. C.
 Fleming, Edward M., Construction Co., Inc., Miami, Fla.
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 Fullen Construction Co., Inc., Scottsbluff, Nebr.
 Functional Building Supply, Inc., Cleveland, Ohio
 Gardner Hardware Co., Minneapolis, Minn.
 Gariup Construction Company, Inc., Gary, Ind.
 General Supply Co., Easton, Pa.
 Goettling Construction Co., Tacoma, Wash.
 Grellinger-Rose Associates, Inc., Architects, Milwaukee, Wisc.
 Guilbert, Inc., Philadelphia, Pa.
 Hager, C., & Sons Hinge Manufacturing Co., St. Louis, Mo.
 Haggerty-Messmer Construction Co., Bozeman, Mont.
 Haren & Laughlin Construction Co., Inc., Kansas City, Kans.
 Harmon Construction Co., Inc., Oklahoma City, Okla.
 Haskelite Manufacturing Division, Evans Products Co., Grand Rapids, Mich. (General Support)
 Henges Co., Inc., St. Louis, Mo.
 Hirzel, Chas. K., Architect, New York, N. Y. (General Supporting)
 Hunsicker, L. W., Co., Builders, Allentown, Pa.
 Ideal Building Materials, Inc., Shreveport, La.
 Industrial Construction Co., Inc., Cleveland, Ohio
 Industrial Equipment Co., Atlanta, Ga.
 International Steel Co., Evansville, Ind.
 Jarvis & Emch, Inc., Clarksburg, W. Va.
 Jederberg Construction Co., Aberdeen, S. Dak.
 Johnson Construction Co., Texarkana, Tex.
 Joplin Four States Supply Co., Joplin, Mo.
 Kemp, Bunch & Jackson, Architects, Jacksonville, Fla.
 Kendall, J. B. Co., Washington, D. C.
 Kennedy & Shore, Kansas City, Mo.
 Kesseli & Morse Co., Worcester, Mass.
 Kewanee Manufacturing Co., Kewanee, Ill.
 La Force Builders Hardware, Inc., Green Bay, Wisc.
 Lambie, C. S., & Co., Amarillo, Texas
 Lang, M. J., Construction Co., Inc., Tucson, Ariz.
 Latenser, John & Sons, Architects & Engineers, Omaha, Nebr.
 Lewis & West Contractors, El Dorado, Kans.
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 Locher Construction Co., Anchorage, Alaska
 Lockwood Hardware Mfg. Co., Fitchburg, Mass.
 Loeb, Laurence M., Architect, White Plains, N. Y.
 Lowe Construction Co., Billings, Mont.
 Macdean's Wholesale Builders Supplies, North Platte, Nebr.
 Makielski, Stanislaw J., Architect, University of Virginia, Charlottesville, Va.
 Manhattan Construction Co., of Texas, Houston, Tex.
 Mann & Co., Architects & Engineers, Hutchinson, Kans.
 Maring, Harry, Jr., Inc., Bridgeport, Conn.
 Martens Associated, Architects & Engineers, Charleston, W. Va.
 Marty, A. H., Cleveland, Ohio
 Master Lock Co., Milwaukee, Wisc.
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 Meisner & Co., Contractors, Bismarck, N. Dak.
 Mesker Bros. Iron Co., Hazelwood (St. Louis County) Mo.
 Metal Fabricators, Inc., Rockford, Ill.
 Miletti Construction Co., Inc., Cuyahoga Falls, Ohio
 Miller, Miller & Associates, Architects, Terre Haute, Ind.
 Monroe, Licht & Higgins, Architects & Engineers, El Paso, Tex.
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 Overly Manufacturing Co. of California, Los Angeles, Calif.
 Parish, Archie G., Architect, St. Petersburg, Fla.
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 Patterson Steel Co., Building Products Division, Tulsa, Okla.
 Paustian, John, Engineer, University of Nebraska, Lincoln, Nebr.
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 Permanent Builders, Inc., Clarksburg, W. Va.
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 Pierce and Barry Hardware Co., Inc., Memphis, Tenn.
 Place & Place, Architects, Tucson, Ariz.
 Post, Geo. B., & Sons, Architects, New York, N. Y.
 Potter, Tyler, Martin & Roth, Architects, Cincinnati, Ohio
 Pricemetal Corp., Belmont, Calif.
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 Schiller, Alfred L., Hardware, Inc., Louisville, Ky.
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 Sheridan, Chris R., & Co., Contractors, Macon, Ga.
 Simek, Frank, Construction Co., Bottineau, N. Dak.
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 Simon, James E., Co., Inc., Contractors, North Platte, Nebr.
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Vredenburg, Peter, Lumber Co., Steel Products Division, Springfield, Ill.
Vulcan-Cincinnati, Inc., Cincinnati, Ohio

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Wikelund Wholesale Co., Inc., Appleton, Wis.

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Willy Construction Co., Dubuque, Iowa
Witmer, Maurice E., Architect, Portsmouth, N. H.
Wuehrmann, Wm. G., Architect, El Paso, Tex.
Wyman, A. P., Inc., Contractors, Waterville, Maine.

U. S. GOVERNMENT

Atomic Energy Commission, Washington, D. C.
Department of the Army, Corps of Engineers, Washington, D. C.
Department of Health, Education, and Welfare, Washington, D. C.
Department of the Interior, Washington, D. C.
Post Office Department, Washington, D. C.
Department of the Treasury, Washington, D. C.
Veterans Administration, Washington, D. C.

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