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Census File Number

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997

INSTRUCTIONS

1. General – The materials, parts, and supplies listed below are those commonly consumed in the manufacture, processing, or assembly of the products listed in item 18B. Please review the entire list and report separately each item consumed. Leave blank if you do not consume the item. If you use materials, parts, and supplies which are not listed, describe and report them in the "Cost of all other materials . . ." line at the end of this section. If you consumed less than \$25,000 of a listed material, include the value with "Cost of all other materials . . .," Census material code 970099 8.

Report materials, parts, and supplies purchased or transferred from other plants of your company, or withdrawn from inventory.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

Materials received from other plants within your company should be reported at their full economic value (the value assigned by the shipping plant, plus the cost of freight and other handling charges).

If purchases or transfers do not differ significantly from the amounts actually put into production, you may report the cost of purchases or transfers. However, if consumption differs significantly from the amounts purchased or transferred, these amounts should be adjusted for changes in the materials and supplies inventories by adding the beginning inventory to the amount purchased or transferred and subtracting ending inventory.

3. Contract Work – Include as materials consumed those purchased for use by others making products for you under contract. Amounts paid to the companies doing the contract work should be reported in item 10, line e, and should include freight in and out. On the other hand, materials owned by others but used at this establishment in making products for others under contract or on commission should be excluded.

4. Resales – Cost for products bought and sold or transferred from other establishments of your company and sold without further manufacture, processing, or assembly should be reported in item 10, line b, not in item 17 below. The value of these products shipped by this establishment should be reported in item 18B under Census product code 99989 00 6, "Resales."

2. Valuation of Materials Consumed – The value of the materials, etc., consumed should be based on the delivered cost; i.e., the amount paid or payable after discounts and including freight and other direct charges incurred in acquiring the materials.

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Line No.	Materials, parts, and supplies (A)		Census material code (B)	Consumption of purchased materials and of materials received from other establishments of your company		
				Cost, including delivery cost (freight-in) (E)		
				574 Millions	Thou- sands	Dollars
1	FABRICATED METAL PRODUCTS (Except forgings)	Bolts, nuts, screws, washers, rivets, and screw machine products	345001 2	\$		
2		Metal stampings	346901 2			
3		Valves, fittings, and couplings purchased for further assembly	349005 9			
4		Other fabricated metal products	340061 1			
5	CASTINGS (Rough and semifinished)	Iron	332011 6			
6		Steel	332045 4			
7		Aluminum and aluminum-base alloy	336005 4			
8		Copper and copper-base alloy	336006 2			
9		Other nonferrous castings	336008 8			
10	FORGINGS	Iron and steel	346200 9			
11		Nonferrous forgings	346300 7			
12	Shapes and Forms (Except castings, forgings, and fabricated metal products)	STEEL	Bars, bar shapes, and plate	331007 5		
13			Sheet and strip	331022 4		
14			All other steel shapes and forms	331034 9		
15		COPPER AND COPPER-BASE ALLOY	Refinery shapes	333122 0		
16			Rod, bar, and mechanical wire (including extruded and/or drawn shapes)	335102 0		
17			Pipe and tube	335152 5		
18			All other copper and copper-base alloy shapes and forms	335192 1		

CONTINUE WITH ITEM 17 ON PAGE 6

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 – Continued						
Line No.	(A) Materials, parts, and supplies		Census material code 571 (B)	Consumption of purchased materials and of materials received from other establishments of your company		
				Cost, including delivery cost (freight-in)		
				(E)		
			574	Thou-	Dollars	
				Millions	sands	
19	Shapes and Forms (Except castings, forgings, and fabricated metal products) – Continued	Aluminum and aluminum-base alloy shapes and forms	335001 4	\$		
20		All other nonferrous shapes and forms	335099 8			
21	Scrap (excluding home scrap)		190060 4			
22	Electric motors and generators less than 1 horsepower (less than 746 watts)		362130 6			
23	Paperboard containers, boxes, and corrugated paperboard		265001 8			
24	RUBBER AND PLASTICS HOSE AND BELTING	Hydraulic and pneumatic hose (without fittings), rubber and plastics inner tube type, wire or textile reinforced	305202 4			
25		Other rubber and plastics hose and belting	305204 0			
26	Gaskets, packings, and sealing devices		305302 2			
27	Fabricated rubber products (except tires, tubes, hose, belting, and gaskets)		306902 8			
28	Fabricated plastics products (except gaskets)		308006 6			
29	Cost of all other materials and components, parts, containers, and supplies consumed <i>Describe the principal materials, etc., included in this value.</i>		970099 8			
30	TOTAL Sum of lines 1–29 should equal item 10, line a			\$		

Item 18A – Not applicable to this report

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997

INSTRUCTIONS

1. General – The manufactured products and services listed below are generally made in your industry. If you make products that are not listed, describe and report them in the "All other products made in this establishment" section at the end of item 18B. PLEASE DO NOT COMBINE PRODUCT LINES.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

2. Valuation of Products – Report the value of the products shipped and services performed at the net selling value, f.o.b. plant to the customer; i.e., after discounts and allowances, and exclusive of freight charges and excise taxes.

If you transfer products to other establishments within your company, you should assign the full economic value to the transferred products; i.e., include all direct costs of production and a reasonable proportion of all other costs and profits.

3. Contract Work – Report PRODUCTS MADE BY OTHERS FOR YOU FROM YOUR MATERIALS on the specific lines as if they were made in this establishment. On the other hand, do not report on the specific product lines PRODUCTS THAT YOU MADE FROM MATERIALS OWNED BY OTHERS. Report only the amount that you received for "commission or contract receipts" under Census product code 93000 00 8.

4. Resales – Do not report on the specific product lines those PRODUCTS BOUGHT AND SOLD OR TRANSFERRED FROM OTHER ESTABLISHMENTS OF YOUR COMPANY AND SOLD WITHOUT FURTHER MANUFACTURE. Report only a value under Census product code 99989 00 6, "Resales."

5. Detailed Data Reported Elsewhere – Items denoted by an asterisk (*) require totals for groups of products covered in the more frequent Current Industrial Reports (CIR). If you report on the CIR forms, the sum of the detailed CIR products should equal the total reported on this census form.

NOTE: Only CIR totals are requested; do not duplicate detail reported on the CIR.

6. Special Instructions for Nuclear and Industrial Valves – Actuators and parts when shipped with a valve should not be included in the value of the valve but should be reported separately on the appropriate actuators and parts lines.

If not shown, please enter your 11-digit Census File Number from the address label on page 1

Census File Number

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports		Census product code 581	Products shipped and other receipts		
				Value, f.o.b. plant (E)		
				584	Thou-	Dollars
(A)			(B)	Millions	sands	
1	Gates, Globes, Angles, Straightway (Y-Type) Checks, Stop and Check, Cross, 3- and 4-way, etc., (Including manual and power-operated, on/off valves; excluding automatic valves and water works) (34911)	Iron body (including ductile or modular, all pressures; excluding IBBM, AWWA, and UL)	34911 11 5	\$		
2		CARBON STEEL	Cast	34911 21 4		
3			Forged	34911 23 0		
4		Alloy steel and other metals	34911 34 7			
5		Brass and bronze (125 lb, w.s.p. or more)	34911 38 8			
6		Actuators (power-operated, on/off mounted) – <i>Report hydraulic and pneumatic actuators on lines 97 and 98, respectively.</i>	34911 43 8			
7		Parts	34911 52 9			
8	Valves for Water Works and Municipal Equipment (IBBW, AWWA, and UL) (34912)	IBBM gate line and tapping valves	34912 01 4			
9		UL VALVES (All pressures)	Check valves	34912 11 3		
10			All others (including pest indicators)	34912 21 2		
11		Tapping sleeves and crosses	34912 23 8			
12		Fire hydrants	34912 31 1			
13		AWWA VALVES (All pressures)	Check valves	34912 35 2		
14			Butterfly valves	34912 41 0		
15		Parts	34912 43 6			
16	BALL VALVES, ALL METALS, PRESSURES, AND TYPES (Including manual and power-operated, on/off valves but excluding automatic control valves, solenoid valves, and regulators) (34913)	Iron (including ductile)	34913 11 1			
17		Brass and bronze	34913 23 6			
18		Carbon steel (cast and fabricated)	34913 35 0			
19		Alloy steel and other metals	34913 47 5			
20		Actuators (power-operated, on/off mounted) – <i>Report hydraulic and pneumatic actuators on lines 97 and 98, respectively.</i>	34913 59 0			
21		Parts	34913 61 6			
22	Butterfly Valves, All Metals, Pressures, and Types (Including manual and power-operated, on/off valves but excluding automatic control valves and regulators and all IBBM, AWWA, and UL valves) (34914)	INDUSTRIAL TYPES (Including elastomer and fluoro-plastics, lined)	Iron (including ductile)	34914 11 9		
23			Brass and bronze	34914 13 5		
24			Carbon steel (cast and fabricated)	34914 15 0		
25			Alloy steel and other metals	34914 17 6		
26	HIGH-PRESSURE TYPES (Shut-off to full ANSI class ratings)	Iron	34914 21 8			
27		Carbon steel (cast and fabricated)	34914 23 4			
28		Alloy steel and other metals	34914 25 9			
29	Actuators (power-operated, on/off mounted) – <i>Report hydraulic and pneumatic actuators on lines 97 and 98, respectively.</i>	34914 31 7				
30	Parts	34914 61 4				

CONTINUE WITH ITEM 18B ON PAGE 8

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued							
Line No.	Products and services *Items correspond to products reported on Current Industrial Reports		Census product code 581	Products shipped and other receipts			
				Value, f.o.b. plant (E)			
				584	Thou-	Dollars	
(A)	(B)	Millions	sands				
31	PLUG VALVES, ALL METALS, PRESSURES, AND TYPES (Such as lubricated, nonlubricated, cylindrical eccentric, sleeve-lined) (Except cocks and stops including manual and power-operated, on/off valves but excluding automatic control valves, solenoid valves, and regulators) (34915)	Iron (including ductile)	34915 11 6	\$			
32		Carbon steel	34915 23 1				
33		Alloy steel or other metals	34915 35 5				
34		Actuators (power-operated, on/off mounted) – Report hydraulic and pneumatic actuators on lines 97 and 98, respectively	34915 47 0				
35		Parts	34915 61 1				
36	Industrial Valves, N.E.C. (34916)	Cocks and stops, all metals, pressures, and types	34916 11 4				
37		Diaphragm and pinch valves (including operators, all metals, pressures, and types; excluding automatic valves)	34916 23 9				
38		POP SAFETY VALVES AND RELIEF VALVES (More than 15 lb, w.s.p.)	Iron and steel	34916 31 2			
39			Brass and bronze	34916 33 8			
40		Compressed gas cylinder valves	34916 41 1				
41		Steam traps (more than 15 lb, w.s.p.)	34916 53 6				
42		Thru conduit pipeline valves	34916 65 0				
43		Actuators (power-operated, on/off mounted) – Report hydraulic and pneumatic actuators on lines 97 and 98, respectively	34916 78 3				
44		Other metal valves (excluding control valves, regulators, and solenoid valves)	34916 98 1				
45		Nuclear Valves (N-Stamp only) (34917)	GATE, GLOBE, AND CHECK VALVES	Cast-carbon steel and low alloy	34917 11 2		
46	Forged-carbon steel and low alloy			34917 13 8			
47	Corrosion-resistant alloy steel			34917 15 3			
48	Ball valves, butterfly valves, and plug valves (on/off only)		34917 27 8				
49	Actuators (power-operated, on/off mounted) – Report hydraulic and pneumatic actuators on lines 97 and 98, respectively		34917 31 0				
50	Automated control valves		34917 39 3				
51	Parts		34917 98 9				
52	Automatic valves (regulating and control type) and parts (except nuclear) (corresponds to the sum of the value of shipments figures for survey item codes 4001–4049 as reported on CIR Form MA38B, Selected Instruments and Related Products, for 1997)*		34918 00 3				
53	Solenoid-operated valves and parts (except nuclear and fluid power transfer) (corresponds to the sum of the value of shipments figures for survey item codes 4073–4079 as reported on CIR Form MA38B, Selected Instruments and Related Products, for 1997)*		34919 00 1				
54	FLUID POWER VALVES AND PARTS	Aerospace-type hydraulic fluid power valves (corresponds to the sum of item codes 1281–1289 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492A 00 7				
55		Aerospace-type pneumatic fluid power valves (corresponds to item code 1291 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492B 00 5				
56		(Continued on next page) Nonaerospace-type hydraulic directional control valves (corresponds to the sum of item codes 1201–1219 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492C 00 3				

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Census File Number

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (A)		Census product code (B)	Products shipped and other receipts		
				Value, f.o.b. plant (E)		
				584 Millions	Thousands	Dollars
57	FLUID POWER VALVES AND PARTS – Continued	Nonaerospace-type hydraulic valves, except directional control (corresponds to the sum of item codes 1221–1249 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492D 00 1	\$		
58		Nonaerospace-type pneumatic directional control valves (corresponds to the sum of item codes 1251–1269 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492E 00 8			
59		Nonaerospace-type pneumatic valves, except directional control (corresponds to the sum of item codes 1271–1279 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492F 00 6			
60		Parts for fluid power valves (corresponds to the sum of item codes 1293–1295 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492G 00 4			
61	FLUID POWER HOSE FITTINGS AND ASSEMBLIES	Aerospace-type hydraulic and pneumatic hose or tube end fittings and assemblies (corresponds to the sum of item codes 2271–2277 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492H 00 2			
62		Nonaerospace-type flared (metal) fittings, couplings for, and assemblies of tubing (including assemblies which combine tubing and hose) used in fluid power transfer systems (corresponds to the sum of item codes 2201–2209 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492J 00 9			
63		Nonaerospace-type flareless fittings and couplings (including nonmetal fittings) used in fluid power transfer systems (corresponds to the sum of item codes 2211–2221 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492K 00 7			
64		Nonaerospace-type hydraulic and pneumatic fittings and couplings for hose (corresponds to the sum of item codes 2241–2251, on CIR Form MA35N, Fluid Power Products, for 1997)*	3492M 00 3			
65		Nonaerospace-type hydraulic and pneumatic assemblies of hose (corresponds to the sum of item codes 2261 and 2263 on CIR Form MA35N, Fluid Power Products, for 1997)*	3492N 00 1			
66	PLUMBING AND HEATING VALVES AND SPECIALTIES (Except plumbers' brass goods) (34944)	Safety and relief valves	34944 21 5			
67		Check valves	34944 31 4			
68		All other plumbing and heating valves (including gates, globes, angles, 3- and 4-way drain, brass and bronze) (less than 125 lb, w.s.p)	34944 41 3			
69		Plumbing and heating valve specialties	34944 51 2			
70		Parts	34944 99 1			
71	Metal Fittings, Flanges, and Unions for Piping Systems (34945)	GRAY IRON	Fittings, flanges, and unions	34945 11 3		
72			Grooved fittings and couplings	34945 12 1		
73		MALLEABLE IRON	Fittings and flanges (including reducers, caps, etc.)	34945 13 9		
74			Grooved fittings and couplings	34945 14 7		
75			Unions and union fittings	34945 15 4		
76		DUCTILE IRON	Fittings, flanges, and unions	34945 16 2		
77			Grooved fittings and couplings	34945 17 0		
78		COPPER, BRASS, OR BRONZE (Including solder and threaded types)	Cast brass or bronze fittings, flanges, and unions	34945 18 8		
79			Wrought copper and wrought copper alloy fittings, flanges, and unions	34945 19 6		
80		(Continued on next page)	Cast carbon and alloy steel fittings, flanges, and unions	34945 21 2		

CONTINUE WITH ITEM 18B ON PAGE 10

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued											
Line No.	Products and services				Census product code	Products shipped and other receipts					
	*Items correspond to products reported on Current Industrial Reports					581	Value, f.o.b. plant (E)				
	(A)				(B)		584	Millions	Thou-sands	Dollars	
81	Metal Fittings, Flanges, and Unions for Piping Systems – (34945) – Continued	FORGED CARBON, ALLOY, AND STAINLESS STEEL	Fittings, flanges, and unions; socket-weld or threaded-type		34945 23 8	\$					
82			Flanges, butt-welding type	Carbon steel		34945 32 9					
83				Alloy steel		34945 34 5					
84				Stainless steel		34945 37 8					
85			Fittings, butt-welding type	Carbon steel		34945 42 8					
86				Alloy steel		34945 44 4					
87				Stainless steel		34945 47 7					
88			Pipe hangers and supports (not including metal framing)				34945 71 7				
89			Pipe couplings				34945 85 7				
90			All other metal fittings, flanges, and unions (including aluminum for piping systems; including metal framing and fittings for mechanical and electrical supports)				34945 99 8				
91	Hose fittings and couplings (including garden hose, beverage hose, etc.; excluding fittings and couplings used in fluid power systems) (34298)				34298 62 0						
92	Fabricated iron and steel pipe and pipe fittings made from purchased pipe (34980)				34980 13 6						
93	Industrial pumps (except hydraulic fluid power pumps, automotive circulating pumps and measuring and dispensing pumps) (corresponds to the sum of survey item codes 1098–1298 on CIR Form MA35P, Pumps and Compressors, for 1997)* (35611)				35611 00 3						
94	Nonaerospace hydraulic filters for fluid power systems (corresponds to the sum of survey item codes 3301–3309 on CIR Form MA35N, Fluid Power Products, for 1997)* (35694)				35694 00 9						
95	Nonaerospace pneumatic filters for fluid power systems (corresponds to the sum of survey item codes 3311–3323 on CIR Form MA35N, Fluid Power Products, for 1997)* (35695)				35695 00 6						
96	Aerospace-type filters for fluid power systems (hydraulic and pneumatic) (corresponds to the value of shipments figure for survey item codes 3325 and 3327 as reported on CIR Form MA35N, Fluid Power Products, for 1997)* (35696)				35696 00 4						
97	Nonaerospace hydraulic (linear and rotary) fluid power cylinders and actuators (corresponds to the sum of survey item codes 4501–4519 on CIR Form MA35N, Fluid Power Products, for 1997)* (35934)				35934 00 9						
98	Nonaerospace pneumatic (linear and rotary) fluid power cylinders and actuators (corresponds to the sum of survey item codes 4601–4619 on CIR Form MA35N, Fluid Power Products, for 1997)* (35935)				35935 00 6						
99	Parts for hydraulic and pneumatic fluid power cylinders and actuators (including accumulators, cushions, nonvehicular shock absorbers, and related items) (corresponds to the sum of survey item codes 4841–4847 and 4893 on CIR Form MA35N, Fluid Power Products, for 1997)* (35939)				35939 00 8						
100	FLUID POWER PUMPS, MOTORS, AND HYDRO-STATIC TRANSMISSION COMPONENTS	Nonaerospace pumps, reciprocating types (corresponds to the sum of survey item codes 5504–5517 on CIR Form MA35N, Fluid Power Products, for 1997)* (35943)		35943 00 0							
101		Nonaerospace pumps, rotary and other types (corresponds to the sum of item codes 5534–5538 on CIR Form MA35N, Fluid Power Products, for 1997)* (35944)		35944 00 8							
102		Nonaerospace motors (corresponds to the sum of survey item codes 5545–5571 on CIR Form MA35N, Fluid Power Products, for 1997)* (35945)		35945 00 5							
103		Aerospace pumps and motors (corresponds to the sum of survey item codes 5581–5589 on CIR Form MA35N, Fluid Power Products, for 1997)* (35946)		35946 00 3							
104		Parts for pumps and motors (corresponds to the sum of survey item codes 5591–5597 on CIR Form MA35N, Fluid Power Products, for 1997)* (35949)		35949 00 7							
105	Flexible metal hose and tubing, stainless steel (35994)				35994 15 1						
106	General-purpose relays and industrial controls (corresponds to the sum of survey item codes 6402–6509 on CIR Form MA36A, Switchgear, Switchboard Apparatus, Relays, and Industrial Controls, for 1997)* (36253)				36253 00 3						
107	Controls for monitoring residential and commercial environments and appliance regulating controls and parts (corresponds to the sum of survey item codes 4570–4609 on CIR Form MA38B, Selected Instruments and Related Products, for 1997)* (38220)				38220 00 0						
108	Process control instruments and parts (corresponds to the sum of survey item codes 4612–4897 as reported on CIR Form MA38B, Selected Instruments and Related Products, for 1997)* (38230)				38230 00 9						

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Census File Number

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued

Line No.	Products and services (A)	Census product code (B)	Products shipped and other receipts		
			Value, f.o.b. plant (E)		
			584 Millions	Thou- sands	Dollars
109	ALL OTHER PRODUCTS MADE IN THIS ESTABLISHMENT <i>Describe and report separately each product with a sales value of \$50,000 or more which cannot be assigned to one of the lines above. For all remaining products, write "Other" and report a single total value.</i>	18			
110		26			
111		34			
112		42			
113		59			
114		67			
115		CONTRACT WORK Receipts for work done for others on their own materials <i>Describe below products worked on and kind of work.</i>	93000 00 8		
116	MISCELLANEOUS RECEIPTS Sales of scrap and refuse	99980 13 8			
117	Receipts for repair work	99980 61 7			
118	Other miscellaneous receipts	99980 98 9			
119	RESALES Sales of products bought and sold without further manufacture, processing, or assembly in this establishment. The cost of such items should be reported in item 10, line b.	99989 00 6			
120	TOTAL value of shipments and other receipts Sum of lines 1–119, column (E)	77000 00 8	\$		

Items 19–21 – Not applicable to this report

REMARKS – Please use this space for any explanations that may be essential in understanding your reported data.

Item 22. CERTIFICATION – This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report (<i>Print or type</i>)		Telephone	Area code	Number	Extension	
667	1	2				
Name of company			Address (<i>Number and street, city, State, ZIP Code</i>)			
Period covered	FROM: Month	Day	Year	TO: Month	Day	Year
	666	1		2		
Signature of authorized person			Title		Date	