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Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.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

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.

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 you 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 consignment should be excluded.

4. Resale – 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."

5. Produced and Consumed – Forgings, foundries, and screw machine products – Report the quantities produced and used in manufacturing other products made in this establishment in item 19. Note that the materials used to produce these items should be reported in item 17.

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Line No.	Materials, parts, and supplies		Census material code	Consumption of purchased materials and of materials received from other establishments of your company		
				Cost, including delivery cost (freight-in)		
				(E)		
	(A)	(B)	574	Thou-	Dollars	
			Millions	sands		
1	FABRICATED METAL PRODUCTS (Except forgings)	Bolts, nuts, screws, washers, rivets, and other screw machine products	345001 2	\$		
2		Other fabricated metal products	340099 1			
3		Forgings	346000 3			
4	CASTINGS (Rough and semifinished)	Iron and steel	332001 7			
5		Aluminum and aluminum-base alloy	336005 4			
6		Other nonferrous	336003 9			
7	Shapes and Forms (Except castings, forgings, and fabricated metal products)	STEEL	Bars, bar shapes, and plates	331007 5		
8			Sheet and strip	331022 4		
9			Structural shapes and sheet piling	331023 2		
10			All other steel shapes and forms	331091 9		
11		COPPER AND COPPER- BASE ALLOY	Rod, bar, and mechanical wire (including extruded and/or drawn shapes)	335102 0		
12			All other copper and copper-base alloy, except rod, bar, and mechanical wire	335160 8		
13		ALUMINUM AND ALUMINUM- BASE ALLOY	Sheet, plate, foil, and welded tubing	335301 8		
14			All other aluminum and aluminum-base alloy, except sheet, plate, foil, and welded tubing	335011 3		
15			Other nonferrous shapes and forms	335099 8		
16			Cutting tools for machine tools	354501 9		

CONTINUE WITH ITEM 17 ON PAGE 6

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 – Continued

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
17	Fluid power products including pumps, motors, valves, cylinders, rotary actuators, hose or tube fittings and assemblies, filters, etc. (hydraulic and pneumatic)	190090 1	\$		
18	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			
19	TOTAL Sum of lines 1–18 should equal item 10, line a		\$		

Item 18A. SELECTED METALWORKING AND RELATED OPERATIONS PERFORMED IN THIS ESTABLISHMENT DURING 1997

Census code	Mark (X) appropriate box	
	Yes	No
591 208	592 1 <input type="checkbox"/>	2 <input type="checkbox"/>

Were any of the operations listed below performed in this establishment in 1997?

If "Yes," indicate in column (C) by marking appropriately, which of the specified operations were performed in this establishment during 1997. Where "Yes" is marked, show in column (D) the approximate number of production workers on all shifts usually engaged in the specified operation.

Line No.	Operation (A)	Census Code (B)	Was this operation performed in this establishment during 1997? (C)		Number of production workers (on all shifts) usually employed when operated (estimate if necessary) (D)
			592 Yes	No	
			593		
1	Electroplating and other plating	018	1 <input type="checkbox"/>	<input type="checkbox"/>	
2	Galvanizing and other hot dip coating	026	1 <input type="checkbox"/>	<input type="checkbox"/>	
3	Heat treating of metals for production purposes	034	1 <input type="checkbox"/>	<input type="checkbox"/>	
4	Precision turned products (on screw machines, turning centers, and CNC equipment)	042	1 <input type="checkbox"/>	<input type="checkbox"/>	
5	Machine shop	059	1 <input type="checkbox"/>	<input type="checkbox"/>	
6	Tool and die shop (if separate from machine shop) for jigs, fixtures, dies, and other special tooling)	067	1 <input type="checkbox"/>	<input type="checkbox"/>	
7	Pattern shop (foundry patterns only – metal, wood, etc.)	075	1 <input type="checkbox"/>	<input type="checkbox"/>	
8	Sheet metal work, aluminum or steel	083	1 <input type="checkbox"/>	<input type="checkbox"/>	
9	Stamping and blanking of metals	091	1 <input type="checkbox"/>	<input type="checkbox"/>	
10	Painting, lacquering, and enameling on metals	109	1 <input type="checkbox"/>	<input type="checkbox"/>	
11	Welding of steel plate for manufacturing production	117	1 <input type="checkbox"/>	<input type="checkbox"/>	
12	Welding repair shop	125	1 <input type="checkbox"/>	<input type="checkbox"/>	

CONTINUE WITH ITEM 18B ON PAGE 7

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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. 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."
4. Special Instructions –
 - a. Contract work requested on line 39 covers manufacturing activities performed only on materials owned by others and excludes any machine shop job work or job order repairs.
 - b. If another company makes products for you from your materials on a contract basis, report the value of these products on lines 1–38 but not on line 39.
 - c. Receipts for repair work requested on line 40 covers occasional repairs not done on a factory basis and excludes any machine shop job order repairs.

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
1	RECEIPTS FOR MACHINE SHOP JOB WORK AND JOB ORDER REPAIRS	RECEIPTS FOR MACHINE SHOP JOB WORK AND JOB ORDER REPAIRS, including the activities and operations that follow: <ul style="list-style-type: none"> • Producing machinery parts, all types • Repairing machinery parts, all types • Machining of castings, crankshafts, camshafts, etc. (except deburring, see line 3) • Grinding, boring, milling, and other machining activities (except sharpening services, see line 10) • Repairing of machinery on a factory basis 	35995 00 0	\$		
2	Rebuilding of machinery on a factory basis – <i>Specify kind</i>		35990 98 5			
3	METAL SERVICES, NOT ELSEWHERE CLASSIFIED	Electroplating, plating, polishing, anodizing, coloring, cleaning, deburring, and related services	34710 00 4			
4		Coating, engraving, etching, painting, enameling, lacquering, varnishing, galvanizing, and allied services	34790 00 6			
5		Photochemical etching (including machining, excluding metal nameplates)	34790 11 3			
6		Heat treating of metal (heat treating, pickling, annealing, brazing, shot peening, tempering, etc.)	33980 00 4			
7		Welding repair shop (welding service)	97692 00 8			
8		Steel service centers (including steel slitting on a customer basis)	95051 00 9			
9		Steel slitting on a contract basis	97389 01 9			
10	Sharpening services		97699 00 3			
11	Weldments and fabricated steel plate		34432 99 7			
12	Sheet metal work		34440 00 8			
13	JOB STAMPINGS FOR THE TRADE	Automotive	34650 00 2			
14		All other job stampings	34692 00 4			
15	Precision turned products and turned parts (Nonstandard items made from rod, bar, or tube stock on screw machine turning centers and CNC equipment)		34510 00 8			
16	Bolts, nuts, screws, rivets, and washers		34520 00 7			

CONTINUE WITH ITEM 18B ON PAGE 8

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)			
				581	584	Millions	Thou- sands	Dollars
17	INDUSTRIAL PATTERNS, EXCEPT SHOE PATTERNS	Foundry patterns		35430 11 5	\$			
18		All other industrial patterns, except shoe patterns		35430 98 2				
19	Special dies, tools, die sets, jigs, and fixtures			35441 00 5				
20	Industrial models and prototypes – <i>Specify kind</i>			35441 83 1				
21	Industrial molds and mold boxes			35442 00 3				
22	Machine tool accessories (including small cutting tools for machine tools and metal working machinery, attachments, accessories, and precision measuring tools)			35450 00 6				
23	Industrial machinery plastics products, except foam			30893 00 2				
24	Miscellaneous Machinery Products (Including flexible metal hose and tubing, metal bellows, etc.) (35994)	FLEXIBLE METAL HOSE AND TUBING	Copper and copper-base alloy	35994 11 0				
25			Aluminum and aluminum-base alloy	35994 13 6				
26			Stainless steel	35994 15 1				
27			Other	35994 16 9				
28		Metal bellows		35994 25 0				
29		Carnival and amusement park equipment (ferris wheels, merry-go-rounds, etc.), excluding coin-operated amusement machines		35994 31 8				
30		All other miscellaneous machinery products; weather vanes; swage blocks; leak detectors; ship and boat propellers, machined; etc.) – <i>Specify kind</i>		35994 98 7				
31	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				
32				26				
33				34				
34				42				
35				59				
36				67				
37				75				
38			83					
39	CONTRACT WORK (Excluding receipts for machine shop job work reported on line 1)	Receipts for work done for others on their own materials (exclude receipts for machine shop job work reported on line 1) Describe below products worked on and kind of work.			93000 00 8			

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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
40	MISCELLANEOUS RECEIPTS	Receipts for repair work. Report only receipts from occasional repairs not done on a factory basis (exclude receipts for machine shop job order repairs reported on line 1)	99980 61 7	\$		
41		Sale of scrap and refuse	99980 13 8			
42		Receipts for installation or construction of products of this establishment	99980 31 0			
43		Receipts for research and development work	99980 41 9			
44		Other miscellaneous receipts	99980 98 9			
45	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			
46	TOTAL value of shipments and other receipts Sum of lines 1-45, column (E)		77000 00 8	\$		

Item 19. SELECTED PRODUCTS PRODUCED IN THIS ESTABLISHMENT AND USED IN MANUFACTURING OTHER PRODUCTS MADE IN THIS ESTABLISHMENT

INSTRUCTIONS

- Report below the quantity of each listed item produced in this establishment and used in manufacturing other products made in this establishment.
- Purchases or receipts of the items specified below should be reported only in item 17.
- Materials used to produce the items specified below should be reported in item 17.
- Quantities produced for sale as such and not for incorporation in other products should be reported in item 18B.
- Report quantities in the unit of measure specified in column (D).

Line No.	Item (A)		Census code (B)	Was this operation performed at this establishment during 1997?		Unit of measure for quantities (D)	Quantities produced in this establishment and used in manufacturing other products made in this establishment (E)
				(C)			
				591 Yes	No		
1	Ferrous foundries		1001 7	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Short tons	
2	NONFERROUS FOUNDRIES (Except die-casting)	Aluminum	1002 5	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Thousand pounds	
3		Copper	1003 3	1 <input type="checkbox"/>	2 <input type="checkbox"/>		
4		Zinc	1004 1	1 <input type="checkbox"/>	2 <input type="checkbox"/>		
5		Other	1005 8	1 <input type="checkbox"/>	2 <input type="checkbox"/>		
6	Nonferrous die-casting foundries		1006 6	1 <input type="checkbox"/>	2 <input type="checkbox"/>		
7	Precision turned products (on screw machines, turning centers, and CNC equipment)		1007 4	1 <input type="checkbox"/>	2 <input type="checkbox"/>		

CONTINUE WITH ITEM 22 ON PAGE 10

Items 20 and 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	