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Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.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

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.

6. Lines 6-8 – Scrap generated in other establishments of your company and transferred to this establishment should be reported as scrap purchased from outside sources. Exclude home scrap.

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	SHAPES AND FORMS (Except castings, forgings, and fabricated metal products)	Copper and copper-base alloy	330060 5	\$		
2		Aluminum and aluminum-base alloy	333402 6			
3		Zinc and zinc-base alloy	333978 5			
4		Magnesium and magnesium-base alloy	333973 6			
5		All other nonferrous shapes and forms	335097 2			
6	NONFERROUS SCRAP (Excluding home scrap)	Copper and copper-base alloy	190024 0			
7		Aluminum and aluminum-base alloy	190040 6			
8		All other nonferrous scrap	190080 2			
9	INDUSTRIAL AND COMMERCIAL MACHINERY AND COMPUTER EQUIPMENT	Industrial patterns	354301 4			
10		Industrial dies, molds, jigs, and fixtures	354401 2			
11		All other industrial and commercial machinery and computer equipment	350010 5			
12	Sand		144603 8			
13	Grinding wheels and other abrasive products (except industrial diamonds)		329101 0			

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Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 - Continued					
Line No.	Materials, parts, and supplies (A)	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 Millions	Thou- sands	Dollars
14	Cost of all other materials and components, parts, containers, and supplies consumed <i>Describe the three principal materials, etc., included in this value.</i>	970099 8	\$		
15	TOTAL Sum of lines 1-14 should equal item 10, line a		\$		

Item 18A - Not applicable to this report

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

INSTRUCTIONS

- 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.
 - 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.
 - Quantities - Lines 1-39 - Report the weight of castings before machining. The removal of gates, risers, sprues, and tumbling, dipping or sandblasting do not constitute machining. The quantity and value of the machined castings or the finished products in which the castings are incorporated should be entered in columns (D) and (E) on lines 46-54.
 - Products Shipped and Other Receipts - Report the quantity and value of each product made and physically shipped during 1997 from this establishment; include products shipped to other plants, sales branches, retail stores, or warehouses of your company and on consignment. Deduct returned goods. Also report the value of services performed at this establishment.
 - 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."
 - Contract Work
 - Products made by others for you from your materials - Report such products on the specific lines of this section as if they were made in this establishment.
 - Products that you made from materials owned by others - Report the amount that you received for "commission or contract receipts" on line 55, Census product code 93000 00 8. Do not report on the specific product lines for these products.
 - Toll Operations - Tolling must be performed for the customers outside your own company. If the work is done for other establishments within your company, the value of the materials consumed in the tolling operation should be reported in your cost of materials data and processed value of the product should be reported as a product shipment and a corresponding interplant transfers.
- Line 36 - Report heat and corrosion resistant steel castings containing 8 percent or more of chromium or nickel, or both, with or without molybdenum or other elements.

Line No.	Products and services (A)	Census product code 581 (B)	Unit of measure for quantities (C)	Products shipped and other receipts		
				Quantity 583 (D)	Value, f.o.b. plant (E)	
					584 Millions	Thou- sands
1	Aluminum and aluminum-base alloy die-castings	33630 00 5	↑ Thousand pounds ↓	\$		
2	NONFERROUS DIE-CASTINGS (Except aluminum) (33640) Copper and copper-base alloys (including bearings and bushings)	33640 11 1				
3	Zinc and zinc-base alloys	33640 21 0				
4	Magnesium and magnesium-base alloys	33640 31 9				
5	Lead and lead-base alloys	33640 41 8				
6	Other nonferrous metal die-castings - <i>Specify metal</i>	33640 51 7				

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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)	Unit of measure for quantities (C)	Products shipped and other receipts				
					Quantity (D)	Value, f.o.b. plant (E)			
						Millions	Thou- sands	Dollars	
7	Aluminum and Aluminum-Base Alloy Castings (Excluding die-castings) (33650)	ALUMINUM AND ALUMINUM-BASE ALLOY CASTINGS (Except cast aluminum cooking utensils)	Sand	33650 11 0	↑ Thousand pounds ↓		\$		
8		Permanent and semipermanent mold	33650 31 8						
9		Investment	33650 51 6						
10		Other	33650 61 5						
11		Nonelectric cast aluminum pressure cookers, household-type and nonelectric cast aluminum cooking utensils	33650 73 0						
12	Copper and Copper-Base Alloy Castings (Excluding die-castings) (33660)	COPPER AND COPPER-BASE ALLOY CASTINGS (Except bearings and bushings)	Sand Castings	Alloy (C84400)	33660 20 0				
13			Leaded red and semi-red brasses (C83100-C84000 except C84400)	33660 21 8					
14			Tin bronzes (including leaded and high-leaded) (C90100-C94500)	33660 22 6					
15			Copper and high-copper alloys (C80100-C82900)	33660 24 2					
16			Engineered alloys including - Manganese bronzes (C86100-C86900) Silicon bronzes and brasses (C87100-C87900) Aluminum bronzes (C95100-C95900) Copper nickels (C96100-C96900)	33660 25 9					
17	(Continued on next page)	(Continued on next page)	Other alloys, including - Yellow and leaded yellow brasses (C85100-C85900) Nickel tin bronzes (C94600-C94900) Nickel silvers (C97100-C97900) Lead bronzes (C98100-C98900) Special alloys (C99100-C99900)	33660 26 7					

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

Line No.	Products and services			Census product code 581	Unit of measure for quantities (C)	Products shipped and other receipts			
						Quantity 583	Value, f.o.b. plant (E)		
							584	Thou-	Dollars
(A)	(B)	(C)	(D)	Millions	sands				
18	Copper and Copper-Base Alloy Castings (Excluding die-castings) (33660) – Continued	COPPER AND COPPER-BASE ALLOY CASTINGS (Except bearings and bushings) – Continued	Permanent and semipermanent mold	33660 31 7			\$		
19			Centrifugal	33660 41 6					
20			Investment	33660 51 5					
21			Other	33660 61 4					
22			Copper-base alloy bearings and bushings, nonmachined		33660 72 1				
23	Other Nonferrous Castings N.E.C. (Excluding die-castings) (33690)	Zinc and zinc-base alloy		33690 11 6					
24		MAGNESIUM AND MAGNESIUM BASE ALLOY	Sand	33690 15 7					
25			Other (including permanent and semi-permanent mold and cast anodes)	33690 23 1					
26			Nickel and nickel-base alloy		33690 85 0				
27			Other nonferrous metal castings – <i>Specify kind of metal</i>		33690 99 1				
28	STEEL INVESTMENT CASTINGS (33240)	Carbon (including low alloy)		33240 63 1					
29		Alloy (excluding stainless)		33240 64 9					
30		Stainless steel		33240 66 4					
31		Hi-temp metal castings (iron, nickel, or cobalt-base alloys)		33240 67 2	Pounds				
32	OTHER CARBON STEEL CASTINGS, EXCEPT INVESTMENT (33252)	Cast steel railroad car wheels and railway specialties		33252 11 5					
33		Rolls for rolling mills		33252 15 6					
34		Other carbon steel castings		33252 19 8					
35	HIGH ALLOY STEEL CASTINGS, EXCEPT INVESTMENT (33254)	High manganese steel castings		33254 21 0	Short tons				
36		Other high alloy steel castings		33254 31 9					
37	OTHER ALLOY STEEL CASTINGS, EXCEPT INVESTMENT (33255)	Railway specialties		33255 51 4	Short tons				
38		Rolls for rolling mills		33255 55 5					
39		All other alloy steel castings		33255 59 7					
40	Industrial Molds Billed to Customers Separately (35442) (Include only those molds whose cost was borne directly by the company for whom the mold was made, whether delivered to that company or kept in your own plant) (Do not report elsewhere in item 18B the value of molds reported here)	MOLDS FOR METAL OR METAL CARBIDES (Except ingot molds)	Die-casting Dies	For low pressure casting	35442 03 7				
41					For high pressure casting	35442 05 2			
42			Permanent molds (for gravity casting)		35442 07 8				
43			Other types – <i>Specify</i>		35442 09 4				
44			Molds for wax		35442 14 4				

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

Line No.	Products and services (A)	Census product code 581 (B)	Unit of measure for quantities (C)	Products shipped and other receipts			
				Quantity 583 (D)	Value, f.o.b. plant (E)		
					584 Millions	Thou- sands	Dollars
45	Foundry patterns (billed to customers separately) (Include only those patterns whose cost was borne directly by the company for whom the pattern was made, whether delivered to that company or kept in your own plant)	35430 11 5			\$		
46	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. Specify unit of measure for quantity. For all remaining products, write "Other" and report a single total value.</i>	18					
47		26					
48		34					
49		42					
50		59					
51		67					
52		75					
53		83					
54		91					
55	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					
56	MISCELLANEOUS RECEIPTS Sales of scrap and refuse	99980 13 8					
57	Receipts for repair work	99980 61 7					
58	Other miscellaneous receipts	99980 98 9					
59	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					
60	TOTAL value of shipments and other receipts Sum of lines 1-59, column (E)	77000 00 8			\$		

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

INSTRUCTIONS

- 1. Report below the quantity of each listed item produced in this establishment and used in manufacturing other products made in this establishment.
- 2. Purchases or receipts of the items specified below should be reported only in item 17.
- 3. Materials used to produce the items specified below should be reported in item 17.
- 4. Quantities produced for sale as such and not for incorporation in other products should be reported in item 18B.
- 5. 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? (C)		Unit of measure for quantities (D)	Quantities produced in this establishment and used in manufacturing other products made in this establishment (E)
			592			
			591	593		
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"/>		

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	