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UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 U.S. GEOLOGICAL SURVEY  
 986 NATIONAL CENTER  
 RESTON, VIRGINIA 20192

INDIVIDUAL COMPANY  
 DATA - PROPRIETARY

The data furnished in this report will be treated in confidence by the Department of the Interior, except that they may be disclosed to Federal defense agencies, or to the Congress upon official request for appropriate purposes.

**NICKEL**  
**Stocks, Purchases, and Consumption**

\_\_\_\_\_  
 (Please correct if name or address has changed.)

**FACSIMILE NUMBER**  
**1-800-543-0661**

Public reporting burden for this voluntary collection of information is estimated to average 30 MINUTES per response. A Federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Comments regarding this collection of information should be directed to: U.S. Geological Survey, Statistics and Information Systems Section, 988 National Center, Reston, VA 20192. **Please do not mail canvass forms to this address.**

Collection of nonfuel minerals information is authorized by Public Law 96-479 and the Defense Production Act. This information is used to support executive policy decisions pertaining to emergency preparedness, national defense, and analyses for minerals legislation and industrial trends. The USGS relies on your voluntary and timely response to assure that its information is complete and accurate. If you have any questions concerning completion of this form, please contact the Mineral Commodities Data Unit, U.S. Geological Survey, 985 National Center, Reston, VA 20192, Telephone (703) 648-7960.

**LOCATION OF PLANT**

City or town \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_

**SECTION 1. Stocks, purchases and disposition of commercial forms of nickel and purchased nickel scrap (contained nickel).**

Forms/Scrap (1)	Code	Report basis (2)	Physical inventory adjustment only (3)	Beginning stocks (4)	Purchases (5)	Consumption (6)	Sales of material in form received (7)	Ending stocks (8)
Commercially pure metal: Cathode or pellets.....	101	POUNDS OF CONTAINED NICKEL						
Briquets and powder.....	102							
Ferronickel.....	104							
Nickel oxide.....	105							
Nickel sulfate and other nickel salts.....	106							
Nickel-base master alloys (please specify)								
_____								
_____								
Other forms (please specify)								
_____								
_____								
Purchased nickel scrap: Prompt Industrial (new)..	120							
Obsolete (old).....	121							
Unspecified.....	122							

OVER

**SECTION 2. Consumption of commercial forms of nickel and purchased nickel scrap by use.**

Use (1)	Code	QUANTITY CONSUMED (Pounds of contained nickel)						
		Commercially pure (Unwrought)		Ferronickel (4)	Nickel oxide (5)	Nickel sulfate and other nickel salts (6)	Master alloys and all other forms (7)	Purchased nickel scrap (8)
		Cathode or pellets (2)	Briquets and powder (3)					
Stainless and heat resisting: Wrought (include continuous cast slabs)...	301							
Cast.....	302							
Alloy steels (exclude stainless and heat resisting): Wrought (include continuous cast slabs)...	304							
Cast.....	305							
Superalloys: Wrought.....	307							
Cast.....	308							
Copper-nickel alloys: Wrought.....	310							
Cast.....	311							
Other nickel and nickel alloys: Wrought.....	313							
Cast.....	314							
Electrical, magnetic and expansion alloys.....	316							
Cast irons.....	317							
Electroplating.....	318							
Chemicals and chemical uses.....	319							
Catalysts.....	320							
Batteries.....	321							
Coinage.....	322							
Other (please specify)								
_____								
_____								
_____								
<b>TOTAL.....</b>	<b>399</b>							

Remarks:

Name of person to be contacted regarding this report			Tel. area code		No.		Ext.				
Address		No.		Street		City		State		ZIP Code	

May tabulations be published which could indirectly reveal the data reported above?  (1) Yes  (2) No

Signature			Title			Date		
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## GENERAL INSTRUCTIONS

Please return this form in the enclosed envelope or fax to the toll-free number on the first page of this form **BY THE 15TH OF THE MONTH** following the reporting period. Complete a separate form for each establishment that was active during the reporting period. In completing this form, reasonable estimates should be used wherever exact data are not available. Use zero (0) when appropriate. Do not report decimals or fractions. Round to the nearest whole number. If you have nothing to report, please complete "Location of Plant", sign, and return the form. Please do not make entries in shaded areas. Please use the space for "Remarks" to provide any specific information that will help us in the use or interpretation of the data. Any statement on the effect of changes in economic conditions upon the reporting establishment will be useful. In describing products or materials, do not use brand or trade names. Additional forms are available upon request.

If you have any questions concerning completion of this form, please contact the Mineral Commodities Data Unit, U.S. Geological Survey, 985 National Center, Reston, VA 20192, Telephone (703) 648-7960.

## SPECIFIC INSTRUCTIONS

### SECTION 1. Stocks, purchases, and disposition of commercial forms of nickel and purchased nickel scrap.

#### Column 1. Forms/Scrap.

Commercially pure (unwrought nickel) - Cathode or pellets - high purity (more than 99%) nickel in anodes, cathode squares or sheets, pigs, ingots, rondelles, rounds, pellets, and shot. Briquets and powder - forms produced directly from ores and concentrates.

Ferronickel - an intermediate alloy consisting of iron and nickel, usually containing 25 to 50 percent nickel by weight.

Nickel oxide - include oxide sinter, and chemical grade oxide.

Nickel sulfate and other nickel salts - the quantity of nickel contained in nickel salts such as nickel sulfate, chloride, carbonates, ammonium sulfate, formate, nitrate, etc.

Nickel-base master alloys - the quantity of nickel contained in master alloy additives such as nickel-columbium, nickel-lanthanum, nickel-magnesium, and nickel-vanadium.

Other forms - include utility grade nickel and nickel alloy additives such as "F" nickel shot, NMA#1, and NMSA#2. Do not include remelt stock or alloy additives made from scrap.

Purchased scrap - exclude revert or home scrap. Exclude stainless and alloy steel scrap (see AISI specifications).

#### Column 2. Report basis.

Report all quantities as pounds of contained nickel, not gross weight of commercial form. Estimate nickel content, if unknown.

#### Column 3. Physical inventory adjustment only.

Report adjustments necessary to correct ending inventory shown for the preceding reporting period. If adjustment is significant, explain under "Remarks". Show negative figure in parentheses.

#### Column 4. Beginning stocks.

Report all nickel (COLUMN 1) owned by the establishment at the beginning of the reporting period, regardless of its location within the United States. Include nickel in process, on consignment to others, and, if owned by you, in transit to you within the United States. Exclude material sold but awaiting shipment, and material on consignment to you from others.

***Entries in COLUMN 4 plus or minus inventory adjustment (COLUMN 3) should equal ending stocks (COLUMN 8) on preceding report.***

#### Column 5. Purchases.

Report nickel (COLUMN 1) purchased by the reporting establishment; include materials coming from other companies and those transferred from other establishments of your company. If purchased from foreign sources, include only the quantity which arrived in the United States during the reporting period.

#### Column 6. Consumption.

Report the quantity of nickel (COLUMN 1) consumed in the reporting establishment during the reporting period.

#### Column 7. Sales of material in form received.

Enter the quantity of nickel (COLUMN 1) sold during the reporting period without change by the reporting establishment. Include materials going to other domestic or foreign companies and those transferred to other establishments of your company.

OVER

**Column 8.****Ending stocks.**

Report all nickel (COLUMN 1) owned by the reporting establishment at the end of the reporting period, regardless of its location within the United States. Include nickel in process, on consignment to others, and, if owned by you, in transit to you within the United States. Exclude material sold but awaiting shipment, and material on consignment to you from others.

***For each line, the entry in COLUMN 8 should equal: COLUMN 4 plus COLUMN 5 minus COLUMN 6 minus COLUMN 7. (COLUMNS 4 + 5 - 6 - 7 = 8).***

**SECTION 2.****Consumption of commercial forms of nickel and purchased nickel scrap, by use.**

Report all quantities as pounds of contained nickel, not gross weight of commercial form.

For each use (COLUMN 1), report in the appropriate COLUMN the quantity consumed. The total of each COLUMN should equal the quantity of the same form of nickel as consumed in COLUMN 6 of SECTION 1.

**Column 1.****Use.**

***Stainless and heat resisting steels*** - Follow American Iron and Steel Institute (AISI) and Alloy Casting Institute (ACI) definitions for corrosion and heat resisting steels. Examples include the austenitic stainless steels, such as 301, 304, and 316, and other nickel-bearing ferritic, martensitic, and duplex stainless steels. Nickel content is usually less than or equal to 22%. Also include iron base superalloys (over 50% Fe), such as V-57, W-545, A-286, AM-350, AM-355, and Discalloy.

***Alloys steels (excluding stainless and heat resisting)*** - Include nickel steels such as SAE 4300, 8600, etc. series, low alloy-high strength maraging, tool steels, cast alloy steel, steel rolls, and valve steels.

***Superalloys*** - Alloys that have been developed for very high temperature service where relatively high stresses (tensile, thermal, vibratory, and shock) are encountered and where oxidation resistance is frequently required. Included are nickel and cobalt base superalloys, usually containing significant percentages of chromium. Examples include but are not limited to: TAZ-alloys; TRW-alloys; IN-series; RA 333; INCONEL 617, 625, 706, 713, 718, X-750, X-751; WASPALOY; Rene Alloys; C-263; NIMONIC alloys; M-252; Udimet alloys; CG-27; INCOLOY 901, 903, 907, 909; D-979; HASTELLOY W, S, and X; MP35N; N-155; Haynes Alloy No. 188; L-605; WF-31; W-545; MAR-M alloys; AiResist alloys; and FSX alloys.

***Copper-nickel alloys*** - Includes alloys such as brasses, bronzes, nickel-silver, and other copper-nickel alloys.

***Other nickel and nickel alloys*** - Include nickel base corrosion and heat resistant alloys where relatively low stresses (tensile, thermal, vibratory, and shock) are encountered. These include alloys not contained in the superalloy category. Examples are: Pure nickel (200); MONEL series (e.g. 400, 405, K500); INCONEL 600, 601, 690; HASTELLOY N; C-type, G-type, and B-type; Ilium alloys; Ni-chromes; INCOLOY 800 series, 825; RA 330; 20 Cb-3; ARMCO 20-45-5; SANDVIK SANICRO 30,;904L; JS700; and AL-6X.

***Electrical, magnetic, and expansion alloys*** - alloys that provide special electrical resistance, high magnetic permeability (permanent and soft magnets) or controlled expansion characteristics. These materials are used in industrial and consumer electrical equipment, electronics, semi-conductors, computers and other applications. Examples of alloys in this category are: Composition of iron-nickel, iron-nickel-aluminum, iron-nickel-cobalt, nickel-chromium, nickel-iron-chromium, copper-nickel-cobalt, copper-nickel-iron and manganese-copper with or without addition of Mo, Al, Cu, Cr, Ti, Mn, Cb, Si or V. Some trade names are: Rodar, Kovar, Invar, Permalloy, Alnico, Cunico, Mu Metal, 80-20, 36, 42, 72, etc.

***Cast irons*** - Include gray, malleable, and ductile iron, Ni-Resist and Ni-Hard castings and cast iron rolls.

***Electroplating*** - self-explanatory.

***Chemicals and chemical uses*** - Include nickel used as catalysts, in producing chemicals, in coloring glass, in making ground coat frit, and other chemical and ceramic uses.

***Catalyst*** - self-explanatory.

***Batteries*** - self-explanatory.

***Coinage*** - strips and blanks.

***Other uses*** - may include powder metal products, and other uses or products not listed above.