

Mineral Industry Surveys

For information, contact:

E. Lee Bray, Aluminum Commodity Specialist
 National Minerals Information Center
 U.S. Geological Survey
 989 National Center
 Reston, VA 20192
 Telephone: (703) 648-4979, Fax: (703) 648-7757
 Email: lbray@usgs.gov

Susan M. Weaver (Data)
 Telephone: (703) 648-7979
 Fax: (703) 648-7995
 Email: sweaver@usgs.gov

Internet: <http://minerals.usgs.gov/minerals/>

ALUMINUM IN MARCH 2018

Domestic primary aluminum production in March 2018 was 71,000 metric tons (t). The average daily production in March was 2,290 t, 5% more than that in February 2018, 13% more than that in March 2017, but 8% less than that in March 2016 (fig. 1, table 1).

Total aluminum recovered from scrap in March 2018 was 304,000 t, 6% more than the revised amount in February 2018, but 5% less than the revised amount in March 2017, and slightly more than the amount in March 2016. Of this, 175,000 t of aluminum was recovered from new scrap and 129,000 t was recovered from old scrap (fig. 1, table 1).

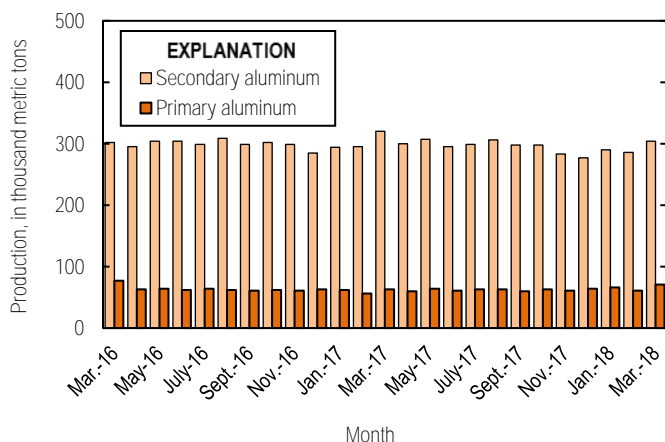


Figure 1. Monthly domestic primary and secondary aluminum production from March 2016 through March 2018. Source: U.S. Geological Survey.

Prices and Stocks

The March 2018 average U.S. market price of primary aluminum ingot increased slightly but the average cash price on the London Metal Exchange (LME) decreased by 5% from those in February 2018 to \$1.129 per pound and \$0.942 per pound, respectively (fig. 2, table 6).

Inventories of primary aluminum in LME-approved warehouses in the United States decreased to 59,450 t at the end of March 2018 from 61,500 t at the end of February 2018 (London Metal Exchange Ltd., 2018a, b).

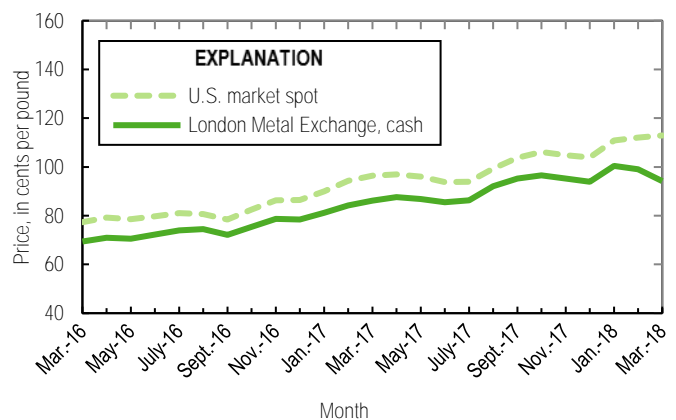


Figure 2. Average monthly prices for primary aluminum from March 2016 through March 2018. Source: Platts Metals Week.

U.S. Trade

Total imports for consumption of aluminum in the first quarter of 2018 (table 8) were unchanged from those in the same period in 2017. Imports of crude metal and alloys, and scrap decreased by 5% and 11%, respectively, but imports of semifabricated products increased by 30%. Canada continued to be the leading source of imported aluminum materials, supplying 41% of all aluminum imports during the first 3 months of 2018, followed by Russia (11%), the United Arab Emirates (10%), and China (8%). Canada accounted for 47% of crude metal, 18% of semifabricated products, and 59% of scrap imports. China accounted for 38% of semifabricated product imports. Mexico was the source of 23% of scrap imports.

Total exports of aluminum (table 9) increased by 8% during the first 3 months of 2018 compared with those of the same period in the previous year. Exports of crude metal and alloys, semifabricated products, and scrap increased by 12%, 6% and 9%, respectively, compared with those in the same period of 2017. The leading destinations for total aluminum products during the first 3 months of 2018, in descending order of quantity, were Mexico (27%), China (25%), and Canada (22%).

Update

Alcoa Corp. shut down one potline at the Warrick primary aluminum smelter in Evansville, IN, on May 28, citing a power failure. The capacity of the potline was approximately 50,000 metric tons per year (t/yr). In December 2017, Alcoa restarted three potlines with a total capacity of 161,400 t/yr at the 269,000-t/yr smelter which was shut down in March 2016. (See Aluminum in November 2017). A schedule to restart the potline was not available (Alcoa Corp., 2018).

On April 30, the President of the United States extended the exemption from the 10% tariff on aluminum imports from Argentina, Australia, Brazil, Canada, Mexico, and member countries of the European Union imposed on March 8 under authority of Section 232 of the Trade Expansion Act of 1962. (See Aluminum in January 2018.) Imports from these countries were temporarily exempted from the tariffs until May 1 on condition of satisfactory alternative means of addressing the threatened impairment to national security by aluminum imports. (See Aluminum in February 2018.) The extension for Argentina, Australia, and Brazil would be in place on condition that satisfactory progress is made to reach agreements. In early May, Argentina agreed to a quota of 180,000 metric tons per year (t/yr), the average annual volume imported in 2015–17. Brazil decided in May to accept the 10% tariff on aluminum imports with no quotas. The exemption for Canada, Mexico, and the European Union member countries was extended until June 1. The temporary exemption from the tariff on aluminum imported from the Republic of Korea was made permanent after the Republic of Korea's Government agreed to a quota on aluminum imports of 70% of the average annual imports in 2015–17 (Assalve, 2018; White House, The, 2018; Yanchunas, 2018).

On May 4, the Government of China halted imports of aluminum and other nonferrous scrap metal from the United States for a period of 30 days. Inspection operations of the Chinese Certification and Inspection Group (CCIG) in the United States were halted from May 4 to June 4. CCIG is an agency of the Government of China that inspects cargo prior to shipment to China. Shipments made prior to May 3 that received proper certification would be accepted at ports in China but were subject to inspection in China. Quality issues were cited for the temporary shutdown of CCIG offices in the United States. The offices of CCIG in Canada were still operating and on May 22 announced that scrap from the United States could

be inspected and shipped to China from ports in Canada (Macaulay, 2018a, b).

Alcoa and Rio Tinto plc announced a joint venture named Elysis to develop technology to produce primary aluminum by a process that would not use carbon anodes or generate carbon dioxide. The ceramic anodes used in the process would have a service life approximately 30 times longer than the carbon anodes used in conventional smelting pots. When fully developed, both companies planned to retrofit their smelters with the new technology, and the technology would be licensed to other producers. Alcoa had been testing the process since 2009 at its research center in Pittsburgh, PA. The governments of Canada and the Province of Quebec were also investing in the project as well as Apple Inc. (Hotter, 2018a, b).

References Cited

- Alcoa Corp., 2018, Alcoa Corporation provides update to partial restart of aluminum smelter at Warrick Operations: Pittsburgh, PA, Alcoa Corp. press release, May 28. (Accessed May 29, 2018, at <http://news.alcoa.com/press-release/alcoa-corporation-provides-update-partial-restart-aluminum-smelter-warrick>.)
- Assalve, Danielle, 2018, Argentina, Brazil split on 232 ali restrictions: American Metal Market, v. 126, no. 19–1, May 7, p. 11–12.
- Hotter, Andrea, 2018a, Alcoa, Rio Tinto form carbon-free ali tech JV: American Metal Market, v. 126, no. 19–5, May 11, p. 10.
- Hotter, Andrea, 2018b, Elysis could revolutionize aluminium smelting tech: American Metal Market, v. 126, no. 20–1, May 14, p. 7–8.
- London Metal Exchange Ltd., 2018a, Aluminium stocks: London, United Kingdom, London Metal Exchange Ltd., February 28, 3 p.
- London Metal Exchange Ltd., 2018b, Aluminium stocks: London, United Kingdom, London Metal Exchange Ltd., March 30, 3 p.
- Macaulay, Brad, 2018a, CCIG Canada to inspect China-bound scrap: American Metal Market, v. 126, no. 23–3, May 23, p. 1,3.
- Macaulay, Brad, 2018b, Chinese gov't halt imports of US non-ferrous scrap: American Metal Market, v. 126, no. 18–5, May 4, p. 1–2.
- White House, The, 2018, Presidential proclamation adjusting imports of aluminum into the United States: The White House, Office of the Press Secretary press release, April 22. (Accessed May 23, 2018, at <https://www.whitehouse.gov/presidential-actions/presidential-proclamation-adjusting-imports-aluminum-united-states-3/>.)
- Yanchunas, Dom, 2018, 232-exempted nations will face quotas Navarro says: American Metal Market, v. 126, no. 18–3, May 2, p. 1–2.

List services and web feed subscribers are the first to receive notification of USGS minerals information publications and data releases. For information on how to subscribe, go to <http://minerals.usgs.gov/minerals/>.

TABLE 1
COMPONENTS OF ALUMINUM SUPPLY¹

(Thousand metric tons)

Period	Primary production	Secondary recovery ²			Imports for consumption			Total new supply ³	Stocks, end of period ⁴
		New	Old	Total	Metals and alloys, crude	Plates, sheets, bars, etc.	Total		
2017 ^p	741	1,990 ^r	1,590	3,570 ^r	4,830	1,380	6,200	10,500 ^r	1,470
2017:									
March	63	175 ^r	145	320 ^r	476	111	587	969 ^r	1,310
April	60	166 ^r	135	300 ^r	434	113	547	907 ^r	1,320
May	64	171 ^r	137	307 ^r	411	133	544	915 ^r	1,340
June	61	165 ^r	130	295 ^r	409	119	528	885 ^r	1,330
July	63	165 ^r	133	299 ^r	411	130	541	903 ^r	1,360
August	63	169 ^r	138 ^r	306 ^r	379	121	500	869 ^r	1,390
September	60	165 ^r	134	298 ^r	338	102	440	799 ^r	1,420
October	63	167 ^r	131	298 ^r	358	122	480	841 ^r	1,430
November	61	161 ^r	122	283 ^r	358	116	474	817 ^r	1,420
December	64	160 ^r	117	277 ^r	400	118	518	859 ^r	1,470
January–March	182	498	411	909	1,330	301	1,630	2,720	1,470
2018:									
January	66	163 ^r	126	290 ^r	333	167	500	856 ^r	1,460
February	61	161 ^r	125	286 ^r	374	99	473	820	1,450
March	71	175	129	304	555	126	681	1,060	NA
January–March	198	499	380	879	1,260	392	1,650	2,730	NA

^pPreliminary. ^rRevised. NA Not available.

¹Data are rounded to no more than three significant digits, except "Primary production"; may not add to totals shown.

²Metallic recovery from purchased, tolled, or imported scrap, expanded for full coverage of industry.

³Primary production, secondary recovery, and imports for consumption.

⁴Inventory levels reflect total for both U.S. and Canadian producers; data from the Aluminum Association Inc.

TABLE 2
ESTIMATED FULL COVERAGE CONSUMPTION OF AND METALLIC RECOVERY FROM
PURCHASED NEW AND OLD ALUMINUM SCRAP¹

(Thousand metric tons)

Period	Secondary smelters		Independent mill fabricators		Foundries		Other consumers		Total	
	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery	Con-sump-tion	Metal recovery
	2017 ^p	2,030 ^r	1,590 ^r	2,060	1,880	101	93	4	4	4,190 ^r
2017:										
March	173 ^r	135 ^r	194	177	8	8	(2)	(2)	376 ^r	320 ^r
April	169 ^r	132 ^r	175	160	8	8	(2)	(2)	353 ^r	300 ^r
May	173 ^r	136 ^r	179	164	8	8	(2)	(2)	361 ^r	307 ^r
June	162 ^r	126 ^r	176	161	8	8	(2)	(2)	347 ^r	295 ^r
July	169 ^r	133 ^r	172	158	8	8	(2)	(2)	350 ^r	299 ^r
August	171 ^r	135 ^r	179	163	8	8	(2)	(2)	358 ^r	306 ^r
September	166 ^r	132 ^r	173	159	8	8	(2)	(2)	348 ^r	298 ^r
October	173 ^r	136 ^r	169	154	8	8	(2)	(2)	351 ^r	298 ^r
November	169 ^r	133 ^r	154	141	8	8	(2)	(2)	332 ^r	283 ^r
December	168 ^r	133 ^r	148	136	8	8	(2)	(2)	325 ^r	277 ^r
January–March	507	399	533	486	25	23	1	1	1,070	909
2018:										
January	165 ^r	131 ^r	164	150	8	8	(2)	(2)	338 ^r	290 ^r
February	158 ^r	125 ^r	166	153	8	8	(2)	(2)	333 ^r	286 ^r
March	164	130	181	166	8	8	(2)	(2)	354	304
January–March	487	386	511	469	25	23	1	1	1,030	879

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

TABLE 3
CONSUMPTION OF AND RECOVERY FROM PURCHASED
NEW AND OLD ALUMINUM SCRAP IN MARCH 2018¹

(Metric tons)

	Consumption		Calculated metallic recovery	
	Tabulated reports	Estimated full coverage	Tabulated reports	Estimated full coverage
	Secondary smelters	137,000	164,000	108,000
Independent mill fabricators	166,000	181,000	152,000	166,000
Foundries	7,040	8,450	6,440	7,730
Other consumers	266	320	266	320
Total	310,000	354,000	267,000	304,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 4
PURCHASED AND TOLL-TREATED ALUMINUM-BASE SCRAP AND SWEATED
PIG IN MARCH 2018¹

(Metric tons)

	March			January–March ²		
	Stocks, opening ²	Net receipts ³	Melted or consumed	Stocks, closing	Net receipts ³	Melted or consumed
New scrap:						
Extrusion	16,000	71,600	72,000	15,500	208,000	208,000
Can stock clippings	5,200	20,900	21,400	4,670	62,700	63,200
Other wrought sheet/clippings	10,100	45,000	46,000	9,080	124,000	125,000
Casting	3,250	4,760	4,930	3,080	13,900	14,100
Borings and turnings	3,640	9,320	9,450	3,510	29,000	29,900
Dross and skimmings	10,300	28,400	28,400	10,300	82,700	82,700
Total new scrap	48,400	180,000	182,000	46,200	520,000	522,000
Old scrap:						
Used castings	8,480	25,200	25,300	8,310	75,000	75,300
Used extrusion	7,830	13,500	13,500	7,830	42,000	42,600
Used cans (shredded, loose, baled)	9,330	47,000	47,100	9,230	140,000	140,000
Other wrought products	13,900	28,300	31,600	10,600	83,600	89,600
Fragmentized shredder (auto shredder)	2,690	8,770	9,670	1,790	26,700	27,400
Total old scrap	42,200	123,000	127,000	37,700	367,000	375,000
Sweated pig						
Total all classes	90,700	303,000	310,000	83,900	888,000	897,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

³Includes data on imported aluminum-base scrap.

TABLE 5
ALUMINUM ALLOYS PRODUCED AT SECONDARY SMELTERS IN THE UNITED
STATES IN MARCH 2018^{1,2}

(Metric tons)

	March				January–March	
	Stocks, opening ³	Production	Net shipments	Stocks, closing	Production	Net shipments
Die-cast alloys:						
13% Si, 360, etc. (0.6% Cu, max.)	1,690	2,910	1,790	2,810	6,360	5,240
380 and variations	6,190	14,700	14,700	6,190	44,100	44,100
Sand and permanent mold:						
95/5 Al-Si, 356, etc. (0.6% Cu, max.)	1,160	2,370	2,370	1,160	7,110	7,110
No. 319 and variations	2,630	3,670	3,670	2,630	11,000	11,000
F-132 alloy and variations	162	196	196	162	587	587
Al-Zn alloys	243	94	94	243	281	281
Al-Si alloys (0.6% to 2.0% Cu)	103	92	92	103	275	275
Al-Cu alloys (1.5% Si, max.)	178	67	67	178	202	202
Other ⁴	5,280	9,710	10,200	4,840	31,100	30,900
Wrought alloys, extrusion billets	10,100	54,700	54,700	10,100	165,000	164,000
Total all alloys	27,800	88,500	87,800	28,400	266,000	264,000
Less:						
Primary aluminum consumed	XX	15,800	XX	XX	47,900	XX
Primary silicon consumed	XX	1,970	XX	XX	5,890	XX
Other alloying ingredients consumed	XX	1,070	XX	XX	3,250	XX
Net metallic recovery from aluminum scrap and sweated pig consumed in production of secondary aluminum ingot ⁵	XX	69,600	XX	XX	209,000	XX

XX Not applicable.

¹Excludes integrated aluminum companies.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³May include revisions to previously published data.

⁴Includes alloys No. 12, Al-Mg, Al-Si-Cu-Ni, aluminum-base hardeners, variations of these alloys, plus other aluminum alloys.

⁵No allowance made for melt-loss of primary aluminum and alloying ingredients.

TABLE 6
AVERAGE PRICE OF ALUMINUM IN THE UNITED STATES
AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	Midwest U.S. market price	LME cash price Grade A
2017:		
March	96.370	86.233
April	96.972	87.571
May	96.071	86.803
June	93.761	85.559
July	93.964	86.329
August	99.330	92.062
September	103.810	95.261
October	106.198	96.616
November	104.852	95.280
December	103.908	93.911
January–December	98.298	89.254
2018:		
January	110.830	100.429
February	112.050	99.091
March	112.929	94.173
January–March	111.936	97.898

Source: Platts Metals Week.

TABLE 7
AVERAGE BUYING PRICES FOR ALUMINUM SCRAP

(Cents per pound)

Month	Used beverage cans	Mixed low copper clips	Old sheet	Old cast	Turnings (clean and dry)
2017:					
March	73.35	65.91	60.96	61.96	60.52
April	71.55	66.00	61.75	62.75	61.15
May	68.27	64.50	60.05	61.05	60.36
June	67.23	63.14	58.77	59.77	59.68
July	67.05	62.00	57.85	59.00	59.00
August	70.98	62.91	57.30	58.35	59.00
September	73.12	65.00	58.40	58.95	58.90
October	74.09	65.00	58.00	58.77	58.00
November	72.88	64.08	57.65	59.00	56.60
December	69.95	62.55	56.50	57.95	54.70
January–December	70.93	63.62	58.44	59.63	58.62
2018:					
January	75.57	63.48	58.90	59.90	56.36
February	75.66	65.29	61.21	62.21	58.45
March	75.59	66.00	61.91	63.00	58.95
January–March	75.61	64.92	60.67	61.70	57.92

Source: American Metal Market.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF ALUMINUM IN MARCH 2018¹

(Metric tons)

Country or locality	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	March	January–	March	January–	March	January–	March	January–
		March		March		March		March
Argentina	24,900	51,200	--	2	--	--	24,900	51,200
Australia	3,390	18,600	63	123	243	575	3,700	19,300
Austria	--	--	2,360	7,130	--	--	2,360	7,130
Bahrain	8,050	31,600	3,510	12,100	--	--	11,600	43,700
Belgium	128	383	878	2,430	--	--	1,010	2,820
Brazil	--	1,290	1,890	5,890	181	230	2,070	7,410
Canada	277,000	587,000	23,500	70,500	34,300	94,200	335,000	752,000
Chile	--	--	--	--	545	1,690	545	1,690
China	758	2,270	41,500	148,000	--	341	42,300	150,000
Colombia	--	--	744	2,010	156	263	900	2,270
Costa Rica	--	--	--	--	375	1,030	375	1,030
El Salvador	--	--	71	197	303	859	374	1,060
France	1,090	6,960	2,740	8,240	93	590	3,920	15,800
Germany	80	241	2,610	8,560	426	935	3,120	9,740
Greece	--	--	1,520	4,310	25	25	1,550	4,330
Guatemala	--	--	--	--	1,370	3,070	1,370	3,070
Honduras	--	--	--	--	169	490	169	490
Hong Kong	--	--	568	2,250	20	144	588	2,390
India	13,800	51,600	3,970	10,700	--	--	17,700	62,200
Indonesia	--	--	7,310	18,900	--	--	7,310	18,900
Italy	3	3	1,170	2,950	--	--	1,170	2,950
Japan	--	--	3,780	9,490	20	81	3,800	9,570
Korea, Republic of	--	--	2,310	4,740	2,880	4,390	5,190	9,130
Malaysia	17	17	653	2,100	--	--	670	2,120
Mexico	2,460	6,190	4,670	12,200	12,900	36,700	20,100	55,100
Netherlands	208	461	362	995	32	44	602	1,500
New Zealand	877	2,810	--	(2)	--	--	877	2,810
Norway	63	10,600	2	61	--	--	65	10,700
Oman	1,970	3,600	3,170	7,830	--	--	5,150	11,400
Qatar	8,450	23,400	--	1	--	--	8,450	23,400
Romania	--	--	252	597	--	--	252	597
Russia	98,100	192,000	1,200	4,960	--	--	99,300	197,000
Saudi Arabia	1,350	15,000	950	5,200	121	496	2,420	20,700
South Africa	12,500	55,900	4,570	13,700	--	--	17,100	69,600
Spain	825	1,100	550	1,030	664	1,740	2,040	3,870
Sweden	--	--	553	1,600	--	--	553	1,600
Switzerland	--	--	267	877	--	--	267	877
Taiwan	20	60	1,970	3,160	183	542	2,180	3,760
Thailand	69	207	892	2,170	289	481	1,250	2,860
Turkey	--	--	1,200	3,530	408	1,050	1,600	4,580
United Arab Emirates	95,100	175,000	52	276	85	733	95,200	176,000
United Kingdom	39	100	200	542	156	742	395	1,380
Venezuela	3,110	23,500	378	733	2,890	3,270	6,380	27,500
Vietnam	124	253	1,670	7,460	6	15	1,800	7,730
Other	107	606	2,110	5,290	1,870	5,640	4,080	11,500
Total	555,000	1,260,000	126,000	392,000	60,700	160,000	742,000	1,810,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 9
U.S. EXPORTS OF ALUMINUM IN MARCH 2018¹

(Metric tons)

Country or locality	Metals and alloys, crude		Plates, sheets, bars, etc.		Scrap		Total	
	March	January–	March	January–	March	January–	March	January–
		March		March		March		March
Australia	24	115	190	513	--	3	214	631
Belgium	--	20	61	182	42	478	103	680
Bolivia	--	--	128	638	--	--	128	638
Brazil	29	48	352	820	660	1,150	1,040	2,010
Canada	10,600	31,700	37,300	107,000	8,770	25,500	56,700	164,000
China	58	625	2,480	7,750	66,700	178,000	69,300	186,000
Colombia	41	41	170	492	--	15	211	548
Dominican Republic	93	430	116	330	--	--	209	760
France	736	1,850	916	2,920	335	721	1,990	5,490
Germany	257	445	557	1,450	765	2,360	1,580	4,260
Guatemala	3	3	932	2,060	--	--	935	2,070
Hong Kong	--	--	81	326	2,100	5,610	2,180	5,930
India	13	56	273	583	11,400	27,500	11,700	28,200
Indonesia	--	2	47	193	2,960	10,600	3,010	10,800
Ireland	14	22	37	113	--	--	51	135
Israel	1	1	763	2,130	--	26	764	2,160
Italy	32	40	133	314	--	--	165	354
Jamaica	12	18	25	32	--	--	37	50
Japan	130	394	993	2,900	1,270	4,130	2,390	7,420
Korea, Republic of	80	216	2,840	8,210	18,400	49,700	21,400	58,100
Malaysia	10	19	555	1,450	6,300	20,200	6,870	21,600
Mexico	10,900	38,800	42,500	117,000	14,400	39,300	67,800	195,000
Netherlands	6	56	30	95	300	789	336	940
New Zealand	--	6	87	236	--	--	87	242
Norway	3	3	3	26	--	--	6	29
Pakistan	--	--	27	49	795	1,550	822	1,600
Panama	--	--	6	18	--	--	6	18
Philippines	36	36	50	138	215	531	301	705
Poland	12	22	72	198	--	171	84	391
Romania	2	20	33	78	--	--	35	98
Russia	1	16	7	43	1,390	4,620	1,400	4,680
Saudi Arabia	--	--	175	491	--	--	175	491
Singapore	110	268	537	1,430	79	101	726	1,800
Spain	--	8	59	211	260	611	319	830
Taiwan	132	1,760	1,220	2,940	3,320	8,520	4,680	13,200
Thailand	42	42	381	1,050	712	1,940	1,140	3,030
Turkey	61	63	323	920	144	237	528	1,220
United Arab Emirates	26	301	320	425	109	237	455	963
United Kingdom	25	82	917	2,700	205	422	1,150	3,210
Vietnam	--	--	6	26	462	761	468	787
Other	51	97	476	1,220	903	1,570	1,430	2,890
Total	23,600	77,600	96,200	270,000	143,000	387,000	263,000	734,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.