

Group 10.—PRODUCTS OF PETROLEUM AND COAL

Description of the group of industries.—This group of industries includes establishments refining petroleum crude oil, and manufacturing coke and coke-oven products, and products made from petroleum, coal, or natural gas (except lampblack). Gas manufactured and distributed to consumers is considered as a public utility and is not included as a manufacturing industry.

The following individual industries were combined to make up the Products of Petroleum and Coal group in the Census of Manufactures for 1939:

1. Petroleum refining.
2. Beehive coke.
3. Oven coke and coke-oven byproducts.

4. Paving blocks and paving mixtures: asphalt, creosoted wood, and composition.
5. Roofing, built-up and roll; asphalt shingles; roof coating (except paint).
6. Fuel briquets.

“Lubricating oils and greases—not made in petroleum refineries” industry, formerly classified in this group, is now classified in the Chemicals and Allied Products group. The industries “Paving block and paving mixtures: asphalt, creosoted wood, and composition”; and “Roofing, built-up and roll; asphalt shingles; roof coating (except paint)” were classified for 1937 and previous censuses in the Miscellaneous Industries group.

SUMMARY FOR GROUP 10.—PRODUCTS OF PETROLEUM AND COAL: 1939¹ AND 1937

	Census year	Number of establishments ²	Wage earners (average for the year) ³	Wages	Cost of materials, supplies, fuel, purchased electric energy, and contract work	Value of products	Value added by manufacture ⁴
Aggregate for the group.....	1939 1937	989 739	105,428 113,606	\$173,701,818 186,002,864	\$2,278,485,610 2,418,664,859	\$2,953,973,409 3,038,202,778	\$675,487,799 619,537,919
PETROLEUM REFINING.....	1939 1937	485 365	72,840 83,182	128,214,055 140,414,750	1,933,264,243 2,064,306,627	2,461,126,549 2,546,745,730	527,862,306 482,439,103
COKE AND BYPRODUCTS, TOTAL.....	1939 1937	112 94	21,693 20,603	32,480,723 33,102,643	261,217,384 273,067,707	346,978,397 357,468,778	85,761,013 84,401,071
	1935	88	16,694	21,575,134	180,557,083	238,703,683	58,146,600
	1933	97	13,066	15,526,645	123,275,080	165,731,226	42,456,146
	1931	112	14,368	22,134,487	162,793,117	226,509,038	63,715,921
	1929	153	20,552	35,389,425	281,592,430	416,348,458	134,756,028
	1927	171	21,082	34,167,692	286,728,701	382,012,617	95,283,016
	1925	237	23,191	36,762,401	277,750,675	378,693,527	100,882,852
	1923	262	28,364	48,107,894	354,080,441	516,922,898	162,892,457
	1921	176	16,070	28,832,946	168,790,864	221,313,363	52,522,499
	1919	278	29,319	42,299,292	224,266,674	316,515,838	92,249,164
	1914	251	21,107	14,288,952	69,138,328	99,275,020	30,136,692
	1909	315	29,273	15,454,345	64,024,527	95,606,622	31,672,095
	1904	278	18,981	9,304,498	29,884,532	51,728,647	21,844,115
	1899	241	16,999	7,085,736	19,665,532	35,585,445	15,919,913
Beehive coke.....	1939 1937	29 30	685 1,310	701,108 1,467,856	3,566,705 7,716,019	4,781,094 10,267,530	1,214,389 2,581,511
Oven coke and coke-oven byproducts.....	1939 1937	83 64	21,008 19,293	31,779,615 31,634,787	257,650,679 265,351,688	342,197,303 347,171,248	84,546,624 81,819,560
PAVING AND ROOFING MATERIALS, TOTAL.....	1939 1937	360 289	10,485 9,364	12,522,321 11,938,240	80,433,076 77,249,749	140,581,181 127,850,610	60,148,105 50,600,861
Paving blocks and paving mixtures: asphalt, creosoted wood, and composition.....	1939 1937	231 148	2,437 1,946	2,681,421 2,418,555	19,026,756 14,605,459	32,754,308 25,288,862	13,727,552 10,683,403
Roofing, built-up and roll; asphalt shingles; roof coating (except paint).....	1939 1937	129 111	8,048 7,418	9,840,900 9,519,685	61,406,320 62,644,290	107,826,873 102,561,748	46,420,553 39,917,458
PRODUCTS OF PETROLEUM AND COAL NOT ELSEWHERE CLASSIFIED: Fuel briquets.....	1939 1937	32 21	410 457	484,719 547,231	3,570,907 4,040,776	5,287,282 6,137,660	1,716,375 2,096,884

¹ Figures for the Coke and Byproducts subgroup are shown for the years 1899 to 1939.

² See GENERAL EXPLANATIONS—Definition of establishment.

³ See GENERAL EXPLANATIONS—Wage earners and wages.

⁴ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

PRODUCTS OF PETROLEUM AND COAL—GENERAL STATISTICS IN DETAIL: 1939¹

ITEM	Total for the group	PETROLEUM REFINING	COKE AND BYPRODUCTS		PAVING AND ROOFING MATERIALS		PRODUCTS OF PETROLEUM AND COAL NOT ELSEWHERE CLASSIFIED
		1011	1031	1032	1051	1052	1091
Number of establishments.....	989	485	29	83	231	129	32
Proprietors and firm members.....	192	109	1		35	33	9
Persons reported by manufacturing industries, total.....	139,654	100,972	761	24,060	3,193	10,174	494
Salaried officers of corporations.....	561	335	6	26	113	68	13
Manufacturing:							60
Salaried employees.....	17,986	14,407	63	2,066	389	1,001	
Wage earners (average for the year).....	105,428	72,840	685	21,008	2,437	8,048	410
Distribution.....	4,014	2,513	4	364	222	900	11
Construction.....	10,851	10,175		502	29	145	
Other.....	814	702	3	94	3	12	
Salaries and wages, total.....	\$250,131,477	\$190,547,331	\$781,620	\$39,003,487	\$4,494,084	\$14,660,259	\$644,696
Salaried officers.....	3,475,846	2,112,748	9,010	235,668	544,928	548,302	25,190
Manufacturing:							
Salaries.....	44,617,456	36,069,048	64,091	5,536,098	738,745	2,094,215	115,259
Wages.....	173,701,818	123,214,055	701,108	31,779,615	2,681,421	9,840,900	484,719
Distribution.....	7,699,148	4,589,704	7,050	650,832	492,589	1,939,445	19,528
Construction.....	19,298,766	18,405,560		635,689	38,645	223,872	
Other.....	1,338,443	1,156,216	361	165,585	2,766	13,525	
Cost of materials, supplies, containers, fuel, purchased electric energy, and contract work, total.....	2,278,485,610	1,933,264,243	3,566,705	257,650,679	19,026,756	61,406,320	3,570,907
Materials, supplies, and containers.....	2,192,110,640	1,861,671,143	3,478,380	246,328,808	17,741,684	59,571,065	3,319,560
Fuel.....	69,516,464	58,479,092	24,434	8,791,732	833,741	1,299,627	87,838
Purchased electric energy.....	14,394,276	10,904,378	57,730	2,434,601	313,267	521,785	162,515
Contract work.....	2,464,230	2,209,630	6,161	95,538	138,064	13,843	994
Value of products.....	2,953,973,409	2,461,126,549	4,781,094	342,197,303	32,754,308	107,826,873	5,287,282
Value added by manufacture.....	675,487,799	527,862,306	1,214,389	84,546,624	13,727,552	46,420,553	1,716,375

¹ The numbers at the head of the columns represent the following industries: 1011, Petroleum refining; 1031, Beehive coke; 1032, Oven coke and coke-oven byproducts; 1051, Paving blocks and paving mixtures; asphalt, creosoted wood, and composition; 1052, Roofing, built-up and roll; asphalt shingles; roof coating (except paint); 1091, Fuel briquets.

PETROLEUM REFINING

[A preliminary report for this industry was issued October 21, 1940]

Description of the industry.—This industry, as constituted for census purposes, embraces establishments engaged primarily in the refining of crude petroleum by distillation. It does not, therefore, include the compounding of refined or partly refined petroleum products, nor the production of gasoline from natural gas at the wells. The principal products named in the order of their importance, as measured by value, are gasoline, fuel oils, lubricating oils, and kerosene.

Duplication in value of products.—The total value of products for this industry includes a comparatively small amount of duplication because of the fact that the "partially refined oils, sold for rerunning" and, to some extent, the "tops" (see table 6) reported as products by some establishments become materials for others.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1939

CEN- SUS YEAR	Number of estab- lish- ments ¹	Wage earn- ers (aver- age for the year) ²	Wages	Cost of materials, supplies, fuel, pur- chased electric energy, and contract work ³	Value of products	Value added by manu- facture ⁴	Horse- power of prime motors
1899..	485	72,840	\$128,214,055	\$1,933,264,243	\$2,461,126,549	\$527,862,306	1,074,775
1907..	365	83,182	140,414,750	2,064,306,627	2,546,745,730	482,439,103	(5)
1935..	395	77,402	109,610,774	1,481,936,374	1,838,621,913	356,685,539	(5)
1933..	389	69,047	89,793,481	1,064,437,370	1,378,636,948	314,199,578	(5)
1931..	376	68,824	107,474,117	1,210,517,315	1,524,284,997	313,767,682	(5)
1929..	390	80,596	131,176,993	2,031,341,408	2,639,665,001	608,323,598	486,866
1927..	354	71,234	113,716,705	1,752,997,043	2,142,648,503	389,651,460	388,647
1925..	359	65,324	104,645,391	1,889,078,019	2,376,056,556	486,978,537	290,271
1923..	382	66,717	103,833,760	1,425,052,861	1,793,700,087	368,047,226	268,730
1921..	366	63,189	102,294,108	1,382,170,434	1,727,440,157	345,269,723	(5)
1919..	320	58,889	89,749,637	1,247,908,355	1,632,532,766	384,624,411	187,521
1914..	176	25,366	19,397,466	325,264,509	390,361,406	71,096,897	113,837
1909..	147	13,929	9,830,078	199,273,402	236,997,659	37,724,257	89,577
1904..	98	16,770	9,989,367	139,387,213	175,005,320	35,618,107	45,539
1899..	67	12,199	6,717,087	102,859,341	123,929,384	21,070,043	31,277

¹ See GENERAL EXPLANATIONS—Definition of establishment.
² See GENERAL EXPLANATIONS—Wage earners and wages.
³ Figures for years prior to 1935 do not include cost of contract work.
⁴ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.
⁵ Not called for on schedule.
⁶ Data not available.

TABLE 2.—GENERAL STATISTICS IN DETAIL BY STATES: 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

ITEM	United States	Arkansas	California	Colorado	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan	Montana
Number of establishments ¹	485	6	76	7	15	7	21	9	13	20	28
Proprietors and firm members.....	109	-----	18	1	-----	1	2	-----	5	2	15
Persons reported by manufactur- ing establishments, total ²	100,972	823	12,026	225	6,220	7,336	3,870	769	5,518	1,013	875
Salaried officers of corpora- tions ²	335	9	54	4	6	2	21	6	2	36	20
Manufacturing: Salaried employees ²	14,407	79	1,683	32	1,014	847	557	117	812	107	118
Wage earners (average for the year) ³	72,840	612	8,613	142	4,282	6,384	3,000	506	2,629	679	439
Distribution.....	2,513	68	482	11	82	20	70	12	22	139	255
Construction.....	10,175	60	1,238	36	836	83	206	64	1,781	50	40
Other.....	702	-----	6	-----	-----	-----	22	4	272	2	3
Salaries and wages, total ²	\$190,547,831	\$1,445,115	\$23,560,597	\$373,246	\$11,419,246	\$14,623,011	\$6,608,479	\$1,288,625	\$9,759,831	\$1,835,366	\$1,545,831
Salaried officers ²	2,112,748	79,141	481,895	17,895	27,883	3,795	165,525	34,575	10,800	201,524	112,584
Manufacturing: Salaries ²	36,069,048	199,748	4,397,277	75,590	2,424,619	2,346,289	1,188,691	323,827	2,082,435	238,320	205,012
Wages.....	128,214,055	881,089	15,688,736	230,687	7,687,830	12,159,925	4,831,694	817,778	4,334,342	1,114,025	717,383
Distribution.....	4,589,704	179,322	823,221	16,467	133,786	36,270	133,399	20,280	38,109	216,368	443,614
Construction.....	18,405,560	105,815	2,164,422	32,598	1,145,128	76,732	282,246	85,325	2,781,502	64,133	65,664
Other.....	1,156,216	-----	5,046	-----	-----	-----	6,924	6,840	512,643	996	1,574
Cost of materials, supplies, con- tainers, fuel, purchased electric energy, and contract work, total.....	1,933,264,243	11,034,485	284,780,723	4,385,444	85,815,506	131,177,662	74,282,231	18,004,344	95,482,507	28,663,650	9,083,633
Materials, supplies, and con- tainers.....	1,861,671,143	10,484,772	276,105,413	4,208,985	83,415,981	125,048,089	71,251,869	17,337,813	91,098,881	27,545,085	8,729,004
Fuel.....	58,479,092	421,203	6,665,418	117,336	1,520,920	5,578,578	2,290,738	566,474	3,921,766	784,110	313,229
Purchased electric energy.....	10,904,378	128,510	1,755,296	59,123	637,847	550,995	447,431	100,057	461,860	206,870	41,450
Contract work.....	2,209,630	-----	254,596	-----	240,758	-----	292,193	-----	-----	127,585	-----
Value of products.....	2,461,126,549	14,327,824	367,667,475	6,407,088	122,933,528	182,566,697	89,437,983	21,305,269	109,627,341	37,226,330	13,461,015
Value added by manufacture ⁴	527,862,306	3,293,339	82,886,752	2,021,594	37,118,022	51,389,035	15,155,752	3,300,925	14,144,834	8,562,680	4,377,332

ITEM	Nebraska	New Jersey	New Mexico	New York	Ohio	Oklahoma	Pennsyl- vania	South Dakota	Texas	West Virginia	Wyoming	Other States ⁵
Number of establishments ¹	9	9	7	9	13	27	30	3	113	3	37	23
Proprietors and firm members.....	10	-----	4	-----	1	2	-----	2	29	-----	17	-----
Persons reported by manufactur- ing establishments, total ²	83	9,713	175	2,703	2,862	5,153	11,060	20	25,302	458	1,283	3,473
Salaried officers of corpora- tions ²	2	-----	6	6	-----	27	34	3	77	1	9	10
Manufacturing: Salaried employees ²	12	1,261	29	312	461	645	1,535	1	3,906	66	211	602
Wage earners (aver- age for the year) ³	32	6,115	118	1,523	2,356	4,278	8,196	5	18,931	391	988	2,560
Distribution.....	27	8	13	289	23	117	365	11	362	-----	51	136
Construction.....	10	2,131	9	448	22	77	930	-----	1,980	-----	20	154
Other.....	-----	198	-----	125	-----	9	-----	46	-----	-----	4	11

See footnotes at end of table.

PETROLEUM REFINING

TABLE 2.—GENERAL STATISTICS IN DETAIL BY STATES: 1939—Continued

ITEM	Nebraska	New Jersey	New Mexico	New York	Ohio	Oklahoma	Pennsylvania	South Dakota	Texas	West Virginia	Wyoming	Other States ⁵
Salaries and wages, total ¹	\$68,825	\$20,386,714	\$295,546	\$5,169,165	\$5,426,705	\$8,578,455	\$21,782,066	\$21,636	\$46,320,519	\$805,087	\$2,480,908	\$6,752,358
Salaried officers ²	6,000		17,300	50,825		174,374	246,209	3,924	397,550	1,406	40,562	38,981
Manufacturing:												
Salaries ³	11,366	3,412,495	68,386	747,695	1,027,527	1,447,738	3,908,412	968	9,728,195	161,780	563,901	1,508,678
Wages	30,986	11,817,543	183,832	2,739,911	4,314,669	6,598,413	14,361,213	5,930	32,515,958	641,901	1,778,821	4,711,389
Distribution	14,623	16,509	14,594	476,067	40,299	231,333	848,509	10,814	557,944		68,292	274,384
Construction	5,850	4,783,080	11,434	909,985	44,210	118,306	2,417,723		3,082,004		30,868	203,535
Other		357,087		194,682		12,791			88,868		3,374	15,391
Cost of materials, supplies, containers, fuel, purchased electric energy, and contract work, total	712,481	142,973,512	2,401,711	36,857,945	71,176,794	88,581,628	180,570,337	66,017	576,380,689	8,402,877	17,601,915	64,828,102
Materials, supplies, and containers	685,476	136,116,906	2,320,797	34,946,122	67,330,615	85,456,699	170,029,836	60,485	563,238,278	7,980,785	16,572,962	61,697,288
Fuel	25,244	6,148,081	64,642	1,731,094	3,189,558	2,450,935	8,498,193	4,668	10,292,880	321,045	814,300	2,758,690
Purchased electric energy	1,761	203,275	14,472	180,729	591,526	666,393	1,944,274	864	2,223,811	101,047	214,563	372,224
Contract work		505,250	1,800		50,095	7,601	98,032		625,720			
Value of products	843,805	213,963,061	3,538,753	46,344,991	84,137,190	106,666,837	225,742,635	102,339	698,850,077	10,549,149	24,671,993	80,755,219
Value added by manufacture ⁴	131,324	70,989,549	1,137,042	9,487,046	12,960,396	18,085,209	45,172,298	36,322	122,469,388	2,146,272	7,070,078	15,927,117

¹ See GENERAL EXPLANATIONS—Definition of establishment.

² See GENERAL EXPLANATIONS—Persons engaged—general classification.

³ See GENERAL EXPLANATIONS—Wage earners and wages.

⁴ Value of products less cost of materials, supplies, containers, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

⁵ Alabama, 1 establishment; Delaware, 1; Georgia, 1; Idaho, 1; Maryland, 3; Massachusetts, 3; Minnesota, 1; Missouri, 1; Oregon, 1; Rhode Island, 2; South Carolina, 1; Tennessee, 1; Utah, 3; Virginia, 1; Washington, 2.

TABLE 3.—VALUE OF PRODUCTS FOR THE UNITED STATES: 1939, 1937, AND 1929

PRODUCT	1939	1937	1929
Petroleum Refining industry, all products, total value	\$2,461,126,549	\$2,546,745,730	\$2,639,665,001
Refinery products	2,453,753,562	2,537,060,775	2,627,533,212
Miscellaneous products not specified	480,343		(?)
Other products (not classified in this industry)	14,117,653	4,735,012	
Receipts for contract work	2,289,239	4,949,943	12,131,789
Merchandise, bought and sold	485,752	(?)	
Refinery products, aggregate	2,454,200,233	2,537,609,099	2,627,533,212
Refinery products made in this industry	2,453,753,562	2,537,060,775	2,627,533,212
Refinery products made as secondary products in other industries	446,671	548,324	

¹ Principally sulphuric acid, candles, insecticides, fungicides, soaps, roofing, and roof coatings.

² No data.

³ Revised.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1939, 1937, AND 1929—Continued

PRODUCT	1939	1937	1929
Refinery products—Continued.			
Lubricating oils ¹ :			
Total gallons	1,606,830,052	1,517,102,553	1,553,710,762
Total value	\$237,161,245	\$245,666,434	\$304,672,655
Neutral—			
Gallons	453,328,838		
Value	\$65,336,704		
Cylinder—			
Gallons	188,244,690	970,592,628	940,870,411
Value	\$30,776,810	\$133,985,561	\$169,364,721
Black—			
Gallons	70,798,273		
Value	\$4,036,230		
All other, including compounded and unclassified—			
Gallons	894,458,251	546,509,925	612,840,351
Value	\$137,012,501	\$111,680,873	\$135,307,934
Road oils:			
Total gallons	861,772,078	592,556,892	323,001,799
Total value	\$25,680,795	\$19,521,797	\$11,041,285
Liquid asphaltic road oils—			
Gallons	608,914,551	481,135,078	323,001,799
Value	\$17,142,266	\$16,417,605	\$11,041,285
Other road oils—			
Gallons	252,857,527	111,421,814	
Value	\$8,538,529	\$3,104,192	
Residuum or tar:			
Gallons	52,029,686	20,421,403	104,111,494
Value	\$822,242	\$853,393	\$3,148,630
Greases:			
Total gallons	61,884,768	61,925,798	52,017,128
Total value	\$17,323,676	\$17,215,900	\$16,645,858
Petrolatum, mineral jelly, etc.—			
Gallons	18,875,239	23,083,111	13,663,593
Value	\$2,873,030	\$3,931,775	\$2,547,531
Lubricating greases ¹ —			
Gallons	43,009,529	38,842,687	38,353,625
Value	\$14,450,646	\$13,284,125	\$14,098,327
Paraffin wax:			
Gallons	90,649,364	90,608,190	84,639,316
Value	\$19,484,714	\$19,213,203	\$22,328,375
Acid oil:			
Gallons	55,272,800	57,633,349	34,766,976
Value	\$784,433	\$1,015,991	\$662,611
Liquefied petroleum gases:			
Gallons	145,429,473	116,054,825	(?)
Value	\$4,942,341	\$3,903,733	(?)
Asphalt, other than liquid asphalt:			
Tons (2,000 pounds)	2,344,595	2,971,038	3,115,197
Value	\$20,852,435	\$31,352,147	\$34,506,087
Petroleum coke:			
Tons (2,000 pounds)	1,521,740	1,327,238	1,264,576
Value	\$4,987,247	\$5,048,049	\$5,461,210
Other refinery products, value	\$51,460,615	\$48,787,183	\$29,035,008

¹ Production in the Petroleum Refining industry only; lubricating oils and greases are also made in the Lubricating Oils and Greases, Not Made in Petroleum Refineries industry.

² No data.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1939, 1937, AND 1929

PRODUCT	1939	1937	1929
Refinery products, aggregate value	\$2,464,200,233	\$2,537,609,099	\$2,627,533,212
Gasoline:			
Total gallons	24,393,809,047	22,626,325,189	17,538,788,700
Total value	\$1,424,436,179	\$1,447,688,118	\$1,531,242,047
Aviation—			
Gallons	395,654,926		
Value	\$36,268,950		
All other—			
Gallons	23,998,154,121	22,626,325,189	17,538,788,700
Value	\$1,388,167,229	\$1,447,688,118	\$1,531,242,047
Naphtha, including benzene:			
Gallons	392,771,685	319,983,096	712,582,971
Value	\$23,111,763	\$22,031,591	\$70,180,392
Kerosene:			
Gallons	2,710,108,704	2,508,045,150	2,338,028,885
Value	\$112,064,645	\$123,081,070	\$164,835,012
Fuel oils:			
Total gallons	19,983,006,278	19,243,713,721	16,390,954,087
Total value	\$472,209,414	\$512,904,099	\$384,630,297
Distillates—			
Gallons	2,866,729,603	2,997,560,634	1,024,364,025
Value	\$107,648,740	\$122,187,405	\$39,338,451
Gas oils, including Diesel oils—			
Gallons	3,972,609,427	3,153,937,106	2,882,958,643
Value	\$130,467,274	\$110,428,068	\$96,094,037
Residual fuel oils—			
Gallons	13,143,667,248	13,092,215,981	12,483,631,419
Value	\$234,093,400	\$280,288,626	\$249,197,809
Partially refined oils, sold for re-refining:			
Total gallons	1,331,987,486	1,147,454,232	1,466,861,399
Above fuel oil, gallons	1,013,264,715	838,757,770	869,055,523
Fuel oil, gallons	249,678,959	247,723,472	567,553,199
Below fuel oil, gallons	69,043,812	60,972,990	30,272,677
Total value	\$38,878,489	\$38,726,391	\$49,142,865

CENSUS OF MANUFACTURES: 1939

TABLE 5.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1939

KIND AND STATE	Quantity	Value	KIND AND STATE	Quantity	Value
Gasoline—aviation and all other, total.....	<i>Gallons</i> 24,393,809,047	\$1,424,436,179	Partially refined oils, sold for rerunning—Con.	<i>Gallons</i>	
California.....	3,349,774,266	222,526,746	California.....	214,746,626	\$5,275,794
Colorado.....	72,156,943	5,402,103	Texas.....	918,511,914	26,462,964
Illinois.....	1,353,517,439	82,946,169	Other States: Del., Ind., Kans., Ky., La., Md., Mich., Mont., N. Mex., N. Y., Ohio, Okla., Pa., R. I., S. Dak., W. Va., Wyo.....	198,728,946	7,139,731
Indiana.....	1,845,220,091	119,974,321	Lubricating oils, total.....	1,606,830,052	237,161,245
Kansas.....	1,156,527,273	63,215,058	Arkansas.....	29,122,283	1,996,550
Kentucky.....	219,292,498	14,762,750	California.....	140,487,769	17,199,530
Louisiana.....	1,063,822,268	59,914,316	Illinois.....	77,178,050	14,316,958
Michigan.....	335,328,225	21,333,974	New Jersey.....	319,743,960	54,150,840
Montana.....	124,567,617	8,763,541	Oklahoma.....	106,571,654	16,366,141
Nebraska.....	5,251,094	390,049	Pennsylvania.....	270,369,687	39,955,593
New Jersey.....	1,168,406,621	90,238,637	Texas.....	363,682,751	44,889,984
New Mexico.....	46,715,318	2,856,750	West Virginia.....	23,089,841	4,233,724
Ohio.....	1,047,614,326	59,246,979	Ind., Kans., Mich., Ohio.....	104,441,231	17,906,701
Oklahoma.....	1,362,228,154	65,786,610	Other States: Ky., La., Md., Mass., Mo., Mont., N. Y., Utah, Wyo.....	172,142,826	26,145,224
Pennsylvania.....	1,963,386,086	113,497,209	Road oils, total.....	861,772,078	25,680,795
Texas.....	7,849,561,931	406,447,300	California.....	184,999,257	4,176,404
West Virginia.....	75,742,553	4,937,423	Illinois.....	79,514,835	2,074,070
Wyoming.....	286,428,554	17,752,461	Kansas.....	32,196,983	667,413
Other States: Ala., Ark., Ga., Idaho, Md., Mass., Minn., Mo., N. Y., R. I., S. C., S. Dak., Utah, Wash.....	1,069,267,790	64,435,783	Kentucky.....	30,923,165	938,655
Naphtha, including benzine, total.....	392,771,685	23,111,763	Louisiana.....	27,819,455	1,012,506
California.....	25,980,518	2,569,426	Montana.....	19,021,916	615,034
Kansas.....	11,112,032	562,924	Ohio.....	36,267,759	1,206,911
Louisiana.....	23,884,950	1,556,512	Oklahoma.....	33,873,070	907,887
Michigan.....	30,042,298	1,496,935	Texas.....	58,615,407	1,916,743
Oklahoma.....	21,955,619	1,103,655	Wyoming.....	37,575,021	746,546
Pennsylvania.....	27,776,543	1,700,053	Mass., R. I.....	24,289,384	993,809
Texas.....	109,693,984	4,956,878	Del., Ga., Md., S. C., Va.....	117,038,142	4,566,457
Other States: Ark., Ill., Ind., Ky., Mont., Mo., Mass., Nebr., N. J., N. Y., Ohio, Utah, Wash., Wyo.....	137,320,736	9,095,370	Other States: Ark., Ind., Mich., Mo., N. J., N. Mex., N. Y., Pa., Utah, Wash.....	179,637,684	5,859,360
Kerosene, total.....	2,710,108,704	112,064,645	<i>Tons</i>		
California.....	148,947,958	6,314,527	Asphalt, other than liquid, total.....	2,344,595	20,852,435
Illinois.....	101,181,383	5,184,220	California.....	389,510	2,738,745
Indiana.....	126,087,552	6,929,960	Illinois.....	239,050	1,675,950
Kansas.....	109,865,360	4,518,282	Mass., N. J., Pa., R. I.....	632,232	6,157,889
Kentucky.....	24,456,257	1,233,360	Ark., La., Okla., Texas.....	401,978	3,273,010
Louisiana.....	351,441,424	11,783,266	Other States: Del., Ga., Ind., Kans., Ky., Md., Mich., Mo., Mont., Ohio, Oreg., Tenn., Utah, Va., Wyo.....	681,775	7,006,841
Michigan.....	46,032,533	2,071,595	<i>Gallons</i>		
New Jersey.....	152,683,872	7,914,108	Residuum or tar (Ill., Ind., Kans., Ky., La., Ohio, W. Va.).....	52,029,686	822,242
New York.....	53,299,857	2,568,764	Greases, total.....	61,884,768	17,323,676
Ohio.....	34,661,827	1,783,543	California.....	7,332,270	2,889,751
Oklahoma.....	150,760,156	5,561,375	Louisiana.....	2,215,643	520,983
Pennsylvania.....	207,916,485	9,282,460	Oklahoma.....	4,044,163	663,459
Texas.....	1,101,609,516	42,371,267	Pennsylvania.....	17,410,180	3,033,593
West Virginia.....	12,627,632	578,670	Texas.....	17,119,777	5,172,982
Wyoming.....	12,198,518	625,343	Ill., Ind., Kans., Ohio.....	7,597,725	2,760,514
Other States: Ala., Ark., Colo., Md., Mass., Minn., Mo., Mont., Nebr., N. Mex., S. Dak., Utah, Wash.....	76,338,374	3,343,905	Ky., Md., N. J., N. Y., W. Va.....	5,854,152	2,160,178
Fuel oils, total.....	19,933,006,278	472,209,414	Other States: Ark., Mont., Utah, Wyo.....	310,858	122,210
Arkansas.....	178,914,425	3,584,939	Other refinery products, total value.....		81,659,350
California.....	5,222,734,329	96,611,008	California.....		6,198,203
Illinois.....	392,387,729	11,233,025	Illinois.....		4,180,037
Indiana.....	811,013,581	28,059,647	Indiana.....		9,369,558
Kansas.....	521,460,382	12,176,155	Kansas.....		3,135,607
Kentucky.....	88,303,047	2,430,915	Michigan.....		586,957
Louisiana.....	952,875,843	20,703,375	New Jersey.....		9,637,405
Maryland.....	221,601,030	6,562,386	Ohio.....		4,559,565
Michigan.....	349,051,212	10,587,711	Oklahoma.....		3,933,582
Montana.....	130,235,403	3,459,779	Pennsylvania.....		11,027,316
New Jersey.....	1,464,653,519	41,586,003	Texas.....		17,419,256
New York.....	307,429,628	8,285,530	Mass., N. Y., R. I.....		3,824,977
Ohio.....	441,072,793	11,207,698	Md., W. Va.....		1,417,813
Oklahoma.....	590,090,252	11,651,165	Colo., Idaho, Mont., N. Mex., Utah, Wyo.....		1,958,221
Pennsylvania.....	1,525,786,773	42,404,868	Other States: Ark., Ky., La., Mo., Nebr.....		4,410,153
Texas.....	6,137,451,845	144,164,552			
Wyoming.....	124,101,973	2,859,473			
Colo., Idaho, N. Mex., Utah, Wash.....	97,216,525	2,014,964			
Del., Ga., S. C., Va., W. Va.....	42,026,992	1,134,237			
Other States: Ala., Mass., Minn., Mo., Nebr., R. I., S. Dak.....	384,598,987	11,491,279			
Partially refined oils, sold for rerunning, total.....	1,331,987,486	38,873,489			

PETROLEUM REFINING

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TABLE 6.—PRINCIPAL MATERIALS CONSUMED, BY KIND AND QUANTITY, FOR THE UNITED STATES, 1939, 1929, AND 1919, AND FOR SELECTED STATES, 1939 AND 1929

KIND AND STATE	1939	1929	1919	KIND AND STATE	1939	1929	1919
UNITED STATES				STATES, 1939 AND 1929—Continued			
Crude petroleum.....	Bbl. (½ gal.) 1,250,256,188	Bbl. (½ gal.) 1,039,921,589	Bbl. (½ gal.) 365,271,803	NATURAL GASOLINE—continued			
Partially refined oils, waxes, tops, etc.....	63,556,255	51,549,133	43,074,982	Purchased, extracted, and used—Continued			
Natural gasoline, total.....	51,785,031	42,381,002	7,242,215	Louisiana.....	Bbl. (½ gal.) 1,347,365	Bbl. (½ gal.) 1,093,103	
Purchased.....	47,086,543	37,098,958	6,952,215	Montana.....	423,044	135,071	
Extracted and used.....	4,698,488	5,282,044	290,000	New Jersey.....	710,186	1,523,718	
Soda ash.....	Tons (2,000 lb.) 11,318	Tons (2,000 lb.) 18,441	(¹)	New Mexico.....	56,010	(²)	
Sulphuric acid, total.....	924,589	1,483,883	522,060	Ohio.....	277,797	496,502	
Purchased and produced in plant.....	710,439	1,007,590	522,060	Oklahoma.....	4,964,284	3,577,209	
Reclaimed and reused.....	214,150	476,273	(¹)	Pennsylvania.....	1,153,565	652,503	
Caustic soda, purchased.....	99,297	134,054	22,635	Texas.....	13,109,886	11,123,130	
Fuller's earth.....	158,386	(¹)	(¹)	Wyoming.....	483,379	1,340,490	
STATES, 1939 AND 1929				SODA ASH			
CRUDE PETROLEUM				Purchased and produced in plant			
Arkansas.....	Bbl. (½ gal.) 10,085,719	Bbl. (½ gal.) 10,963,126		California.....	377	344	
California.....	201,262,815	245,891,377		Illinois.....	943	1,183	
Colorado.....	2,530,810	(²)		Kansas.....	828	858	
Illinois.....	55,077,209	37,604,309		Michigan.....	85	(²)	
Indiana.....	78,050,627	(²)		Oklahoma.....	676	1,317	
Kansas.....	47,980,966	34,884,861		Pennsylvania.....	480	(²)	
Kentucky.....	10,218,225	6,101,014		Texas.....	4,782	5,694	
Louisiana.....	61,934,417	64,418,841		SULPHURIC ACID			
Michigan.....	19,796,071	(²)		Purchased and produced in plant			
Montana.....	6,908,223	2,994,902		California.....	115,797	203,270	
Nebraska.....	439,013	(²)		Ohio.....	1,867	12,321	
New Jersey.....	77,417,681	81,510,554		Oklahoma.....	49,685	75,858	
New Mexico.....	1,888,210	798,465		Pennsylvania.....	78,256	67,237	
New York.....	17,716,864	10,520,713		Texas.....	182,474	218,665	
Ohio.....	42,417,642	21,393,567		CAUSTIC SODA, PURCHASED			
Oklahoma.....	57,741,850	77,283,307		Arkansas.....	1,055	696	
Pennsylvania.....	101,319,869	72,481,824		California.....	18,195	17,516	
Texas.....	402,173,951	256,137,845		Illinois.....	4,965	6,632	
Wyoming.....	12,109,607	18,875,734		Indiana.....	5,882	(²)	
PARTIALLY REFINED OILS, WAXES, TOPS, ETC.				Kansas.....	1,688	2,919	
California.....	28,981,706	6,781,727		Kentucky.....	772	392	
Oklahoma.....	1,229,359	2,647,092		Louisiana.....	4,431	12,937	
Pennsylvania.....	635,708	7,588,342		Michigan.....	924	(²)	
Texas.....	19,825,137	9,105,740		Montana.....	557	388	
NATURAL GASOLINE				New Mexico.....	194	(²)	
Purchased, extracted, and used				Oklahoma.....	1,671	4,761	
Arkansas.....	302,661	732,993		Pennsylvania.....	9,479	15,679	
California.....	12,919,466	12,735,811		Texas.....	31,554	37,199	
Colorado.....	43,285	(²)		Wyoming.....	365	924	
Kansas.....	1,923,429	2,881,268		FULLER'S EARTH			
Kentucky.....	443,319	155,181		Michigan.....	639		
				Montana.....	240		
				Ohio.....	1,401	(¹)	
				Oklahoma.....	30,299		
				Pennsylvania.....	21,478		
				Texas.....	46,738		

¹ No data.

² Withheld to avoid disclosing, exactly or approximately, data reported by individual establishments.

TABLE 7.—WAGE EARNERS ENGAGED IN MANUFACTURING, BY MONTHS, FOR THE UNITED STATES, 1939, 1937, AND 1929, AND BY STATES, 1939

STATE	Average number employed during year	NUMBER RECEIVING PAY DURING NORMAL PAY-ROLL PERIOD ENDED NEAREST 15TH OF MONTH—											
		January	February	March	April	May	June	July	August	September	October	November	December
United States:													
1939.....	72,840	69,708	69,923	70,286	70,067	71,912	73,125	74,202	74,781	75,100	74,787	75,140	74,146
1937.....	83,182	79,230	79,552	80,066	82,595	84,105	85,917	85,894	85,637	84,785	84,876	83,173	82,645
1929.....	80,596	74,444	75,913	77,063	79,001	80,641	82,662	82,972	84,176	82,969	82,551	82,191	82,571
Arkansas.....	612	532	617	603	615	648	615	610	627	664	592	659	568
California.....	8,613	8,114	8,159	8,127	8,253	8,678	8,678	8,979	9,016	8,930	8,899	8,786	8,793
Colorado.....	142	132	127	128	129	152	153	141	145	147	149	164	136
Illinois.....	4,282	3,907	3,942	4,037	4,114	4,086	4,325	4,436	4,612	4,585	4,450	4,515	4,329
Indiana.....	6,384	6,109	6,104	6,100	6,151	6,145	6,325	6,573	6,561	6,655	6,585	6,682	6,617
Kansas.....	3,000	2,868	2,845	2,906	2,933	2,976	3,035	3,039	3,134	3,051	3,069	3,101	3,046
Kentucky.....	566	503	531	538	549	553	619	597	578	571	563	571	618
Louisiana.....	2,629	2,685	2,494	2,522	2,553	2,594	2,621	2,663	2,656	2,695	2,703	2,695	2,696
Maryland.....	782	765	763	749	780	755	791	812	797	822	812	776	766
Massachusetts.....	594	634	618	599	621	608	529	551	573	613	601	580	596
Michigan.....	679	610	603	623	656	696	702	712	729	697	692	712	715
Montana.....	439	380	359	404	465	439	441	460	461	480	506	443	427
Nebraska.....	32	29	29	30	32	31	31	33	32	35	35	35	36
New Jersey.....	6,115	5,988	6,013	6,236	6,042	6,154	6,121	6,193	6,158	6,206	6,099	6,119	6,051
New Mexico.....	118	115	116	118	119	117	121	122	117	114	123	121	119
New York.....	1,523	1,412	1,448	1,431	1,442	1,450	1,541	1,521	1,571	1,584	1,624	1,636	1,612
Ohio.....	2,356	2,327	2,288	2,315	2,338	2,360	2,206	2,225	2,199	2,304	2,548	2,642	2,523
Oklahoma.....	4,278	4,078	4,073	4,173	4,125	4,225	4,347	4,408	4,344	4,345	4,400	4,417	4,404
Pennsylvania.....	8,196	7,880	7,835	7,838	7,951	8,078	8,201	8,298	8,461	8,356	8,464	8,590	8,397
South Dakota.....	5	5	5	5	5	5	5	5	5	5	5	5	5
Texas.....	18,931	18,170	18,499	18,203	18,537	18,698	19,075	19,231	19,411	19,645	19,282	19,321	19,095
Utah.....	200	190	200	195	199	182	205	217	196	195	209	196	218
West Virginia.....	391	380	373	376	376	381	394	393	395	400	407	404	403
Wyoming.....	988	976	963	965	978	1,015	1,066	1,009	1,008	988	954	956	978

TABLE 8.—EXPENDITURES FOR PLANT AND EQUIPMENT: 1939

	1939
Number of establishments:	
Total for the industry.....	485
Reporting expenditures for plant and equipment.....	418
Value of products:	
Total for the industry.....	\$2,461,126,549
Reporting expenditures for plant and equipment.....	2,420,596,764
Expenditures for plant and equipment:	
Total for the industry.....	111,535,112
Expenditures for new construction or major alterations of buildings and other fixed plant and structures.....	85,189,228
Expenditures for new machinery and operating equipment.....	23,257,202
Expenditures for plant and equipment acquired in a "used" condition from other owners and expenditures for land.....	2,773,728
Expenditures unclassified.....	314,954

TABLE 9.—VALUE OF INVENTORIES OF MATERIALS AND FINISHED PRODUCTS, AND VALUE OF PRODUCTS: 1939 AND 1937

	1939	1937
Inventories:		
Beginning of year, total.....	\$421,566,042	\$359,030,572
Finished products.....	259,664,777	208,294,939
Materials, supplies, etc.....	161,901,265	150,735,633
End of year, total.....	417,593,786	426,078,450
Finished products.....	263,782,789	259,298,396
Materials, supplies, etc.....	153,810,997	166,780,054
Value of products for the industry, total.....	2,461,126,549	2,546,745,730
Value for establishments reporting inventories (includes value of products of establishments reporting no inventories on hand).....	2,404,842,220	2,507,257,797
Value for establishments not reporting inventories.....	56,284,329	39,487,933

TABLE 10.—PRIME MOVERS, MOTORS, GENERATORS, AND ELECTRIC ENERGY: 1939 AND 1929

	1939	1929
Number of establishments.....	485	390
Number of establishments reporting power equipment.....	478	348
Prime movers, aggregate:		
Number.....	11,155	5,307
Horsepower.....	1,074,775	486,866
Prime movers, driving generators, total:		
Number.....	311	1 5,307
Horsepower.....	458,744	1 486,866
Steam engines—		
Number.....	37	1 3,360
Horsepower.....	5,754	1 123,265

TABLE 10.—PRIME MOVERS, MOTORS, GENERATORS, AND ELECTRIC ENERGY: 1939 AND 1929—Continued

	1939	1929
Prime movers—Continued.		
Prime movers, driving generators—Continued.		
Steam turbines—		
Number.....	178	1 1,461
Horsepower.....	433,025	1 309,807
Diesel and semi-Diesel engines—		
Number.....	44	
Horsepower.....	13,250	
Other internal-combustion engines ² —		
Number.....	52	1 486
Horsepower.....	6,715	1 53,794
Prime movers, driving generators, ordinarily idle (included above), horsepower.....	77,826	
Prime movers not driving generators, total—		
Number.....	10,844	
Horsepower.....	616,031	
Steam engines—		
Number.....	6,537	
Horsepower.....	171,994	
Steam turbines—		
Number.....	3,145	(³)
Horsepower.....	311,144	
Diesel and semi-Diesel engines—		
Number.....	73	
Horsepower.....	8,850	
Other internal-combustion engines ² —		
Number.....	1,089	
Horsepower.....	124,043	
Prime movers not driving generators, ordinarily idle (included above), horsepower.....	127,333	
Generators, kilowatt rating, total.....	326,514	186,664
Generators, driven by—		
Steam engines, kilowatt rating.....	3,598	
Steam turbines, kilowatt rating.....	309,235	(³)
Diesel and semi-Diesel engines, kilowatt rating.....	8,813	
Other internal-combustion engines, ² kilowatt rating.....	4,868	
Generators, ordinarily idle (included above), kilowatt rating.....	61,128	(⁴)
Electric motors, total:		
Number.....	43,634	24,244
Horsepower.....	1,159,606	603,962
Driven by purchased energy—		
Number.....	24,908	13,167
Horsepower.....	623,283	302,983
Driven by energy generated in establishments reporting—		
Number.....	18,636	11,077
Horsepower.....	536,323	300,979
Electric energy (kilowatt-hours):		
Generated in plant.....	1,339,183,119	(⁴)
Sold.....	71,465,888	(³)
Purchased.....	1,505,068,345	600,625,288

¹ Includes data for prime movers not driving generators.² Gas, gasoline, etc.³ Not called for on schedule.⁴ Data not available.

BEEHIVE COKE

[A preliminary report for this industry was issued December 7, 1940]

Description of the industry.—This industry embraces those establishments engaged primarily in the production of coke by the beehive-oven process. In this process of manufacturing coke the volatile constituents of the coal escape and are wasted.

Prior to 1939 this industry was part of the industry formerly known as Coke-Oven Products. A special tabulation was made of the 1937 census reports classified in the Coke-Oven Products industry to obtain comparable figures for 1939.

No detailed statistics on quantity and value of beehive coke are compiled by the Census Bureau. Statistics compiled from the 1940 Minerals Yearbook, published by the Bureau of Mines, are given in table 4.

Assignment of establishments to industries.—Although the beehive coke industry, as defined for census purposes, consists primarily in the manufacture of coke as an independent operation, it also includes operation of beehive coke plants in conjunction with blast furnaces and other affiliated establishments where such plants are reported as separate industrial units.

Data for coal-mining operations which are sometimes included in the reports made by establishments operating their own mines, have been eliminated, so far as possible, and the cost of materials includes in all cases the total cost of coal laid down at the ovens.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1939 AND 1937

CENSUS YEAR	Number of establishments ¹	Wage earners (average for the year) ²	Wages	Cost of materials, supplies, fuel, purchased electric energy, and contract work	Value of products	Value added by manufacture ³	Horsepower of prime movers
1939.....	29	686	\$701, 108	\$3, 566, 705	\$4, 781, 094	\$1, 214, 389	8, 327
1937 ⁴	30	1, 310	1, 467, 856	7, 716, 019	10, 297, 530	2, 581, 511	(⁵)

- ¹ See GENERAL EXPLANATIONS—Definition of establishment.
² See GENERAL EXPLANATIONS—Wage earners and wages.
³ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.
⁴ No figures for years prior to 1937.
⁵ Not called for on schedule.

TABLE 2.—GENERAL STATISTICS IN DETAIL BY STATES: 1939
 [See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

ITEM	United States	Pennsylvania	Virginia	Other States ¹
Number of establishments ²	29	20	4	5
Proprietors and firm members.....	1	1		
Persons reported by manufacturing establishments, total ³	761	408	218	135
Salaried officers of corporations ³	6	1	1	4
Manufacturing:				
Salaried employees ³	63	40	13	10
Wage earners (average for the year) ⁴	685	364	203	118
Distribution.....	4	3	1	
Construction.....				
Other.....	3			3
Salaries and wages, total ³	\$781, 620	\$501, 505	\$170, 659	\$109, 456
Salaried officers ³	9, 010	500	1, 950	6, 530
Manufacturing:				
Salaries ³	64, 091	38, 745	16, 700	8, 646
Wages.....	701, 108	457, 910	149, 279	93, 919
Distribution.....	7, 050	4, 350	2, 700	
Construction.....				
Other.....	361			361
Cost of materials, supplies, fuel, purchased electric energy, and contract work, total.....	3, 566, 705	2, 532, 047	445, 171	589, 487
Materials and supplies.....	3, 478, 380	2, 496, 807	427, 812	553, 761
Fuel.....	24, 434	12, 790	7, 605	4, 039
Purchased electric energy.....	57, 730	16, 289	9, 754	31, 687
Contract work.....	6, 161	6, 161		
Value of products.....	4, 781, 094	3, 368, 598	646, 666	765, 830
Value added by manufacture ⁵	1, 214, 389	836, 551	201, 495	176, 343

- ¹ Colorado, 1 establishment; West Virginia, 4.
² See GENERAL EXPLANATIONS—Definition of establishment.
³ See GENERAL EXPLANATIONS—Persons engaged—general classification.
⁴ See GENERAL EXPLANATIONS—Wage earners and wages.
⁵ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

TABLE 3.—VALUE OF PRODUCTS FOR THE UNITED STATES: 1939 AND 1937

No detailed production statistics are compiled by the Bureau of the Census. Such statistics are published by the Bureau of Mines, Department of the Interior, and are shown in table 4.

TABLE 4.—COKE, SCREENINGS AND BREEZE, OBTAINED FROM BEEHIVE COKE-OVEN OPERATIONS IN THE UNITED STATES: 1939 AND 1937

[From "Minerals Yearbook," U. S. Bureau of Mines, Department of the Interior]

KIND	1939	1937
Coke:		
Total produced, net tons.....	1, 444, 328	3, 164, 721
Value.....	\$6, 426, 177	\$13, 648, 151
Screenings and breeze:		
Total produced, net tons.....	51, 543	101, 057
Sold:		
Net tons.....	25, 981	53, 090
Value.....	\$35, 441	\$73, 322

CENSUS OF MANUFACTURES: 1939

TABLE 5.—WAGE EARNERS ENGAGED IN MANUFACTURING, BY MONTHS, FOR THE UNITED STATES, 1939 AND 1937, AND BY STATES, 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

STATE	Average number employed during year	NUMBER RECEIVING PAY DURING NORMAL PAY-ROLL PERIOD ENDED NEAREST 15TH OF MONTH—											
		January	February	March	April	May	June	July	August	September	October	November	December
United States:													
1939	685	480	475	475	102	395	431	412	421	758	1,434	1,477	1,359
1937	1,310	1,281	1,345	1,448	1,419	1,455	1,417	1,395	1,324	1,351	1,237	1,083	967
Pennsylvania	364	173	178	185	14	131	174	185	200	433	885	918	897
Virginia	203	217	217	212	22	197	189	170	163	224	290	286	245
West Virginia	84	56	46	44	32	33	34	23	24	67	226	238	183

TABLE 6.—EXPENDITURES FOR PLANT AND EQUIPMENT: 1939

	1939
Number of establishments:	
Total for the industry	29
Reporting expenditures for plant and equipment	7
Value of products:	
Total for the industry	\$4,781,094
Reporting expenditures for plant and equipment	1,565,394
Expenditures for plant and equipment:	
Total for the industry	14,580
Expenditures for new construction or major alterations of buildings and other fixed plant and structures	
Expenditures for new machinery and operating equipment	12,802
Expenditures for plant and equipment acquired in a "used" condition from other owners and expenditures for land	1,778

TABLE 7.—VALUE OF INVENTORIES OF MATERIALS AND FINISHED PRODUCTS, AND VALUE OF PRODUCTS: 1939 AND 1937

	1939	1937
Inventories:		
Beginning of year, total	\$167,847	\$248,189
Finished products	77,944	109,718
Materials, supplies, etc.	89,903	138,471
End of year, total	165,546	385,860
Finished products	92,869	256,134
Materials, supplies, etc.	72,677	129,726
Value of products for the industry, total	4,781,094	10,297,530
Value for establishments reporting inventories (includes value of products of establishments reporting no inventories on hand)	4,704,484	10,219,162
Value for establishments not reporting inventories	76,610	78,368

TABLE 8.—PRIME MOVERS, MOTORS, GENERATORS, AND ELECTRIC ENERGY: 1939¹

	1939
Number of establishments	29
Number of establishments reporting power equipment	28
Prime movers, aggregate:	
Number	45
Horsepower	8,327
Prime movers, driving generators, total—	
Number	8
Horsepower	5,280
Steam engines—	
Number	5
Horsepower	1,200
Steam turbines—	
Number	3
Horsepower	4,050
Prime movers not driving generators, total—	
Number	37
Horsepower	3,077
Steam engines—	
Number	37
Horsepower	3,077
Generators, kilowatt rating, total	3,800
Generators, driven by—	
Steam engines, kilowatt rating	800
Steam turbines, kilowatt rating	3,000
Electric motors, total:	
Number	380
Horsepower	8,300
Driven by purchased energy—	
Number	289
Horsepower	6,572
Driven by energy generated in establishments reporting—	
Number	74
Horsepower	1,728
Electric energy (kilowatt-hours):	
Generated in plant	3,806,350
Sold	1,894,572
Purchased	2,847,218

¹ Comparable data for 1929 not available.

OVEN COKE AND COKE-OVEN BYPRODUCTS

[A preliminary report for this industry was issued December 27, 1940]

Description of the industry.—This industry designation covers establishments engaged primarily in the manufacture of coke by the distillation of coal in what is known as the byproduct ovens. The volatile constituents of the coal are collected and the products of the industry besides coke consist of coke-oven gas, tar, chemicals, and related products.

Prior to 1939 this industry was part of the industry formerly known as Coke-Oven Products. A special tabulation was made of the 1937 census reports classified in the former Coke-Oven Products industry to obtain comparable figures for 1939.

No detailed statistics on Oven Coke and Coke-Oven Byproducts are compiled by the Census Bureau. Statistics compiled from the 1940 Minerals Yearbook, published by the Bureau of Mines, are given in table 4.

Assignment of establishments to industries.—Although the Oven Coke and Coke-Oven Byproducts industry, as defined for census purposes, consists primarily in the manufacture of coke and byproducts as an independent operation, it also includes the operation of

oven coke and coke-oven byproduct plants in conjunction with blast furnaces and other affiliated establishments where such plants are reported as separate industrial units.

Data for coal-mining operations, which are sometimes included in reports made by establishments operating their own mines, have been eliminated so far as possible and the cost of materials includes in all cases the total cost of the coal laid down at the ovens.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1939 AND 1937

CENSUS YEAR	Number of establishments ¹	Wage earners (average for the year) ²	Wages	Cost of materials, supplies, fuel, purchased electric energy, and contract work	Value of products	Value added by manufacture ³	Horse-power of prime movers
1939.....	83	21,008	\$31,779,615	\$257,650,679	\$342,197,303	\$84,546,624	273,893
1937.....	64	19,293	31,634,787	265,351,688	347,171,248	81,819,560	(⁴)

¹ See GENERAL EXPLANATIONS—Definition of establishment.

² See GENERAL EXPLANATIONS—Wage earners and wages.

³ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

⁴ Not called for on schedule.

TABLE 2.—GENERAL STATISTICS IN DETAIL BY STATES: 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

ITEM	United States	Alabama	Illinois	Indiana	Michigan	Minnesota	New York	Ohio	Pennsylvania	West Virginia	Other States ¹
Number of establishments ²	83	6	9	5	9	3	8	15	12	3	13
Proprietors and firm members.....											
Persons reported by manufacturing establishments, total ³	24,060	1,565	1,724	2,417	1,364	492	2,637	2,881	5,791	791	4,398
Salaried officers of corporations ³	26			4		4	3		4	2	9
Manufacturing:											
Salaried employees ³	2,066	111	250	195	87	71	212	260	458	49	373
Wage earners (average for the year) ⁴	21,008	1,451	1,431	2,001	1,228	359	2,196	2,583	5,089	740	3,930
Distribution.....	364		14	3		53	167	4	108		15
Construction.....	502	3	10	168	49	5	51	34	117		65
Other.....	94		19	46			8		15		6
Salaries and wages, total ³	\$39,003,487	\$2,069,083	\$2,860,782	\$3,770,201	\$2,542,124	\$813,406	\$4,755,049	\$4,804,290	\$3,860,207	\$1,314,842	\$7,213,503
Salaried officers ³	235,668			22,530		39,106	23,280		39,583	16,573	94,596
Manufacturing:											
Salaries ³	5,536,098	304,828	635,472	476,058	294,315	152,877	627,373	747,272	1,197,044	136,153	954,706
Wages.....	31,779,615	1,752,824	2,135,263	2,971,510	2,194,231	555,734	3,730,287	3,957,843	7,238,436	1,162,116	6,081,371
Distribution.....	650,832		24,300	5,367		57,690	324,368	12,537	197,397		29,074
Construction.....	685,089	11,431	35,636	196,823	53,578	7,990	39,384	86,638	168,080		36,129
Other.....	165,555		30,021	97,913			10,357		19,667		7,627
Cost of materials, supplies, fuel, purchased electric energy, and contract work, total.....	257,650,679	15,225,857	14,006,708	36,403,442	16,391,653	4,362,581	27,903,206	35,496,233	57,914,220	5,610,183	44,336,596
Materials and supplies.....	246,328,808	14,558,302	13,090,197	35,582,539	15,370,755	4,076,467	26,949,496	34,085,053	55,954,584	4,955,826	41,705,539
Fuel.....	8,791,732	399,633	713,953	724,583	801,614	226,775	642,932	1,090,099	1,397,416	553,556	2,239,166
Purchased electric energy.....	2,434,601	172,384	202,553	96,270	219,284	59,339	310,778	321,081	582,220	98,801	391,891
Contract work.....	95,538	95,538									
Value of products.....	342,197,303	20,138,932	18,578,112	43,559,216	21,264,578	5,789,341	41,938,703	43,805,290	80,686,370	7,663,099	58,773,662
Value added by manufacture ³	84,546,624	4,913,075	4,571,404	7,155,774	4,872,925	1,426,760	14,035,497	8,309,057	22,772,150	2,052,916	14,437,606

¹ Colorado, 1 establishment; Connecticut, 1; Kentucky, 1; Maryland, 1; Massachusetts, 1; Missouri, 1; New Jersey, 2; Rhode Island, 1; Tennessee, 1; Utah, 1; Wisconsin, 2.

² See GENERAL EXPLANATIONS—Definition of establishment.

³ See GENERAL EXPLANATIONS—Persons engaged—general classification.

⁴ See GENERAL EXPLANATIONS—Wage earners and wages.

⁵ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

TABLE 3.—VALUE OF PRODUCTS FOR THE UNITED STATES: 1939 AND 1937

No detailed production statistics are compiled by the Bureau of the Census. Such statistics are published by the Bureau of Mines, Department of the Interior, and are shown in table 4.

TABLE 4.—COKE AND BYPRODUCTS OBTAINED FROM BYPRODUCT COKE-OVEN OPERATIONS IN THE UNITED STATES: 1939 AND 1937¹

[From "Minerals Yearbook," U. S. Bureau of Mines, Department of the Interior]

KIND	1939	1937	KIND	1939	1937
Coke:			Byproducts—Continued.		
Total produced, net tons.....	42,882,313	49,210,748	Ammonia—Continued.		
Value.....	\$206,457,873	\$247,355,752	Sulphate—		
Screenings and breeze:			Production, pounds.....	1,160,548,288	1,289,740,739
Total produced, net tons.....	3,354,374	3,883,698	Sold—		
Sold—			Pounds.....	1,153,901,833	1,332,308,748
Net tons.....	512,375	657,145	Value.....	\$13,153,642	\$14,477,234
Value.....	\$1,264,743	\$1,535,137	Crude light oil—		
Byproducts:			Production, gallons ³	170,963,199	187,054,346
Gas—			Sold—		
Production M cubic feet ²	675,143,201	757,628,942	Gallons.....	9,383,907	11,113,150
Sold—			Value.....	\$727,765	\$955,459
M cubic feet.....	433,711,290	463,042,959	Light-oil derivatives—		
Value.....	\$71,876,455	\$72,961,697	Production, gallons ⁴	139,805,191	156,502,308
Tar—			Sold—		
Production, gallons.....	554,406,216	603,053,288	Gallons.....	133,435,416	151,105,055
Sold—			Value.....	\$16,306,449	\$19,259,945
Gallons.....	344,534,382	386,648,478	Naphthalene, crude and refined—		
Value.....	\$16,585,734	\$18,456,483	Production, pounds.....	48,460,171	60,797,108
Tar derivatives, value.....	\$3,219,323	\$2,889,562	Sold—		
Ammonia—			Pounds.....	46,551,432	60,315,581
Liquor (NH ₃ content)—			Value.....	\$727,947	\$1,182,092
Production, pounds.....	48,264,021	54,172,628	Other products, value.....	\$736,240	\$370,375
Sold—					
Pounds.....	48,034,809	52,394,717			
Value.....	\$1,480,879	\$1,571,091			

¹ Includes products of tar distillation conducted by coke-oven operators under same corporate name, except, however, phenol and other tar acids produced at Clairton, Pa.
² Includes gas wasted and gas used for heating retorts.
³ Refined on premises to make the derived products shown; 1939, 163,947,167 gallons; 1937, 182,030,795 gallons.
⁴ Total gallons of derived products.
⁵ Ammonia thiocyanate, asphalt paint, cyanogen sludge, calcium ferrocyanide, light carbolic oils, pyridine oil, sodium carbolate, sodium prussiate, spent soda solution, sulphur, phenol, sodium phenolate, and vented vapors.
⁶ Ammonia thiocyanate, asphalt paint, carbolates, crude ferrocyanide, cyanogen sludge, extide covering, insecticides, light carbolic oils, pyridine oil, sodium carbolate, sodium prussiate, spent soda solution, sulphur (brimstone), phenol, sodium phenolate, and vented vapors.

TABLE 5.—WAGE EARNERS ENGAGED IN MANUFACTURING, BY MONTHS, FOR THE UNITED STATES, 1939 AND 1937, AND BY STATES, 1939

STATE	Average number employed during year	NUMBER RECEIVING PAY DURING NORMAL PAY-ROLL PERIOD ENDED NEAREST 15TH OF MONTH—											
		January	February	March	April	May	June	July	August	September	October	November	December
United States:													
1939.....	21,008	19,939	19,863	20,093	19,685	19,197	19,847	20,302	21,001	21,963	23,229	23,426	23,517
1937.....	19,293	18,765	19,204	19,678	19,691	19,900	19,191	20,475	20,675	20,447	19,445	17,620	16,333
Alabama.....	1,451	1,457	1,471	1,452	1,378	1,322	1,402	1,435	1,429	1,471	1,529	1,523	1,540
Illinois.....	1,431	1,265	1,253	1,279	1,260	1,241	1,242	1,435	1,449	1,695	1,781	1,694	1,674
Indiana.....	2,001	1,840	1,791	1,828	1,797	1,760	1,893	1,870	1,947	2,184	2,324	2,377	2,411
Michigan.....	1,228	1,206	1,216	1,203	1,190	1,155	1,194	1,215	1,212	1,250	1,301	1,312	1,288
Minnesota.....	359	382	392	362	349	349	362	355	356	357	337	352	350
New York.....	2,196	2,190	2,178	2,178	2,163	2,144	2,105	2,129	2,160	2,272	2,283	2,268	2,273
Ohio.....	2,583	2,433	2,434	2,449	2,383	2,100	2,280	2,402	2,527	2,671	2,990	3,147	3,181
Pennsylvania.....	5,089	4,594	4,536	4,640	4,561	4,563	4,739	4,765	5,202	5,434	5,986	6,018	6,035
West Virginia.....	740	739	738	737	733	722	719	723	722	750	764	770	765

OVEN COKE AND COKE-OVEN BYPRODUCTS

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TABLE 6.—EXPENDITURES FOR PLANT AND EQUIPMENT: 1939

	1939
Number of establishments:	
Total for the industry.....	83
Reporting expenditures for plant and equipment.....	65
Value of products:	
Total for the industry.....	\$342,197,303
Reporting expenditures for plant and equipment.....	282,713,406
Expenditures for plant and equipment:	
Total for the industry.....	8,275,443
Expenditures for new construction or major alterations of buildings and other fixed plant and structures.....	5,666,515
Expenditures for new machinery and operating equipment.....	2,524,820
Expenditures for plant and equipment acquired in a "used" condition from other owners and expenditures for land.....	84,108

TABLE 7.—VALUE OF INVENTORIES OF MATERIALS AND FINISHED PRODUCTS, AND VALUE OF PRODUCTS: 1939 AND 1937

	1939	1937
Inventories:		
Beginning of year, total.....	\$44,952,291	\$36,129,404
Finished products.....	16,295,943	7,619,904
Materials, supplies, etc.....	28,656,348	28,509,500
End of year, total.....	44,284,708	37,352,666
Finished products.....	13,581,467	10,435,329
Materials, supplies, etc.....	30,703,241	26,917,337
Value of products for the industry, total.....	342,197,303	347,171,248
Value for establishments reporting inventories (includes value of products of establishments reporting no inventories on hand).....	291,955,675	317,229,451
Value for establishments not reporting inventories.....	50,241,628	29,941,797

TABLE 8.—PRIME MOVERS, MOTORS, GENERATORS, AND ELECTRIC ENERGY: 1939¹

	1939	1939
Number of establishments.....	83	
Number of establishments reporting power equipment.....	83	
Prime movers, aggregate:		
Number.....	1,442	
Horsepower.....	273,893	
Prime movers, driving generators, total—		
Number.....	129	
Horsepower.....	84,529	
Steam engines—		
Number.....	76	
Horsepower.....	18,163	
Steam turbines—		
Number.....	52	
Horsepower.....	66,336	
Internal-combustion engines, ² other than Diesel and semi-Diesel—		
Number.....	1	
Horsepower.....	30	
Prime movers, driving generators, ordinarily idle (included above), horsepower.....	7,055	
Prime movers not driving generators, total—		
Number.....	1,313	
Horsepower.....	189,364	
Steam engines—		
Number.....	777	
Horsepower.....	57,817	
Steam turbines—		
Number.....	449	
Horsepower.....	127,229	
Prime movers—Continued.		
Prime movers not driving generators—Continued.		
Diesel and semi-Diesel engines—		
Number.....		5
Horsepower.....		756
Other internal-combustion engines ² —		
Number.....		82
Horsepower.....		3,562
Prime movers not driving generators, ordinarily idle (included above), horsepower.....		12,925
Generators, kilowatt rating, total.....		59,326
Generators, driven by—		
Steam engines, kilowatt rating.....		12,284
Steam turbines, kilowatt rating.....		47,022
Internal-combustion engines, ² other than Diesel and semi-Diesel, kilowatt rating.....		20
Generators, ordinarily idle (included above), kilowatt rating.....		4,841
Electric motors, total:		
Number.....		15,597
Horsepower.....		498,879
Driven by purchased energy—		
Number.....		8,745
Horsepower.....		309,883
Driven by energy generated in establishments reporting—		
Number.....		6,852
Horsepower.....		189,016
Electric energy (kilowatt-hours):		
Generated in plant.....		287,463,594
Sold.....		41,819,056
Purchased.....		336,280,968

¹ Comparable data for 1929 not available.

² Gas, gasoline, etc.

PAVING BLOCKS AND PAVING MIXTURES: ASPHALT, CREOSOTED WOOD, AND COMPOSITION

[A preliminary report for this industry was issued December 28, 1940]

Description of the industry.—This industry classification covers establishments engaged primarily in the manufacture of paving blocks of asphalt, creosoted wood, and various compositions, and the manufacture of asphalt tar paving mixtures. Plants operated by contractors for the mixing of paving materials which they themselves lay on the highways are not included unless they also manufacture paving materials in considerable quantity for sale as such. As this industry was canvassed by means of the "General schedule," it is impossible to compile, from the data collected, any detailed statistics showing quantity and value of individual classes of products.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1929 TO 1939

CENSUS YEAR	Number of establishments ¹	Wage earners (average for the year) ²	Wages	Cost of materials, supplies, fuel, purchased electric energy, and contract work ³	Value of products	Value added by manufacture ⁴	Horse-power of prime movers
1939.....	231	2,437	\$2,681,421	\$19,026,756	\$32,754,308	\$13,727,552	19,032
1937.....	148	1,946	2,418,555	14,605,459	25,288,862	10,683,403	(5)
1935.....	132	2,231	2,513,708	9,983,718	17,885,089	7,901,371	(6)
1933.....	93	1,151	1,214,698	6,287,323	10,950,433	4,663,110	(5)
1931.....	97	1,081	1,555,533	8,587,054	16,003,091	7,416,037	(5)
1929 ⁷	77	1,376	2,187,347	11,997,915	22,059,896	10,061,981	(6)

¹ See GENERAL EXPLANATIONS—Definition of establishment.
² See GENERAL EXPLANATIONS—Wage earners and wages.
³ Figures for years prior to 1935 do not include cost of contract work.
⁴ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.
⁵ Not called for on schedule. ⁶ Data not available.
⁷ No comparable data for years prior to 1929.

TABLE 2.—GENERAL STATISTICS IN DETAIL BY STATES: 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

ITEM	United States	Alabama	California	Connecticut	Illinois	Kansas	Kentucky	Maryland	Massachusetts
Number of establishments ¹	231	6	13	4	14	3	5	8	10
Proprietors and firm members.....	35		8		2	1		1	3
Persons reported by manufacturing establishments, total ²	3,193	144	243	19	326	7	166	137	198
Salaried officers of corporations ²	113	2	10		17	2	14	8	3
Manufacturing:									
Salaried employees ²	380	12	24	1	43		10	21	24
Wage earners (average for the year) ³	2,437	128	142	17	248	5	140	80	164
Distribution.....	222	1	67	1	18		1	28	1
Construction.....	29	1							6
Other.....	3						1		
Salaries and wages, total ²	\$4,494,084	\$124,987	\$406,234	\$29,427	\$636,194	\$10,305	\$132,372	\$213,966	\$311,367
Salaried officers ²	544,928	9,000	52,900		174,490	4,562	59,200	33,786	8,877
Manufacturing:									
Salaries ²	738,745	17,024	45,263	1,025	96,540		26,220	43,409	52,040
Wages.....	2,681,421	96,796	178,826	25,102	329,335	5,743	39,488	83,654	238,550
Distribution.....	492,589	1,430	129,245	2,700	35,829		7,200	53,117	3,900
Construction.....	33,645	737							8,000
Other.....	2,756						264		
Cost of materials, supplies, containers, fuel, purchased electric energy, and contract work, total.....	19,026,756	233,899	806,593	123,909	2,119,296	23,850	168,483	1,578,328	1,491,908
Materials, supplies, and containers.....	17,741,684	207,067	739,734	107,318	1,998,685	21,580	150,869	1,465,403	1,402,014
Fuel.....	833,741	17,654	31,802	13,909	72,455	1,324	15,728	32,034	50,852
Purchased electric energy.....	313,267	9,178	25,434	2,682	46,809	946	1,886	7,366	36,800
Contract work.....	138,064		9,623		1,847			73,525	2,242
Value of products.....	32,754,308	598,206	1,876,821	277,077	3,400,188	42,776	499,045	2,649,763	2,467,076
Value added by manufacture ⁴	13,727,552	364,307	1,070,228	153,168	1,280,892	18,926	330,562	1,071,435	975,168

See footnotes at end of table.

TABLE 2.—GENERAL STATISTICS IN DETAIL BY STATES: 1939—Continued

ITEM	Missouri	New Jersey	New York	Ohio	Penn- sylvania	Texas	Virginia	West Virginia	Other States ¹
Number of establishments ¹	14	9	21	31	44	3	5	6	26
Proprietors and firm members.....		1	3	5	11				
Persons reported by manufacturing establishments, total ²	181	219	218	386	398	19	44	36	452
Salaries officers of corporations ²	12		10	12	1		1	1	20
Manufacturing:									
Salaries employees ²	29	22	25	43	72	3	6	8	46
Wage earners (average for the year) ³	114	197	173	316	311	15	36	26	325
Distribution.....	24		10	7	11	1	1	1	50
Construction.....	2			7	2				11
Other.....				1	1				
Salaries and wages, total ²	\$251,462	\$310,799	\$364,491	\$532,609	\$506,020	\$18,663	\$54,244	\$38,732	\$551,612
Salaries officers ²	38,122		45,900	32,420	5,712		8,400	3,550	68,009
Manufacturing:									
Salaries ²	46,436	20,390	54,005	104,418	125,708	3,640	6,215	14,950	71,862
Wages.....	105,353	281,409	245,400	359,963	330,443	13,523	34,229	19,430	294,177
Distribution.....	60,331		19,186	26,007	40,376	1,500	5,400	802	104,966
Construction.....	1,220			8,001	3,089				12,598
Other.....				1,200	1,292				
Cost of materials, supplies, containers, fuel, purchased electric energy, and contract work, total.....	494,907	1,328,877	1,356,480	3,415,381	2,283,849	225,736	538,590	211,773	2,624,897
Materials, supplies, and containers.....	461,901	1,170,560	1,273,235	3,231,536	2,087,293	220,627	488,697	197,079	2,518,086
Fuel.....	18,613	147,431	58,908	126,973	137,574	2,357	19,341	8,350	78,436
Purchased electric energy.....	11,050	5,043	24,337	41,177	58,230	2,752	5,298	6,344	28,375
Contract work.....	3,343	5,843		15,695	692		25,254		
Value of products.....	1,060,289	2,559,179	2,552,371	5,221,698	3,711,255	267,257	757,388	462,241	4,351,683
Value added by manufacture ⁴	565,382	1,230,302	1,195,891	1,806,312	1,427,406	41,521	218,798	250,468	1,726,786

¹ See GENERAL EXPLANATIONS—Definition of establishment.

² See GENERAL EXPLANATIONS—Persons engaged—general classification.

³ See GENERAL EXPLANATIONS—Wage earners and wages.

⁴ Value of products less cost of materials, supplies, containers, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

⁵ Arkansas, 1 establishment; Delaware, 1; District of Columbia, 1; Florida, 1; Georgia, 4; Indiana, 3; Louisiana, 1; Maine, 1; Michigan, 4; North Carolina, 1; Oklahoma, 1; Rhode Island, 2; South Carolina, 2; Tennessee, 1; Utah, 1; Wisconsin, 1.

TABLE 3.—VALUE OF PRODUCTS FOR THE UNITED STATES: 1939 AND 1937

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1939 AND 1937

No detailed product statistics are collected for this industry; therefore, no figures are available for tables 3 and 4.

TABLE 5.—WAGE EARNERS ENGAGED IN MANUFACTURING, BY MONTHS, FOR THE UNITED STATES, 1939 AND 1937, AND BY STATES, 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

STATE	Average number employed during year	NUMBER RECEIVING PAY DURING NORMAL PAY-ROLL PERIOD ENDED NEAREST 15TH OF MONTH—											
		January	February	March	April	May	June	July	August	September	October	November	December
United States:													
1939.....	2,437	1,744	1,665	1,778	2,197	2,654	2,887	2,936	2,844	2,910	2,796	2,611	2,223
1937.....	1,940	1,341	1,324	1,554	1,901	2,307	2,375	2,302	2,366	2,266	2,171	1,935	1,507
Alabama.....	128	71	75	51	89	141	177	192	152	155	136	157	136
California.....	142	145	132	132	142	139	142	150	148	150	143	148	135
Connecticut.....	17	13	7	13	17	18	19	20	19	19	19	21	21
Georgia.....	97	52	48	53	50	76	107	117	98	149	147	125	143
Illinois.....	248	205	188	216	247	254	244	239	254	261	315	293	263
Kansas.....	5	1	1	1	4	4	4	10	10	10	10	4	1
Kentucky.....	140	108	97	109	141	153	193	174	222	169	60	137	113
Maryland.....	80	62	58	70	80	90	92	90	74	78	78	86	89
Massachusetts.....	104	87	80	97	143	197	210	198	201	195	213	174	169
Michigan.....	61	44	43	52	58	61	67	68	68	66	70	71	64
Missouri.....	114	72	72	90	101	118	124	131	139	136	147	134	101
New Jersey.....	197	169	172	176	174	197	188	219	211	212	224	244	182
New York.....	173	114	119	118	175	187	235	211	196	207	192	191	127
Ohio.....	316	240	235	249	291	355	379	362	349	338	382	322	285
Pennsylvania.....	311	207	190	202	294	373	371	371	370	421	387	301	243
Texas.....	15	12	12	12	15	16	21	21	21	15	19	14	11
Virginia.....	36	18	22	22	21	61	39	58	48	38	43	46	19
West Virginia.....	26	10	8	12	20	38	37	38	33	30	34	28	15

TABLE 6.—EXPENDITURES FOR PLANT AND EQUIPMENT: 1939

	1939
Number of establishments:	
Total for the industry.....	231
Reporting expenditures for plant and equipment.....	121
Value of products:	
Total for the industry.....	\$32,754,308
Reporting expenditures for plant and equipment.....	24,294,198
Expenditures for plant and equipment:	
Total for the industry.....	849,524
Expenditures for new construction or major alterations of buildings and other fixed plant and structures.....	173,604
Expenditures for new machinery and operating equipment.....	551,948
Expenditures for plant and equipment acquired in a "used" condition from other owners and expenditures for land.....	123,972

TABLE 7.—VALUE OF INVENTORIES OF MATERIALS AND FINISHED PRODUCTS, AND VALUE OF PRODUCTS: 1939 AND 1937

	1939	1937
Inventories:		
Beginning of year, total.....	\$3,076,750	\$2,572,068
Finished products.....	1,146,295	900,008
Materials, supplies, etc.....	1,930,455	1,672,060
End of year, total.....	3,553,931	2,373,149
Finished products.....	1,238,846	892,069
Materials, supplies, etc.....	2,315,085	1,481,080
Value of products for the industry, total.....	32,754,308	25,288,862
Value for establishments reporting inventories (includes value of products of establishments reporting no inventories on hand).....	30,467,787	22,517,537
Value for establishments not reporting inventories.....	2,286,521	2,771,325

TABLE 8.—PRIME MOVERS, MOTORS, GENERATORS, AND ELECTRIC ENERGY: 1939¹

	1939		1939
Number of establishments.....	231	Prime movers—Continued.	
Number of establishments reporting power equipment.....	227	Prime movers not driving generators—Continued.	
Prime movers, aggregate:		Diesel and semi-Diesel engines—	
Number.....	157	Number.....	2
Horsepower.....	19,032	Horsepower.....	165
Prime movers, driving generators, total—		Other internal-combustion engines ² —	
Number.....	7	Number.....	50
Horsepower.....	12,925	Horsepower.....	2,350
Steam engines—		Prime movers not driving generators, ordinarily idle (included above), horsepower.....	290
Number.....	3	Generators, kilowatt rating, total.....	11,135
Horsepower.....	10,050	Generators, driven by—	
Steam turbines—		Steam engines, kilowatt rating.....	9,435
Number.....	3	Steam turbines, kilowatt rating.....	1,550
Horsepower.....	2,600	Diesel and semi-Diesel engines, kilowatt rating.....	150
Diesel and semi-Diesel engines—		Electric motors, total:	
Number.....	1	Number.....	2,171
Horsepower.....	275	Horsepower.....	43,603
Prime movers not driving generators, total—		Driven by purchased energy—	
Number.....	150	Number.....	2,027
Horsepower.....	6,107	Horsepower.....	32,700
Steam engines—		Driven by energy generated in establishments reporting—	
Number.....	94	Number.....	144
Horsepower.....	3,407	Horsepower.....	10,903
Steam turbines—		Electric energy (kilowatt-hours):	
Number.....	4	Generated in plant.....	4,723,849
Horsepower.....	185	Purchased.....	13,259,960

¹ Comparable figures for 1929 not available.² Gas, gasoline, etc.

ROOFING, BUILT-UP AND ROLL; ASPHALT SHINGLES; ROOF COATING (EXCEPT PAINT)

[A preliminary report for this industry was issued December 14, 1940]

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of asphalt and other saturated roofing felts, in rolls or in shingle form, either smooth or faced with grit, and in the manufacture of roofing cements and coatings (except paint, which is included in another industry classification). This industry does not include the production of asbestos shingles and flexible roofing which are assigned to the Asbestos Products (Except Steam Packing and Pipe and Boiler Covering) industry.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1939

CENSUS YEAR	Number of establishments ¹	Wage earners (average for the year) ²	Wages	Cost of materials, supplies, fuel, purchased electric energy, and contract work ³	Value of products	Value added by manufacture ⁴	Horse-power of prime movers
1899	129	8,048	\$9,840,900	\$61,406,320	\$107,826,873	\$46,420,553	11,669
1937	111	7,418	9,519,685	62,644,290	102,561,748	39,917,458	(5)
1935	108	6,478	6,684,820	44,325,391	76,172,504	31,847,113	(5)
1933	74	4,418	4,435,500	23,892,848	44,833,073	20,940,225	(5)
1931	83	4,123	5,331,030	32,706,052	58,962,019	26,256,867	(5)
1929	102	6,027	8,951,537	61,391,590	103,506,090	42,114,500	6,032
1927	100	7,255	10,712,626	67,327,735	123,210,305	55,882,570	10,126
1925	140	8,310	12,144,764	78,596,627	123,590,811	44,994,184	6,795
1923	122	7,665	10,826,123	55,520,343	84,341,931	28,821,588	(5)
1921	136	6,908	9,213,047	45,013,397	76,193,430	31,180,033	(5)
1919	178	8,871	10,344,043	52,587,777	85,895,359	33,307,582	18,245
1914	170	4,088	2,642,136	17,604,944	27,977,913	10,372,969	6,520
1909	117	2,465	1,338,697	12,458,177	19,204,423	6,746,246	8,923
1904	307	8,819	4,007,669	10,842,307	19,870,953	9,025,646	22,367
1899	267	7,593	3,072,317	6,886,006	13,690,540	6,804,534	(5)

¹ See GENERAL EXPLANATIONS—Definition of establishment.
² Figures for years prior to 1935 do not include cost of contract work.
³ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.
⁴ Not called for on schedule.
⁵ Data not available.

TABLE 2.—GENERAL STATISTICS IN DETAIL BY STATES: 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

ITEM	United States	California	Illinois	Indiana	Louisiana	Minnesota	Missouri	New Jersey	New York	Ohio	Oregon	Pennsylvania	Other States ¹
Number of establishments ²	129	16	22	5	3	4	6	15	9	11	4	8	26
Proprietors and firm members.....	38	9	4	2	—	—	—	8	1	—	—	1	13
Persons reported by manufacturing establishments, total ³	10,174	930	2,704	337	414	229	219	1,824	316	696	56	825	1,622
Salaried officers of corporations ⁴	68	5	7	5	—	1	7	7	3	13	2	5	13
Manufacturing: Salaried employees ⁴	1,001	108	211	37	53	19	26	267	33	43	5	77	122
Wage earners (average for the year) ⁴	8,048	688	2,241	283	308	192	146	1,483	278	598	14	639	1,176
Distribution.....	900	111	194	4	44	17	36	51	2	42	21	95	283
Construction.....	145	16	45	8	7	—	4	15	—	—	14	8	28
Other.....	12	2	6	—	2	—	—	1	—	—	—	—	—
Salaries and wages, total ⁵	\$14,660,259	\$1,460,947	\$3,853,510	\$513,271	\$468,414	\$359,199	\$274,389	\$2,803,851	\$344,157	\$907,439	\$51,647	\$1,124,368	\$2,499,067
Salaried officers ⁴	548,302	71,193	79,302	85,986	—	11,750	20,700	20,720	6,500	125,321	6,200	28,680	91,950
Manufacturing: Salaries ⁴	2,094,215	209,144	442,531	64,406	93,607	42,263	39,326	635,605	63,857	90,777	3,575	146,076	263,048
Wages.....	9,840,900	950,280	2,854,659	328,411	284,788	240,636	161,298	1,985,092	270,946	570,855	10,036	764,152	1,419,747
Distribution.....	1,939,445	199,763	386,445	19,818	81,329	64,550	48,721	110,650	2,854	120,456	29,636	175,162	700,031
Construction.....	223,872	28,547	84,869	14,650	6,706	—	4,344	49,727	—	—	2,200	8,538	24,291
Other.....	13,525	2,020	5,704	—	1,984	—	—	2,057	—	—	—	1,760	—
Cost of materials, supplies, containers, fuel, purchased electric energy, and contract work.....	61,406,320	5,235,503	17,036,856	2,596,849	2,118,405	1,837,029	1,167,360	10,958,612	1,810,149	5,473,715	45,027	4,672,545	8,464,270
Materials, supplies, and containers.....	59,571,065	5,117,892	16,567,735	2,548,493	2,068,097	1,761,463	1,117,975	10,582,757	1,736,965	5,358,047	42,430	4,463,645	8,205,566
Fuel.....	1,299,627	82,732	368,089	16,363	33,492	52,891	25,788	270,930	33,371	93,547	1,374	159,412	161,838
Purchased electric energy.....	521,785	34,879	101,032	31,993	16,816	22,375	13,597	95,405	39,813	22,121	—	49,488	92,543
Contract work.....	13,843	—	—	—	—	—	—	9,520	—	—	—	—	4,323
Value of products.....	107,826,873	9,662,786	31,475,265	4,018,614	4,155,955	2,745,419	2,054,094	18,740,452	3,267,344	9,312,747	157,312	8,107,508	14,129,377
Value added by manufacture ⁵	46,420,553	4,427,283	14,438,409	1,421,765	2,037,550	908,390	896,734	7,781,840	1,457,195	3,839,032	112,285	3,434,963	5,665,107

¹ Alabama, 1 establishment; Arkansas, 1; Colorado, 1; Connecticut, 1; Delaware, 1; Georgia, 2; Kentucky, 1; Maryland, 3; Massachusetts, 6; Michigan, 3; Tennessee, 3; Utah, 1; Vermont, 1; Washington, 1.
² See GENERAL EXPLANATIONS—Definition of establishment.
³ See GENERAL EXPLANATIONS—Persons engaged—general classification.
⁴ See GENERAL EXPLANATIONS—Wage earners and wages.
⁵ Value of products less cost of materials, supplies, containers, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

TABLE 3.—VALUE OF PRODUCTS FOR THE UNITED STATES: 1939 AND 1937

	1939	1937
"Roofing, Built-up and Roll; Asphalt Shingles; Roof Coating (Except Paint)" industry, all products, total value.....	\$107,826,873	\$102,561,748
Roofing materials, asphalt shingles, roof coatings, and asphalt brick siding.....	92,997,124	91,638,457
Miscellaneous products not specified.....	2,085,811	(¹)
Other products (not classified in this industry).....	12,743,938	10,923,291
Roofing materials, asphalt shingles, roof coatings, and asphalt brick siding, aggregate value.....	90,732,673	98,157,827
Roofing materials, etc., made in this industry.....	92,997,124	91,638,457
Roofing materials, etc., made as secondary products in other industries.....	6,735,549	6,519,370

¹ No data.

² Principally value of chemicals, paints, paving and flooring materials, pipe and boiler insulation materials, and asbestos siding.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1939, 1937, AND 1929

PRODUCT	1939	1937	1929
Roofing materials, aggregate value.....	\$99,732,673	\$98,157,827	\$101,084,861
Asphalt roll roofing:			
Total roofing squares.....	27,040,864	25,554,583	28,437,076
Total value.....	\$28,315,045	\$29,296,226	\$30,109,653
Smooth-surfaced—			
Roofing squares.....	17,394,564	17,378,058	18,718,704
Value.....	\$16,171,491	\$17,495,534	\$20,032,452
Grit-surfaced—			
Roofing squares.....	9,646,300	8,176,525	9,718,372
Value.....	\$18,143,554	\$11,800,692	\$16,077,201
Asphalt shingles:			
Total roofing squares.....	11,910,182	9,093,647	11,676,636
Total value.....	\$38,973,277	\$34,900,319	\$42,291,343
Strip—			
Roofing squares.....	10,209,584	7,454,467	9,692,774
Value.....	\$33,546,649	\$28,589,887	\$33,707,384
Individual—			
Roofing squares.....	1,700,648	1,639,180	1,983,862
Value.....	\$5,426,628	\$6,420,432	\$8,583,959
Saturated felt:			
Total tons (2,000 pounds).....	394,516	405,587	205,525
Total value.....	\$12,745,375	\$12,551,985	\$9,803,629
Asphalt-saturated felt—			
Tons.....	327,018	333,866	137,026
Value.....	\$10,333,532	\$9,671,765	\$6,631,461
Tar-saturated felt—			
Tons.....	67,498	71,721	68,499
Value.....	\$2,411,843	\$2,880,220	\$3,172,168
Waterproofing fabrics, value.....	\$506,319	\$483,573	(¹)
Roof coatings and cement, total value.....	\$11,696,507	\$10,406,130	\$6,311,449
Asphalt roof cement (solid):			
Tons.....	148,526	133,101	35,161
Value.....	\$2,361,563	\$2,237,140	\$842,420
Coal-tar roofing pitch:			
Tons.....	77,719	128,580	(²)
Value.....	\$1,552,177	\$1,651,445	
Fibrous-plastic roof cement:			
Pounds.....	55,323,696	55,790,089	52,753,395
Value.....	\$1,596,948	\$1,728,092	\$2,336,111
Fibrous-liquid roof coating:			
Gallons.....	7,124,065	8,123,315	4,941,563
Value.....	\$2,247,665	\$2,345,821	\$2,115,578
Nonfibrous-liquid roof coating:			
Quantity reported—			
Gallons.....	3,146,595	8,169,849	1,931,269
Value.....	\$767,684	\$2,200,695	\$1,017,340
Quantity not reported, value.....		\$242,937	
Kind not reported, value.....	\$3,170,470		
Other roofing materials, value.....	\$2,608,065	\$8,496,225	\$6,568,787
Asphalt brick siding.....	\$4,888,085	\$1,933,369	(¹)

¹ No data.

² Included in "Other roofing materials."

TABLE 5.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1939

[For data on all kinds of roofing materials reported, see table 6]

KIND AND STATE	Number of establishments	Quantity	Value
		Roofing squares	
Asphalt smooth-roll roofing, total.....	75	17,394,564	\$15,171,491
California.....	9	1,691,824	1,603,165
Illinois.....	15	4,301,372	3,725,885
Louisiana.....	3	539,506	451,507
Missouri.....	3	239,729	303,149
New Jersey.....	8	1,862,292	1,810,602
Ohio.....	3	1,275,798	1,121,333
Pennsylvania.....	5	1,902,886	1,585,987
Mass., 3 establishments; N. Y., 5.....	8	1,331,256	1,274,576
Ind., 3; Mich., 1.....	4	504,639	460,779
Del., 1; Ga., 1; Md., 1.....	3	601,332	508,540
Ala., 1; Ky., 1; Tenn., 2.....	4	505,208	460,259
Other States: Ark., 1; Colo., 1; Conn., 1; Minn., 3; Oreg., 1; Tex., 1; Utah, 1; Wash., 1.....	10	2,588,724	1,865,759
Asphalt grit-roll roofing, total.....	71	9,646,300	13,143,554
California.....	8	2,100,850	2,844,590
Illinois.....	16	3,120,587	4,230,836
Louisiana.....	3	367,938	500,871
Minnesota.....	3	310,056	430,731
Missouri.....	3	237,694	346,999
New Jersey.....	7	737,627	931,850
Ohio.....	3	582,689	793,543
Pennsylvania.....	5	482,688	626,926
Mass., 3 establishments; N. Y., 4.....	7	605,636	905,405
Ind., 2; Mich., 1.....	3	377,904	525,438
Del., 1; Ga., 1; Md., 1.....	3	220,633	295,014
Ala., 1; Ky., 1; Tenn., 2.....	4	283,472	403,784
Other States: Ark., 1; Conn., 1; Oreg., 1; Tex., 1; Utah, 1; Wash., 1.....	6	218,526	301,917
Asphalt strip shingles; hexagon, etc., including patented, total.....	70	10,209,584	33,546,649
California.....	8	377,505	1,303,761
Illinois.....	15	3,322,283	11,057,205
Louisiana.....	3	482,102	1,606,422
Minnesota.....	3	373,149	744,630
Missouri.....	3	152,199	502,333
New Jersey.....	7	1,471,031	4,913,127
Ohio.....	3	820,691	3,035,247
Pennsylvania.....	5	640,562	2,248,797
Mass., 3 establishments; N. Y., 4.....	7	1,034,834	3,975,123
Ind., 2; Mich., 1.....	3	469,723	1,325,282
Del., 1; Ga., 1; Md., 1.....	3	448,508	965,002
Ala., 1; Ky., 1; Tenn., 2.....	4	321,967	967,899
Other States: Ark., 1; Conn., 1; Oreg., 1; Tex., 1; Utah, 1; Wash., 1.....	6	294,980	901,436
Asphalt individual shingles (all kinds), total.....	68	1,700,648	5,426,628
California.....	10	177,295	586,326
Illinois.....	14	535,331	1,548,302
Louisiana.....	3	136,242	396,761
New Jersey.....	7	250,086	812,928
Pennsylvania.....	5	115,526	364,505
Mass., 3 establishments; N. Y., 4.....	7	134,270	495,955
Ind., 1; Mich., 1; Ohio, 3.....	5	184,185	701,397
Minn., 2; Mo., 3.....	5	21,223	74,240
Other States: Ala., 1; Ark., 1; Conn., 1; Del., 1; Ga., 1; Md., 1; Oreg., 1; Tenn., 2; Tex., 1; Utah, 1; Wash., 1.....	12	146,490	445,714
Asphalt-saturated felt, total.....	68	Tons 327,018	10,333,532
California.....	9	43,215	1,784,988
Illinois.....	14	53,310	2,212,370
Louisiana.....	3	15,357	650,761
Missouri.....	3	6,028	286,545
New Jersey.....	8	32,728	1,633,837
Pennsylvania.....	5	16,063	692,909
Mass., 3 establishments; N. Y., 4.....	7	13,966	605,900
Del., 1; Ga., 1; Md., 1.....	3	9,209	360,857
Other States: Ala., 2; Ark., 1; Ind., 1; Ky., 1; Mich., 1; Minn., 2; Ohio, 3; Oreg., 1; Tenn., 2; Utah, 1; Wash., 1.....	16	137,142	2,105,065

ROOFING; ASPHALT SHINGLES; ROOF COATING

TABLE 5.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1939—Continued

KIND AND STATE	Number of establishments	Quantity	Value
		<i>Tons (2,000 lbs.)</i>	
Tar-saturated felt, total	34	67,498	\$2,411,843
Illinois	8	20,997	904,194
Minn., 2 establishments; Mo., 3	5	3,917	161,474
Md., 1; Pa., 3; Ohio, 3	7	26,138	685,368
Other States: Ala., 1; Colo., 1; Calif., 1; Ga., 1; Ind., 1; La., 1; N. J., 4; N. Y., 2; Tex., 1; Wash., 1	14	16,446	670,807
Asphalt roof cement (solid), total	40	148,526	2,361,563
California	6	13,215	223,487
Illinois	10	26,879	472,051
Mass., 1 establishment; N. Y., 4	5	6,303	132,831
La., 2; Minn., 2; Mo., 2	6	8,460	164,321
Other States: Conn., 1; Ga., 1; N. J., 4; Ohio, 2; Pa., 2; Va., 1; Utah, 1; Wash., 1	13	93,669	1,368,873
		<i>Pounds</i>	
Fibrous-plastic roof cement, total	78	55,323,696	1,596,948
California	8	2,884,777	114,775
Illinois	17	10,961,777	353,084
Louisiana	3	2,708,241	90,402
Missouri	4	1,041,026	46,206
New Jersey	10	20,076,205	438,118
New York	5	808,170	24,122
Ohio	9	3,549,125	114,312
Pennsylvania	5	4,240,721	111,142
Conn., 1 establishment; Mass., 3; Vt., 1	5	5,322,415	192,807
Ga., 1; Md., 3	4	2,186,241	61,431
Other States: Ala., 1; Colo., 1; Ind., 1; Minn., 2; Tenn., 2; Wash., 1	8	1,544,998	50,549
		<i>Gallons</i>	
Fibrous-liquid roof coating, total	87	7,124,065	2,247,665
California	9	340,537	72,170
Illinois	17	1,287,047	334,070
Missouri	4	233,036	125,596
New Jersey	11	861,392	164,093
New York	5	219,924	60,034
Ohio	11	1,537,910	807,088
Pennsylvania	7	926,085	220,719
Conn., 1 establishment; Mass., 3; Vt., 1	5	715,497	234,573
Ga., 1; Md., 4	5	420,499	91,545
Ala., 1; La., 3; Tenn., 2	6	231,665	56,207
Other States: Colo., 1; Ind., 1; Mich., 1; Minn., 2; Wash., 2	7	350,473	81,570
		<i>Gallons</i>	
Nonfibrous-liquid roof coating, total	54	3,146,595	767,684
California	6	488,115	93,437
Illinois	11	1,056,755	195,542
New Jersey	7	329,696	70,493
Ohio	6	578,387	199,940
Pennsylvania	4	114,646	23,150
Conn., 1 establishment; Mass., 2; N. Y., 3; Vt., 1	7	72,084	31,345
Ind., 1; Minn., 2; Mo., 2	5	188,911	65,210
Other States: La., 3; Md., 2; Oreg., 1; Tenn., 1; Wash., 1	8	318,001	88,567
Other roofing materials and those not reported by kind, total	238		7,837,031
California	21		232,863
Illinois	23		1,838,051
Massachusetts	9		178,237
New Jersey	20		1,037,582
New York	16		272,703
Ohio	38		1,865,364
Pennsylvania	27		624,289
Ind., 4 establishments; Mich., 5; Wis., 3	12		181,740
Minn., 3; Mo., 8; Nebr., 1	12		262,395
Dist. of Col., 1; Fla., 8; Ga., 3; Md., 8; Va., 1; W. Va., 3	24		789,343
Ala., 2; Ky., 6; Miss., 1; Tenn., 5	14		302,464
Ark., 2; La., 3; Okla., 2; Tex., 1	8		116,732
Ariz., 1; Colo., 2; Oreg., 3; Wash., 8	14		155,268
Asphalt brick siding, total	32		4,888,085
New Jersey	7		805,444
Ohio	3		175,906
Pennsylvania	4		240,281
Ill., 9 establishments; Ind., 2	11		3,508,432
Other States: Calif., 1; Conn., 1; Ga., 1; Mo., 2; N. Y., 2	7		153,022

TABLE 6.—PRODUCTION OF SPECIFIED KINDS OF ROOFING MATERIALS, BY QUANTITY AND VALUE, AS REPORTED TO THE BUREAU OF THE CENSUS BY MANUFACTURERS: 1931 TO 1939

[This table brings together all the Manufactures Census statistics for roofing materials as reported in the several industries. See footnotes]

	Year	Quantity	Value
Asbestos shingles ¹		<i>Squares</i>	
	1939	663,514	\$4,599,405
	1937	2,100,364	11,519,411
	1935	1,171,095	5,234,727
	1933	408,256	1,826,279
	1931	565,997	3,266,054
Asphalt roll roofing ¹			
	1939	27,040,864	28,315,045
	1937	25,554,583	29,236,226
	1935	22,595,588	25,728,128
	1933	12,333,342	12,763,519
	1931	17,525,143	20,272,517
Asphalt shingles ²			
	1939	11,910,182	38,972,277
	1937	9,093,647	34,990,319
	1935	7,731,034	26,812,741
	1933	4,008,811	11,994,619
	1931	6,558,524	22,566,749
		<i>Tons (2,000 lbs.)</i>	
Asphalt and tar-saturated felt ²			
	1939	394,516	12,745,375
	1937	405,587	12,551,985
	1935	225,623	8,055,275
	1933	75,623	2,778,308
	1931	143,512	6,026,401
Clay roofing tile ³		<i>Squares</i>	
	1939	243,040	2,375,770
	1937	228,335	2,059,863
	1935	134,922	1,145,434
	1933	103,257	910,647
	1931	285,263	3,125,175
		<i>Tons (2,000 lbs.)</i>	
Concrete roofing tile ⁴			
	1939	70,072	1,764,715
	1937	74,168	1,948,727
	1935	43,099	862,068
	1933	11,971	328,809
	1931	31,860	862,107
Slate roofing ⁵		<i>Squares (c)</i>	
	1939	281,129	2,470,470
	1937	272,621	2,157,354
	1935	272,621	1,155,129
	1931	(c)	2,041,258
Steel sheets, corrugated and crimped:		<i>Tons (2,240 lbs.)</i>	
Galvanized ⁷			
	1939	507,009	40,952,515
	1937	454,386	38,572,911
	1935	358,836	27,611,786
	1933	243,542	15,922,460
	1931	262,307	18,331,907
Not galvanized ⁷			
	1939	4,111	290,275
	1937	6,814	481,343
	1935	6,506	542,981
	1933	2,338	140,486
	1931	3,026	175,218
Wood shingles ⁸		<i>Squares</i>	
	1939	6,500,242	16,640,620
	1937	5,649,792	14,519,965
	1935	4,416,709	10,379,266
	1933	3,662,250	6,958,275
	1931	3,392,465	4,993,708
		<i>Tons (2,000 lbs.)</i>	
Asphalt roof cement (solid)			
	1939	148,526	2,361,563
	1937	133,101	2,237,140
	1935	107,159	1,452,906
	1933	10,373	255,471
	1931	16,630	333,750
		<i>Pounds</i>	
Fibrous-plastic roof cement			
	1939	55,323,696	1,596,948
	1937	55,790,089	1,728,092
	1935	33,216,585	1,314,187
	1933	13,968,939	661,044
	1931	29,488,861	1,847,599

See footnotes at end of table.

TABLE 6.—PRODUCTION OF SPECIFIED KINDS OF ROOFING MATERIALS, BY QUANTITY AND VALUE, AS REPORTED TO THE BUREAU OF THE CENSUS BY MANUFACTURERS: 1931 TO 1939—Continued

	Year	Quantity	Value
		<i>Gallons</i>	
Fibrous-liquid roof coating.....	1939	7,124,065	\$2,247,665
	1937	8,128,315	2,345,821
	1935	5,519,921	1,533,847
	1933	3,003,734	1,011,323
	1931	4,979,013	2,040,783
Nonfibrous-liquid roof coating.....	1939	3,146,595	767,684
	1937	8,169,849	2,200,695
	1935	5,584,901	2,506,511
	1933	799,844	183,729
	1931	1,420,622	576,814

¹ Made in the "Asbestos products (except steam packing and pipe and boiler covering)" industry. Due to a change in the 1939 questionnaire, the 1939 figures represent "asbestos roofing shingles" only. Figures for 1937 and prior years include an indeterminate amount of asbestos siding shingles.
² Made in the "Roofing, built-up and roll; asphalt shingles; roof coating (except paint)" industry.
³ Made in the "Clay products (except pottery) not elsewhere classified" industry.
⁴ Made in the "Concrete products" industry.
⁵ Made in the "Monuments, tombstones, cut-stone," etc., industry. No data collected for 1933.
⁶ No data.
⁷ Made principally in the "Steel works and rolling mills" industry.
⁸ Made in the "Sawmills, veneer mills," etc., industry.
⁹ Includes the value of a small quantity of shingles produced by establishments whose value of products was less than \$5,000 in 1939.
¹⁰ Revised to include the value of a small quantity of shingles produced by establishments whose value of products was less than \$5,000.

TABLE 8.—EXPENDITURES FOR PLANT AND EQUIPMENT: 1939

	1939
Number of establishments:	
Total for the industry.....	129
Reporting expenditures for plant and equipment.....	86
Value of products:	
Total for the industry.....	\$107,826,873
Reporting expenditures for plant and equipment.....	98,806,384
Expenditures for plant and equipment:	
Total for the industry.....	2,109,579
Expenditures for new construction or major alterations of buildings and other fixed plant and structures.....	447,084
Expenditures for new machinery and operating equipment.....	1,606,783
Expenditures for plant and equipment acquired in a "used" condition from other owners and expenditures for land.....	55,712

TABLE 9.—VALUE OF INVENTORIES OF MATERIALS AND FINISHED PRODUCTS, AND VALUE OF PRODUCTS: 1939 AND 1937

	1939	1937
Inventories:		
Beginning of year, total.....	\$10,776,836	\$10,573,640
Finished products.....	5,018,692	4,987,566
Materials, supplies, etc.....	5,758,144	5,606,074
End of year, total.....	12,817,792	11,293,029
Finished products.....	5,822,885	5,420,664
Material, supplies, etc.....	6,994,907	5,872,365
Value of products for the industry, total.....	107,826,873	102,561,748
Value for establishments reporting inventories (includes value of products of establishments reporting no inventories on hand).....	107,028,625	99,716,662
Value for establishments not reporting inventories.....	798,248	2,845,086

TABLE 7.—WAGE EARNERS ENGAGED IN MANUFACTURING, BY MONTHS, FOR THE UNITED STATES, 1939, 1937, AND 1929, AND BY STATES, 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

STATE	Average number employed during year	NUMBER RECEIVING PAY DURING NORMAL PAY-ROLL PERIOD ENDED NEAREST 15TH OF MONTH—											
		January	February	March	April	May	June	July	August	September	October	November	December
United States:													
1939.....	3,048	6,756	6,852	7,413	8,110	8,207	8,295	8,317	8,463	8,811	9,135	8,479	7,734
1937.....	7,418	6,733	7,409	7,546	7,633	7,723	7,501	7,462	7,785	7,932	7,719	7,195	6,479
1929.....	6,027	5,131	5,596	5,855	6,262	6,598	6,637	6,412	6,422	6,409	6,106	5,598	5,267
California.....	688	645	644	657	682	643	626	653	703	759	818	736	688
Illinois.....	2,241	1,772	1,747	2,023	2,267	2,383	2,471	2,347	2,394	2,515	2,493	2,286	2,195
Indiana.....	283	207	207	216	274	303	296	326	329	318	363	299	260
Louisiana.....	308	276	273	283	305	299	302	307	317	323	354	344	317
Maryland.....	86	69	68	68	86	85	85	84	100	96	100	98	98
Massachusetts.....	450	376	378	397	446	473	495	487	477	474	496	437	437
Michigan.....	76	48	54	77	84	80	79	96	88	83	94	73	65
Minnesota.....	192	152	146	165	191	201	191	207	201	215	227	220	187
Missouri.....	146	108	109	111	137	144	147	154	153	166	159	201	158
New Jersey.....	1,483	1,247	1,374	1,405	1,454	1,491	1,519	1,516	1,518	1,594	1,634	1,582	1,467
New York.....	278	225	224	247	283	283	295	301	304	323	356	279	221
Ohio.....	598	571	519	576	619	625	619	610	612	613	665	603	545
Oregon.....	14	4	4	4	4	4	5	4	20	32	29	28	28
Pennsylvania.....	639	571	565	572	640	624	632	674	680	688	740	705	581
Tennessee.....	74	67	71	82	75	77	74	73	73	76	76	71	71

TABLE 10.—PRIME MOVERS, MOTORS, GENERATORS, AND ELECTRIC ENERGY: 1939 AND 1929

	1939	1929		1939	1929
Number of establishments.....	129	102	Prime movers—Continued.		
Number of establishments reporting power equipment.....	129	94		Prime movers not driving generators—Continued.	
Prime movers, aggregate:			Diesel and semi-Diesel engines—		
Number.....	62	43	Number.....	1	
Horsepower.....	11,669	6,032	Horsepower.....	86	
Prime movers, driving generators, total—			Other internal-combustion engines ¹ —		(?)
Number.....	14	143	Number.....	5	
Horsepower.....	10,185	16,032	Horsepower.....	500	
Steam engines—			Prime movers not driving generators, ordinarily idle (included above), horsepower.....	223	
Number.....	8	132	Generators, kilowatt rating, total.....	7,385	2,593
Horsepower.....	2,760	12,802	Generators, driven by—		
Steam turbines—			Steam engines, kilowatt rating.....	1,850	
Number.....	4	13	Steam turbines, kilowatt rating.....	5,370	(?)
Horsepower.....	7,050	11,930	Diesel and semi-Diesel engines, kilowatt rating.....	65	
Diesel and semi-Diesel engines—			Hydroturbines and water wheels, kilowatt rating.....	100	
Number.....	1	(?)	Electric motors, total:		
Horsepower.....	100		Number.....	5,237	2,677
Hydroturbines and water wheels—			Horsepower.....	45,861	31,112
Number.....	1	18	Driven by purchased energy—		
Horsepower.....	285	11,300	Number.....	4,067	2,402
Prime movers not driving generators, total—			Horsepower.....	33,984	27,759
Number.....	48		Driven by energy generated in establishments reporting—		
Horsepower.....	1,484		Number.....	1,170	275
Steam engines—			Horsepower.....	11,877	3,353
Number.....	41	(?)	Electric energy (kilowatt-hours):		
Horsepower.....	868		Generated in plant.....	9,190,982	(?)
Steam turbines—			Purchased.....	42,069,100	37,724,523
Number.....	1				
Horsepower.....	30				

¹ Includes prime movers not driving generators.
² Not called for on schedule.

³ Gas, gasoline, etc.
⁴ Data not available.

FUEL BRIQUETS

[A preliminary report for this industry was issued November 6, 1940]

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of fuel briquets and boulets from anthracite culm, bituminous slack, peat, wood scrap, etc., mixed with tar, pitch, or other suitable material as a binder, and the manufacture of charcoal briquets and powdered fuel.

No detailed statistics on the quantity and value of briquets are compiled by the Census Bureau as such statistics are published annually by the United States Bureau of Mines, Department of the Interior.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1909 TO 1939

CENSUS YEAR	Number of establishments ¹	Wage earners (average for the year) ²	Wages	Cost of materials, supplies, fuel, purchased electric energy, and contract work ³	Value of products	Value added by manufacture ⁴	Horse-power of prime movers
1939.....	32	410	\$484,719	\$3,570,907	\$5,287,282	\$1,716,375	1,725
1937.....	21	457	547,231	4,040,776	6,137,680	2,096,884	(6)
1935.....	25	341	386,131	3,393,544	4,912,578	1,519,034	(7)
1933.....	24	296	261,590	1,885,667	2,943,799	1,058,232	(6)
1931.....	23	301	356,633	3,034,691	4,587,853	1,533,162	(6)
1929.....	23	426	584,029	5,918,799	9,497,657	3,578,858	990
1927.....	20	274	445,511	4,873,195	7,203,410	2,330,215	280
1925.....	14	246	369,280	3,935,503	6,019,310	2,083,807	685
1923.....	15	364	510,604	3,907,197	5,584,070	1,676,873	(7)
1921.....	14	371	484,423	2,280,374	3,177,742	897,368	(6)
1919.....	11	171	221,545	1,386,394	1,973,877	587,483	1,845
1914.....	14	141	111,774	609,068	862,904	253,836	1,085
1909.....	11	88	49,874	154,648	311,010	150,362	965

¹ See GENERAL EXPLANATIONS—Definition of establishment.

² See GENERAL EXPLANATIONS—Wage earners and wages.

³ Figures for years prior to 1935 do not include cost of contract work.

⁴ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

⁵ The total production for 1939 of fuel briquets (including those made as secondary products in other industries) was 892,213 tons, valued at \$5,801,666. (From reports of the Bureau of Mines.)

⁶ Not called for on schedule.

⁷ Data not available.

TABLE 2.—GENERAL STATISTICS IN DETAIL BY STATES: 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

ITEM	United States	Ohio	Wisconsin	Other States ¹
Number of establishments ²	32	4	9	19
Proprietors and firm members.....	9	2	-----	7
Persons reported by manufacturing establishments, total ³	494	25	145	323
Salaried officers of corporations ³	13	1	2	10
Manufacturing:				
Salaried employees ³	60	-----	23	37
Wage earners (average for the year) ⁴	410	21	119	269
Distribution.....	11	3	1	7
Construction.....	-----	-----	-----	-----
Other.....	-----	-----	-----	-----
Salaries and wages, total ⁵	\$644,696	\$27,785	\$238,926	\$377,985
Salaried officers ³	25,190	3,600	3,875	17,715
Manufacturing:				
Salaries ³	115,259	-----	41,072	74,187
Wages.....	484,719	21,297	191,979	271,443
Distribution.....	19,523	2,888	2,000	14,640
Construction.....	-----	-----	-----	-----
Other.....	-----	-----	-----	-----
Cost of materials, supplies, fuel, purchased electric energy, and contract work, total.....	3,570,907	117,428	2,325,528	1,127,951
Materials and supplies.....	3,319,560	114,943	2,191,969	1,012,648
Fuel.....	87,838	846	54,679	32,313
Purchased electric energy.....	162,515	1,639	78,880	81,996
Contract work.....	994	-----	-----	994
Value of products.....	\$5,287,282	160,991	3,148,831	1,977,460
Value added by manufacture ⁶	1,716,375	43,563	823,303	849,509

¹ Arkansas, 1 establishment; California, 1; Michigan, 2; Minnesota, 5; Missouri, 1; Nebraska, 2; North Dakota, 1; Oregon, 1; Pennsylvania, 1; Washington, 1; West Virginia, 2; Wyoming, 1.

² See GENERAL EXPLANATIONS—Definition of establishment.

³ See GENERAL EXPLANATIONS—Persons engaged—general classification.

⁴ See GENERAL EXPLANATIONS—Wage earners and wages.

⁵ The total production for 1939 of fuel briquets (including those made as secondary products in other industries) was 892,213 tons, valued at \$5,801,666. (From reports of the Bureau of Mines.)

⁶ Value of products less cost of materials, supplies, fuel, purchased electric energy, and contract work. See GENERAL EXPLANATIONS—Value added by manufacture.

TABLE 3.—VALUE OF PRODUCTS FOR THE UNITED STATES: 1939 AND 1937

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1939 AND 1937

No detailed production statistics were collected for this industry by the Bureau of the Census; therefore, no figures are presented for tables 3 and 4. The Bureau of Mines, Department of the Interior, publishes such statistics annually.

TABLE 5.—WAGE EARNERS ENGAGED IN MANUFACTURING, BY MONTHS, FOR THE UNITED STATES, 1939, 1937, AND 1929, AND BY STATES: 1939

[See GENERAL EXPLANATIONS—Disclosure of data for individual establishments]

STATE	Average number employed during year	NUMBER RECEIVING PAY DURING NORMAL PAY-ROLL PERIOD ENDED NEAREST 15TH OF MONTH—											
		January	February	March	April	May	June	July	August	September	October	November	December
United States:													
1939.....	410	478	477	430	357	332	323	301	340	388	506	506	480
1937.....	457	719	489	377	340	352	372	370	416	462	509	521	559
1929.....	426	445	414	409	381	409	346	336	372	439	548	518	499
Minnesota.....	33	43	42	41	31	19	18	16	18	34	43	45	50
Ohio.....	21	24	24	23	23	15	16	15	21	22	25	24	24
Wisconsin.....	119	152	144	127	108	89	94	95	101	110	148	145	122

TABLE 6.—EXPENDITURES FOR PLANT AND EQUIPMENT: 1939

	1939
Number of establishments:	
Total for the industry.....	32
Reporting expenditures for plant and equipment.....	15
Value of products:	
Total for the industry.....	\$5,287,282
Reporting expenditures for plant and equipment.....	3,856,948
Expenditures for plant and equipment:	
Total for the industry.....	51,498
Expenditures for new construction or major alterations of buildings and other fixed plant and structures.....	9,610
Expenditures for new machinery and operating equipment.....	41,535
Expenditures for plant and equipment acquired in a "used" condition from other owners and expenditures for land.....	353

TABLE 7.—VALUE OF INVENTORIES OF MATERIALS AND FINISHED PRODUCTS, AND VALUE OF PRODUCTS: 1939 AND 1937

	1939	1937
Inventories:		
Beginning of year, total.....	\$782,207	\$616,720
Finished products.....	125,143	107,462
Materials, supplies, etc.....	657,064	509,258
End of year, total.....	682,396	1,010,795
Finished products.....	87,593	152,679
Materials, supplies, etc.....	594,803	858,116
Value of products for the industry, total.....	5,287,282	6,137,660
Value for establishments reporting inventories (includes value of products of establishments reporting no inventories on hand).....	5,274,939	6,137,660
Value for establishments not reporting inventories.....	12,343	

TABLE 8.—PRIME MOVERS, MOTORS, GENERATORS, AND ELECTRIC ENERGY: 1939 AND 1929

	1939	1929
Number of establishments.....	32	23
Number of establishments reporting power equipment.....	32	23
Prime movers, aggregate:		
Number.....	8	9
Horsepower.....	1,725	990
Prime movers, driving generators, total—		
Number.....	2	19
Horsepower.....	1,500	1,990
Steam engines—		
Number.....		14
Horsepower.....		1,380
Steam turbines—		
Number.....	2	15
Horsepower.....	1,500	1,610
Prime movers not driving generators, total—		
Number.....	6	
Horsepower.....	225	
Steam engines—		
Number.....	5	(?)
Horsepower.....	180	
Internal-combustion engines, ³ other than Diesel and semi-Diesel—		
Number.....	1	
Horsepower.....	45	
Prime movers not driving generators, ordinarily idle (included above), horsepower.....	20	
Generators, kilowatt rating, total.....	1,050	100
Generators, driven by—		
Steam turbines, kilowatt rating.....	1,050	(?)
Electric motors, total:		
Number.....	759	568
Horsepower.....	14,116	14,083
Driven by purchased energy—		
Number.....	665	563
Horsepower.....	12,459	13,903
Driven by energy generated in establishments reporting—		
Number.....	94	5
Horsepower.....	1,627	180
Electric energy (kilowatt-hours):		
Generated in plant.....	1,728,900	(?)
Purchased.....	9,741,515	12,788,492

¹ Include data for prime movers not driving generators.

² Not called for on schedule.

³ Gas, gasoline, etc.

⁴ Data not available.