OFFICE COPY

REPORT OF

COMMITTEE ON

MATERIALS REQUIREMENTS BY THE OIL AND GAS INDUSTRY

CHAIRMAN: Claude P. Parsons

October 9, 1947

MATERIALS COMMITTEE

NATIONAL PETROLEUM COUNCIL

2100 Esperson Bldg.
Houston, Texas
October 4, 1947

Mr. Walter S. Hallanan, Chairman
National Petroleum Council
601 Commonwealth Bldg.
Washington, D. C.

Dear Mr. Hallanan:

Prior to the last meeting of the Council the materials committee made a report on the current materials situation.

As you are holding another meeting in a few days, the following developments have occurred since the last report of the committee:

I attended a meeting in New York with the IPA materials committee, the American Iron and Steel Institute and representatives of U. S. Steel Company and Bethlehem Steel Co. for the purpose of reconciling figures relative to production and export of pipe. The discussion disclosed that: (1), there are no figures either in the Steel Institute or in the Dept. of Commerce that show the amount of casing exported; (2) there are figures which show that the total amount of casing and line pipe exported during 1946 amounted to 8.7%. Following the meeting the IPA materials committee compiled a set of seven tables relating to pipe production and export. These tables are very comprehensive and I believe as authentic as possible. However, I question the last column of figures in Table 6 because it shows percentages based upon comparing the total export of both oil country tubular goods and line pipe with the production of only oil country tubular goods.

Table 7 shows that approximately 45,000 tons of casing and line pipe were shipped during the first half of 1947 to foreign governments in which Americans have little, if any, petroleum interests.

Referring to the list of critical materials in our report of June 6th, the following materials have eased sufficiently to be taken off the list: Compressors, pumps, phosphates, tank trucks, valves and fittings.

Casing has been put on the export positive list. As casing is a material used exclusively by the petroleum industry I see nothing to be gained by such action, either from the viewpoint of the American operator at home or abroad. It places some government agency in the position of deciding matters which I believe can be best worked out between the American Petroleum Industry and the manufacturers of casing.

In view of the recent Labor legislation which now has become law, our recommendation relative to such legislation in our June 6th report is no longer necessary.

The demand for drilling materials continues to increase. At the beginning of September there were 1985 rotary rigs in operation in the U. S., which is 111 over the peak of any previous year in the history of the business.

Aside from the above, our report of June 6th, is still current. As the committee is industry wide in scope representing both domestic and foreign operations of the American Petroleum Industry, the report was made on that basis.

Very truly yours,

(Signed) Claude P. Parsons, Chairman

REPORT
OIL FIELD MATERIAL SHORTAGES COMMITTEE
TO THE 18th ANNUAL MEETING OF THE
INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA
Oklahoma City, Oklahoma
September 29-30, 1947

At the mid-year Directors meeting held at Jackson, Mississippi, on May 9th, 1947, a resolution was passed authorizing the President of the Association to appoint a committee to make a thorough investigation and study of the material shortage situation; to collaborate with other industry groups interested in and affected by the problem, and to take whatever action that seemed necessary to alleviate the material shortage condition. Accordingly, President Hardey appointed the Material Shortage Committee for this purpose. The Committee held a meeting in Dallas on June 11th and after deliberation and study of the problem, acted as follows:

FIRST: Sent a wire to Secretary Krug that spot shortages in petroleum products were due to the lack of sufficient materials in the way of tubular goods for drilling needed wells and pipe lines and not from the lack of petroleum reserves or the inability of the oil industry to meet the current unprecedented demand for petroleum products.

SECOND: The committee instructed its Chairman to write the President of the Petroleum Equipment Suppliers Association regarding the resale of tubular goods. This was done in a letter to President Judd of the PESA, and his reply is attached to this report.

THIRD: It was recommended that operators review their casing programs and urge State regulatory Bodies to make modifications where pipe could be saved with safety and proper protection to wells.

FOURTH: The Committee prepared a letter outlining its work and making definite recommendations to the IPAA membership.

Since there was a wide discrepency in various figures concerning the exportations of tubular goods, it was decided to call a joint meeting in New York with representatives of the American Iron & Steel Institute, and the National Petroleum Council's Material Shortage Chairman, to reconcile these discrepencies so that the industry would have one set of figures that were true and realistic. Accordingly, Mr. Russell Brown, Mr. Minor Jameson, Mr. W. G. Warnock, and Mr. J. E. Warren representing the IPAA, and Mr. Claude Parsons, Chairman of the NPC Scarce Materials Committee met with representatives

of the AISI on September 11th for this purpose. Attached to this report are copies of the revised figures which the committee feels show the true trend in tubular goods production and exportation. It was indicated that information concerning the needs of the oil industry for steel products would be valuable to the steel industry executives in appraising consumer demands. Steel products will not be in competitive supply until some time in the unpredictable future. The facts concerning the production and distribution of steel tubular goods are just as important to the petroleum industry today as basic facts concerning production, refining and importation of crude oil. For these reasons a resolution to the Membership has been prepared recommending that the IPAA continue to analyze all pertinent information concerning tubular goods production, distribution and exportation in order that the Membership be fully informed as to the trends developed. Further, that the IPAA set up in their regular program a policy to keep the steel industry informed through all appropriate channels concerning the needs of the oil industry for steel.

The Committee wishes to acknowledge the work of the Association staff regarding the material shortage situation. All of the statistical information and analysis concerning this matter were prepared by Mr. Minor Jameson. The executives of the Association have utilized every opportunity to emphasize the seriousness of the problems and are doing everything possible to alleviate the situation.

J. Ed. Warren, Chairman

COPY COPY

Mr. J. Ed Warren, Chairman
IPAA Material Shortage Committee,
P. O. Box 270
Midland, Texas

Dear Mr. Warren:

Your letter of the 23rd ultimo addressed to me as President of the Petroleum Equipment Suppliers Association was received during my absence from Houston.

Your letter in its entirety is being distributed to the P.E.S.A. membership.

Of my own knowledge I can state that the major suppliers of tubular goods are in hearty accord with your suggestion that such goods should neither be hoarded nor resold at advanced prices. Deliveries are being assiduously screened with a view to determining the need of the purchaser, and an investigation made of all instances coming to the notice of the major suppliers of any of their respective tubular products reaching the so-called "black market".

It is thought that the amount of pipe reaching the "black market" has been somewhat magnified in that the same pipe is offered a number of times in different places. The amount of pipe which has been known to be resold at exhorbitant advanced prices represents a very small percentage of the total tubular tonnage reaching the industry.

Your Committee may rest assured that the major suppliers of tubular goods are sincerely endeavoring to channel their products through legitimate channels to the ultimate user.

Yours very truly,

(Signed) Ardon B. Judd,
President

* * * * * * * * *

Resolution

On Shortage of Materials

WHEREAS:

The growing use of petroleum products in automobiles, farm tractors, airplanes, ships, industrial machinery and oil burners is requiring larger and larger quantities to support our economy and to insure our national security; and

The normal expansion of the production division of the petroleum industry in the United States was delayed by severe limitations on manpower, materials and funds since the beginning of the war. The improvement in the availability of manpower and funds emphasizes the continued shortage of materials essential to the re-building of this division of the industry; and

The 1946 production of casing, drill pipe and tubing used in the drilling of new oil wells was only 2 percent greater than the prewar (1935-39) output as contrasted with an increase of 43 percent in total steel production, 53 percent in all pipe and tubing, and more than 50 percent in the demand for petroleum products; and

The Department of Commerce statistics show that for the first six months of 1947 exports of casing and oil line pipe were at the annual rate of 332,586 tons which is an increase of 85 percent over 1946 and approximately five times the prewar (1935-39) rate of exports; and

There is conclusive evidence that the policies of some in the petroleum industry supported by certain agencies of the Federal Government have operated to the end of preferring development of petroleum operations in foreign lands to the prejudice of the domestic industry.

NOW THEREFORE BE IT RESOLVED:

By the Independent Petroleum Association of America in annual membership meeting at Oklahoma City, Oklahoma, September 29-30, 1947, that the Oil Field Material Shortages Committee of the Association continue to investigate and study the material shortages which adversely are affecting the domestic petroleum industry; collaborate and cooperate with other industry groups interested in and affected by this problem; and confer directly with manufacturers of such materials for the purposes of determining the causes and possible means of alleviating these shortages.

BE IT FURTHER RESOLVED:

That the Association endeavor in every proper manner to periodically advise the manufacturers of steel products as to the increasing demands for petroleum products and the extent of the resulting requirements for the materials necessary to discover, develop and produce the required quantities of petroleum supplies by the domestic industry.

BE IT FURTHER RESOLVED:

That the officers of the Association take such action as may be necessary and proper to oppose the continuation of policies which prefer the development of foreign petroleum operations at the expense, and to the detriment, of the industry in this country in its efforts to fulfill its responsibility to the public.

FACTUAL INFORMATION RELATING TO SUPPLY OF STEEL TUBULAR GOODS

The attached tables contain information relative to the supply of oil tubular goods for the petroleum industry. These tables were originally prepared by the Independent Petroleum Association of America and subsequently reviewed and corrected by the American Iron & Steel Institute.

These tables present factual information on production, capacities, domestic shipments and exports that may be helpful in arriving at a better understanding of the steel supply situation. Comparisons are made between the pre-war years of 1935-39 against the latest period for which data are available. In some cases, comparable figures are not available for the pre-war years and the figures for 1947 are also not available for all comparisons. However, it is believed that these tables represent the most complete statistical analysis of this problem that has been prepared.

A study of the information in the attached tables reveals certain trends which directly affect a supply of steel tubular goods for the oil industry. Although it is inadvisable to attempt to simplify these questions, which involve many complications over and above what can be shown by the attached figures, several of these trends are of such importance as to warrant further study of the underlying factors influencing these conditions. Some of the more important of these trends are briefly summarized in the following paragraphs.

1. The figures indicate that production of Oil Country Goods (casing, drill pipe and tubing) has not increased in proportion to the increase in output of other steel products. This conclusion is based on annual production data from 1935

through the year 1946. The production of Oil Country Goods in 1946 amounted to 1,094,962 net tons, an increase of only 2% over the average annual output of 1,072,656 net tons during the 1935-39 period. In contrast, total steel production, as compared with pre-war, increased 43% and total production of pipe and tubing for all industries increased 53% over the pre-war output. Production figures are not available to show whether this trend has continued in 1947.

2. In contrast to the above situation as to Oil Country Goods, output of Line Pipe has risen substantially with the 1946 output of 973,933 net tons almost double the average 1935-39 rate of 502,109 tons annually. The Line Pipe volume includes quantity for industries other than the oil and gas industry but the oil and gas industry probably accounts for the largest part of this Line Pipe supply and the increase in this production undoubtedly reflects the growing demand for transmission lines, particularly in the larger sizes for both oil and natural gas.

3. Figures on capacity production of pipe and tube are misleading because the output of any product depends on so many factors such as the total supply of basic raw materials and fuel, the labor situation, and the allocation of raw material between various products and between various types of processing equipment. However, the published figures indicate that total maximum potential capacity for all kinds of pipe and tube amounts to about 8 million tons per year as compared with actual production in 1946 of 5,058,468 tons. The figures alone, therefore, would indicate that the supply of pipe and tubing could be increased substantially but the extent to which production could actually approach capacity would depend on the factors previously mentioned.

4. Shipments of pipe and tube (including Oil Country Goods and Line Pipe) for domestic use in the United States by the oil and gas industry amounted to 1,070,175 net tons in the first 6 months of 1947. This is at the rate of 2,140,350 tons per year which would be 74 percent larger than 1940, 6 percent less than in 1941, and 40 percent above the 1946 domestic shipments.

5. The steel industry compiles figures on exports of total pipe and tube for all industries but does not collect information on exports for oil and gas use. The only figures on tubular exports for the oil and gas industry are prepared

through the year 1946. The production of Oil Country Goods in 1946 amounted to 1,094,962 net tons, an increase of only 2% over the average annual output of 1,072,656 net tons during the 1935-39 period. In contrast, total steel production, as compared with pre-war, increased 43% and total production of pipe and tubing for all industries increased 53% over the pre-war output. Production figures are not available to show whether this trend has continued in 1947.

2. In contrast to the above situation as to Oil Country Goods, output of Line Pipe has risen substantially with the 1946 output of 973,933 net tons almost double the average 1935-39 rate of 502,109 tons annually. The Line Pipe volume includes quantity for industries other than the oil and gas industry but the oil and gas industry probably accounts for the largest part of this Line Pipe supply and the increase in this production undoubtedly reflects the growing demand for transmission lines, particularly in the larger sizes for both oil and natural gas.

3. Figures on capacity production of pipe and tube are misleading because the output of any product depends on so many factors such as the total supply of basic raw materials and fuel, the labor situation, and the allocation of raw material between various products and between various products and between various types of processing equipment. However, the published figures indicate that total maximum potential capacity for all kinds of pipe and tube amounts to about 8 million tons per year as compared with actual production in 1946 of 5,058,468 tons. The figures alone, therefore, would indicate that the supply of pipe and tubing could be increased substantially but the extent to which production could actually approach capacity would depend on the factors previously mentioned.

4. Shipments of pipe and tube (including Oil Country Goods and Line Pipe) for domestic use in the United States by the oil and gas industry amounted to 1,070,175 net tons in the first 6 months of 1947. This is at the rate of 2,140,350 tons per year which would be 74 percent larger than 1940, 6 percent less than in 1941, and 40 percent above the 1946 domestic shipments.

5. The steel industry compiles figures on exports of total pipe and tube for all industries but does not collect information on exports for oil and gas use. The only figures on tubular exports for the oil and gas industry are prepared

by the U. S. Department of Commerce based on shipment records from the ports. Although representatives of the steel industry have questioned the accuracy and representatives of the Commerce figures, they represent the only source of information on exports of oil tubular materials and should be indicative of the trend of such shipments. It is understood that the steel industry contemplates the collection of this information from industry sources beginning in 1948.

6. Based on Commerce Department statistics, exports of casing and oil line pipe during the first 6 months of 1947 were at annual rate of 332,586 tons, an increase of 85 percent over 1946 and approximately 5 times the prewar (1935-39) rate of shipments. The July 1947 rate of export was slightly above the rate during the first 6 months of the year.

7. The Commerce Department export figures, as compared with the figures on domestic shipments of pipe and tube to the oil and gas industry, indicate that exports during the first 6 months of 1947 were equivalent to 13.4 percent of the total supply available to the oil and gas industry. This compares with 10.5 percent in 1946. Although comparable figures are lacking for the prewar years of 1935-39, it appears that the 1946 percentage was from 2 to 3 times the prewar rate.

September 18, 1947

Table 1

Total U. S. Steel Capacity and Production

and Production of Steel Pipe and Tube

1935 - 1947

	Total Steel Capacity (net tons)	Total Steel Production (Ingots and Steel for Castings) (net tons)	Percent of Capacity (%)	Total Production of Pipe and Tube (net tons)	Percent of Total Steel Production (%)
1935	78,451,930	38,183,705	48.7	2,276,544	6.0
1936	78,164,300	53,499,999	68.4	3,643,779	6.8
1937	78,148,374	56,636,945	72.5	4,282,584	7.6
1938	80,185,638	31,751,990	39.6	2,580,463	8.1
1939	81,828,958	52,798,714	64.5	3,764,272	7.1
Avg. 1935-39	79,355,840	46,574,271	58.7	3,309,528	7.1
1940	81,619,496	66,982,686	82.1	4,272,684	6.4
1941	*85,158,150	82,839,259	97.3	5,736,906	6.9
1942	*88,886,550	86,031,931	96.8	5,283,844	6.1
1943	*90,589,190	88,836,512	98.1	6,219,345	7.0
1944	*93,854,420	89,641,600	95.5	6,406,423	7.1
1945	95,505,280	79,701,624	83.5	6,030,243	7.6
1946	91,890,560	66,602,724	72.5	5,058,468	7.6
1947	91,241,250	48,853,807 (7 Mo's.)	92.2	(not available)	

Source: Prepared by the Independent Petroleum Association of America from American Iron and Steel Institute production figures.

* Average annual capacity as of January 1 and July 1.

Table 2

Production of Tubular Oil Country Goods and Line Pipe in Relation to Production of Total Steel Tubular Goods in the United States 1935 - 1946

Year	Total Production of All Pipe & tubing (net tons)	Production of Oil Country Goods (Incl. in Total - Col 1) (net tons)	Production of Oil Country Goods (Incl. in Total - Col 1) (percent of total)	Production of Line Pipe (Incl. in Total - Col. 1) (net tons)	Production of Line Pipe (Incl. in Total - Col. 1) (percent of total)	Production of Oil Country Goods and Line Pipe (net tons)	Production of Oil Country Goods and Line Pipe (percent of total)
1935	2,276,544	744,076	32.7	220,093	9.7	964,169	42.4
1936	3,643,779	1,115,620	30.6	620,000	17.0	1,735,620	47.6
1937	4,282,584	1,418,579	33.1	740,955	17.3	2,159,534	50.4
1938	2,580,463	1,034,921	40.1	288,540	11.2	1,323,461	51.3
1939	3,764,272	1,050,083	27.9	640,956	17.0	1,691,039	44.9
Avg. 1935-39	3,309,528	1,072,656	32.4	502,109	15.2	1,574,765	47.6
1940	4,272,684	1,028,410	24.1	796,324	18.6	1,824,734	42.7
1941	5,736,906	1,050,643	18.3	1,222,472	21.3	2,273,115	39.6
1942	5,283,844	457,603	8.7	1,048,672	19.8	1,506,275	28.5
1943	6,219,345	674,576	10.9	1,126,765	18.1	1,801,341	29.0
1944	6,406,423	1,126,705	17.6	985,979	15.4	2,112,684	33.0
1945	6,030,243	1,117,793	18.5	844,515	14.0	1,962,308	32.5
1946	5,058,468	1,094,962	21.6	973,933	19.3	2,068,895	40.9

Footnotes: Prepared by the Independent Petroleum Association of America from figures from American Iron and Steel Institute.

All Pipe and Tubing includes Standard Pipe, Oil Country Goods, Line Pipe, Boiler Tubes, Mechanical Tubing and Miscellaneous Pipe and Tubes.

Oil Country Goods include casing, Drill Pipe and Tubing.

Line Pipe includes all types of line pipe for all industries.

Table 3
U. S. Capacity and Production of Steel Pipe and Tube
1935-1945

Productive Capacity for Sale - 1935-1943, and Maximum Annual Potential Capacity - 1944-1945, for Steel Pipe and Tube (net tons) (See Note 1)

	Butt Weld	Lap Weld	Electric Weld	Seamless	Conduit	Mechanical Tubing	Total
1935	2,049,519	2,021,078	911,200	2,822,375	159,432	237,496	8,201,100
1936	2,054,079	1,948,278	911,200	2,974,695	159,432	254,128	8,301,812
1937	2,025,489	1,645,391	658,680	3,108,367	173,902	211,456	7,823,285
1938	1,984,392	1,599,786	687,680	3,296,048	177,766	204,176	7,949,848
1939	1,822,016	1,474,570	725,008	3,325,168	185,550	297,472	7,829,784
Avg. 1935-39	1,987,099	1,737,821	778,753	3,105,331	171,216	240,946	8,021,166
1940	1,851,860	1,246,340	735,520	3,159,840	151,145	554,825	7,699,530
1941	2,242,040	895,260	1,071,020	2,997,160	174,140	399,000	7,778,620
1942	2,264,040	845,400	1,165,450	3,054,600	195,880	498,600	8,023,970
1943	2,231,040	845,400	1,149,250	3,082,400	190,000	597,800	8,095,890
1944	2,162,520	842,200	1,344,900	2,678,100	187,000	1,117,600	8,332,320
1945	2,223,520	830,200	1,570,900	3,377,700	(not shown)		8,002,320

Production for Sale 1935-1943; Shipments 1944-1945, of Steel Pipe and Tube (net tons) (See Note 2)

1935	585,574	374,547	85,102	863,054	43,766	83,748	2,035,791
1936	847,582	646,700	158,395	1,498,489	74,390	122,320	3,347,876
1937	871,459	761,654	222,184	1,858,732	89,365	138,076	3,941,470
1938	603,893	303,431	148,880	1,245,354	42,976	66,552	2,411,086
1939	952,974	358,919	267,312	1,686,665	78,850	160,862	3,505,582
Avg. 1935-39	772,296	489,050	176,375	1,430,459	65,869	114,312	3,048,361
1940	1,157,144	360,188	288,424	1,759,567	82,042	313,877	3,961,242
1941	1,768,253	485,270	726,507	2,183,348	161,328	350,172	5,674,878
1942	1,372,212	498,812	620,662	2,008,123	117,133	463,305	5,080,247
1943	1,326,084	560,048	1,014,492	2,165,044	54,492	750,366	5,870,526
1944	1,435,674	577,602	859,929	2,355,069	63,596	854,441	6,146,311
1945	1,526,611	490,843	979,699	2,800,426	(not shown)		5,797,579

Percent of Capacity

1935	28.6	18.5	9.3	30.6	27.5	35.3	24.8
1936	41.3	33.2	17.4	50.4	46.7	48.1	40.3
1937	43.0	46.3	33.7	59.8	51.4	65.3	50.4
1938	30.4	19.0	21.6	37.8	24.2	32.6	30.3
1939	52.3	24.3	37.4	50.7	42.5	54.1	44.8
Avg. 1935-39	38.9	28.1	22.6	46.1	38.5	47.4	38.0
1940	62.5	28.9	39.2	55.7	54.3	56.6	51.0
1941	78.9	54.2	67.8	72.8	92.6	87.8	73.0
1942	60.6	59.0	53.3	65.7	59.8	92.9	63.3
1943	59.4	66.2	88.3	70.2	28.7	125.5	72.5
1944	66.4	68.6	63.9	87.9	34.0	76.5	73.8
1945	68.7	59.1	62.4	82.9	(not shown)		72.4

Source: Prepared by the Independent Petroleum Association from Annual Statistical Reports of American Iron and Steel Institute.

Note 1 Embraces the total tonnage of each product that could be produced under full operations, assuming exclusive use of all available facilities and without regard to the availability of ingots. For those types of rolling mills and other producing facilities which produce more than one product, the full capacity for each product is shown, regardless of the fact that such producing facilities have not capacity to produce the aggregate tonnage shown for all such products.

Note 2 Production figures do not check total U. S. Production of Pipe and Tube as shown on Tables 1 and 2. Above figures are data reported by companies comprising over 99% of total production of finished rolled steel products.

Table 4

Total U. S. Shipments of Steel Pipe and Tube
And Shipments to Oil and Gas Industry
1940 - 1947

	Shipments of Steel Pipe and Tube to All Industries			Shipments of Steel Pipe and Tube to Oil and Gas Industry				
				Domestic Shipment			Exports of Casing and Oil Line Pipe	Total
	Domestic	Export	Total	To Jobbers, Dealers and Distributors	Direct to Industry	Total Domestic Shipments		
	(net tons)	(net tons)	(net tons)	(net tons)	(net tons)	(net tons)	(net tons)	(net tons)
1940	3,537,862	382,338	3,920,200	612,658	615,984	1,228,642	203,447	1,432,089
1941	5,490,869	398,070	5,888,939	918,919	1,355,415	2,274,334	141,948	2,416,282
1942	4,075,554	640,507	4,716,061	259,375	648,981	908,356	136,826	1,045,182
1943	4,661,165	455,506	5,116,671	323,068	820,069	1,143,137	113,234	1,256,371
1944	5,598,268	454,014	6,052,282	549,888	845,941	1,395,829	198,618	1,594,447
1945	5,370,056	382,696	5,752,752	641,872	855,191	1,497,063	256,770	1,753,833
1946	4,316,219	339,286	4,655,505	854,976	675,572	1,530,548	179,781	1,710,329
1st 6 Mo's 1947	2,769,390	209,157	2,978,547	467,570	602,605	1,070,175	166,293	1,236,468
Percentages of Total Shipments								
1940	90.2	9.8	100.0	42.8	43.0	85.8	14.2	100.0
1941	93.1	6.9	100.0	38.0	56.1	94.1	5.9	100.0
1942	86.4	13.6	100.0	24.8	62.1	86.9	13.1	100.0
1943	91.1	8.9	100.0	25.7	65.3	91.0	9.0	100.0
1944	92.5	7.5	100.0	34.5	53.0	87.5	12.5	100.0
1945	93.3	6.7	100.0	36.6	48.8	85.4	14.6	100.0
1946	92.7	7.3	100.0	50.0	39.5	89.5	10.5	100.0
1st 6 Mo's. 1947	93.0	7.0	100.0	37.8	48.8	86.6	13.4	100.0

Shipments of Steel Pipe and Tube to all Industries from reports of the American Iron and Steel Institute from reports from companies comprising over 99% of the total production of finished rolled steel products.

Domestic shipments of Steel Pipe and Tube to the Oil and Gas Industry obtained from the same source but these reports do not show exports of oil pipe and tube so export data from Commerce Department(See Table 7) was used to obtain Total Shipments to Oil and Gas Industry.

Prepared by the Independent Petroleum Association of America.

Table 5

Shipments of Steel Pipe and Tube to Oil and Gas Industry
In Relation to Production
1940 - 1st 4 Mo's. 1947

	Total U.S. Steel Prod. (Ingots and Steel for Casting)	Total U.S. Domestic & Export Shipments of All Finished Steel Prods.	Total U.S. Domestic & Export Shipments of Pipe & Tube to All Industries	Domestic Shipments of Pipe and Tube to Oil and Gas Industries in the U.S.			
				Total	Percent of Total Steel Prod.	Percent of Total Shipments of all Products	Percent of Total Shipments of Pipe & Tube
	(net tons)	(net tons)	(net tons)	(net tons)	(%)	(%)	(%)
1940	66,982,686	45,850,825	3,920,200	1,228,642	1.8	2.7	31.3
1941	82,839,259	62,484,162	5,888,939	2,274,334	2.7	3.6	38.6
1942	86,031,931	60,464,774	4,716,061	908,356	1.1	1.5	19.3
1943	88,836,512	59,905,646	5,116,671	1,143,137	1.3	1.9	22.3
1944	89,641,600	64,193,159	6,052,282	1,395,829	1.6	2.2	23.1
1945	79,701,624	57,242,240	5,752,752	1,497,063	1.9	2.6	26.0
1946	66,602,724	48,775,532	4,655,505	1,530,548	2.3	3.1	32.9
1st 6 Mo's 1947	42,283,653	31,172,157	2,978,547	1,070,175	2.5	3.4	35.9

Prepared by the Independent Petroleum Association of America from data from the American Iron and Steel Institute.

Shipment figures are based on reports from companies comprising over 99% of total production of finished rolled steel products.

Table 6

Exports of Casing and Oil Line Pipe
In Relation to U. S. Production of Steel Pipe and Tube
1935 - 1946

	Total U.S. Production of Steel Pipe and Tube	U.S. Prod. of Oil Country Goods and Line Pipe	U.S.Prod of Oil Country Goods	Export of Casing and Oil Line Pip			
				Total	Percent of Total Pipe and Tube Prod	Percent of Prod of Oil Country Goods & Line Pipe	Percent of Prod. of Oil Country Goods
	(net tons)	(net tons)	(net tons)	(net tons)	(%)	(%)	(%)
1935	2,276,544	964,169	774,076	26,567	1.2	2.8	3.6
1936	3,643,779	1,735,620	1,115,620	31,820	.9	1.8	2.9
1937	4,282,584	2,159,534	1,418,579	93,498	2.2	4.3	6.6
1938	2,580,463	1,323,461	1,034,921	71,347	2.8	5.4	6.9
1939	3,764,272	1,691,039	1,050,083	98,455	2.6	5.8	9.4
Avg. 1935-39	3,309,528	1,574,765	1,078,656	64,337	1.9	4.1	6.0
1940	4,272,684	1,824,734	1,028,410	203,447	4.8	11.1	19.8
1941	5,736,906	2,273,115	1,050,643	141,948	2.5	6.2	13.5
1942	5,283,844	1,506,275	457,603	136,826	2.6	9.1	29.9
1943	6,219,345	1,801,341	674,576	113,234	1.8	6.3	16.8
1944	6,406,423	2,112,684	1,126,705	198,618	3.1	9.4	17.6
1945	6,030,243	1,962,308	1,117,793	256,770	4.3	13.1	23.0
1946	5,058,468	2,068,895	1,094,962	179,781	3.6	8.7	16.4

Source: Prepared by the Independent Petroleum Association of America

Production figures from Annual Statistical Reports of American Iron and Steel Institute except 1946 which are preliminary figures obtained direct from the Institute.

Exports from U. S. Department of Commerce (See Table 7)

Table 7

U. S. Exports of Seamless and Welded Casing and Oil Line Pipe by Principal Countries of Destination 1935 - 1947

(All figures in net tons)

	Venez-uela	Mexico	Middle East *	Columbia	Neth. E.I.	U.S.S.R.	Canada	Argen-tina	Peru	Bri tish Malaya	Trini-dad & Tobago	India	All Other	Grand Total
1935	8980	1928	576	2833	1968	-----	301	1283	667	54	987	1026	5964	26567
1936	12461	2662	892	1277	1096	-----	765	1678	598	73	1505	2253	6560	31820
1937	30095	13035	1154	8538	6250	-----	6321	3017	2687	1644	4210	5719	10828	93498
1938	24913	682	2643	19794	569	213	4859	2085	900	524	1133	2520	10512	71347
1939	32463	466	7555	9848	9158	-----	4385	1185	2263	1146	2663	6162	21161	98455
Avg. 35-39	21782	3755	2564	8458	3808	43	3326	1850	1423	688	2100	3536	11004	64337
1940	58224	1033	6309	5549	15261	32049	3410	21257	3064	2485	10842	13923	30041	203447
1941	56700	3163	88	2685	18088	-----	19162	9651	2180	2679	11890	2657	13005	141948
1942	24611	4618	16924	607	725	16649	12118	4051	1086	1	6804	17685	30947	136826
1943	9985	9352	2248	3108	-----	24309	7201	82	3516	----	406	11594	41433	113234
1944	83315	5560	13848	18326	-----	34148	6767	----	8094	----	2459	14570	11531	198618
1945	102844	9758	17975	16171	73	66192	9564	526	9293	----	3777	5352	15245	256770
Avg. 42-45	55189	7322	12749	9553	200	35324	8912	1165	5497	----	3362	12300	24789	176362
1946	69580	5062	18420	15892	747	29536	10626	2379	8457	796	1977	1262	15047	179781
1947														
1st Q	27366	14488	8556	7163	3150	4745	2463	1955	2675	1484	1286	611	6308	82250
2nd Q	41059	4586	7353	5900	5044	2818	3024	1701	902	1302	1499	303	8552	84043
6 Mo's	68425	19074	15909	13063	8194	7563	5487	3656	3577	2786	2785	914	14860	166293
July	17155	568	2697	1464	690	386	1322	731	478	315	544	---	2068	28418

Source: Prepared by the Independent Petroleum Association of America from data from U. S. Department of Commerce reports on exports of Seamless Casing and Oil-Line Pipe (class 606200 and Welded Casing and Oil Line Pipe (class 606300)

* Includes Saudi Arabia, Kuwait, Bahrein Island, Iran, Iraq and Palestine.