

STUDY OF REFINED COPPER STATISTICS FOR PERIOD JANUARY, 1955 TO JULY, 1958

The Arizona Department of Mineral Resources has made a study of refined copper statistics, reported by the members of the Copper Institute for the past forty-two months.

Although curtailment of domestic copper production was begun in the latter part of the year 1956, it did not seem to have any appreciable effect until May and June of this year. Refined stocks increased over 200,000 tons from July 1, 1956 to May of this year. Curtailment of production was partly offset by expanded production from new properties which were in the process of attaining economical capacity production. The result was a net curtailment of less than eight percent, but this was not sufficient to prevent the increase in stocks, because deliveries to fabricators declined more than sixteen percent during the same period.

Statistics for the month of June, this year, seem to indicate a turning point, with a reported production of 71,246 tons as compared with a previous maximum monthly average of 95,772 tons; a decline of over 25 percent. Likewise, June showed a delivery to fabricators of 100,296 tons after having fallen to as low as 78,631 tons.

Refined domestic stocks at the end of June still amount to 244,421 tons, and are 175,000 tons in excess of normal. Unless the Government absorbs this copper into their stockpile, it would appear that it will be a long hard pull for the domestic copper industry to show any appreciable improvement for many months, and possibly years, to come. The only other alternative is a high enough copper tariff to keep foreign low-cost copper out of our market.

Foreign output and consumption during the period under study have shown opposite trends to those in the U. S. A. A remarkable industrial development has resulted in an increased production of over 100,000 tons of copper monthly and an increased consumption of over 30,000 tons monthly. However, new capacity production has resulted in 60,000 tons increase in refined stocks in the 42 months period.

SUMMARY OF COPPER STATISTICS REPORTED BY MEMBERS OF THE COPPER INSTITUTE

SIX-MONTHS PERIODS FOR YEARS 1955, 1956, 1957 AND 1958

<u>UNITED STATES</u>	<u>Crude Production Primary</u>	<u>Secondary</u>	<u>Refined Prod.</u>	<u>Del. to Fabricators</u>	<u>Refined Stocks End of Period</u>	<u>E. & M.J. Avg. Price</u>
First six months 1955	554,349	65,974	771,305	731,364	38,533	
Avg. per month	92,392	10,996	128,551	121,894		33.7 cts.
Range of producers' copper prices-First Half, 1955-30 cents low to 36 cents high.						
Second six months 1955	483,231	58,785	696,143	708,394	61,554	
Avg. per month	80,539	9,798	116,024	118,066		41.2 cts.
Range of producers' copper prices-Second Half 1955-36 cents low to 43 cents high.						
First six months 1956	574,551	78,392	811,762	820,491	57,546	
Avg. per month	95,759	13,065	135,294	136,749		45.3 cts.
Range of producers' copper prices-First Half 1956-43 cents low to 46 cents high.						
Second six months 1956	557,261	61,020	768,525	645,408	120,645	
Avg. per month	92,877	10,170	128,088	107,568		38.6 cts.
Range of producers' copper prices-Second Half 1956-43 cents high to 36 cents low.						
First six months 1957	574,629	63,370	846,730	674,106	165,549	
Avg. per month	95,772	10,562	141,122	112,351		32.3 cts.
Range of producers' copper prices-First Half 1957-36 cents high to 29 $\frac{1}{4}$ cents low.						
Second six months 1957	540,854	48,212	767,177	600,762	181,024	
Avg. per month	90,142	8,035	127,863	100,127		27.1 cts.
Range of producers' copper prices-Second Half 1957-29 $\frac{1}{4}$ cents high to 27 cents low.						
First six months 1958	510,198	61,477	739,041	545,106	244,421	
Avg. per month	85,033	10,246	123,174	90,851		24.5 cts.
Range of producers' copper prices-First Half 1958-27 cents high to 25 cents low.						
Second six months 1958						
Avg. per month						

COMMENTS ON U. S. STATISTICS

Although a systematic curtailment of production was inaugurated by most U. S. producers in 1957, the monthly crude production was reduced only 5,630 tons per month, or less than 6 percent; from an average of 95,772 tons per month in the first half of 1957 to an average of 90,142 tons in the second half. The curtailment would have been at least $12\frac{1}{2}$ to 15 percent, if it were not for such large new properties as San Manuel, and Pima in Arizona, the Berkeley Pit in Montana and the White Pine in Michigan being in the process of developing and attaining planned capacity production.

Further curtailment in the first six months of 1958 has reduced monthly production to 71,246 tons in June, or over 25 percent below the high monthly average in the first six months of 1957.

Deliveries to fabricators have dropped from a monthly average of 112,351 tons in the first half of 1957 to 90,851 tons in the first half of 1958, a drop of 21,500 tons per month. As primary crude production dropped from 95,772 tons per month in the first half of 1957 to 85,033 tons in the first half of 1958, or an average of 10,739 tons per month, stocks were increased by 10,761 (21,500-10,739) tons per month for the 12 months from July 1, 1957 to July 1, 1958, or a total of 129,132 tons increase.

The actual reported stocks showed 165,549 tons at the end of the first half of 1957, as compared with 244,421 tons at the end of the first half of 1958, an increase of 78,872 tons in the 12-month period. The discrepancy of 50,260 tons was due to a marked reduction of imports of copper for domestic refining and fabrication. For example, the domestic refined production for the first half of 1957 was 141,122 tons per month as compared with 123,174 tons per month for the first half of 1958; a drop of 17,948 tons per month or 215,378 tons for the 12 months. As shown above, deliveries to fabricators dropped 258,000 tons during the 12-month period, so stocks should have dropped 42,622 tons (258,000-215,378). However, they increased 78,872 tons, thereby indicating that domestic primary production must have accounted for 121,494 tons (78,872 + 42,622). This checks fairly closely with the figure of 129,132 tons shown above.

SUMMARY OF REFINED COPPER STATISTICS (Continued)

<u>OUTSIDE U.S.A.</u>		<u>Crude Production</u> <u>Primary Secondary</u>	<u>Refined Pro-</u> <u>duction</u>	<u>Deliveries to</u> <u>Fabri-</u> <u>cators</u>	<u>Refined</u> <u>Stocks</u> <u>End of</u> <u>Period</u>	<u>E. & M. J.</u> <u>Foreign</u> <u>Prices</u>
First six months 1955		771,166	2,337	605,422	659,904	171,081
Avg. per month		128,528	390	100,904	109,984	36.0 cts
Range of L. M. E. prices-First Half 1955 - 38 cts to 43½ cts.						
Second six months 1955		805,525	5,968	655,349	647,395	158,531
Avg. per month		134,254	995	109,225	107,898	42.0 cts
Range of L. M. E. prices - Second Half 1955 - 43½ cts to 49 cts.						
First six months 1956		836,098	7,607	696,949	651,012	205,412
Avg. per month		139,350	1,268	116,158	108,502	45.2 cts
Range of L. M. E. prices - First Half 1956 - 36 cts to 54 cts.						
Second six months 1956		893,513	5,345	709,510	713,996	232,961
Avg. per month		148,919	891	118,252	118,999	35.9 cts
Range of L. M. E. prices - Second Half 1956 - 36 cts to 33 cts.						
First six months 1957		882,620	6,888	697,581	796,701	234,745
Avg. per month		147,103	1,148	116,264	132,784	30.3 cts
Range of L. M. E. prices - First Half 1957 - 33 cts to 28 cts.						
Second six months 1957		900,499	4,322	721,043	778,495	277,316
Avg. per month		150,083	720	120,174	129,749	24.2 cts
Range of L. M. E. prices - Second Half 1957 - 28 cts to 22 cts.						
First six months 1958		867,772	2,868	710,140	833,148	232,402
Avg. per month		144,629	478	118,357	138,858	21.5 cts
Range of L. M. E. prices - First Half 1958 - 20 cts to 24 cts.						
Second six months 1958						
Avg. per month						

(L. M. E. = London Metal Exchange)

COMMENTS ON FOREIGN STATISTICS

The mines outside the United States continued to increase their copper production until the end of 1957, in spite of the efforts of some of them to curtail. As in the United States, planned expansion offset any curtailment that may have been inaugurated at a few of the mines.

Such increases appeared to be justified by the notable increase in deliveries to fabricators. Instead of declining as they did in the U. S., they increased steadily during the period under study. While the United States deliveries dropped about 30,000 tons per month from the first six months of 1955 to the first six months of 1958, foreign deliveries increased almost 30,000 tons per month during the same period. This indicates a remarkable expansion in foreign industrialization.

The increase in stocks of refined copper abroad took place in 1955, before the industrial expansion had got going, but has not changed much in the past two years.

In 1955 and the first half of 1956, when the U. S. was short of copper, the foreign refinery price was one cent above the U. S. price; but when our stocks began to accumulate, the foreign refinery price declined about three cents below ours. This indicates a spread of about four cents per pound, depending upon the market for foreign copper.

SUMMARY OF COPPER STATISTICS (Continued)

COMBINED TOTALS IN U.S.A. AND OUTSIDE U. S. A.

		Crude Production		Refined	Deliveries	Refined
		<u>Primary</u>	<u>Secondary</u>	<u>Production</u>	<u>to</u> <u>Fabricators</u>	<u>Stocks</u> <u>End of</u> <u>Period</u>
First six months	1955	1,325,515	68,311	1,376,727	1,391,268	209,614
Avg. per month		220,919	11,385	229,455	231,878	
Second six months	1955	1,288,756	64,753	1,351,492	1,355,789	220,085
Avg. per month		214,793	10,792	225,249	225,965	
First six months	1956	1,410,649	85,999	1,508,711	1,471,503	262,958
Avg. per month		235,108	14,333	251,452	247,584	
Second six months	1956	1,450,774	66,365	1,478,035	1,359,404	353,606
Avg. per month		241,796	11,061	246,673	226,567	
First six months	1957	1,457,249	70,258	1,544,311	1,470,807	400,294
Avg. per month		242,875	11,710	257,385	245,135	
Second six months	1957	1,441,353	52,534	1,488,220	1,379,257	458,340
Avg. per month		240,226	8,756	248,037	229,876	
First six months	1958	1,377,970	64,345	1,449,181	1,378,254	476,823
Avg. per month		229,662	10,724	241,530	229,709	
Second six months	1958					
Avg. per month						