REVIEW OF COPPER INDUSTRY IN 1963

REVIEW BASED ON PRELIMINARY STATISTICS PUBLISHED

BY U. S. BUREAU OF MINES

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By Frank J. Tuck, Statistical Consultant, Arizona Department of Mineral Resources

The U. S. Bureau of Mines' preliminary estimate of recoverable copper production from U. S. mines in 1963 was 1,209,787 tons, down only 1.5% from the final figure of the 1962 production of 1,228,421 tons. The Copper Institute's estimate of the 1963 production was 1,225,065 tons.

Based on an estimated annual capacity of 1,400,000 tons of mine recoverable copper in 1962, the 1963 preliminary estimate by the U. S. Bureau of Mines was about 86.4 percent of capacity.

May 19, 1963 marked the end of two complete years during which the copper price had been unchanged at 31 cents a pound. The calendar year, 1963, saw no change in the price throughout the year. Previous periods of an unchanged copper price occurred from May 1929 to March 1930 (18 cents a pound) and from November 12, 1959 to October 12, 1960 (33 cents a pound).

The Copper Institute reported the 1963 production of copper in the Free World outside the U. S. A. to have been an estimated 2,650,000 tons of mine copper, assuming that the Institute's coverage represented approximately 90% of the Free World. The Free World production of copper outside the U. S. A. was approximately 88% of the Free World capacity of 3,000,000 tons. According to the Copper Institute, the monthly production during the first six months of 1963 averaged about 210,700 tons, but increased to 231,200 tons per month during the last six months of the year.

Copper production did not change much from the preceding year. There were short strikes in Africa, Latin America and the U. S. but they did not affect output. The U. S. stockpile investigation and legislative proposals for disposition of stockpile surpluses continued to have a slightly unsettling effect on the metal industries, though actually the indestructibility of such stockpiles has made them a valuable reserve to offset the serious loss in gold reserves.

Production of copper by Arizona mines (658,700 tons) amounted to 54.4% of the total U. S. production in 1963. Utah was second with 203,140 tons; New Mexico third with 82,680 tons; Nevada fourth with 81,575 tons; Montana fifth with 79,109 tons. These were all based on preliminary estimates by the U. S. B. M.

Preliminary estimates of Free World copper production in 1963 consisted of 1,209,787 tons for the U. S. A. and 2,650,000 tons in the rest of the Free World. Copper production in Communist controlled countries is not known, but it is believed to have been at least 600,000 tons. The total World mine production for 1963 is therefore estimated at 4,460,000 as compared with an estimated 4,428,000 tons in 1962.

The Free World mine production of 3,860,000 tons amounts to about 88 percent of an estimated Free World capacity of 4,400,000 tons.

The U. S. Bureau of Mines reported producers' refined copper stocks at the beginning of the year at 71,000 tons. The Copper Institute, which differs from the Bureau's figures by including refined copper in process, reported 117,441 tons in the hands of producers at the beginning of the year, and 76,934 tons at the end of the year.

United States refined copper production in 1963 was reported by the U. S. Bureau of Mines at 1,219,342 tons of domestic copper and 377,009 tons of foreign copper, or a total of 1,596,351 tons. This includes an estimated 310,000 tons of secondary unalloyed copper. The Copper Institute reported a total refined production of 1,706,213 tons, which includes 1,225,065 tons of U. S. mine production, 131,305 tons of secondary, and 349,843 tons of foreign copper.

According to the U. S. Bureau of Census, U. S. imports of copper in 1963 amounted to 49,158 tons in ore, matte and regulus, 368,849 tons of blister, and 118,445 tons of refined ingots, bars, etc., total 536,452 tons; as compared with 43,552 tons in ore, matte and regulus, 331,686 tons blister, and 98,820 tons refined, total 474,058 tons in 1962. Copper exports in 1963 amounted to 1210 tons of copper in ore, concentrates and matte, and 311,479 tons of refined ingots, bars, total 312,689 tons; as compared with 2000 tons of copper in ore, concentrates and matte, and 334,000 tons of refined ingots, bars, etc., total 336,000 tons in 1962. The net excess of imports over exports in 1963 was 223,763 tons, as compared with 135,617 tons in 1962.

Apparent consumption of new refined copper in the United States in 1963 was estimated by the Bureau of Mines at approximately 1,422,000 tons, while the actual consumption was estimated at approximately 1,707,134 tons. These figures compare with an apparent consumption of 1,352,000 tons in 1962, and actual consumption of 1,556,687 tons for the same year.

Attached hereto is Table I, giving a summary of the U. S. Copper Industry Preliminary Statistics for 1962 and 1963.

TABLE I

SUMMARY OF U. S. COPPER INDUSTRY PRELIMINARY COPPER STATISTICS FOR 1963

COMPARED WITH STATISTICS FOR 1962

Unit: Short Tons
Source: U. S. B. M.

	1962	Prelim. 1963
Mine production of New Cu from U.S. ores . . .	1,228,421	1,209,787
Ref. Prod. of New Cu from U. S. ores	1,214,146	1,219,342
Ref. Prod. of New Cu from Foreign ores	397,584	377,009
Total Ref. Prod. of New Copper	1,611,730	1,596,351
Imports of Refined Copper	98,820	118,445
Stocks at Beginning of Year	49,000	71,000
Total Available Supply	1,759,550	1,785,796
Exports of Refined Copper	336,525	311,479
Refined Stocks at End of Period	71,000	52,000
Total	407,525	363,479
Withdrawn on Domestic Account (Apparent Consumption)	1,352,000	1,422,000
Actual Consumption	1,556,687	1,707,134
Imports of Ores, Matte and Regulus (Copper Content)	43,552	49,158
Imports of Blister Copper	331,686	368,849
Imports of Refined Copper	98,820	118,445
Total Imports of Crude & Refined	474,058	536,452
Exports of Ores, Concts., Matte (Copper Content)	1,916	1,210
Exports of Refined Copper	336,525	311,479
Total Exports of Crude & Refined	338,441	312,689
Excess Imports of Crude & Refined	135,617	223,763
Secondary Copper Recovered as Unalloyed Copper	301,000	310,000

Arizona Department of Mineral Resources March, 1964

OUTLOOK

Mr. John M. Boyle, Vice President and General Manager of Phelps Dodge Sales Co., has contributed an article on copper in the February, 1964 Annual Review number of the Mining Congress Journal.

Mr. Boyle notes some encouraging signs in the copper industry. Budgets for advertising, market research, and sales promotion are being increased. Several modern laboratories have been completed and are working on the improvement of old products, as well as the development of new ones.

The formation of the "Copper Development Association" in 1962 was indeed a milestone in the history of copper. For the first time, all segments of the copper and brass industry have joined together to promote new products and expand the copper market.

Mr. Boyle says that United States copper mines are competing against foreign mines located in areas where labor costs are lower. "Fortunately, the Government has continued the relatively small tax of 1.7 cents per pound on imported copper, to partially offset the differentials in labor costs. It is imperative that it continue to do so, but the industry must remain vigilant or one day it will awaken to find this protection eliminated by some general political maneuver."

As to the outlook, Mr. Boyle says "The picture is one where ample copper supplies are, and should be, available. With cooperative effort in research and promotion, the market for copper can be maintained and expanded. Therefore, the long range copper outlook is a favorable one and should give a satisfactory return to both investors and employes".

"However, there is no room for complacency. In this jet age, there is no material or industry that is not subject to the most severe competition. To a large extent the destiny of copper will be determined by the time, effort, and money that the miner, in conjunction with the refiner and fabricator, is willing to spend in meeting the challenge ahead".

The "Copper Institute" recently disclosed that deliveries of refined copper to fabricators outside the U. S. topped the 200,000 tons level during both November and December, the first such monthly figures in two years. There are indications that foreign deliveries may be headed still higher. The development is significant because foreign copper demand has failed to show any annual increment since 1960. But in November the foreign stocks showed a decline for the first time in five months.

In response to this situation, the two large Rhodesian copper producers, Anglo American and Rhodesian Selection Trust, announced at the beginning of this year that they are stepping up their rate of sales to 90% of capacity, as compared with an operating level of around 85% set in the summer of 1962.

Then, on January 16, these two producers removed all remaining restrictions on production and sale of their copper. At the same time, they switched to selling copper on the basis of £236 a long ton (29½ c a pound) instead of on the basis the London Metal Exchange settlement price.

Shortly after the Rhodesian announcement, Phelps Dodge announced that it plans to increase production. However, according to the "American Metal Market" of January 22, 1964, "the overall consensus is that producers aim to move sufficient supplies of metal into the market to offset any pressure for a price increase. Barring really serious labor trouble at U. S. producing properties later this year, the outlook is for a continuation of copper at 31 c a pound". New labor contracts are due to be negotiated at most of the big copper properties during the middle of this year.

Sir Ronald Prain, head of Rhodesian Selection Trust, and an acknowledged world copper authority, has come up with a reassessment of the long-term growth pattern, in the German publication "Metall" on January 1, 1964:

"World production in 1962 amounted to 4,146,000 tons (copper) which compares with 4,020,000 tons in 1961 and 3,939,000 tons in 1960. All statistics are given in short tons, and refer to the non-Soviet world. There has thus been a steady increase in output despite the fact that voluntary cutbacks of sales and/or production

The production cuts in force up to the end of last year amounted to nearly 350,000 t.p.a., equivalent to 7½ per cent of capacity throughout the industry. Some large producers, however, were curtailing as much as 15 per cent of their capacity or sales, while some smaller producers were not curtailing at all."

"Despite the continuing need for cutbacks at the time, producers announced several new projects during the past year or two, stimulated by the genuine industrial growth of copper usage and by the steadiness of prices. During the next four years Free World primary capacity is expected to increase by about 11 per cent to over 5,100,000 tons. So far, new projects with an aggregate capacity of 205,000 tons and increases totalling 318,000 tons have been announced."

"Assuming that the purchasing power of money remains unchanged, the median and average cost of producing copper in 1967 should be virtually the same as, or possibly marginally less than, the present median net cost of about £154 per l. ton of refined copper (19¼ c. per lb)."

Sir Ronald estimates the 1963 demand for Free World primary copper, including allowances for healthy stock growth and Soviet offtake, at 4,100,000 tons. During the fifties and early sixties, Free World refined consumption has shown a growth trend of 4.1 per cent per annum. After taking other factors into account, a continuation of this trend will give a demand for primary copper of between 4,800,000 and 4,900,000 tons in 1967. Assuming normal wastage from strikes and other causes in that year, this corresponds quite closely with the expected primary production of 4,800,000 tons. A 3½ per cent growth rate for refined copper would give a demand of 4,700,000 tons; i.e., a slight surplus. Demand in 1970 is tentatively estimated as being perhaps of the order of about 5,500,000 tons.

The indicators, in Sir Ronald's view, are set fair for copper's continued growth. As the main grounds for confidence in the industry's future he cites the following; First, the responsibility shown by producers in taking charge of the market situation during a period of over-capacity; secondly, the confidence and courage of producers in continuing to expand their capacity at a time of over-production, and against a background of declining profit margins; thirdly, the stability of the price which is encouraging consumption; fourthly, the increasing tonnages required by the growing populations of the world and by the higher standards demanded; and fifthly, the re-awakening of the copper industry as a whole to the technological and scientific requirements and opportunities of the 20th century.

In the last-mentioned context the article points out that the amounts being spent by the industry on research and promotion are reaching unprecedented levels. It seems inconceivable that this effort will not be matched by results.