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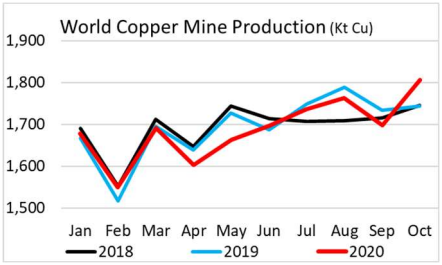
Copper: Preliminary Data for October 2020

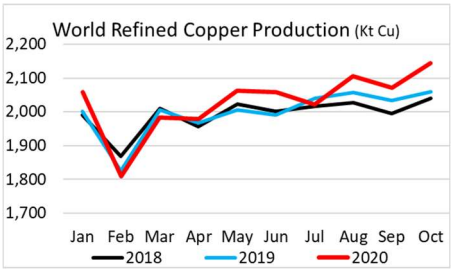
The International Copper Study Group (ICSG) released preliminary data for October 2020 world copper supply and demand in its January 2021 Copper Bulletin. The Bulletin and ICSG online statistical database provide data, on a country basis, for copper mine, smelter, refined and semis production, copper refined usage, trade, stocks and prices. The bulletin is available for sale (annual subscription €550/€850 for orders originating from/outside institutions based in ICSG member countries).

Preliminary data indicates that world copper mine production fell by around 0.5% in the first ten months of 2020, with concentrate production remaining essentially unchanged and solvent extraction-electrowinning (SX-EW) declining by about 2%:



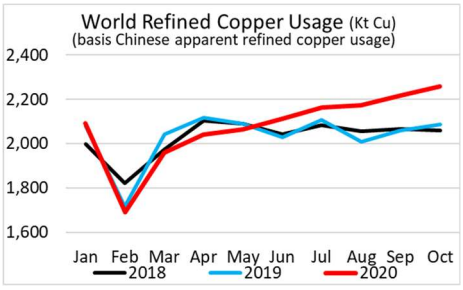
- World mine production declined by 3.5% in April-May as these two months were the most affected by the COVID-19 related global lockdown that resulted in temporary mine shutdowns/reduced production levels. However, world mine production started to recover in May as lockdown measures eased and the copper industry adapted to the strict health protocols.
- In Peru, stoppages resulting from the COVID-19 pandemic combined with operational issues/adverse weather that affected a few major mines, resulted in a 14.5% decline in mine output over the first ten months of 2020 including a significant decline of 38% in April-May compared to the same period of 2019. However, as the Peruvian mining industry started to recover the extent of the reduction narrowed and October output was 1.5% above that in October 2019.
- COVID-19 related constraints and other operational issues resulted in declines in production in other major copper mine producing countries, most notably Australia, Mexico and the United States.
- In Chile, the world's biggest copper mine producing country, output was up by 2.5% in 1st half of 2020, recovering from production constraints in early 2019 (output had declined by 2.5% in 1st half 2019). However, with a 3% decline over July-October 2020 compared to the same period of 2019, accumulated output in the first 10 months of 2020 remained essentially unchanged.
- Production in the Democratic Republic of Congo (DRC) and Panama increased significantly mainly due to the ramp-up of new mines or expansions. In Indonesia, production grew by 25% as output levels improved following the transition of the country's major two copper mines to different ore zones in 2019.

Preliminary data indicates that world refined copper production increased by 1.5% during the first ten months of 2020 with primary production (electrolytic and electrowinning) up by 2.5% and secondary production (from scrap) down by 3.5%.



- Chilean electrolytic refined output increased by 32% as in the comparative period of 2019 production was negatively affected by temporary smelter shutdowns as a result of upgrades to comply with new environmental regulations. After including a 6.5% decline in electrowinning production, total Chilean refined copper production (electrolytic and electrowinning) increased by 5%.
- Chinese refined production growth was negatively impacted by temporary shutdowns related to COVID-19 restrictions, tight scrap supply and constraints associated with concentrate imports and oversupply in the sulphuric acid market.
- In Africa, refined production was up 5% in the DRC, due to the ramp-up of new or expanded SX-EW plants and by 25% in Zambia, where output has been recovering from smelters' operational issues and temporary shutdowns in 2019.
- Indian refined output decreased by 20% primarily as a consequence of the temporary suspension of Birla Copper's operations in March-May following a nationwide lockdown due to COVID-19. In the United States, temporary shutdowns and a long strike at Asarco's operations led to a 14% decline in refined output. Japanese refined production rose by 5% mainly as a consequence of a recovery from a number of maintenance shutdowns over the same period of 2019.
- Globally, constrained scrap supply due to the COVID-19 lockdown and lower copper prices during the first half of the year have negatively impacted world secondary refined production.

Preliminary data indicates that world <u>apparent</u> refined copper usage increased by 2% over the first ten months of 2020:



- The COVID-19 related global lockdown has had a notable negative impact on the world economy and subsequently on key copper end-use sectors in all regions.
- World ex-China refined copper usage was significantly impacted and is estimated to have declined by about 10%. Among the biggest copper using regions, refined usage fell by 17% in Japan, 12% in the EU, 5% in the United States and by about 12% in Asia (Ex-China).
- However, due to a 50% (1.25 million tonnes) increase in net refined copper imports, Chinese <u>apparent</u> usage increased by 14% offsetting usage declines in other regions of the world. <u>Real</u> Chinese industrial usage was negatively impacted by the COVID-19 related production suspensions at semis fabricators early in the year and weaker external demand and should present lower growth than <u>apparent</u> usage.

Preliminary world refined copper balance in the first ten months of 2020 indicates an <u>apparent</u> deficit of about 480,000 t due to a strong Chinese apparent usage:

- In developing its global market balance, ICSG uses an apparent demand calculation for China that does not take into account changes in unreported stocks [State Reserve Bureau (SRB), producer, consumer, merchant/trader, bonded]. To facilitate global market analysis, however, an additional line item - Refined World Balance Adjusted for Chinese Bonded Stock Changes - is included in the attached table that adjusts the world refined copper balance based on an average estimate of changes in bonded inventories provided by two consultants with expertise in China's copper market.
- Over the first ten months of 2020, the world refined copper balance, based on Chinese apparent usage (excluding changes in bonded stocks), indicated a deficit of about 480,000 t. The world refined copper balance adjusted for changes in Chinese bonded stocks indicated a market deficit of about 380,000 t.

(Copper Prices and Stocks and World Refined Copper Usage and Supply Trends table on next page)

Copper Prices and Stocks:

- Based on the average of estimates provided by two independent consultants, China's bonded stocks are thought to have increased by about 105,000 t over the first ten months of 2020 compared to the year-end 2019 level.
- As of the end of December 2020, copper stocks held at the major metal exchanges (LME, COMEX, SHFE) totalled 251,175 t, a decline of 51,212 t (-17%) from stocks held at the end of December 2019. Stocks were up COMEX (+106%) and down at the LME (-27%) and at SHFE (-39%).
- The average LME cash price for December 2020 was US$ 7,755.24 /t, up 9.8% from the November average of US$ 7,063.43 /t. The 2020 high and low copper prices were US$ 7,964 /t (on 18th Dec) and US$ 4,617.50 /t (on 23rd Mar), respectively, and the year average was US$ 6,180.63 /t (3% above the 2019 annual average).

Please visit the ICSG website www.icsg.org for further copper market related information.

World Refined Copper Usage and Supply Trends

Thousand metric tonnes, copper

	2017	2018	2019	2019	2020	2020			
				Jan-Oct		Jul	Aug	Sep	Oct
World Mine Production	20,058	20,565	20,528	16,948	16,885	1,737	1,763	1,698	1,806
World Mine Capacity	23,993	24,062	24,154	20,573	20,829	2,112	2,120	2,059	2,135
Mine Capacity Utilization (%)	83.6	85.5	85.0	82.4	81.1	82.2	83.2	82.5	84.6
Primary Refined Production	19,485	20,023	20,018	16,622	17,050	1,699	1,773	1,750	1,814
Secondary Refined Production	4,063	4,035	4,028	3,364	3,241	321	332	322	331
World Refined Production (Secondary+Primary)	23,548	24,058	24,047	19,986	20,291	2,021	2,105	2,072	2,145
World Refinery Capacity	27,545	27,979	28,794	23,959	24,666	2,524	2,529	2,453	2,540
Refineries Capacity Utilization (%)	85.5	86.0	83.5	83.4	82.3	80.1	83.2	84.5	84.5
World Refined Usage 1/	23,705	24,484	24,427	20,340	20,773	2,164	2,174	2,219	2,259
World Refined Stocks End of Period	1,375	1,227	1,220	1,304	1,341	1,259	1,251	1,341	1,341
Period Stock Change	10	-148	-7	77	121	-55	-8	90	-0
Refined Balance 2/	-157	-426	-381	-354	-482	-143	-69	-147	-113
Seasonally Adjusted Refined Balance 3/				-352	-477	-117	-125	-115	-130
Refined Balance Adjusted for Chinese bonded stock change 4/	-154	-486	-559	-530	-379	-130	-49	-109	-46

Due to the nature of statistical reporting, the published data should be considered as preliminary as some figures are currently based on estimates and could change.
1/ Based on Chinese and EU apparent usage.
2/ Surplus/deficit is calculated using refined production minus refined usage.
3/ Surplus/deficit is calculated using seasonally adjusted refined production minus seasonally adjusted refined usage.
4/ For details of this adjustment see the paragraph of the press release on "World refined copper balance".