

# Increase in Tc/Rc to benefit Indian copper smelters

- Metalworld Research Team

Indian copper smelters ramped up production in 2014 due to a 31 per cent increase in conversion charges agreed upon by the global concentrate miners. Popularly known as treatment and refining charges (Tc/Rc), paid by miners to smelters for processing concentrate into refined copper metal including cathodes and wire bars, the conversion charges were negotiated higher for 2014. In case of weakening demand of refined metal due to unfavourable global economic condition, miners pay higher Tc/Rc to push concentrate supply to smelters and refiners. By contrast, however, in case of rising global demand of refined metal, smelters seek increased supply of concentrate from miners resulting into lower Tc/Rc negotiated between smelters and miners.

## Higher Tc/Rc for 2015

Indian copper smelters ramped up metal output this financial year to take advantage of the higher treatment and refining charges (Tc/Rc) accepted by miners for 2014. Negotiations are on for even higher charges in 2015. With abundance of copper concentrate, global miners agreed upon a 31 per cent increase in Tc/Rc for 2014 at \$92 a tonne and 9.2 cents a pound (lb), respectively. Smelting companies are seeking a 20 per cent increase in Tc/Rc to \$115 a tonne and 11.5 cent a lb.

“Tc/Rc reflect the scarcity of smelting capacity, relative to the supply of concentrates. What we are seeing now, with spot Tc/Rc at

recent highs, is a surge in new supply of the latter. New mines and expansion were already boosting supply, even before Freeport and Newmont resumed exports of concentrates from Indonesia; hence, the rise in spot Tc/Rc. With mine output clearly rising faster than smelting capacity, there is little reason for smelters to accept lower terms next year,” said Nic Brown, head of commodities research of London-based consulting firm Natixis Commodities.

The Lisbon-based International Copper Study Group forecasts a 6.7 per cent spurt in copper mine production at 19.8 million tonnes in 2015, against a 4.3 per cent jump in smelter production to 23.1 mt. “The key to

sustainability for a rise in Tc is the question of mine output vs. smelter capacity. While the former continues to rise rapidly, the latter is growing more slowly. There is, therefore, every prospect that Tc will continue to rise through 2015,” said Brown.

Smelters do appear to hold the upper hand here. As Tc continues to rise, their profits will improve further. Miners, in contrast, face higher Tc at a time when copper prices are under pressure, suggesting increasing pressure on their margins. Worse, many of these miners are producing concentrates high in arsenic content. Hence, they will be incurring penalties over and above the benchmark levels in the market.

World copper on a roll (million tonnes)			
Calendar year	Mine production	Refined production	Refined usage
2014*	13.63	13.70	17.39
2013	18.11	17.25	21.33
2012	16.69	16.58	20.40
2011	16.05	16.13	19.71
2010	16.04	15.75	19.14

Source: International Copper Study Group, \* Jan – Sept period



**Copper capacity and production (tonnes)**

Company	Installed capacity	2015*	2014*	2014	2013
Hindustan Copper	49,500	10,038	8,838	17,005	170,001
Hindalco Inds	500,000	257,261	203,259	332,842	314,941
Sterlite Inds	400,000	230,548	162,321	294,433	343,154
Total	949,500	497,847	374,418	644,280	848,096

### Indian copper production up

The size of Indian copper industry (consumption of refined copper per annum) is around five lakh tonnes, which as percentage of world copper market is only three percent. Sterlite Industries, Hindalco and Hindustan Copper are major producers of refined copper in India. India has emerged as net exporter of copper from the status of net importer on account of rise in production. Indian smelting companies include the Aditya Birla Group's Hindalco Industries and Vedanta group's Sterlite Industries. Tc/Rc are a major source of their income. The copper business is two-thirds of Hindalco's, while Sterlite fully depends upon refining.

The public sector Hindustan Copper owns copper mines in India with a total installed annual production capacity of 49,500 tonnes. Other primary producers including Hindalco Industries and Sterlite Industries, however, produce metals after refining and smelting of copper concentrate imported from global miners. Therefore, Tc/Rc are major source of income for Hindalco Industries and Sterlite Industries.

“Smelting and refining margins are core business for Indian smelters. Hence, the increase in Tc/Rc will directly impact

favourably on the balance sheet of Hindalco and Sterlite,” said Rikesh Parikh, vice-president (equities), Motilal Oswal Securities.

With an installed capacity of 500,000 tonnes, Hindalco Industries stands as India's top copper producer. The company produced 257,261 tonnes of refined copper between April – November 2014 as compared to 203,259 tonnes of output reported in the same period last year. Vedanta Group' company, Sterlite Industries stands the second with an annual installed capacity of 400,000 tonnes. The company produced 230,548 tonnes of refined copper between April – November 2014 as compared to 162,321 tonnes of output reported in the same period last year. Indian copper producers ramped up monthly average production at 79 per cent this financial year as compared to 68 per cent in 2013 – 14 financial year.

### Smelters' advancement

China's copper smelters may be paid between 9 per cent and 20 per cent more in fees for processing raw material concentrate next year by global miners, reflecting higher world mine production. Chinese smelters expect the benchmark Tc/Rc for term shipments of clean, standard copper concentrate to rise to \$100-110 per tonne and 10-11 cents per pound in

2015 from \$92 and 9.2 cents in 2014. Mine output is estimated to rise 8.6 percent year-on-year in 2015. Chinese smelters had earlier expected the 2015 Tc/Rc at about \$115 and have lowered expectations slightly after discussions with global miners in the LME Week in London recently. Miners had not put forward any number in the discussions. Miners were unwilling to give a big rise in term 2015 Tc/Rc, arguing that there would be competing demand for their production from some new mines who wanted to blend the purchases with their own production of lower grades. But many Chinese smelters believe those purchases for blending would not be enough to affect 2015 term Tc/Rc substantially, said another executive at a large smelter.

Chinese smelters and Freeport settled Tc/Rc for 2014 at \$92 and 9.2 cents. Smelters failed to settle full-year charges with BHP but agreed \$99 and 9.9 cents for the first half of 2014. Pan Pacific Copper, Japan's biggest copper smelter, has aimed for more than \$100 and 10 cents TC/RC in 2015, while smelters in Europe expect \$105-\$115 and 10.5-11.5 cents. Demand for clean, standard concentrates for blending is rising as new mines came on stream, including Codelco's Ministro Hales in Chile and Chinalco's Toromocho mine in Peru.

Concentrates from the two mines contain more than 0.5 percent arsenic, the maximum allowed in imports by the world's top buyer China. Blended concentrates typically carry higher charges than standard grades, depending on impurities. Codelco may buy about 300,000 tonnes of clean, standard concentrates from the international market in 2015 to blend with about 30,000 tonnes of concentrates from Ministro Hales to sell to China, said the industry source who has knowledge of Codelco operations. The expected purchase by Codelco is equivalent to a quarter of China's record imports in September. The Codelco blended concentrates are expected to sell to China in 2015 with Tc/Rcs about \$10 and 1 cent more than standard grades.

European copper smelters are looking at increasing the raw material processing fees by 20 per cent in 2015. Trading an Tc/Rc are paid by the miners to the smelters for refining of the metal. With increasing copper supply concentrates, the demand for smelting capacities is increasing, leading to high profitability of the smelters. Surplus in the copper market and resuming of copper export from Indonesia are fuelling the increase in the Tc/Rc.

### Global production imbalance

According to preliminary International Copper Study Group data, and excluding the adjustment for changes in China's bonded stocks, after two months of an apparent production surplus, mainly due to weaker usage during the summer holiday period in Europe, production and usage were essentially balanced in September. When making seasonal adjustments for world refined production and usage, however, September showed a production surplus of 61,000 t. The refined copper balance for the first nine months of 2014, including revisions to data previously presented, indicates a production deficit of 578,000 tonnes (a seasonally adjusted deficit of 459,000 tonnes). This compares with a production deficit of 133,000 tonnes (a seasonally adjusted deficit of 4,000 t) in the same period of 2013. In the first nine months of 2014, world usage is estimated to have increased by around 11% ([1.7 Million tons (Mt)] compared with that in the same period of 2013, supported by strong demand in China and a shortage of high-grade scrap that led to the use of more cathode by semi-manufacturers. Chinese apparent demand

increased by 19% (+1.3 Mt) based on a 20% increase in net imports of refined copper. Excluding China, world usage increased by 5%, supported mainly by apparent usage growth of 8% in the European Union and 10% in Japan, as well as by growth of 7% in other Asian countries (excluding China and Japan) and 9% in the Middle East/North Africa region. Usage in the United States remained flat.

World mine production is estimated to have increased by around 2.5% (335 Mt) in the



first nine months of 2014 compared with mine production in the same period of 2013. Concentrate production increased by 3.5% (268,000 tonnes) while solvent extraction-electrowinning increased by 1.7% (67,000 tonnes). Most of the major copper-mine producing countries had greater output, with the exception of Chile, where production remained essentially unchanged, Indonesia (-22%) where production remained constrained by the ban on concentrates exports until August, Zambia (-7%) where output was impacted by an operational failure at the Lumwana mine and lower production levels at other producers, and Australia (-3%) where two mines closed temporarily. Production increased by 3% in Peru, 11% in the United

States (where production in the first half 2013 was impacted by the landslide at the Bingham Canyon Mine), 13% in the Democratic Republic of Congo (DRC), 8% in Mexico, 14% in Canada and 57% in Mongolia. The average world mine capacity utilization rate for the first nine months of 2014 fell to 83% from 84.7% in the same period of 2013 as the growth in capacity outstripped the increase in production.

### Refined copper production

World refined production is estimated to have increased by around 8% (1.3 Mt) in the first nine months of 2014 compared with refined production in the same period of 2013: primary production increased by 7.5% (including 9% growth in production from concentrates) and secondary production (from scrap) increased by 12%. The main contributor to growth was China (19%, 910,000 tonnes), followed by India, the DRC, the United States and Japan, where aggregated production of the four countries increased by 16% (428,000 tonnes).

Output in Chile, the second leading world refined copper producer, declined by 1.2% owing to a 6% decline in electrowinning production. On a regional basis, refined production is estimated to have increased in Africa (8%), North America (11%), Asia (13%), Europe (2%), and Oceania (13%) and to have declined in South America (-1.5%).

The average world refinery capacity utilization rate for the first nine months of 2014 increased to 81% from 78% in the same period of 2013. Based on the average of stock estimates provided by independent consultants, Chinese bonded stocks declined by around 30,000 t in the first nine months of 2014 from the yearend 2013 level. Stocks declined by around 360,000 t in the same period of 2013. In the first nine months of 2014, the world refined copper balance adjusted for the decrease in Chinese bonded stocks indicates a production deficit of around 610,000 t compared with a deficit of around 495,000 t in the same period of 2013.

### Conclusion

Since India's over 90 per cent copper production comes through smelting and refining of concentrate sourced from global markets, the increase in Tc/Rc will benefit Indian copper smelters including Hindalco Industries and Sterlite Industries.