

Copper substitution persistently low

According to new research commissioned by the International Copper Association (ICA), substitution of copper remained low and stable during 2019. Net substitution stood at 0.83 percent, and including miniaturisation at 1.23 percent, of total global copper use. The new survey, carried out by the DMM Advisory Group, discovered that for many applications copper continues to offer the best cost-performance combination.

China, the largest market for copper, has the lowest relative net substitution across the world at 0.5 percent of total copper use. The country's reliance on copper is due to cautious procurement policies and regional product specifications. Conversely, in Latin America, where net substitution is the highest, manufacturers have experienced increased pressure to reduce costs due to political and economic instability, and due to strong competition from the Far East.

Miniaturization of select copper products increased slightly in 2019. This change was due to the increased use of new technologies and product designs offering opportunities for cost reduction without the need for substitution of copper. The increase in miniaturization is led by new motor designs, smaller diameter copper tubes and material reduction in copper-rolled products (plate, sheet, strip and foil) and alloy products.

Krisztina Kalman-Schueler, author of the research, explains, "While substitution is ongoing, it is strongest where alternative materials offer both lower costs and at the same time near-similar performance to copper. The drive for increased energy efficiency and advanced technologies in electric motors is particularly advantageous for copper compared to alternatives."

"Substitution of copper remained very low in 2019," says Colin Bennett, Market Intelligence Director at ICA. "The key factors impacting substitution last year were relative material costs, regulations/standards, new technologies and pressure from competitors to reduce costs. With net material substitution in 2019 standing at 244KT, the impact is significantly less than 1% across the whole of the global copper demand market."

About the International Copper Association (ICA)

The International Copper Association's members represent a majority of global copper production and include some of the world's largest manufacturers of copper semi-end-use products. ICA brings together the global copper industry to develop and defend markets for copper and to make a positive contribution to society's sustainable-development goals. ICA's status as a not-for-profit trade association provides its members with a credible, independent advocate to address challenges faced by the collective industry. ICA is headquartered in Washington, D.C. ICA and its Copper Alliance® partners are active in more than 60 countries worldwide. For additional information visit copperalliance.org.

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