

DTE Aluminum Analysis Pioneer Karl Ágúst Matthíasson Predicts Trends for 2025

Rising Demand, Growing Energy Challenges and Interest in New Technologies

REYKJAVIK, ICELAND, October 7, 2024 /EINPresswire.com/ -- As the world economy recovers from the Covid-19 recession, global demand for aluminum will soar - the International Aluminium Institute predicts a 40% increase by 2030 which will require an additional 33 million tonnes of production annually.

Co-founder and CEO of Icelandic aluminum analysis pioneer [DTE](#), Karl Ágúst Matthíasson, has unveiled his predictions for the aluminum landscape in the coming year. An engineer and businessman committed to transforming the aluminum production process, Karl foresees rising demand for aluminum in the face of growing cost and energy challenges and the incorporation of new technologies into the production process to meet the demand.



Karl Matthiasson - CEO and Co-founder at DTE

Europe to face shortages of aluminum

In recent years, high energy prices have caused European aluminum producers to cut their production for several years, a problem exacerbated by energy supply disruptions resulting from the Russian invasion of Ukraine. According to analysis by the International Aluminium Institute, European aluminum production declined by 3.95% in 2023 to 6.73m tonnes.

Production of aluminum takes a huge amount of energy, with the molten metal having to be kept in the region of 700°C for an extended period. With energy prices unlikely to come down any time soon, the disruption to Europe's domestic production of aluminum seems likely to continue.

Europe may seek to offset the decline in domestic production by increasing the already-large

amount of aluminum it imports from places such as China. However, with key global trading routes passing through multiple potential flashpoints including the Red Sea and South China Sea, the potential for further disruption to European supply chains, including aluminum, in the form of longer shipping times and higher freight costs remains very real.

Tighter scrap aluminum availability

Several factors are currently converging to increase demand for scrap aluminum. As demand for the metal rises, supplies of primary aluminum are becoming more squeezed while high energy prices make new aluminum more expensive to produce. In addition, emissions targets set by governments or demanded by consumers will continue to encourage producers to seek ways to decarbonise.

To try and offset these hurdles, the aluminum industry will turn more aggressively to secondary (scrap) metal as an alternative source which uses 95% less energy than primary aluminum.

With aluminum already being recycled at a rate of around 76%, [according to the International Aluminium Institute](#), we can expect to see buyers in Europe and North America having to compete more forcefully with buyers in Asia for the available supplies. Producers can respond by improving recovery techniques to ensure the maximum possible amount of the metal can be returned into circulation.

Net-zero and carbon emissions targets will increase the demand for low-carbon aluminum

[According to the Aluminium Stewardship Initiative](#), the aluminum industry must reduce its emissions by more than 95% by 2050 to reach its 1.5°C goals. For this ambitious goal to be achieved, what is now known as low carbon aluminum must become the norm.

Emissions targets are already front and centre in producers' minds and to meet them, they are already planning ways to improve their production of low-carbon aluminum, either through recycling or by sourcing the energy their facilities consume from low-carbon sources. Major producers such as Emirates Global Aluminium are focusing on meeting the growing global demand for low-carbon aluminum and can expect to do so for the foreseeable future.

Increased interest in real-time melt analysis solutions as a means to reduce the usage of increasingly expensive energy

High energy prices and growing demand for low carbon aluminum will lead producers to seek energy savings through the adoption of new technologies. Real-time composition analysis, offers significant energy savings to producers looking to reduce their consumption, by cutting the

amount of time the aluminum needs to spend molten and reducing the chances of needing an energy-intensive remelt.

DTE couples Laser-Induced Breakdown Spectroscopy (LIBS) technology with advanced AI analytics software to provide real-time insights into the composition of molten metal. This enables producers to know within seconds exactly what is in their melt, rather than waiting for a much longer period to solidify a sample and take it to a laboratory for testing. This technology also gives accurate predictive insights into how producers can make their processes safer and more energy efficient.

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