



China threat sparks Hitachi's four-fold graphite anode expansion

December 16th 2016

The world's second largest lithium ion battery anode producer, Hitachi Chemical, is to **expand its graphite anode capacity by four-fold in 4 years** to prepare for a global wave of demand from lithium ion battery megafactories that are under construction.

Hitachi is investing up to \$90m to expand its capacity in Japan to produce 100,000 tonnes of graphite anode material by 2020 – a move which could see it increase its anode market share to 40% from 20% today.

It is the most significant development for the lithium ion battery anode industry and flake graphite feedstock sector to date.

While 70% of Hitachi production is presently synthetic graphite, its aggressive expansion will see it take a larger stake in natural spherical graphite – **a move that could define the lithium ion battery industry's trend of favouring natural graphite over synthetic material.**

The company operates two lithium ion battery anode production facilities – Shimodate and Yamazaki both in Ibaraki prefecture – and is presently expanding output for 2017.

Hitachi explained that its growth in sales of anode material stands at 30% per year.

At present, **Benchmark Mineral Intelligence** data shows a global anode market size of 105,000 tonnes for 2016 and forecasts that this will grow to 122,000 tonnes by end-2017. The market has more than doubled in size in the last five years from under 50,000 tonnes in 2011.

Hitachi looks aboard

In a significant move, Hitachi outlined that it was seeking to also **expand its anode production abroad.**

While there was little detail on location, options will include setting up a facility within China and, perhaps more urgently, North America to serve the Tesla Gigafactory 1 and LG Chem's Michigan plant that is expanding for the Chevrolet Bolt ramp up.

At present, the company's largest customers are Nissan via AESC and LG Chem but anode majors are vying for the Tesla contract which could alone require the vast majority of Hitachi's expansion.

One of the drivers behind Hitachi's move is the threat of China's expansions in spherical graphite over the past 12 months.

Its main competitor and China's leading anode producer, BTR, has enacted its own expansion plans which will see it double capacity over the next 12 months.

Speaking to Nikkei, Hitachi's President Maruyama, explained that "China is a threat" but has confidence in the consistency and performance of the company's materials – two of the major challenges with anodes materials for lithium ion battery producers.

Anode material produced from naturally sourced spherical graphite is dogged with consistency problems that are less prevalent with synthetic graphite. With the flake graphite feedstock being sourced from multiple mines in China, the final anode product (coated spherical graphite) can vary significantly in performance.