ASX ANNOUNCEMENT **12 May 2025**

FIREBIRD'S ENERGY SAVING ROTARY KILN SUCCESSFULLY TESTS LOW GRADE MANGANESE ORE FOR EUROPEAN SULPHATE PRODUCER, REDUCING ENERGY USE BY >50%

HIGHLIGHTS

- **Firebird has successfully completed calcining and leaching trials, for Taza Metal Technologies (Taza), an established manganese chemical business based in Kazakhstan, who supplies the European market**
- **Taza, seeking to utilize stockpiles of lower-grade manganese ore (18–20% Mn) for high-purity manganese sulfate (HPMSM) production, engaged the Firebird technical team for support**
- **Taza is seeking to procure manganese chemical processing equipment, including a calcining kiln, from China. Trial work with Firebird forms a critical component of their due diligence in assessing potential supply partners**
- **Trial work was based on 3.3 tonne manganese ore sample received from Taza and Taza has covered all costs associated with completing the test work**
- **Results demonstrated a significant energy reduction, with average consumption of 230 kWh per tonne of ore feed (which includes drying and kiln pre-heating), compared to greater than 400 kWh/t quoted for conventional rotary kilns by third-party suppliers. On a commercial-scale kiln, a further 25% reduction is expected—bringing total consumption to less than half**
- **Energy saving results complement previous tests on high grade ore where 70% energy saving was achieved, technology works on all ore types**
- **Firebird's calcining technology has broad industrial applications, as many chemical processes containing a calcining kiln, such as lithium spodumene processing**
- **Firebird is currently handling several kiln inquiries from both within China and internationally**

Firebird Managing Director, Mr Peter Allen, commented:

"This trial work further demonstrates and validates clear industry demand for our innovative calcining kiln. Our kiln delivers energy savings that are crucial to the minerals processing industry – making this product potentially transformative for the market, and for our Company.

"Our technical team is continuing to deliver consistent innovation that makes our own processes more efficient, supporting our low-cost LMFP battery cathode strategy, and affords us the opportunity to commercialise revolutionary new technology. Our commitment to efficiency, alongside our high-quality in-country partners, gives us the opportunity to become one of the lowest-cost battery-grade MnSO4 producers, placing us in an incredibly competitive market position going forward."

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Australian-owned Firebird Metals Limited (ASX:FRB, Firebird or the **Company)** is pleased to announce it has successfully completed calcining and leaching test work for **Taza Metal Technologies (Taza)** which is a part of ongoing technical due diligence of Firebird's energy-efficient calcining kiln for Taza's manganese chemical production.

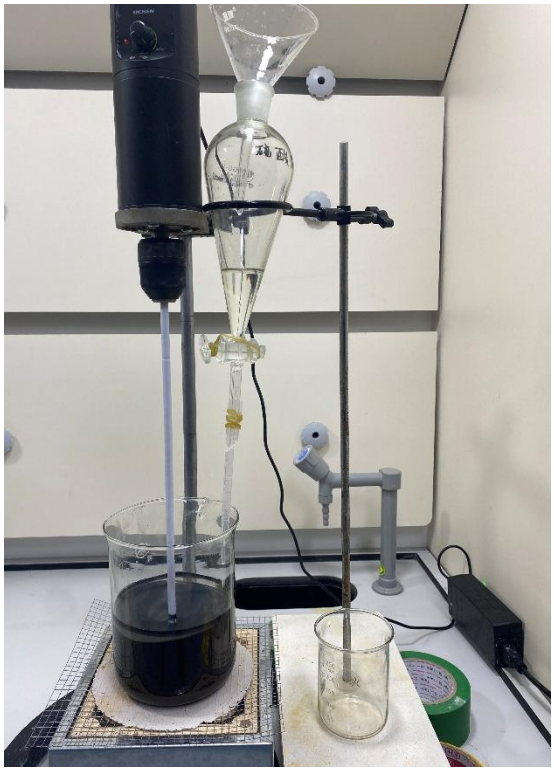
Firebird's Chinese subsidiary, **Hunan Firebird Battery Technology (HFBT),** has processed 3.3 tonnes of 18-20% manganese ore from lower-grade stockpiles from Taza's mine in Kazakhstan using the Company's pilot scale calcining kiln, reducing the manganese ore to manganese monoxide (MnO). Taza has covered all costs associated with completing the test work.

This is another significant step in the Company's strategy to commercialise its innovative, efficient technology globally, and validates the quality of Firebird's calcining kiln.

The trial demonstrated significant energy reduction, 230 kW/t (including energy consumption during startup and preheating) achieved against quoted 400 + kW/t for conventional rotary kilns from third party suppliers. On a commercial-scale kiln, a further 25% reduction is expected—bringing total consumption to less than half.

Images 1,2 and 3: Calcining kiln, high temperature observation portal, roast feed and discharging

The average manganese leaching rate was around 95%, indicating high leaching efficiency and low manganese residue. The average residual manganese content in the acid leaching residue was approximately 1.5%.



Images 4 and 5 Acid leaching process

Taza Metal Technologies, a Kazakhstan-based manganese mining and chemical processing company, is seeking to utilize stockpiles of lower-grade manganese ore (18–20% Mn) for high-purity manganese sulfate (HPMSM) production.

Taza is actively pursuing the procurement of manganese chemical processing equipment from China, including a calcining kiln, as part of its strategy to expand high-purity manganese sulphate (HPMSM) production. As a key component of its due diligence process, Taza has re-engaged Firebird's technical team, following previous successful collaboration, to undertake test work. These trials are designed to evaluate the performance, efficiency, and operational suitability of the proposed equipment under real-world conditions, providing critical technical validation to support Taza's procurement decisions.

Firebird's Energy Efficient Calcining Kiln

Firebird's calcining kiln, currently under international patent application, provides significantly greater energy efficiency than existing alternatives. Firebird has successfully completed trials of the pilot scale calcining kiln, with remarkable results generated – indicating that the calcining kiln has the potential to reduce energy usage by 70%[1] when processing 44% manganese content ore.

Compared to conventional kilns, which typically require more than 300kWh per tonne of 44% Manganese ore feed, FRB's pilot kiln operates at only 80-100kWh per tonne – translating to a significant cost reduction of USD30 per tonne of product, or approximately 5% of total production costs[2].

The calcining kiln technology is highly scalable, works on all ore types and, in addition to applications in manganese-related mineral processing, will also be assessed for use across industries such as iron ore beneficiation and lithium sulphate production.

The Company is currently managing multiple kiln inquiries from both within China and international potential clients.

This announcement has been approved for release by the Board.

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[1] Refer ASX announcement dated 21/10/24

[2] Refer to ASX announcement dated 7/5/24 for full Feasibility study details

About Firebird Metals Limited

Firebird Metals is an advanced manganese developer focused on combining mining and downstream processing with a dedication to the advancement of the EV battery sector.

The Company is currently progressing its unique China-focused lithium manganese iron phosphate (LMFP) battery strategy, which will develop Firebird into a near-term producer of high-purity, battery-grade manganese sulphate, a key cathode material in LMFP batteries for electric vehicles.

Execution of this strategy will place Firebird at the forefront of manganese sulphate production, at a time when the use and demand for manganese in batteries continues to rapidly grow. Due to the low number of ASX-manganese developers and increasing use of LMFP by car manufacturers, Firebird considers that it is in a strong position to benefit from this growing market and deliver significant value to its shareholder base.

The Company also owns 100% of its project portfolio, located in the renowned East Pilbara manganese province of Western Australia, which boasts a total Resource of 234Mt[3,4], with exciting exploration and development growth upside. The portfolio is led by the flagship Oakover Project, which holds a Mineral Resource Estimate[1] of 176.7 Mt at 9.9% Mn, with 105.8 Mt at 10.1% Mn in an Indicated category.

The Company is committed to generating sustainable long-term value and growth for stakeholders, through the implementation of best practice exploration methods while prioritising the well-being, health and environmental protection of its employees and communities it operates in.

JORC Compliance Statement

This announcement contains references to Mineral Resource Estimates, which have been reported in compliance with Listing Rule 5.8 and extracted from previous ASX announcements as referenced.

The Company confirms that it is not aware of any new information or data that materially affects the information previously reported and that all material assumptions and technical parameters underpinning the Mineral Resource Estimates continue to apply and have not materially changed.

[3] See ASX announcement dated 23 March 2023: Indicated Resource of 105.8Mt at 10.1%; Inferred Resource of 70.9Mt at 9.6% for global Resource of 176.7 Mt at 9.9% Mn.
[4] See ASX announcement dated 1 December 2021: Inferred Resource of 57.5 Mt at 12.2% Mn.