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Optimisation Works Identifies Cost-Effective Dry Milling Processing

Highlights

- **High level review of an alternative primary crushing circuit, demonstrates strong potential for major capital (~30%) and operating cost (25-30%) savings**
 - **Preliminary discussions with vendors and operators indicate further savings possible, subject to further test work**
 - **100% dry circuit to be investigated as a priority given the scope for significant cost, environmental, scheduling and permitting benefits**
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Emerging magnetite development company Hawsons Iron Ltd (ASX:HIO) (“Hawsons” or the “Company”) is pleased to provide investors an update on its Optimisation Works program. This work was carried out by independent engineering firm Stantec Australia (“Stantec”).

The aim of the Optimisation Works was to explore the feasibility of dry grinding circuits as a cost-effective alternative to Hawsons' current Stantec-proposed base case circuit, with a particular focus on potential water, energy, and capital expenditure (CAPEX) savings.

The program evaluated the following technologies against the currently selected flowsheet (base case) that was designed for Hawsons after the pilot plant trials conducted in 2023:

- Dry two stage HPGR (High Pressure Grinding Roll)
- Dry Tumble Milling
- Dry VRM (Vertical Roller Mill)

Hawsons' material has a unique blend of competency and grindability. The material appears to be highly competent but soft, considered to have a high level of grindability, corresponding to low 'ball milling energy requirements'.

In total, six vendors were approached during the study including FLS, Metso, Weir, Loesche, Koeppern, and GEBR Pfeiffer, each of which provided prices for their comminution circuit designs/configurations.

Total comminution equipment costs provided by GEBR Pfeiffer were the lowest of all flowsheet options, making GEBR Pfeiffer VRM flowsheet an attractive option for further investigation. Given Hawsons' material properties and following further discussions, potential exists for a 100% dry solution. This will be undertaken as part of the next phase of the optimisation program.



GEBR Pfeiffer's MVR 6000 C-6: the biggest vertical mill in Australia operating since 2014

Based on review and discussions with vendors, Stantec provided Hawsons the following high-level results for the Phase 1 flowsheet¹ which reduced the feed material to a particle size of approximately 150 microns at which point most of the magnetite is liberated from the host's sandstone matrix.

Primary Crushing Circuit Based on targeted 11Mtpa product	Current Hawsons Flowsheet (Updated 2024 Equip Costs)	GEBR Pfeiffer (2024 Equip Costs)
CAPEX Est. – Equip supply & install	AU\$632 million	AU\$433 million
Total OPEX Est. (water & power) per annum	AU\$100 million	AU\$72 million

Subject to further test work results, the Project could also see benefits in the following areas:

- Water supply system development and operations (costs)
- Energy supply and transmission (costs)
- Lower Project carbon footprint

¹ <https://hawsons.com.au/wp-content/uploads/2024/04/20240416-Hawson-Iron-Project-Update.pdf>

As a critical component for derisking the Project, further dry processing test work will be carried out in a research facility ahead of a full pilot test work program in Germany with the VRM vendor. The proposed 100% dry processing 2-stage comminution circuit test work program results will be required prior to a final flowsheet being defined. The latter program is likely to be undertaken in 2025 as part of the final DFS.

Given the potential for material improvements to the economics of the project and increase in Project value, the Company is keeping the Strategic Investors informed of developments. Hawsons' objective is to integrate the full benefits of these potential improvements into the ultimate terms agreed with Strategic Investors.

Hawsons CEO, Tom Revy, commented: *“The outcomes of this work have successfully demonstrated at a high level, that significant savings exist with the incorporation of a primary dry crushing circuit. The unique properties of Hawsons' material allow us to go down this processing path and we will commence test work associated with a 100% dry circuit as a priority given the further possible costs and environmental benefits to the Project”.*

This announcement is authorised by the Board.

For further information contact:

Tom Revy
Chief Executive Officer
tom.revy@hawsons.com.au
+61 411 475 376

Head Office

Level 21
12 Creek Street
Brisbane Q 4000
Phone: +61 7 3554 1003
Website: www.hawsons.com.au

Share Registry

Link Market Services Limited
Level 12, 300 Queen Street
Brisbane Q 4000
Phone: 1300 554 474