

Terrafame net sales in Q1/2020 totalled EUR 96,1 million - a new quarterly record in nickel production

(The financial data from Terrafame Ltd presented in this factsheet are unaudited FAS figures. Unless otherwise stated, the figures in parentheses refer to the corresponding period of the previous year.)

January-March 2020 in brief

- Nickel production increased by 14.7 per cent to 8,362 (7,288) tonnes, which is a new quarterly record. Zinc production increased by 7.7 per cent to 15,542 (14,434) tonnes.
- The average price of nickel in the London Metal Exchange increased by 2.9 per cent during the review period to USD 12,723 (12,369) per tonne.
- The average price of zinc in the London Metal Exchange decreased by 21.2 per cent during the review period to USD 2,128 (2,702) per tonne.
- During the review period, net sales grew by 18.7 per cent to EUR 96.1 (81.0) million.
- The growth in net sales was driven by good production volumes during the first quarter. In addition, hedges reduced the direct impact of falling prices and dollar exchange rate developments on net sales.
- EBITDA for the period was EUR 11.3 (11.3) million, which accounts for 11.7 (14.0) per cent of net sales.
- Operating profit for the period amounted to EUR 1.6 (2.8) million.
- Free cash flow from operations was EUR 25.3 (-3.6) million.
- Terrafame's own employees LTIFR was 8.3 (9.1). The LTIFR for production and maintenance partner companies was 17.7 (7.2) and for companies operating at the battery chemicals plant project 27.6.
- The combined LTIFR of Terrafame and its partner companies was 14.3 (8.1).
- Impacts of the coronavirus pandemic have decreased metal prices significantly but otherwise it did not adversely affect Terrafame's operations in January–March, and the construction of the battery chemicals plant has also progressed as planned.
- Terrafame monitors the coronavirus epidemic closely, and instructions have been issued to ensure the continuity of operations under these exceptional circumstances. The scheduled annual maintenance break, which normally takes place in May, has been postponed to August due to the coronavirus-related restrictions on gatherings.

Financial and production figures

	2020 Q1	2019 Q1	Change, %	2019
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Financial figures

Net sales, EUR million	96.1	81.0	18.7 %	310.4
EBITDA, EUR million	11.3	11.3	0.0 %	32.0
Operating result, EUR million	1.6	2.8	-42.9 %	-5.6
Work in progress, EUR million	186.3	175.6	6.1 %	186.2
Free cash flow, EUR million ⁽¹⁾	25.3	-3.6	n.a.	-20.6
Capital expenditure, total, EUR million	43.3	21.2	104.2 %	130.6
Sustaining capex, EUR million	8.5	5.7	49.1 %	42.1
Development and growth capex, EUR million	34.8	15.5	124.5 %	88.5
Equity, EUR million	415.5	348.9	19.1 %	349.8
Total assets, EUR million	863.2	684.9	26.0 %	749.5

Ore processing

Ore to primary leaching, Mt	3.8	2.7	40.7 %	14.4
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Metals production

Nickel produced, tonnes	8,362	7,288	14.7 %	27,468
Zinc produced, tonnes	15,542	14,434	7.7 %	55,222

1) Free cash flow after maintenance capex = EBITDA - Change in net working capital - Maintenance capital expenditure excluding right-of-use assets.

CEO Joni Lukkarainen:

"The start for the year 2020 has been twofold. We made a new quarterly record of 8,362 (7,288) tonnes in nickel production in the first quarter of 2020. That is almost 15 per cent higher than in the corresponding period in 2019. This is certainly good news for us, and it proves that the production ramp-up has been going along according to plan. With zinc production growing as well, our net sales for the period increased to EUR 96.1 (81.0) million. Price and exchange rate hedges reduced the direct impact of decreasing prices and of the USD development on the net sales. EBITDA for the period reached a good level, amounting to EUR 11.3 (11.3) million.

Even if a production record was made, concerns about the coronavirus pandemic have cast a shadow over the first few months of the year. The impacts of the pandemic have decreased metal prices significantly but otherwise it did not adversely affect Terrafame's operations during the first quarter, and the construction of the battery chemicals plant has also progressed as planned. The average price of nickel decreased by nearly 18 per cent on the London Metal Exchange during the review period compared to the fourth quarter of 2019, ending at less than USD 13,000 per tonne. The price of zinc continued to decrease as well. The main reasons for the sharp decrease in prices were the restrictions imposed to curb the coronavirus pandemic, as well as the increased uncertainty resulting from the restrictions. The electric vehicle market did not escape the impact of the coronavirus pandemic either – severe restrictions on both people's consumption behaviour and production affected both the demand and supply of electric vehicles. E.g. in China, the total vehicle market fell 78% year-on-year, and the EV market declined by a similar extent. And many OEMs have reported production shut downs due to the coronavirus pandemic.

At Terrafame, we are closely monitoring the coronavirus pandemic and its potential impact on our business and on the progress of the battery chemicals plant project. We have issued instructions, seeking to ensure the continuity of production under these exceptional circumstances. The

scheduled annual maintenance break, which normally takes place in May, has been postponed to August due to the coronavirus-related restrictions on gatherings.

We submitted an environmental impact assessment (EIA) programme to the Kainuu ELY Centre on 30 March 2020 regarding the exploitation of the Lake Kolmisoppi ore deposit and the expansion of the mining concession. After the end of the reporting period in April, we agreed on a real estate transaction with Metsähallitus in order to acquire land within the planned expansion area of the mining concession as well as water and waterfront areas at Kivijärvi lake which is located nearby the expansion area. Acquisition of the water areas supports our plans to refurbish the lake.

In our day-to-day operations, safety remains one of the key values. The combined 12-month rolling lost-time injury frequency rate of Terrafame and its partner companies at the end of the review period was 14.3 (8.1). Terrafame's own employees LTIFR was 8.3 (9.1). The LTIFR for production and maintenance partner companies was 17.7 (7.2) and for companies operating at the battery chemicals plant project 27.6. With this in mind, our clear goal is to improve our operational culture, and we will continue our determined efforts also this year to achieve this goal."

Market developments

Electric car and EV battery markets

Global EV sales were approximately 281,000 (284,000) units in January–February 2020 which is roughly one percent less than during the corresponding period in 2019. In February, the impact of coronavirus resulted in a significant reduction in Chinese sales as the total vehicle market fell 78% y-o-y, and the EV market declined by a similar extent. In China, OEMs reported shut downs in production in mid-to-end of January but vehicle production resumed between the mid-to-end of February. However, plants are not expected to be working at full capacity for at least a month. In Europe, EV sales were strong in the opening two months of 2020. However, most OEMs in the region halted production in mid-March because of the coronavirus. This is expected to result in a significant reduction of EV sales recorded in March and especially April and plant closures are expected to remain in place until the beginning of May at least.

The sales weighted average battery pack sizes across all EV classes declined somewhat from 56 kWh at the end of 2019 to 51 kWh in February 2020. In early 2020 the market share of nickel-rich battery chemistry increased strongly. The market share of NCM 811 batteries increased to 4 percent in January–February 2020 compared to 2 percent in 2019. NCM 622 batteries' market share increased from 14 percent in 2019 to 25 percent in January–February 2020.

Nickel and zinc

Although the market price of nickel fell 17.7 per cent on the London Metal Exchange (LME) during the review period compared to the price in the fourth quarter of 2019 (15,450), the average price for the review period, USD 12,723 (12,369), was 2.9 per cent higher than in the first quarter of 2019. Nickel was the only base metal to see prices rise year-on-year. The nickel price has been supported by supply cuts, which are offsetting to a certain extent the demand reductions.

The market price of zinc continued to fall on the LME in early 2020. The average price of zinc for the review period was on average USD 2,218 (2,702) per tonne, which was 21.2 per cent lower than during the corresponding period in 2019, and 10.9 per cent lower than in the fourth quarter of 2019 (2,388). Rising inventory levels and a deteriorating demand outlook are behind the zinc price decrease.

The combined nickel stock levels at the LME and Shanghai Futures Exchange (SHFE) increased significantly compared to both the situation at the end of 2019 (188,097) and the corresponding period in 2019 (193,388), amounting to 257,439 tonnes at the end of the review period. The stock levels equalled less than 6 (4) weeks' demand. The zinc stock levels also increased dramatically from the level of both the end of 2019 (79,283) and the corresponding period in 2019 (163,701), totalling

234,008 tonnes at the end of the review period. This equals about one week's demand, when the stock levels at the end of the year only equalled just a few days' demand.

Exchange rate

The US dollar continued to get stronger compared to the euro in early 2020. The average EUR/USD exchange rate for the review period was 1.10, compared to 1.14 in the corresponding period in 2019 and 1.11 in the fourth quarter of 2019.

Metals production

Nickel production increased by 14.7 per cent in the review period to 8,362 (7,288) tonnes, which is a new quarterly record. Zinc production increased by 7.7 per cent to 15,542 (14,434) tonnes. In early 2020, production grew especially due to the lack of disruptions and the resulting high capacity utilisation rate.

The scheduled annual maintenance break, which normally takes place in May, has been postponed to August due to the coronavirus-related restrictions on gatherings.

Net sales and financial performance

During the review period, net sales grew by 18.7 per cent to EUR 96.1 (81.0) million. The growth in net sales was driven by good production volumes during the first quarter. In addition, hedges reduced the direct impact of falling metal prices and dollar exchange rate developments on net sales.

Hedging had a major impact on the company's net sales during the review period. In the latter part of the year 2019, the strategic level of hedging for nickel deliveries in particular was raised to take advantage of the increased market prices. This had a clear positive impact on net sales for the review period.

EBITDA for the period was EUR 11.3 (11.3) million, which accounts for 11.7 (14.0) per cent of net sales. The EBITDA margin decreased slightly compared to the corresponding period in 2019 mainly due to the changes in the value of the finished goods inventory and work in progress.

Operating profit for the period was EUR 1.6 (2.8) million, and free cash flow from operating activities* totalled EUR 25.3 (-3.6) million.

* Free cash flow after maintenance capex = EBITDA - Change in net working capital - Maintenance capital expenditure excluding right-of-use assets.

Financing arrangements

In order to finance the investment in the battery chemicals plant, the company agreed with its owners in 2017 and 2018 on an approximately 166 million euro equity financing and on a loan facility worth approximately 137 million euro. Suomen Malmijalostus Oy's share of this financing is EUR 30 million of equity, which Terrafame drew down during the review period. Respectively, Terrafame drew down EUR 30 million of equity financing from Trafigura Group's Galena Funds. After this, Terrafame no longer has any unused equity financing. In addition to this, Terrafame drew down for the investment project approximately EUR 27 million from a loan facility from Trafigura during the review period. After this, approximately EUR 46 million remains undrawn in the loan facility granted to Terrafame by Trafigura.

Items based on other currencies have been converted into euros at the rate of the end of the review period.

As a result of on the above arrangements, Terrafame's shares are held by its shareholders as follows:

Finnish Minerals Group	69.8%
Galena Funds (Trafigura)	29.7%
Sampo Plc	0.5%

Changes in shareholdings will be reported to the Trade Register during the second quarter.

Capital expenditure

Capital expenditure for the review period totalled EUR 43.4 (21.2) million. Of this amount, EUR 34.8 (15.5) million were used to improve productivity and increase capacity, while maintenance capital expenditure amounted to EUR 8.5 (5.7) million.

Capital expenditure on improving productivity and capacity was especially allocated to the construction of the battery of chemicals plant to be commissioned in 2021, and the related equipment purchases.

The construction of the battery chemicals plant went according to plan during the review period. The installation of process equipment continued in all main process areas, and the prefabrication and installation of piping materials was initiated.

The most significant sustaining capital expenditure items were related to purchases of spare parts for mining equipment and the ore crushing lines, and construction work in the new block of the KL2 waste rock area.

Environment

During the review period, 1.9 (0.014) million cubic metres of purified water was released from the industrial site.

The discharge pipe in Lake Nuasjärvi was in use from January to March during the review period. Purified discharge waters were also released via so-called old routes to the Oulu watercourse towards the north and the Vuoksi watercourse towards the south.

The rainy autumn of 2019 and high amounts of snow and consequently meltwaters caused by several mild periods during the winter have increased the amount of water in the process. Due to this, the neutralisation process for purifying and reducing the amount of solution in the process circulation was in use at the beginning of the year. The neutralisation process increases the sulphate content of the purified water. As a result, the sulphate content limit for discharge waters, 2,000 mg/l, was slightly exceeded in February when the flow weighted sulphate content was 2,044 mg/l and in March when the sulphate content was 2,031 mg/l. The monthly 1,000 tonne-limit for sulphate load was not exceeded during the review period. The sulphate load of the discharge is estimated to increase over the course of 2020 from the 2019 level, however, remaining well below the annual quota for sulphate load.

The other substance concentrations of purified water released from the site were clearly below permit levels in the review period, eg for nickel 0.04 mg/l compared with the permit level of 0.3 mg/l.

During the review period, Terrafame decided on an investment in order to change the process of the centralised water treatment plant so that the water from the solution process can be treated separately from the run-off waters and return to process circulation. The change will be taken into use in 2020 and it will further improve the quality of the purified discharge waters.

Terrafame submitted an environmental impact assessment (EIA) programme to the Kainuu ELY Centre on 30 March 2020 regarding the exploitation of the Lake Kolmisoppi ore deposit, the waterbody arrangements required for Lake Kolmisoppi, and the expansion of the mining concession.

On 6 February 2020, the Finnish Government decided to grant a uranium extraction permit to Terrafame. The company submitted the permit application for uranium recovery under the Nuclear Energy Act (990/1987) to the Finnish Government on 30 October 2017. Terrafame already has the necessary chemicals permit and environmental permit. The commissioning and start-up of the uranium recovery plant will take approximately one year, during which time the plant's organisation will also be established. An appeal against the Government decision has been submitted to the Supreme Court and Terrafame estimates that it will take roughly two years before the final decision is issued on the permit.

In January 2020, Terrafame announced that it will start recovering the excess energy of its hydrogen plants for use in the production of process steam. Similar technology has been used in power plants in the past, but it is new in hydrogen plants. Energy and water company Adven is responsible for the project and operating the solution in the future.

Personnel and occupational safety

At the end of the review period, Terrafame employed 804 (682) persons, which is 18 per cent more than at the corresponding time in 2019. Of the increase, the two-year apprenticeship training leading to a professional degree in the process industry, organised by Terrafame, Kainuu Vocational College and OSAO, accounts for 73 persons, including the 25 who started their studies in the third apprenticeship training group at the end of March.

The internal and external recruitment of experienced process and maintenance professionals for building a production organisation for the new battery chemicals plant continued during the review period. Overall, the plant's workforce will exceed 100 people at the end of 2020 and approximately 150 after the plant becomes fully operational.

Working regularly in Terrafame's industrial site during the review period was approximately 70 partner companies, which employed on average 937 people (FTE) over the course of the review period.

During the review period, Terrafame's employees suffered 2 (3) lost-time injuries. The rolling 12-month lost-time injury frequency rate, or number of accidents resulting in absence per one million person-hours, was 8.3 (9.1).

The lost-time injury frequency rate (LTIFR) of cooperation partners in production and maintenance was 17.7 (7.2).

The LTIFR of companies working at the battery chemicals plant project was 27.6.

The combined LTIFR of Terrafame and all of its cooperation partners was 14.3 (8.1).

Measures will be actively taken to improve the safety at work of both Terrafame's and its partner companies' personnel also in the future.

Assessment of near-term risks caused by the coronavirus pandemic on Terrafame's operations

The most significant near-term risk is related to the spread of coronavirus infections into an epidemic within the industrial site, as it could have adverse effects on the continuity of production. Terrafame monitors the coronavirus epidemic closely, and instructions have been issued to ensure the continuity of operations under these exceptional circumstances. The scheduled annual maintenance break, which normally takes place in May, has been postponed to August due to the coronavirus-related restrictions on gatherings.

The escalating coronavirus pandemic may affect the delivery of certain individual materials and equipment. At the moment, however, there are no significant delays in sight for Terrafame's project operations.

Predicting the effects of the coronavirus pandemic involves a great deal of uncertainty, and the plans will be updated as needed to reflect the changing snapshot.

Significant events after the end of the financial period

On 23 April 2020 Terrafame and Metsähallitus signed a real estate transaction by which Terrafame acquires from Metsähallitus land within the planned expansion area of the mining concession as well as water and waterfront areas at Kivijärvi lake. The transaction includes 160 hectares forest land. At Kivijärvi, the transaction includes 25 unbuilt beach plots and 165 hectares water areas. Total value of the transaction is EUR 875 800. The transaction settles all claims made by Metsähallitus regarding water and land areas it owns.

Near-term outlook

Price development is markedly impacted by uncertainties relating to coronavirus pandemic.

Construction work in the main process areas of the battery chemicals plant is expected to be completed in the coming months. The installation of process equipment will continue. The commercial production of battery chemicals will commence in early 2021.

Terrafame will continue to take measures to improve its safety culture, production, and cost efficiency.

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Terrafame Ltd is a Finnish multi-metal company founded in 2015. Its mine and production plants are located in Sotkamo, Finland. The company's bioleaching-based production process is unique and it has a much lower carbon footprint than conventional nickel production technologies. Terrafame is currently constructing one of the world's largest battery chemicals production lines, which will move the company ahead in the metal refinery chain from a manufacturer of semi-finished metal products to a producer of battery chemicals for electric vehicle batteries. In 2019, Terrafame's net sales amounted to EUR 310 million, and the company's industrial site employed approximately 1,500 people, of which around half were employees of its partner companies. www.terrafame.fi