

**>> TERRAFAME LTD  
INTERIM REPORT Q1 2018**

## Terrafame's net sales continued to grow - EBITDA of first quarter totalled EUR 9.8 million

### Key figures in January–March 2018 (Q1 2017 reference period in parentheses)

- 6,421 tonnes of nickel (4,787) and 15,008 tonnes of zinc (9,791) were produced.
- Net sales totalled EUR 85.7 million (41.3).
- EBITDA was EUR 9.8 million (-18.4).
- EBITDA without change in value of work in progress (WIP) was EUR 1.6 million (-33.3).
- The value of work in progress (WIP) was EUR 146.2 million (65.0).

### Key events in January–March 2018

- The first quarter of the year was the fifth consecutive quarter with record levels reached in the production of main products. 6,421 tonnes of nickel and 15,008 tonnes of zinc were produced at the metals production plant.
- The feasibility studies and project planning of the battery chemicals plant and related power plant were continued. The company also prepared for the permit processes of the project.
- The amount of water stored at the industrial site totalled 1.4 million cubic metres at the end of March, staying within the target level of 1–3 million cubic metres. The amount of water at the site was lower than ever in the history of the company's operations.

### Events following the reporting period

- An environmental impact assessment (EIA) procedure of the battery chemicals plant was initiated after Terrafame submitted its EIA programme concerning the project to the coordinating authority.
- The Annual Report for 2017, including a Responsibility Report, was published at [www.terrafame.com/annualreport](http://www.terrafame.com/annualreport)
- The Board of Directors of Terrafame has been complemented with the appointment of B.Sc. (Chem. Eng.), MBA Riitta Mynttinen as a board member as of 1 July 2018. Mynttinen brings international leadership experience in operational improvement projects, as well as technology commercialisation and business development. No other changes have taken place in the Board of Directors.

## Financial and production figures

	2018 Q1	2017 Q4 <sup>1</sup>	2017 Q1	Year 2017 <sup>1</sup>
<b>Financial figures</b>				
Net sales, EUR million	85.7	67.6	41.3	220.0
EBITDA, EUR million	9.8	17.3	-18.4	13.6
EBITDA without change in WIP <sup>2</sup> , EUR million	1.6	-8.9	-33.3	-74.3
Operating profit/loss, EUR million	2.4	11.1	-22.5	-6.2
Work in progress, EUR million	146.2	138.0	65.0	138.0
Capital expenditure, EUR million	15.5	22.4	16.5	92.1
Equity, EUR million	300.8	295.6	241.7	295.6
Total assets, EUR million	612.6	618.5	550.4	618.5
<b>Ore processing</b>				
Ore mined, million tonnes	4.5	4.2	3.9	17.5
Nickel to heaps, tonnes	12,234	11,900	10,070	46,200
Zinc to heaps, tonnes	24,296	22,742	20,239	91,827
<b>Metals production</b>				
Nickel produced, tonnes	6,421	5,840	4,787	20,864
Zinc produced, tonnes	15,008	13,772	9,791	47,205

1) The figures for 2017 presented here are audited figures.

2) Work in progress (WIP) is calculated based on the cost value as of 31 December 2017.

## CEO Joni Lukkaroinen's review

“During the first quarter, the global market prices of our main products nickel and zinc were at a higher level than in the previous quarter. Compared to the previous quarter, the average price of nickel increased by 14.6% in dollars and by 9.8% in euros in the global market. Similarly, the average price of zinc increased by 5.7% in dollars and 1.3% in euros. The prices of copper and cobalt also developed favourably.

In production, we continued to mine and stack ore onto the primary bioleaching heap at the target level we already reached earlier. At the metals production plant, we reached a quarterly record in the production of our main products nickel and zinc. We are getting very close to the target production level we have set and can continue to stabilise our operations. Our unit costs decreased also during this quarter, signifying growth in efficiency.

This was the third consecutive quarter with profitable business operations for Terrafame. I am particularly pleased with the fact that the EBITDA was positive during every month of the quarter and that EBITDA without change in work in progress turned positive. Our net sales also developed favourably.

The analysis and planning of the battery chemicals plant we are aiming to establish have advanced according to schedule, along with the preparing of the permit processes. In addition to the nickel and cobalt sulphates used in electric vehicle batteries the new plant would produce ammonium sulphate used in, for example, as a fertilizer.

We continuously invest in occupational safety at our site. Our target for 2018 in lost-time injury frequency, i.e. the number of injuries per one million person-hours worked, is to decrease the number to less than 2.5. One injury occurred in January–March, resulting in a two-day absence, and our rolling lost-time injury frequency for 12 months at the end of March was 3.5.”

## Market development

During the first quarter of 2018, the average price for nickel was USD 13,277 per tonne, which is 14.6% higher than in the previous quarter (Q4 2017: 11,583) and 29.3% higher than in the first quarter of 2017 (Q1 2017: 10,271). The average price was at its highest since the first quarter of 2015. Key factors affecting price development were the growth in nickel demand for stainless steel production and for Asia’s battery industry. Also investors’ interest towards nickel has increased due to the demand for electric vehicles.

The combined nickel stock levels of the London Metal Exchange (LME) and Shanghai Futures Exchange (SHFE) have decreased during every quarter since the first quarter of 2016. During January–March 2018, the combined stock levels of LME and SHFE decreased by 43,000 tonnes, totalling 368,000 tonnes at the end of March (end of Q4: 411,000).

During the first quarter of 2018, the average price of zinc was USD 3,421 per tonne, which is 5.7% higher than in the previous quarter (Q4 2017: 3,235) and 23.1% higher than in the first quarter of 2017 (Q1 2017: 2,780). The price remained strong despite the fact that import duties set by the United States on steel and aluminium caused some volatility in the market.

The combined zinc stock levels of LME and SHFE increased in January–March, whereas previously they had decreased for nine consecutive quarters. The stock levels increased by 113,000 tonnes, totalling 363,000 tonnes at the end of March (end of Q4: 250,000).

Also the prices of copper and cobalt developed favourably. The outlook for electric vehicle battery production strengthened especially the demand and price development of cobalt. In January–March, the average price for cobalt was USD 82,246 per tonne, which is 27.3% higher than in the previous quarter (Q4 2017: 64,594) and 86.8% higher than the year before (Q1 2017: 44,023). During January–March, the average price of copper was USD 6,962 per tonne, which is 2.3% higher than in the previous quarter (Q4 2017: 6,807) and 19.4% higher than the year before (Q1 2017: 5,832).

## Capital expenditure

Terrafame's capital expenditure totalled EUR 15.5 million in the first quarter of 2018 (Q4 2017: 22.4 and the year 2017: 92.1). EUR 5.4 million was spent on sustaining capital and EUR 10.1 million on improving productivity and increasing capacity.

The most significant investment items aimed at sustaining capital include ore transport equipment as well as alteration work related to the relocation of the secondary bioleaching area ore transport line.

The most significant investment items related to improving productivity and increasing capacity include the construction of the foundations for block 2 in the waste rock area, the installation of the new hydrogen sulphide production line and the construction of block 4 of the secondary bioleaching area.

## Environmental safety and permits

The water situation at the Terrafame site remained good during the first quarter. At the end of March, the amount of water stored at the site totalled 1.4 million cubic metres, which is less than ever before during Terrafame's operations. A total of 0.2 million cubic metres of water was discharged from the site during January–March.

Due to the normal winter stratification of the Latosuo purified water reservoir, the maximum limit for sulphate, which was stricter than earlier, was exceeded in January–March in the monthly-level analysis of the discharge pipe water flow to keep the pipe from freezing. Due to the low amount of discharged water, the sulphate load remained clearly below quota. Terrafame's total sulphate load amounted to 475 tonnes during the first quarter (Q1 2017: 2,342 tonnes).

Preparing for the environmental impact assessment (EIA) procedure of the battery chemicals plant was started. As part of this work, Terrafame convened a monitoring group consisting of stakeholders and authorities.

A laboratory test programme was also launched during the first quarter to explore the recovery of rare earth elements and uranium.

## Personnel and occupational safety

At the end of March 2018, Terrafame employed 634 people (Q4 2017: 650). In addition, approximately 70 partner companies employing approximately 631 people operated at the site regularly in January–March (Q4 2017: 696).

During the first quarter, one injury occurred to a Terrafame employee resulting in absence. The rolling lost-time injury frequency, meaning the number of injuries per one million person-hours worked, was 3.5 for the past 12 months (2017: 3.5). The target for lost-time injury frequency this year is below 2.5.

## Near-term outlook

Terrafame will continue ramping up production, stabilising operations and improving profitability. A spring maintenance stoppage will take place in May, which will affect the production and sales volumes of the second quarter.

In the battery chemicals plant project, the company will proceed to detailed engineering phase. At the same time, permit processes will be advanced. The recovery of rare earth elements and uranium will also be explored further on a laboratory scale.

Terrafame will employ approximately 90 summer employees for the summer 2018. In accordance with the principles of the Responsible Summer Job campaign, Terrafame wants to provide its employees with, for example, good orientation and sufficient guidance to safely carry out their work tasks.

*Terrafame Ltd's financial information presented in this release are unaudited FAS figures.*

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Terrafame Ltd is a Finnish multi-metal company producing nickel, zinc, cobalt and copper at its mine and metals production plant located in Sotkamo, Finland. Our aim is to conduct environmentally sustainable, safe and profitable operations.