## FerroTer

## Ferrotec Corporation

## Results for the $1^{\text {st }}$ half of the fiscal year ending March 31, 2015

November 27, 2014
(JASDAQ 6890)
http://www. ferrotec. co. jp/

1. This 1st half results cover six months period from April to September of Ferrotec, and six months period from Jan. to June of consolidated subsidiaries and affiliated companies included in investment profit loss in equity method.
2. These materials were prepared for the purpose of providing information regarding the company's results of operations for the $1^{\text {st }}$ half of the fiscal year ending March 31, 2015.
3. These materials were prepared based on information available as of Sep. 30, 2014. All opinions, forecasts and other forwardlooking statements are based on management's judgments in accordance with materials available at that time and may be changed without prior notice.

## ForroTer

First Half of FY March 2015 Financial Results

## Consolidated Financial Summary

## FerroTer

| $¥$ in millions | FY March 2014 1st $^{\text {st }}$ half |  | FY March 2015 1st half |  | YOY |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount | Pct. of sales(\%) | Amount | Pct. of sales(\%) | Amount | Pct. of sales(\%) |
| Net sales | 20,229 | 100.0 | 29,238 | 100.0 | 9,009 | 44.5 |
| Cost of sales | 15,189 | 75.1 | 22,561 | 77.2 | 7,372 | 48.5 |
| Gross profit | 5,040 | 24.9 | 6,677 | 22.8 | 1,637 | 32.5 |
| SG\&A expenses | 4,880 | 24.1 | 5,478 | 18.7 | 598 | 12.3 |
| Operating profit | 159 | 0.8 | 1,199 | 4.1 | 1,040 | 653.9 |
| Non-operating income | 1,257 | 6.2 | 236 | 0.8 | $\triangle 1,021$ | $\triangle 81.2$ |
| Non-operating expense | 886 | 4.4 | 602 | 2.1 | $\triangle 284$ | $\triangle 32.1$ |
| Ordinary profit | 530 | 2.6 | 834 | 2.9 | 304 | 57.3 |
| Extraordinary income | 659 | 3.3 | 2 | 0.0 | $\triangle 657$ | $\triangle 99.7$ |
| Extraordinary loss | 6 | 0.0 | 56 | 0.2 | 50 | 833.3 |
| Net profit | 694 | 3.4 | 354 | 1.2 | $\triangle 340$ | $\triangle 48.9$ |
| Capital investment | 1,640 | - | 1,314 | - | $\triangle 326$ | $\triangle 19.9$ |
| Depreciation | 1,981 | - | 1,899 | - | $\triangle 82$ | $\triangle 4.1$ |

Note: Exchange rate $\mathrm{FY} 3 / 141 \mathrm{H} \rightarrow \mathrm{FY} 3 / 151 \mathrm{H}: ¥ 95.90 \rightarrow ¥ 102.23 /$ US dollar $¥ 15.53 \rightarrow ¥ 16.56 / \mathrm{RMB}$ (avg. rate during the period)

## Consolidated Financial Summary

## FerroTer

| ¥ in millions | FY March $20151^{\text {st }}$ half |  |
| :---: | :---: | :---: |
|  | Amount | Pct. of sales(\%) |
| Net sales | 29,238 | 100.0 |
| Cost of sales | 22,561 | 77.2 |
| Gross profit | 6,677 | 22.8 |
| SG\&A expenses | 5,478 | 18.7 |
| Operating profit | 1,199 | 4.1 |
| Non-operating income | 236 | 0.8 |
| Non-operating expense | 602 | 2.1 |
| Ordinary profit | 834 | 2.9 |
| Extraordinary income | 2 | 0.0 |
| Extraordinary loss | 56 | 0.2 |
| Income before income tax | 780 | 2.7 |
| Income taxes | 433 | 1.5 |
| Net profit | 354 | 1.2 |

Net Sales and Operating Profits by Segment FOROTNQ

| Net sales <br> ( $¥$ in millions) | FY March $20141^{\text {st }}$ half |  | FY March $20151^{\text {st }}$ half |  | YoY |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount | Pct. Of Sales(\%) | Amount | Pct. Of Sales(\% | Difference | Pct.change |
| Equipment-related | 10,189 | 50.4 | 12,948 | 44.3 | 2,759 | 27.1 |
| Electronic device | 2,801 | 13.8 | 4,164 | 14.2 | 1,363 | 48.6 |
| Photovoltaic-related | 5,680 | 28.1 | 10,153 | 34.7 | 4,473 | 78.8 |
| Others | 1,557 | 7.7 | 1,973 | 6.8 | 416 | 26.7 |
| T o t a l | 20,229 | 100.0 | 29,238 | 100.0 | 9,009 | 44.5 |


| Operating income <br> ( $¥$ in millions) | FY March $20141^{\text {st }}$ half |  | FY March $20151^{\text {st }}$ half |  | YOY |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount | Pct. Of Sales(\%) | Amount | Pct. Of Sales(\%) | Difference | Pct. change |
| Equipment-related | 77 | 0.8 | 918 | 7.1 | 841 | 1092.2 |
| Electronic device | 249 | 8.9 | 604 | 14.5 | 355 | 142.6 |
| Photovoltaic-related | $\triangle 111$ | - | $\triangle 247$ | - | $\triangle 136$ | - |
| Others | $\triangle 24$ | - | $\triangle 52$ | - | $\triangle 28$ | - |
| Corporate \& elimination | $\triangle 31$ | - | $\triangle 24$ | - | 7 | - |
| T 0 t a l | 159 | 0.8 | 1,199 | 4.1 | 1,040 | 653.9 |

## Consolidated Balance Sheet～Assets～

| （ $¥$ in millions ） | FY3／14 | $\begin{gathered} \text { FY3/15 } \\ \text { 1H } \end{gathered}$ | Difference |
| :---: | :---: | :---: | :---: |
| Current assets | 39，835 | 39，560 | $\triangle 275$ |
| Cash \＆deposits | 7，550 | 8，018 | 468 |
| Note \＆accounts receivable | 16，946 | 16，949 | 3 |
| Inventory | 12，406 | 11，958 | $\triangle 448$ |
| Fixed assets | 34，887 | 32，926 | $\triangle 1,961$ |
| Tangible fixed assets | 29，041 | 27，108 | $\triangle 1,933$ |
| Building | 6，466 | 5，791 | $\triangle 675$ |
| Equipment \＆ machinery | 11，809 | 10，669 | $\triangle 1,140$ |
| Tools，furniture， and fixture | 6，593 | 5，693 | $\triangle 900$ |
| Land | 708 | 635 | $\triangle 73$ |
| Intangible fixed assets | 1，613 | 1，438 | $\triangle 175$ |
| Goodwill | 602 | 517 | $\triangle 85$ |
| Investments \＆other assets | 4，232 | 4，379 | 147 |
| Total assets | 74，723 | 72，486 | $\triangle 2,237$ |

## 【Current assets】

Decreased in response to progress with repayment of borrowings，but cash and deposits rose slightly with a suitable level

【Main reason for decrease in tangible fixed assets】 Depreciation $¥ 1,900$ million，with the main reason for the decrease being a stronger yen exchange rate at the end of June for the subsidiary company fiscal year than at the end of the previous fiscal year

## 【Intangible fixed assets】

Goodwill amortisation amount：
$1^{\text {st }}$ half（actual）：$¥ 80$ million
$2^{\text {nd }}$ half（plan）：$\quad ¥ 80$ million

| （ $¥$ in millions） | FY3／14 | $\begin{gathered} \text { FY3/15 } \\ 1 \mathrm{H} \end{gathered}$ | Difference |
| :---: | :---: | :---: | :---: |
| Current liabilities | 28，522 | 29，152 | 630 |
| Notes and accounts payable | 10，474 | 12，188 | 1，714 |
| Shot－term debt | 9，386 | 8，072 | $\Delta 1,314$ |
| Current portion of long－term borrowings | 3，037 | 3，023 | $\Delta 14$ |
| Fixed liabilities | 8，140 | 7，035 | －1，105 |
| Long－term debt | 5，673 | 4，331 | $\Delta 1,342$ |
| Total liabilities | 36，662 | 36，187 | $\triangle 475$ |
| Net Assets | 38，060 | 36，298 | $\Delta 1,762$ |
| Shareholder＇s equity | 30，604 | 30，773 | 169 |
| Total adjustment | 6，884 | 4，977 | －1，907 |
| Minority interests | 571 | 547 | $\Delta 24$ |
| Total liabilities \＆ shareholder＇s equity | 74，723 | 72，486 | 42，237 |

【 Major reason for decrease in current liabilities】
The increase in notes payable and accounts payable was mainly due to the timing of inventory purchases of PV（OEM）materials．

| 【 Interest－being debt】 |  |  |
| :---: | :---: | :---: |
| Short－term debt＋Current portion of long－term borrowings | 11，096 million | （12，423＊） |
| Long－term debt＋bond etc． | 4，331 million | $(5,673)$ |
| Total | 15，427 million | （18，096 ） |
| 【 Net interest－being debt | 7，409 million | （ 10，546 ）】 |
| ＊Parentheses represent the figures as of end－FY3／14 |  |  |

【Net assets】
Shareholders＇equity：
Net income ：$\quad 354$ million
Dividends ：$\quad \Delta 184$ million

Foreign currency translation adjustments ：
$\Delta 1,994$ million

## Consolidated Cash Flow

| ( $¥$ in million) | FY3/14 1H | FY3/15 1H |
| :---: | :---: | :---: |
| Cash flow from operating activities | 2,013 | 4,373 |
| Income before income taxes | 1,182 | 780 |
| Depreciation | 1,981 | 1,899 |
| Exchange gain \& loss ( $\Delta$ : gain) | $\triangle 732$ | 111 |
| Changes in restructuring expense ( $\Delta$ : decrease) | 462 |  |
| Changes in notes \& accounts receivable ( $\Delta$ : increase) | 3,430 | $\Delta 1,067$ |
| Changes in inventories ( $\triangle$ : increase) | $\triangle 942$ | $\triangle 83$ |
| Changes in accounts payable( $\Delta$ : decrease) | $\triangle 932$ | 2,585 |
| Others | $\Delta 2,436$ | 177 |
| Cash flow from investing activities | $\Delta 1,761$ | $\triangle 1,123$ |
| Payments for purchase of tangible fixed assets | -1,640 | $\Delta 1,314$ |
| Proceeds from sales of tangible fixed assets | 31 | 327 |
| Payments for purchase of marketable securities | $\triangle 67$ | $\triangle 92$ |
| Proceeds from sales of marketable securities | 760 |  |
| Others | $\Delta 845$ | $\Delta 44$ |
| Cash flow from financing activities | 115 | $\Delta 2,513$ |
| Changes in short-term borrowing | 1,579 | $\triangle 960$ |
| Proceeds from long-term debt | 300 | 200 |
| Payments of long-term debt | $\Delta 1,573$ | $\Delta 1531$ |
| Payments for dividend | $\triangle 152$ | $\triangle 184$ |
| Others | $\Delta 39$ | $\Delta 37$ |
| Changes in cash \& cash equivalents | 841 | 467 |
| Cash and cash equivalents, beginning of year | 7,373 | 7,550 |
| Cash and cash equivalents, end of year | 8,215 | 8,018 |



## (Financing CF)

[^0]
## Free Cash Flow Trend

- Free cash flows have maintained a positive and increasing trend since the fiscal year ended March 2013. $¥ 3,709$ million in the second quarter
$\Rightarrow$ The increase in funds is to be used to finance further growth in the future
※ Free Cash Flow =Operating Cash Flow + Investing Cash Flow



## Full-Year Forecast

| ( $¥$ in millions) | FY3/14 | FY3/15 | FY3/15 | Comparison between FY3/15 and figures |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  |  | Initial forecast | Revised forecast | Vs. FY3/14(\%) | Vs. Initial plan(\%) |
| Net sales | 44,745 | 50,000 | 56,000 | 25.2 | 12.0 |
| Operating profit | 798 | 1,800 | 2,000 | 150.6 | 11.1 |
| Ordinary profit | 1,262 | 1,000 | 1,500 | 18.9 | 50.0 |
| Net profit | 1,391 | 700 | 800 | $\Delta 42.5$ | 14.3 |
| Capital <br> investment | 3,825 | 3,000 | 3,000 | $\Delta 21.6$ | 0 |
| Depreciation | 3,941 | 4,200 | 4,000 | 1.5 | $\Delta 4.7$ |

Note: $\quad$ Exchange rate $F Y 3 / 14 \Rightarrow F Y 3 / 15$ (assumed rate) : $¥ 97.90 \Rightarrow ¥ 105.00 /$ US dollar $\quad ¥ 15.97 \Rightarrow ¥ 17.00 /$ RMB Capital investment is based on cash flow considering unprojected large-scale capital investment and accounts payable facilities at the end of previous year.

## Business Forecast (sales by segment)

## FerroTer

| ( $¥$ in millions) | FY3/14 | FY3/15(E) | YOY(\%) |
| :---: | :---: | :---: | :---: |
| Equipment-related | 21,628 | 25,150 | 16.3 |
| Vacuum Feedthroughs | 5,422 | 7,790 | 43.7 |
| Quartz | 4,484 | 5,010 | 11.7 |
| Ceramics | 3,965 | 5,000 | 26.1 |
| EB-Gun, LED | 3,242 | 3,300 | 1.8 |
| semiconductor wafer | 4,515 | 4,050 | $\triangle 10.3$ |
| Electronic device | 6,609 | 8,370 | 26.6 |
| Thermo-electric module | 6,054 | 7,630 | 26.0 |
| Ferrofluid, others | 555 | 740 | 33.3 |
| Photovoltaic-related | 13,203 | 18,360 | 39.1 |
| Quartz crucibles | 3,699 | 3,180 | $\triangle 14.0$ |
| Solar silicon | 7,570 | 11,810 | 56.0 |
| PV manufacturing Epuip. | 687 | 510 | -25.8 |
| Solar cell, Others | 1,247 | 2,860 | 129.4 |
| Others | 3,304 | 4,120 | 24.7 |
| Total | 44,745 | 56,000 | 25.2 |

## ForroTer

## Status by Segment and Outlook

## Segment

## FerroTer



Substrates for power semiconductor


## 35\%

Photovoltaic-related

PV silicon(Ingot) [OEM】
Single Multi- crystal crystal ingot ingot


Consumable
Quartz crucible


Hot zone


Vessel


## Equipment-related Segment

Sales
( $¥$ in million)



Sales by category


## 1. Status of $1^{\text {st }}$ half of $\mathrm{FY} 3 / 15$

- The FPD market saw greater clarity for portable tablets, and so demand for small to medium-sized LCD, and organic EL production equipment was firm.
- Good performance in automobile-mounted applications
- Semiconductors rose on sustained investment in 3D and miniaturisation
- Semiconductors rose on sustained investment in 3D and miniaturisation
- In the LED market, LED products for lightings and LCD backlights performed well.


## 2. Outlook for $2^{\text {nd }}$ half of $\mathrm{FY} 3 / 15$

- Expect semiconductor applications to continue to achieve gentle growth.
- There are concerns about a slowdown in demand and a fall in price in the LCD market, despite the investment plans of Chinese manufacturers in the FPD market
- Expect that LED-use MOCVD for automobile applications will start to steadily rise
- Increasing transaction volumes with Japanese companies moving into China


## [Measures]

- Further continuation of subassembly of contracted equipment subassembly products for general industry
- Bolstering of operations and O/H business in Taiwan market
- Strengthening contracted manufacture of medical equipment and food related equipment
- Developing China market through alliances with Japanese companies


## Status and Outlook for Quartz Products

## FerroTer



## Sales by category



## 1. Status of $1^{\text {st }}$ half of FY3/15

- Orders from US and Japanese major semiconductor OEM continue brisk
- Capacity utilisation rates remain high and firm at domestic and Asian companies
- Initiating mass production of high purity products in Chinese manufacturing
- Continuous demands for short delivery times from customers (Japan, Taiwan)
- Making progress with improving earnings by implementing measures to reduce materials costs, and by maintaining prices with value added products


## 2. Outlook for $2^{\text {nd }}$ half of FY3/15

- Expect that US majors' OEM (SWP) will remain strong
- Expect that Japanese majors' OEM will rise again after peaking out
- Expect that capacity utilisation rates at domestic and Asian companies will remain at high levels
- LED related demand gradually rising in response to stronger demand for smart phone applications


## [Measures]

- Planning to reduce costs by concentrating production in Chinese facilities
- Moving into the next generation and other process equipment in silicon parts.
- Continuing to respond to requirements from Taiwanese companies, quick delivery, stable product quality and customization


## Status and Outlook for Ceramics Products

## ForroTer



Sales by category


## 1. Status of $1^{\text {st }}$ half (Jan-Jun) of FY 3/15

Machinable ceramics "Photoveel"

- Powered by smartphone and tablet demand, orders and sales for wafer circuit inspection equipment are rising both in Japan and overseas
- Continued stable demand from the US for medical-care related parts


## Fine ceramics

- Orders and sales to equipment manufacturers from both in Japan and overseas are maintaining a high level from the second half of last year to the beginning of this year in response to the investment in semiconductor miniaturisation


## 2. Outlook for $2^{\text {nd }}$ half (Jul-Dec) of FY 3/15

## Machinable ceramics "Photoveel"

- There were some large-scale expressions of interest from sources of demand in Taiwan and Korea in the summer in anticipation of new smart phone models. Although there has been some degree of minor adjustment since the fall, the basic tone remains unchanged.


## Fine ceramics

- Due to the influence of lively investment in miniaturisation and mass production in the semiconductor industry, orders for new equipment applications are strong both from Japan and from overseas. Sales is also expected to maintain a firm tone.


## 3. Continuous sales policy

<Machinable ceramics >

- In order to be able to respond to changes in customer needs for wafer circuit inspection equipment rapidly, focusing on the challenges of next generation models.
< Fine ceramics >
- An increase in demand for equipment is anticipated in response to major investment by sources of demand in miniaturization and 3D.Focusing on the challenges of satisfying demand for ceramics products including products in development.
< Common >
- Continuing our sales and marketing efforts to develop new customers and pioneer new applications (medical equipment related areas, etc).



## Semiconductor wafer：

## 1．Status of $1^{\text {st }}$ half of FY $3 / 15$

－The market environment is firm，and so making solid progress with the company＇s own brand products．
－Sales remain firm thanks to a solid undertone in the Chinese and Taiwanese markets

## 2．Outlook for $\mathbf{2}^{\text {nd }}$ half of FY $3 / 15$

－Maintaining a strong performance for the company＇s own brand products．
－Anticipate year－end production adjustments at the company＇s OEM customers
《Measures》
－Draft plan for the relocation of ingot production from Yinchuan into inland districts
－Establishment of technology，product quality and other service structures

## EB gun and Deposition equipment：

## 1．Status of $1^{\text {st }}$ half of FY $3 / 15$

－Demand slackening temporarily．There is delayed recovery in LED market

## 2．Outlook for $\mathbf{2}^{\text {nd }}$ half of FY 3／15

－Communications chips for smartphones expanding，expect LED market to start to recover
《Measures》
－Focusing on optical market and start taking orders
－EB gun：support from European market sweeping away feelings of uncertainty

## Electronic Device Segment

Sales
( $¥$ in million)



Sales by category


## 1. Status of $1^{\text {st }}$ half of FY3/15

Automobile Seat Application

- Particularly strong in North America, undertaking mass production

Other Applications

- Main industrial applications faring well, also pioneering new applications
- Power device substrates moving into growth as number of models using them increases


## 2. Outlook for $2^{\text {nd }}$ half of FY3/15

## Automobile Seat Application

- Strong demand in North America is expected to remain steady Other Applications
- Demand in China remains firm for optical telecommunications equipment applications
- Expect that bio, medical, and general industrial applications will all remain firm - strong
- Planning to start up new mass production for power device substrates


## 《Measures》

- Planning to increase customer satisfaction with sales proposals
- Bolstering support for customers' TE-use product start-ups
- Initiating new model module products able to respond to new applications
- Planning start-up of new mass production for power device substrates


## Photovoltaic-related Segment



Solar cell \& Others

Solar silicon

Quartz crucibles

## PV

manufacturing
Equip.


## 1. Status of $1^{\text {st }}$ half of FY3/15

- Recovering trend in demand continues, without rebound in prices
- Responding to customer needs for long-life products
- Pressing ahead with sales for small diameter semiconductor use
- Volumes for vessels for multi-crystal remain flat


## 2. Outlook for $2^{\text {nd }}$ half of FY3/15

- Expecting demand to fall in response to US anti-dumping measures
- Continuation of sales for small diameter semiconductor use
- Vessels for multi-crystal for Taiwan expected to receive the impact
- Reinforcing shift in sales from G5 size to G6 size in Chinese Multicrystal vessels market


## 《Measures》

- Planning to pass on price rises with introduction of long-life products
- Striving to reduce costs by shifting Yinchuan plant
- Continuing to acquire authorizations for domestic semiconductor manufacturers




## 1.Status of $1^{\text {st }}$ half of FY3/15

- Evaluations proceeding towards the acquisition of authorisations from new OEM customers. Expect to embark upon mass production in the next fiscal year
- Customer needs for high conversion efficiency N-type single crystal and key OEM customers faring well
- Multi- crystal needs are particularly strong in China but prices remain depressed
- Intensifying competition among users is resulting in severe demands for cost reductions


## 2.Outlook for $2^{\text {nd }}$ half of FY3/15

- Demand from OEM is firm but demands for cost reductions are intensifying even further
- US anti-dumping measures and retaliatory tariffs implemented by China are resulting in an uncertain outlook
- Greater efforts being made to achieve yet further technological advances in thinning technologies
- Pricing reviews for Multi-crystal products, uncertainty sets to continue
- Chinese government installation volumes to be reduced from 14GW to 10GW per annum
- Concerns over impact of succession problems in Japan


## 《Measures》

- Concentrating crystal production at Yinchuan plant, with full capacity utilization
- Further progress with responding to process of thinning of fixed abrasives and thin wafers
- Aiming to expand the number of customers for N -type single crystal by enhancing functionality


[^0]:    - Increase/decrease in short-term debt :
    $\triangle 960$ million
    - Increase/decrease in long-term debt
    $\triangle 1,331$ million

