Hitachi Metals
Corporate Policies

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1. FY2017 Results Forecast
2. Environment and Priority Issues with Business
3. Action Plan
4. Summary

October 25, 2017
## FY2017 Results Forecast: Main Managerial Indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>910.5</td>
<td>482.4</td>
<td>950.0</td>
</tr>
<tr>
<td>Adjusted operating income</td>
<td>[7.2%] 66.0</td>
<td>[6.7%] 32.2</td>
<td>[8.4%] 80.0</td>
</tr>
<tr>
<td>EBIT</td>
<td>68.5</td>
<td>29.1</td>
<td>66.0</td>
</tr>
<tr>
<td>Income before income taxes</td>
<td>66.0</td>
<td>28.0</td>
<td>63.0</td>
</tr>
<tr>
<td>Net income*1</td>
<td>50.6</td>
<td>19.6</td>
<td>45.0</td>
</tr>
<tr>
<td>ROE*2</td>
<td>9.4%</td>
<td>–</td>
<td>8.1%</td>
</tr>
<tr>
<td>ROA*3</td>
<td>4.9%</td>
<td>–</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

- Increase in demand for key products (molds and tool steel, materials for industrial equipment, magnetic materials, etc.)
- Recovery in alloys for electronic products, robust sales of new products
- Solid efforts in price adjustments, strengthening of price strategy

*1 Net income attributable to owners of parent
*2 Return on equity attributable to owners of the parent company ratio (ROE) = Net income attributable to owners of the parent company / Term-end equity attributable to owners of the parent company x 100
*3 Return on total assets (ROA) = Net income attributable to owners of the parent company / term-end total assets x 100
### 1-2. Revenues & Adjusted Operating Income by Segment

<table>
<thead>
<tr>
<th>Segment</th>
<th>FY2016 Business Performance (US$1=¥108)</th>
<th>FY2017 Forecast (US$1=¥110)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(¥billions)</td>
<td>1H, FY2017 Business Performance (US$1=¥111)</td>
</tr>
<tr>
<td>Specialty Steel Products</td>
<td>243.2</td>
<td>141.0</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating income</td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating margin</td>
<td>9.6%</td>
</tr>
<tr>
<td>Magnetic Materials and Applications</td>
<td>99.8</td>
<td>52.1</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating income</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating margin</td>
<td>9.2%</td>
</tr>
<tr>
<td>Functional Components and Equipment</td>
<td>333.5</td>
<td>178.4</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating income</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating margin</td>
<td>3.5%</td>
</tr>
<tr>
<td>Wires, Cables, and Related Products</td>
<td>232.9</td>
<td>110.5</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating income</td>
<td>6.9</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating margin</td>
<td>6.2%</td>
</tr>
<tr>
<td>Other &amp; Adjustments</td>
<td>1.1</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating income</td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>910.5</td>
<td>482.4</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating income</td>
<td>32.2</td>
</tr>
<tr>
<td></td>
<td>Adjusted operating margin</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

As of July 1, 2017, the segment classification to which SH Copper Products Co., Ltd., a consolidated subsidiary, and another company belonged, was changed from “Wires, Cables, and Related Products” to “Specialty Steel Products,” and figures after the segment change are indicated.
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Change to be a competitive business; Challenge ourselves to meet new targets
Achieving our goal of becoming the world’s leading high-performance materials company

Key Policies of the FY2018 Medium-term Management Plan

1. Accelerate the creation and execution of growth strategies.
2. Achieve a robust business structure and highly efficient business management.
3. Strive to establish a business base that is sustainable over the long-term.
Our vision: Expand the business globally while improving profitability

Management driven by both the growth strategy and a stronger business base

Continuous portfolio remodeling

Organic growth (from capital investment & R&D)

Growth through M&A

Strengthen the business base
### 2-3. Overview of 1H, FY2017 Initiatives

**Made strategic investments aimed at expanding global business domains and strengthening the business base.**

| Organic growth (from capital investment & R&D) | • Established Corporate Research Lab, “GRIT” (Investment: approx. ¥10 billion) (Opened in April 2017) |
| • Established Hitachi Metals Advanced Machining, Ltd. (April 2017) |
| • Expanded production capacity for precision casting turbine wheels (Investment: more than ¥3 billion) (Begins operation in FY2019) |
| • Increased production capacity for piston ring materials in Japan and China (Investment: approx. ¥2.5 billion) (Begins operation in 2H, FY2017) |
| • Integrated SH Copper Products and Hitachi Metals Neomaterial (April 2018) |
| • Expanded production capacity for clad metals at Tsuchiura Works (Investment: approx. ¥7.5 billion) (Begins operation in 2H, FY2018) |

| Continuous portfolio remodeling | • Reorganized piping components business (October 2017) |

| Growth through M&A | • Consolidated Hitachi Metals MMC Superalloy as wholly-owned subsidiary → Merged (April 2018) |

| Strengthen the business base | • Improved inventory turnover rate and defect rate through the *Monozukuri* Innovation. |
### 2-4. Environment Surrounding the Company

#### Mega trends

<table>
<thead>
<tr>
<th>Climate change</th>
<th>Resource/energy shortage</th>
<th>Urbanization</th>
<th>Demographic change</th>
<th>Progress in IT and technology</th>
</tr>
</thead>
</table>

#### Market area

<table>
<thead>
<tr>
<th>Auto-mobile</th>
<th>Electronics</th>
<th>Infra-structure-related</th>
</tr>
</thead>
</table>

#### Now

- **EV** (EV annual growth rate: 30%)
- **Electrical operations**
- **Fuel-saving, weight reduction**
- **IoT**
- **Semiconductor, display**
- **Aircraft** (2016→2036 Aircraft demand: 1.8 times)
- **Railway** (Rolling stock market annual growth: 4%)  

#### 2025

- **Drive motor**
- **Inverter**
- **Battery**
- **Turbo**
- **CVT**
- **Light-weight material**
- **Sensor**
- **5G comm.**
- **Robot/FA**
- **Power semiconductor**
- **Organic EL**
- **Jet engine**
- **High-speed rolling stock**

#### Target

- Solve social issues and create new value

* EV: Including term for hybrid electric vehicles (HEV) and plug-in hybrid electric vehicles (PHEV).
* Market trend is Hitachi Metals’ estimate, based on various materials.

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Three innovations under corporate initiatives

- Monozukuri innovation
- Sales innovation
- R&D innovation

Aggressive investment in human resources and goods
(FY2017 capital expenditure: ¥90 billion)

- Mass production of quality products
- Harvesting gains from increased production
- Creation of new businesses

Achieve adjusted operating income over ¥100 billion through organic growth (FY2018)
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3-1. Specialty Steel Company: Soft Magnetic Components

Soft magnetic components installed in EVs

- FINEMET® products
- Soft ferrite products
- Amorphous metal products

Converter

Lead acid battery

Li battery

Inverter

Motor

High-speed battery charger

In-vehicle battery charger
3-2. Specialty Steel Company: Soft Magnetic Components

Become a core supplier in the EV industry

Accommodate high-frequency and large current
- An extensive materials portfolio
- Accommodate next-generation power devices

Contributes to size reduction and energy-saving of in-vehicle electronic components

Enhance production system
- Consolidate R&D functions in Tottori plant (March 2017)
- Enhance production capacity in Japan and Thailand (To be completed in end of FY2018)

Soft magnetic components FY2018 sales plan: 30% increase (vs FY2016)
Increase in demand for organic EL (OLED)-related products

**Backplate**
- Anode
- Color filter
- Film
- Glass
- TFT element

**Target material**
- White O-LED
- Silicon transistor
- Displaying electrode
- Insulating film
- Gate wiring
- Source wiring
- Drain wiring

Organic EL TV cross-section view

TFT element internal view
3-4. Specialty Steel Company: Alloys for Electronic Products

Capture market needs with large-scale investments
(approx. ¥20 billion in alloys for electronic products)

OLED panel production volume (Mm²)*1

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>15</td>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>

Demand increase

Backplate
Mass production response capacity

Target material
Broad line-up
(Pure Mo/Mo alloy/pure Cu, etc.)

Development proposal ability
(New alloy, Oxide materials)

Large material integrated molding technology

Demand by OLED TV size (M units)*1

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>50</td>
<td>75</td>
<td>110</td>
<td>165</td>
<td>250</td>
</tr>
</tbody>
</table>

Size increase
Large (50” or more)

Size increase
Wide rolling technology

Alloys for electronic products-related FY2018 sales plan: 25% increase*2 (vs FY2016)

*1 Market trend is Hitachi Metals’ estimate, based on various materials.
*2 Excludes sales of SH Copper Products Co., Ltd.
Expand ceramics products that utilize elemental technology

High heat transfer insulating substrate

- Silicon nitride substrate that combines high thermal conductivity and mechanical rigidity

Contributes to size reduction of water cooling system of power module

Silicon nitride substrate FY2025 sales plan: 5-fold (vs FY2016)

<table>
<thead>
<tr>
<th></th>
<th>Developed product</th>
<th>Conventional product</th>
<th>Aluminum nitride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal conductivity (W/m·K)</td>
<td>130</td>
<td>90</td>
<td>180</td>
</tr>
<tr>
<td>Bending strength (MPa)</td>
<td>700</td>
<td>700</td>
<td>350-500</td>
</tr>
</tbody>
</table>
### A group of high-share products that support piping infrastructure

#### Construction equipment field
- Construction equipment
- Casting fittings
- Composite fittings
  - High reliability
  - Excellent anticorrosion properties
  - Lead-free
- Domestic share

#### Gas field
- Gas piping system
- Flexible piping system
- Polyethylene piping system
  - Easy application and safety
  - High quake-resistance
  - High anticorrosion
- Domestic share

#### Industrial field
- For semiconductor, plants, and fuel battery
- Mass flow controller (MFC)
  - High-precision, high-speed flow control
  - Saves energy and labor at plants with low pressure loss
- Valve products
- Global share
  - Electro-fusion fittings
  - Vaporizing vaporizer
- Domestic share

*Market share is based on Hitachi Metals’ data*
3-7. Functional Components Company: Piping Components

Customer needs
- Smart city
- Comprehensive energy business
- Introduce IoT
- Improve ease of application
- Maintenance-free

Social needs

Expand business by strengthening solutions
- Secure safety through optimal control of mass flow
- Reduce maintenance cost of entire facility
- Prevent degradation and monitor conditions of piping system
- Improve ease of application to address labor shortage etc.

Our strengths
- Product line-up
- Control technology
- Measuring technology
- Maintenance support, prediction diagnosis

Measures

Strengthen 3-business management system of fittings, valves and MFC
(Implemented on October 1, 2017)
⇒ Concentrate managerial resources into growth areas

Enhance production capacity for flexible piping system by 20%. Establish high-efficiency production line for casting fittings.
(To be launched in FY2018)

Piping components business’ FY2021 sales plan: 40% increase (vs FY2016)
3-8. Cable Materials Company

Expand magnetic wire business

■ Develop unique products for the EV market

HiFC™*1

<table>
<thead>
<tr>
<th>Conductivity</th>
<th>Flexibility</th>
<th>Weldability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Tough pitch copper

Contribution to high-performance motors

- Reduced size and weight by 2%*2
- Improved productivity
- Improved reliability*3

■ Implement capital expenditure in anticipating strong EV demand

<Raw materials process>
Introduce new continuous casting & rolling line and new process
(Scheduled to launch in April 2018)

<Processing process>
Accelerate monozukuri by introducing new production line
(Scheduled to launch in 1H, 2018)

Magnet wire FY2025 sales plan: 1.5-fold (vs FY2016)

*1 New proprietary copper alloy developed by Hitachi Metals
*2 Copper wire weight reduced by 2% (vs Hitachi Metals’ tough pitch copper)
*3 Reliability of welding area improved due to HiFC™ little oxygen in copper
3-9. Develop a Corporate Culture That Places Emphasis on “the Hitachi Metals Way”

“Everyone” “produces solid results” “through proactive work”

- Work style reforms
  - “Reduce information materials and meetings by half” (10% reduction of total work hours)
  - 78 new graduates to be hired next spring (of which 18 are female; female ratio 3 times higher than the previous year’s)
  - Instill corporate philosophy (President’s town hall style meetings, penetration tools, etc.)
  - Vitalize human resources through monozukuri innovations and sales innovations

- Diversity

Achieve stronger front-line operations at production and sales sides and a “transparent Head Office”
Change to be a competitive business; Challenge ourselves to meet new targets
Achieving our goal of becoming the world’s leading high-performance materials company

FY2018 Plan

Revenues: ¥1 trillion
Adjusted Operating Income: ¥100 billion (Margin: 10.0%)
(Exchange rate assumption US$1 = ¥110)

Strive for sustainable growth by executing global growth strategies and strengthening the business base
This document contains forward-looking statements, such as results forecasts, management plans and dividend forecasts, that are not historical facts.

All such forward-looking statements are based upon all available information and upon assumptions and projections that were deemed reasonable at the time the Company prepared this document.

Changes to the underlying assumptions or circumstances could cause the actual results to differ substantially. The factors causing such differences include, but are not limited to, the following:

- Changes in economic conditions and regulations in the main markets where the Company operates, particularly Japan, the Americas, Asia and Europe
- Sudden changes in technological trends
- Changes in competitive advantage and the capabilities of the Company and its subsidiaries and affiliates to develop and commercialize new products and technologies
- Fluctuations in the status of product markets, exchange rates and international commodity markets
- Changes in the financing environment
- The capability of the Company and its subsidiaries and affiliates to cope with fluctuations in product supply and demand, the status of product markets, exchange rates and international commodity markets
- Protection of the Company’s intellectual property, and securing of licenses to use the intellectual property of other parties
- Changes in the status of alliances with other parties for product development, etc.
- Fluctuations in Japanese stock markets