Business Strategy of the Cable Materials Company

Hitachi Metals IR Day 2017

May 31, 2017
Hitachi Metals, Ltd.
Kazuya Murakami
Executive Officer
President of the Cable Materials Company
Business Strategy of the Cable Materials Company

[Table of Contents]
1. Business Overview
2. Growth Strategy and Action Plan
3. Conclusion
## 1-1. Overview of Initiatives in FY2016

### Strengthened profit structure through portfolio remodeling

#### Concentrated injection of managerial resources in three growth areas

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stock</td>
<td>Strengthened global supply system and solutions sales system (China: Facility expanded in Jun. 2016; Czech Republic: Facility established in Oct. 2016)</td>
</tr>
<tr>
<td>Medical Devices</td>
<td>Launched new plant, started mass production at HTP-Meds (Sep. 2016)</td>
</tr>
</tbody>
</table>

Accelerated growth of the rolling stock, medical devices and automotive electronic components areas

#### Steady implementation of business structural reforms

- Transferred the information systems business (Dec. 2016)
- Sold the lead frame business; made the copper product business a wholly owned subsidiary (Jan. 2017)

Accomplish the business structural reforms and shift to a growth phase
1-2. Cable Materials Company: Business Overview

**Core Products**

Main product groups:
- Wires/cables for construction
- Wires/cables for electronics
- Magnet wires
- Industrial rubber
- Brake hoses

**Growth Areas**

Main product groups:
- Wires/cables for rolling stock
- Wires/cables for medical devices
- Automotive electronic components

**Wires, Cables & Related Products:**
FY2016
Revenues: ¥241.4 bn

Adjusted operating income: ¥14.7 bn
Adjusted operating margin: 6.1%

- Information systems business
  (Transferred Dec. 2016)
- SH Copper Products
  (Transferred to the Specialty Steel Company Jul. 2017)
1-3. Products of the Cable Materials Company

**Growth Areas**

- Wires/cables for rolling stock
- Wires/cables for medical devices
- Automotive electronic components

**Core Products**

- Wires/cables for construction:
  - Enhance competitiveness through *monozukuri* innovation
- Magnet wires:
  - Seek synergies with the Magnetic Materials Company in the EV* market
- Brake hoses:
  - Enhance global production system
- Copper strips:
  - Transferred to the Specialty Steel Company and achieved synergies

*Including term for hybrid electric vehicles (HEV) and plug-in hybrid electric vehicles (PHEV)
Business Strategy of the Cable Materials Company

Table of Contents

1. Business Overview
2. Growth Strategy and Action Plan
3. Conclusion
2-1. Basic Policy and Growth Strategy of the Company

Basic Policy and Growth Strategy of the Cable Materials Company

Change to a high-profit structure by strengthening core products and expanding growth areas

- Enhance competitiveness of core products through technical innovation
- Concentrate injection of managerial resources into three growth areas
- Seek synergies with other Companies in the EV and FA areas

FY2018 Medium-term Management Plan: Goals

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>¥241.4 bn</td>
<td>¥210.0 bn</td>
<td>-13%</td>
</tr>
<tr>
<td>Adjusted operating income</td>
<td>¥14.7 bn</td>
<td>¥20.0 bn</td>
<td>+ ¥5.3 bn</td>
</tr>
<tr>
<td>Adjusted operating margin</td>
<td>6.1%</td>
<td>9.5%</td>
<td>+3.4%</td>
</tr>
<tr>
<td>Overseas sales as a percentage of total sales</td>
<td>34%</td>
<td>40%</td>
<td>+6%</td>
</tr>
</tbody>
</table>

*Figures include the impact of the transfer of SH Copper Products Co., Ltd.
## Main Action Plan

| Core Products | Enhance competitiveness through manufacturing process innovation  
|               | • New continuous casting and rolling line  
|               | • Innovative production line for magnet wires |
| Rolling Stock | • Reinforce manufacturing bases that address markets around the world  
| Medical Devices | • Strengthen proposal of products + solutions  
| Automotive Electronic Components | • Expand the EPB* harness business  
|               | • Strengthen the global supply system |

*EPB: Electric Parking Brake*

- **Introduce a new continuous casting and rolling line**
  *(Scheduled for operation in Apr. 2018)*

  - Conductor manufacturing line that uses the latest control technology (IoT)
  - Significant improvement in energy efficiency and productivity
  - Full-scale mass production of HiFC™ (new copper alloy) through introduction of new process

#### Characteristics of HiFC™

<table>
<thead>
<tr>
<th>Characteristics of HiFC™</th>
<th>Molten copper</th>
<th>Achieved properties equivalent to high-purity copper by adding titanium</th>
<th>Titanium and impurities combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impurities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

#### Example of application

<table>
<thead>
<tr>
<th>Example of application</th>
<th>Advantage of application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnet wires</td>
<td>Improved weldability 2%* lighter weight</td>
</tr>
<tr>
<td>Wires/cables for construction</td>
<td>Improved operability Smaller diameter, lighter weight</td>
</tr>
</tbody>
</table>

Enhance competitiveness of core products by introducing innovative equipment

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*Hitachi Metals estimate
Expand business in EV market

Generate synergies with the Magnetic Materials Company

Contributes to higher voltage of motors, smaller size and lighter weight, longer life

Enhance product competitiveness through differentiation

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Conductor</th>
<th>Insulation</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>HiFC™ Characteristics</td>
<td>Surge resistance</td>
<td>High PDIV*</td>
<td>Innovative production line → Fast speed production</td>
</tr>
</tbody>
</table>

FY2025 magnet wire sales: 1.5 times (vs. FY2016)

Source: Hitachi Metals' estimate based on various materials

*PDIV: Partial Discharge Inception Voltage
## 2-5. Market Environment of Growth Areas

<table>
<thead>
<tr>
<th>Market Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-speed railway</td>
<td>Various countries around the world have plans to build high-speed railways. Average annual growth of around 3% is projected over the next 20 years.</td>
</tr>
<tr>
<td>Medical devices</td>
<td>Average annual growth of 5% is projected until 2021 as a result of the aging of society and increasing sophistication of medical devices.</td>
</tr>
<tr>
<td>Automotive</td>
<td>Average annual growth of 2% is projected until 2023 along with the growth of EV.</td>
</tr>
</tbody>
</table>

### Technical Trends

<table>
<thead>
<tr>
<th>Market Area</th>
<th>Technical trends</th>
</tr>
</thead>
</table>
| Rolling stock        | - Smaller diameter, lighter weight  
                        | - Address int’l (EN) standards                                                |
| Medical devices      | - Low invasiveness                
                        | - Smaller diameter, greater flexibility                                    |
| Automotive           | - Acceleration in electronification 
                        | - Growth of EV                                                               |

<table>
<thead>
<tr>
<th>Hitachi Metals’ compatible products</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Wires/cables for rolling stock</td>
</tr>
<tr>
<td>- Thinner high voltage cable</td>
</tr>
<tr>
<td>- Silicone termination</td>
</tr>
<tr>
<td>- Medical tube</td>
</tr>
<tr>
<td>- Probe cable for ultrasonic diagnosis device</td>
</tr>
<tr>
<td>- Harness for combined EPB</td>
</tr>
<tr>
<td>- Magnetic field sensor, etc.</td>
</tr>
<tr>
<td>- Magnet wires</td>
</tr>
</tbody>
</table>

Source: Hitachi Metals’ estimate based on various materials

**Reinforce manufacturing bases that address markets around the world**

- **China**
  - Enhance and expand sales of innovative electric wire and cable manufacturing line (Operation in 2H FY2017)

- **Europe**
  - Mass production and sales expansion of harness in Czech Republic base (Launched FY2016)

**Major railway projects and our manufacturing bases**

<table>
<thead>
<tr>
<th>Czech Republic</th>
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<tbody>
<tr>
<td>China</td>
</tr>
<tr>
<td>Japan</td>
</tr>
</tbody>
</table>

**Strengthen proposals of products + solutions**

- **3-D wiring & module technology**
- **Wiring navigation**
- **Reduction in man-hours* and construction time of rolling stock assembly**
  - *Reduction of 50% (Source: Hitachi Review, Oct./Nov. 2016 issue)

**Sales goal for the rolling stock area:**

￥10.0 billion (FY2016) ⇒ ￥14.0 billion (FY2018)

Expand the tube business + enhance cost competitiveness of probe cables

Sales goal for the medical devices area:
¥7.0 billion (FY2016) ⇒ ¥11.0 billion (FY2021)

Sales plan

- ¥7.0 bn
- ¥8.5 bn
- ¥11.0 bn

Average annual growth of 10%

**Production**
- Launch of new tube plant
- Enhancement of tube assembly capacity
- Concentrate probe manufacturing bases

**Product**
- Start shipment of new catheter for circulatory organs
- Develop wires/cables and tube complex products
- Commercialization of probe cables for antifouling sheath

**Sales expansion**
- Strengthen North American human resources
- Expand customer base in North America
- Cultivate market in regions other than North America (Japan, etc.)

Characteristic technologies
- Tubes with irregular forms
- Pressure-resistant braiding tubes
- High-precision mold components

- Expand the EPB harness business
  EPB installment rate in new cars
  Global vehicle production
  Injection EPB harness integrated with ABS

- Strengthen global supply system for automotive electronic components
  Further strengthening of bases in Mexico, Thailand, and China (FY2017)
  Accelerate development of new sensors

Sales goal for the automotive electronic components area:
¥27.5 billion (FY2016) ⇒ ¥31.0 billion (FY2018)

Source: Hitachi Metals’ estimate based on various materials
# 2-9. Investments toward a High-Profit Structure

## Investment plan

<table>
<thead>
<tr>
<th>Investment in growth</th>
<th>Strengthen the rolling stock and medical devices areas, also keeping M&amp;A in mind</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enhance an innovative electric wire and cable manufacturing line (Scheduled for operation in the 2H of FY2017)</td>
</tr>
<tr>
<td></td>
<td>Strengthen global supply system for automotive electronic components</td>
</tr>
<tr>
<td><strong>Strengthening core products</strong></td>
<td><strong>Introduce a new continuous casting and rolling line</strong> (Scheduled for operation in Apr. 2018)</td>
</tr>
<tr>
<td></td>
<td><strong>Introduce an innovative production line for magnet wires</strong> (Scheduled for operation in the 1H of FY2018)</td>
</tr>
</tbody>
</table>

**Capital expenditures:**

¥22.0 billion (cumulative total for FY2016–FY2018)
Business Strategy of the Cable Materials Company

[Table of Contents]
1. Business Overview
2. Growth Strategy and Action Plan
3. Conclusion
3-1. Regional Sales

Seek to expand overseas sales mainly in growth areas

Overseas sales as a percentage of total sales:

34% (FY2016) ⇒ 40% (FY2018)

The charts indicate comparison of sales between FY2016 and FY2018, with sales in FY2016 as 1.
3-2. Business Portfolio Restructuring (FY2018)

Strengthen profitability of core products and further expand business in growth areas

FY2016

Revenues
¥241.4 bn
Profit margin
6.1%

FY2018*

Revenues
¥210.0 bn
Profit margin
9.5%

Growth areas

Core products

Information systems business
• SH Copper Products

Revenues of growth areas:
¥44.5 billion (FY2016) ⇒ ¥53.5 billion (FY2018)

*Figures include the impact of the transfer of SH Copper Products Co., Ltd.
3-3. Conclusion

Change to a high-profit structure by strengthening core products and expanding growth areas

Cable Materials Company
FY2018 Plan*
Revenues: ¥210.0 billion
Adjusted operating income: ¥20.0 billion (9.5%)

*Figures include the impact of the transfer of SH Copper Products Co., Ltd.
This document contains forward-looking statements—such as results forecasts and management plans—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 businesses
- Fluctuations in the status of product markets, exchange rates and international commodity markets
- Changes in 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