

# Hitachi Metals Financial Results for the First Half Ended September 30, 2016

October 27, 2016

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2	Operating Results Forecast for the Year Ending March 31, 2017
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### 1-1. Overview of the First Half Ended September 30, 2016



Trend in demand

The global economy remained on a modest rebound track primarily in advanced countries, while economic growth in Asia was stagnant. In Japan, concerns over the effects of a continuously strong yen and stagnation of emerging countries' economies remained.

- ➤ Sales of the automobile industry increased compared with 1H, 2015 owing to increased demand in Europe and China, despite a slump in sales of light vehicle in the domestic market and a decrease in sales of passenger cars in the United States.
- ➤ With regard to industrial infrastructure-related products, the supply and demand balance for steel products remained relaxed due to a high level of exports from China. Housing starts in the U.S. and Japan saw an increase.
- > Electronics and information systems-related demand remained sluggish.

# 1-2. Overview of Operating Results for the First Half Ended September 30, 2016

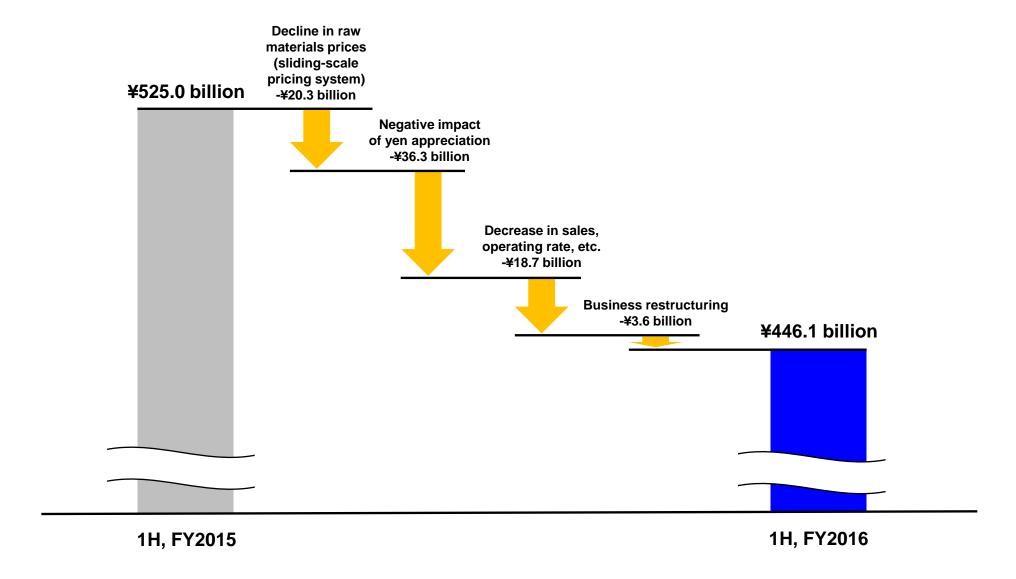


		IFRS		
Profit margin (¥billions) in brackets	1H, FY2015 Business Performance US\$1 = ¥121.80	1H, FY2016 Business Performance US\$1 = ¥105.29	Change	
Revenues	525.0	446.1	-15%	Decrease in revenues from a drop in raw materials prices (sliding-scale pricing system), yen appreciation, slowdown in demand, etc.
Adjusted operating income	[6.9%] 36.2	<sup>[7.0%]</sup> 31.0	-5.2	Decrease in income from yen appreciation and slowdown in demand, despite positive effects from cost reductions and <i>monozukuri</i> innovations.
Other income	31.8	2.8	-29.0	Income of ¥29.3 billion posted from business restructuring, etc. in 1H, FY2015.
Other expenses	-6.4	-5.0	+1.4	
Operating income	<sup>[11.7%]</sup> 61.6	<sup>[6.5%]</sup> 28.8	-32.8	
Interest and other financial income	-0.9	-4.0	-3.1	Foreign exchange loss of -¥2.8 billion posted in 1H, FY2016.
Income before income taxes	60.7	24.8	-35.9	
Income taxes	-16.6	-6.5	+10.1	
Net income	44.1	18.3	-25.8	
Net income attributable to owners of the parent company	43.8	18.3	-25.5	
Percentage of revenues from overseas markets*	57%	55%	-2%	
Employees	29,413	28,772	-641	

<sup>\*</sup> Overseas revenues by region:

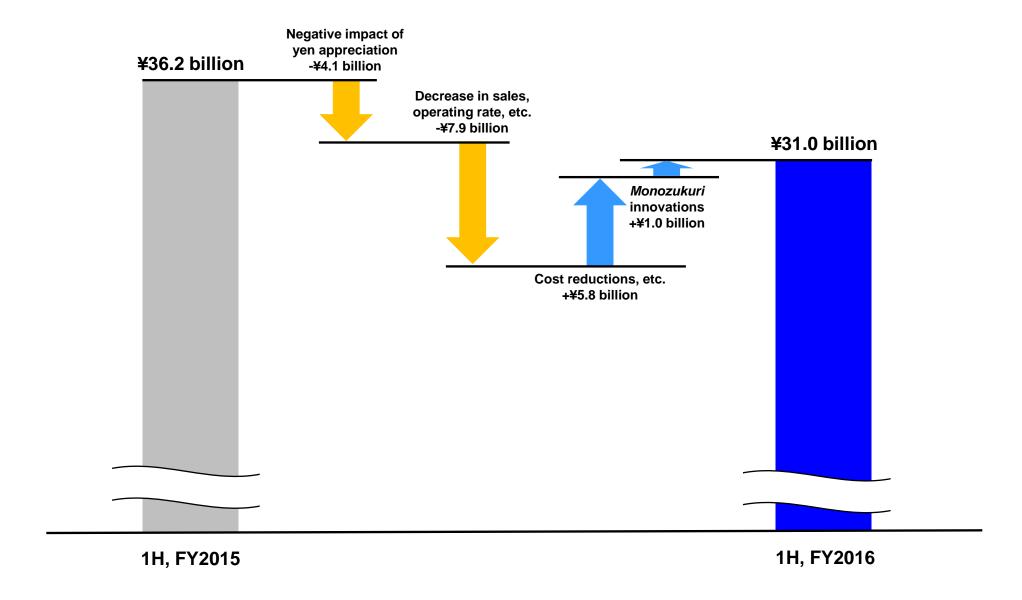
<sup>1</sup>H, 2015: North America, 31%; China, 8%; Asia (exc. China), 12%; Europe, 4%; Others, 2% 1H, 2016: North America, 30%; China, 7%; Asia (exc. China), 12%; Europe, 5%; Others, 1%

# 1-3. Factors Behind the Increase/Decrease in Revenues (Year-on-Year)



# 1-4. Factors Behind the Increase/Decrease in Adjusted Operating Income (Year-on-Year)





# 1-5. Operating Results by Segment for the First Half Ended September 30, 2016



			IFRS		
(¥billions)	Profit margin in brackets	1H, FY2015 Business Performance* US\$1 = ¥121.80	1H, FY2016 Business Performance US\$1 = ¥105.29	Change	* In the Magnetic Materials and Applications segment, soft magnetic materials were transferred to the High-Grade Metal Products and Materials segment in FY2016. Furthermore, Corporate R&D expenses were changed (to be borne by internal Companies).  Business performance for 1H, FY2015 reflects the above changes to the categories of the reportable segments.
High Cando	Revenues	131.8	115.9	-12%	Decline in revenue and income due to an economic slowdown mainly in
High-Grade Metal Products	Adjusted operating income	<sup>[10.3%]</sup> 13.5	<sup>[9.6%]</sup> 11.1	-2.4	Asia and a drop in demand for soft magnetic materials in China, despite an increase in sales of environment-friendly products related to automobiles.
and Materials	Operating income of the segment	[30.5%] 40.2	<sup>[8.6%]</sup> 10.0	-30.2	¥27.0 billion in income resulting from business restructuring accompanying the sale of shares of the former Hitachi Tool Engineering, Ltd. posted in 1H, 2015.
Magnetic	Revenues	54.9	48.5	-12%	Decrease in revenue due to the effects of the decline in raw materials prices (a sliding-scale raw material price system) and exchange rate effects, despite firm demand.
Materials and Applications	Adjusted operating income	[6.6%] 3.7	<sup>[7.7%]</sup> 3.8	+0.1	Remained at the same level as that for 1H, 2015 due to robust demand, despite exchange rate effects.
7 фризанопо	Operating income of the segment	<sup>[6.5%]</sup> 3.6	<sup>[7.6%]</sup> 3.7	+0.1	
High-Grade Functional	Revenues	189.0	162.5	-14%	Decrease in revenue due to the effects of decreased demand for farming machinery and construction machinery products in North America as well as exchange rate effects, despite strong demand in pickup trucks in North America.
Components and Equipment	Adjusted operating income	<sup>[6.8%]</sup> 12.8	<sup>[5.8%]</sup> 9.3	-3.5	Decrease in income due to exchange rate effects and responding to new products in heat-resistant cast steel.
and Equipment	Operating income of the segment	[6.4%] 12.2	<sup>[5.6%]</sup> 9.1	-3.1	
Wires, Cables,	Revenues	147.6	118.7	-20%	Decrease in revenue due to the impact of a drop in revenue from magnet wires and electrical wires and cables for construction as well as a decline in raw materials prices (a sliding-scale raw material price system), despite an increase in wires and cables for rolling stock.
and Related Products	Adjusted operating income	<sup>[4.2%]</sup> 6.2	<sup>[5.1%]</sup> 6.1	-0.1	Remained at the same level as that for 1H, 2015 due to a drop in income from magnet wires and electrical wires and cables for construction, despite an increase in wires and cables for rolling stock.
	Operating income of the segment	[4.3%] 6.3	<sup>[4.5%]</sup> 5.4	-0.9	¥2.2 billion in income resulting from business restructuring posted in 1H, 2015.
	Revenues	1.7	0.5	_	
Other Adjustments	Adjusted operating income	0	0.7	+0.7	
,	Operating income	-0.7	0.6	+1.3	
	Revenues	525.0	446.1	-15%	
Total	Adjusted operating income	<sup>[6.9%]</sup> 36.2	<sup>[7.0%]</sup> 31.0	-5.2	
	Operating income	<sup>[11.7%]</sup> 61.6	<sup>[6.5%]</sup> 28.8	-32.8	

# 1-6. Operating Results by Segment: High-Grade Metal Products and Materials



(¥billions) Profit margin in brackets	1H, 2015	1H, 2016	Change	Supplement
Revenues	131.8	115.9	-12%	Decline in revenue and income due to an economic slowdown mainly in Asia and a drop in demand for soft magnetic materials
Adjusted operating income	<sup>[10.3%]</sup> 13.5	<sup>[9.6%]</sup> 11.1	-2.4	in China, despite an increase in sales of environment-friendly products related to automobiles.
Operating income of the segment	[30.5%] 40.2	<sup>[8.6%]</sup> 10.0	-30.2	¥27.0 billion in income resulting from business restructuring accompanying the sale of shares of the former Hitachi Tool Engineering, Ltd. posted in 1H, 2015.

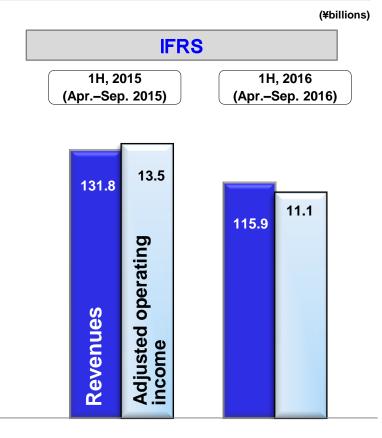
#### **Overview of Revenues**

### Specialty Steel

- Tool steel: Sales fell below those for 1H, 2015 due to inventory adjustments affected by an economic slowdown, mainly in Asia.
- Industrial equipment materials: Sales of environment-friendly products related to automobiles increased, and sales of other industrial components were also strong.
- Aircraft-related and energy-related materials: Faced an in-between season of demand.
- Alloys for electronic products: Sales of display-related materials were stagnant.

### Rolls

- Various types of rolls: Discontinued production at Baosteel Hitachi Rolls (Nantong) Ltd. as of September 1, 2016 with the objective of concentrating management resources in high value-added products.
- Injection molding machine parts: Sales fell year-on-year, affected by a decline in demand for mobile devices.
- Soft Magnetic Materials and Applied Products
  Sales fell below those for 1H, 2015 due to a drop in demand in China.



## 1-7. Operating Results by Segment: Magnetic Materials and Applications



(¥billions) Profit margin in brackets	1H, 2015	1H, 2016	Change	Supplement
Revenues	54.9	48.5	-12%	Decrease in revenue due to the effects of the decline in raw materials prices (a sliding-scale raw material price system) and exchange rate effects, despite firm demand.
Adjusted operating income	[6.6%] 3.7	<sup>[7.7%]</sup> 3.8	+0.1	Remained at the same level as that for 1H, 2015 due to robust demand, despite exchange rate effects.
Operating income of the segment	[6.5%] 3.6	<sup>[7.6%]</sup> 3.7	+0.1	

### **Overview of Revenues**

### Magnets

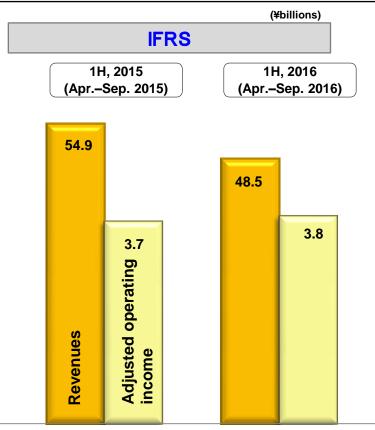
Revenues for the segment fell below those for 1H, 2015, overall due to the effects of the reduction in raw materials prices (sliding-scale raw material price system) and the continued appreciation of the yen.

### Rare earth magnets:

Demand for industrial equipment and household appliances remained at the same level as that for 1H, 2015, despite strong demand in automotive electronic components for electric power steering and hybrid automobiles.

### Ferrite magnets:

Strong demand was noted for automotive electronic components and household appliance parts.



## 1-8. Operating Results by Segment: High-Grade Functional Components and Equipment



(¥billions) Profit margin in brackets	1H, 2015	1H, 2016	Change	Supplement
Revenues	189.0	162.5	-14%	Decrease in revenue due to the effects of decreased demand for farming machinery and construction machinery products in North America as well as exchange rate effects, despite strong demand in pickup trucks in North America.
Adjusted operating income	[6.8%] 12.8	[5.8%] 9.3	-3.5	Decrease in income due to exchange rate effects and responding to new products in heat-resistant cast steel.
Operating income of the segment	[6.4%] 12.2	<sup>[5.6%]</sup> 9.1	-3.1	

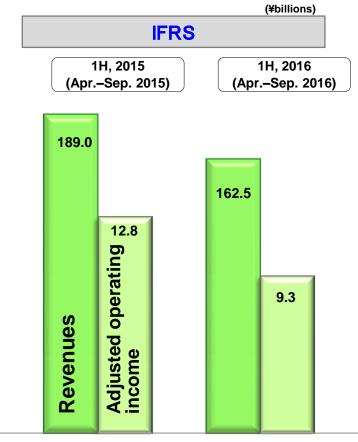
### **Overview of Revenues**

### **Casting Components for Automobiles**

- Casting components for automobiles:
   Despite sustained strong demand for casting components for pickup trucks in North America, sales of casting components for automobiles as a whole decreased compared with those for the six months ended September 30, 2015, due to a decrease in demand for casting components for farming machinery and construction machinery resulting from economic slowdown in emerging countries and a drop in grain and crude oil prices.
- Heat-resistant exhaust casting components:
   Sales exceeded those for the same period of the prior year due to strong performance in Europe as well as significant sales growth in the United States and Asia.
- Aluminum wheels:
   Sales fell below those for 1H, 2015 due to the continued appreciation of the yen, despite robust demand.

### **Piping Components**

Pipe fittings:
 Sales of pipe fittings overall fell below those for the six months ended
 September 30, 2015, due to the effects of the delay in large-scale
 constructions despite the increased number of new housing starts both in Japan and overseas.



### 1-9. Operating Results by Segment: Wires, Cables, and Related Products



(¥billions) Profit margin in brackets	1H, 2015	1H, 2016	Change	Supplement
Revenues	147.6	118.7	-20%	Decrease in revenue due to the impact of a drop in revenue from magnet wires and electrical wires and cables for construction, as well as a decline in raw materials prices (a sliding-scale raw material price system), despite an increase in wires and cables for rolling stock.
Adjusted operating income	<sup>[4.2%]</sup> 6.2	<sup>[5.1%]</sup> 6.1	-0.1	Remained at the same level as that for 1H, 2015 due to a drop in income from magnet wires and electrical wires and cables for construction, despite an increase in wires and cables for rolling stock.
Operating income of the segment	[4.3%] 6.3	<sup>[4.5%]</sup> 5.4	-0.9	¥2.2 billion in income resulting from business restructuring posted in 1H, 2015.

### **Overview of Revenues**

#### Electric Wires and Cables

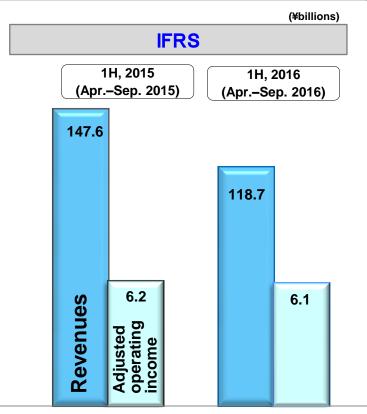
While revenues from magnet wires and electric wires and cables for construction decreased, sales of wires and cables for rolling stock, which is one of the focus areas of the Group, grew significantly, particularly in China.

### Functional Components

- In automotive products, demand for both electronic components for automobiles and brake hoses was strong.
- Sales of probe cables for medical use fell below those for the same period of the prior year due to diminished demand in overseas countries.

### ■Information System Devices and Materials

Sales of information system devices and materials were affected by prolonged sluggish capital investments in infrastructure by telecommunications carriers.



### 1-10. Assets, Liabilities, and Net Assets



### (¥billions)

Category	March 31, 2016 US\$1 = ¥112.68	September 30, 2016 US\$1 = ¥101.12	Change
Cash and cash equivalents	120.3	119.2	-1.1
Trade receivables	178.3	170.4	-7.9
Inventories	147.0	141.0	-6.0
Other current assets	38.2	35.5	-2.7
Non-current assets	549.5	525.1	-24.4
Total Assets	1,033.3	991.2	-42.1
Interest-bearing debt	220.4	212.0	-8.4
Trade payables/other	151.4	141.6	-9.8
Other current liabilities	156.8	144.6	-12.2
Total Liabilities	528.6	498.2	-30.4
Equity attributable to shareholders of the parent company	495.9	484.7	-11.2
Non-controlling interests	8.8	8.3	-0.5
Total Net Assets	504.7	493.0	-11.7

# Total assets decreased by ¥42.1 billion compared to the end of March, 2016

D/E ratio: 0.44→0.44

[Assets]

-¥42.1 bil vs. end Mar. '16

[Liabilities]

-\footaga -\footaga 30.4 bil vs. end Mar. '16

[Total Net Assets]

-¥11.7 bil vs. end Mar. '16

⇒ Decrease due to the negative impact of yen appreciation

D/E ratio	0.44	0.44	_

### 1-11. Consolidated Cash Flows



(¥bil	llions)	ĺ
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Category	1H, 2015	1H, 2016	Increase (Decrease)
Net income	44.1	18.3	-25.8
Depreciation and amortization	21.3	21.2	-0.1
Increase in operating capital	11.3	-5.3	-16.6
Other	-27.0	1.0	+28.0
Cash flows from operating activities	49.7	35.2	-14.5
Purchase of property, plant, and equipment	-29.6	-28.6	+1.0
Other	32.8	2.6	-30.2
Cash flows from investing activities	3.2	-26.0	-29.2
Free cash flow	52.9	9.2	-43.7
Increase (decrease) in debt and bonds	-8.4	0.6	+9.0
Dividend payments, etc.	-5.7	-5.7	0
Cash flows from financing activities	-14.1	-5.1	+9.0
Effect of exchange rate changes	-1.5	-5.2	-3.7
Increase in cash and cash equivalents	37.4	-1.1	-38.5
Cash and cash equivalents at the end of period	116.4	119.2	+2.8

### [Cash flows from operating activities]

A decrease in income for 1H, 2016 and other factors resulted in a net cash outflow of ¥14.5 billion compared to the same period last year.

### [Cash flows from investing activities]

Income in 1H, 2015 resulting from the sale of shares of the former Hitachi Tool Engineering, Ltd. resulted in a net outflow of ¥29.2 billion compared to the same period last year.

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# 2-1. Assumptions Underlying the Operating Results Forecast for the Second Half Ending March 31, 2017 Materials Magle



The stagnation in demand caused by the decline in the pace of economic growth in China and emerging countries is likely to persist.

The strong yen and the resulting drop in export competitiveness are a source of concern.

- Although robust demand will continue on a global basis, demand in North America will remain unchanged, whereas demand for farming machinery and construction machinery in emerging nations will remain sluggish. Strong demand for HEV-related products is anticipated.
- ➤Industrial infrastructure-related

  The improvement seen in demand relating to capital investment in Japan will stagnate. Sales of aircraft-related and energy-related materials will face an in-between season of demand.
- ➤ Electronics-related
  Weakness in demand will persist mainly in China and emerging nations.

Exchange rate assumption

The exchange rate assumption has been changed from US\$1 = \$110 to US\$1 = \$100.

# 2-2. Operating Results Forecast for the Year Ending March 31, 2017

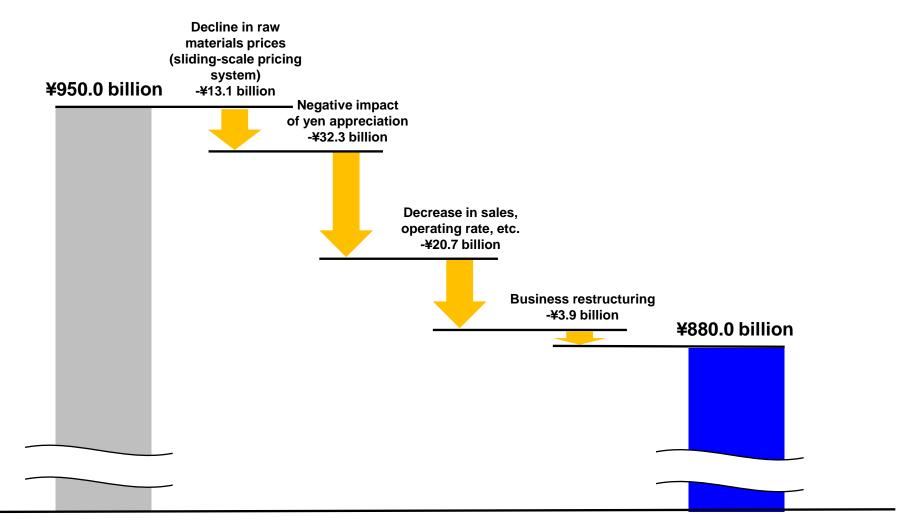


IFRS							
(¥billions) Profit margin in brackets	FY2015 Business Performance US\$1 = ¥120.14		FY2016 Previous Forecast Assuming US\$1 = ¥110 Released April 27, 2016	FY2016 Current Forecast 1H actual exchange rate US\$1 = ¥105.29 2H assumed exchange rate US\$1 = ¥100	Change		
Revenues	1,017.6		950.0	880.0	-7%	Reviewed due to a drop in raw materials prices (sliding-scale pricing system), exchange rate effects, a decrease in demand, and business restructuring.	
Adjusted operating income	<sup>[7.5%]</sup> <b>76.1</b>		<sup>[8.2%]</sup> 78.0	<sup>[7.6%]</sup> 67.0	-11.0	Reviewed due to exchange rate effects, a decrease in demand, and business restructuring, although cost reductions will be reinforced.	
Operating income	<sup>[9.8%]</sup> 100.0		<sup>[7.2%]</sup> 68.0	<sup>[7.7%]</sup> 68.0	0	Gain from the transfer of the Information Systems business and the Lead Frame business.	
EBIT	99.1		68.0	65.2	-2.8		
Income before income taxes	96.2		65.0	63.0	-2.0	Foreign exchange loss	
Net income*	69.1		45.0	45.0	0		
Total assets	1,033.3		1,033.0	986.0	-47.0		
Parent company shareholders' equity	495.9		523.2	499.0	-24.2		
Interest-bearing debt	220.4		193.0	192.0	-1.0		
D/E ratio	0.44		0.37	0.38	+0.01		
ROE	14.4%		8.8 <b>%</b>	9.0%	+0.2%		
Percentage of revenues from overseas markets	56%		55%	55%	0		
Employees	29,157		29,000	28,400	-600		

<sup>\*</sup> Net income attributable to owners of the parent company

# 2-3 . Factors for the Change in Revenues (Compared to the Previous Forecast)



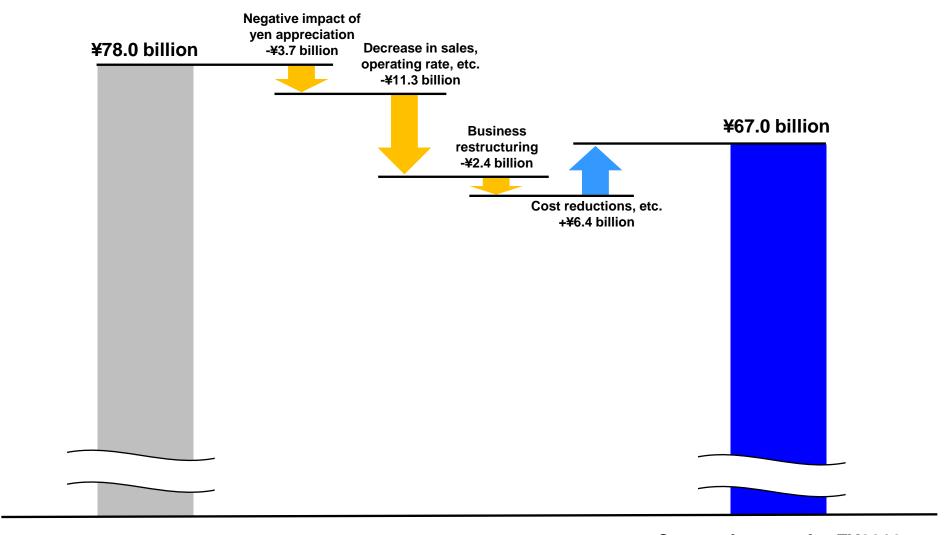


**Previous forecast for FY2016** 

**Current forecast for FY2016** 

# 2-4. Factors for the Change in Adjusted Operating Income (Compared to the Previous Forecast)





**Previous forecast for FY2016** 

**Current forecast for FY2016** 

# 2-5. Operating Results Forecast for the Year Ending March 31, 2017(Net Sales and Adjusted Operating Income by Segment)



IFRS							
(¥billions)	Profit margin in brackets	FY2015 Business Performance US\$1 = ¥120.14		FY2016 Previous Forecast Assuming US\$1 = ¥110 Released April 27, 2016	FY2016 Current Forecast 1H actual exchange rate US\$1 = ¥105.29 2H assumed exchange rate US\$1 = ¥100	Change	In the Magnetic Materials and Applications segment, soft magnetic materials and applied products were transferred to the High-Grade Metal Products and Materials segment in FY2016. Furthermore, R&D costs, previously borne by the Head Office, are now to be borne by the companies. Business performance for 1H, FY2015 reflects the above changes to the categories of the reportable segments.
	Revenues	256.7		251.0	230.0	-8%	Dealine in revenue and income due to our estations that
High-Grade Metal Products and Materials	Adjusted operating income	27.0		27.0	24.0	-3.0	Decline in revenue and income due to expectations that demand in Asia and Japan will not grow as previously forecasted, although demand for environment-friendly
	Adjusted operating margin	10.5%		10.8%	10.4%	-0.4%	products related to automobiles will remain robust.
	Revenues	105.3		100.0	96.0	-4%	Decrease in revenue due to the exchange rate and the
Magnetic Materials and Applications	Adjusted operating income	6.9		8.0	8.5	+0.5	drop in raw materials prices (sliding-scale pricing system). In terms of income, demand for rare earth magnets for automobiles will remain robust. Income will
	Adjusted operating margin	6.6%		8.0%	8.9%	+0.9%	increase due also to the recovery trend of industrial equipment related demand.
High-Grade	Revenues	365.1		329.0	314.0	-5%	Decrease in revenue due to the exchange rate. Income
Functional Components and Equipment	Adjusted operating income	26.1	25.0	19.0	-6.0	is expected to decrease from the initial forecast due to the exchange rate as well as responses to heat- resistant cast steel new products that are difficult to	
	Adjusted operating margin	7.2%		7.6%	6.1%	-1.5%	process.
	Revenues	288.2		268.0	236.0	-12%	Decrease in revenue and income due to the delay in a
Wires, Cables, and Related Products	Adjusted operating income	15.0	15.0	17.7	15.0	-2.7	large project for electric wires and cables for construction, a drop in raw materials prices (sliding-scale pricing system), and business restructuring.  Growth areas (rolling stock, medical devices, and automobile electronic components) are expected to remain robust as previously forecast.
	Adjusted operating margin	5.2%		6.6%	6.4%	-0.2%	
Other Adjustments	Revenues	2.3		2.0	4.0	_	
	Segment income	1.1		0.3	0.5	+0.2	
Total	Revenues	1,017.6		950.0	880.0	-7%	
	Adjusted operating income	76.1		78.0	67.0	-11.0	
	Adjusted operating margin	7.5%		8.2%	7.6%	-0.6%	

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### 3-1. FY2018 Medium-Term Management Plan: Basic Policies



# 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

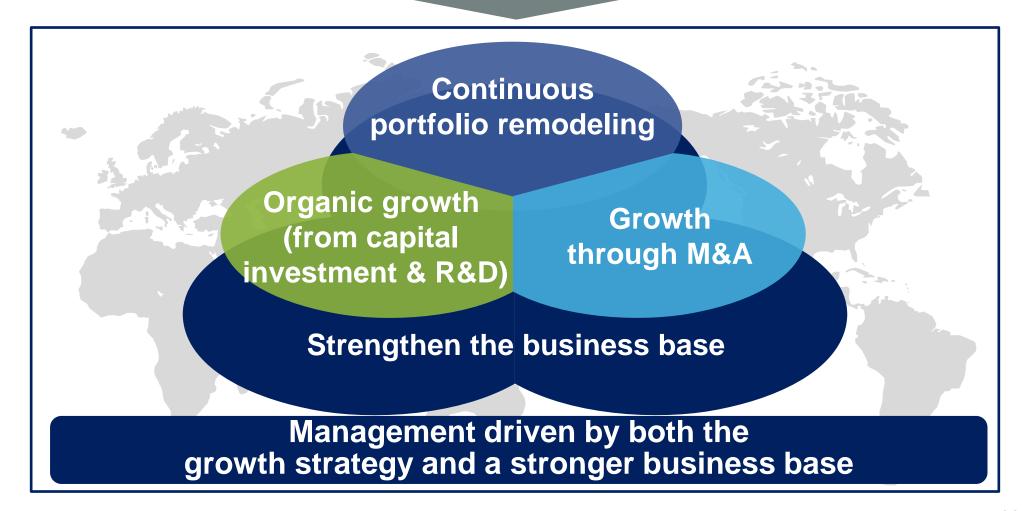
- 1. Accelerate the creation and execution of growth strategies.
- 2. Achieve a robust business structure and highly efficient business management.
- 3. Strive to establish a business base that is sustainable over the long-term.

### 3-2. FY2018 Medium-Term Management Plan: Vision



Our vision

Expand the business globally while improving profitability





### Continuous portfolio remodeling

Concentrate on high-profit, high-growth segments.

Use management resources efficiently.

### Organic growth (from capital investment and R&D)

Strengthen & accelerate the pace of R&D.

Advance the Corporate *Monozukuri* Innovation Project.

### **Growth through M&A**

Generate synergistic benefits.

Acquire human resources & achieve rapid commercialization.

### 3-4. Environment Surrounding the Company



### Short-term impact and countermeasures

Sudden fluctuation in exchange rates, Sluggish economy in emerging countries

- Promote global optimally located production
- Promote a switch to moderate-price material

### Medium- to long-term trends

Strengthened
environmental regulations,
New services that apply IoT,
Accelerated evolution of
materials technology

- Enhance and increase sales of environment-friendly products
- R&D of new materials
- Promote open innovation

# Implement measures early on and get off to a good start building a base for growth

### 3-5. 1H FY2016 Initiatives: Overview



### Get off to a good start building a base for growth

# Decided on and made large-scale investments

- Establish Corporate Research Lab. (Constructed new building. Total investment: approx. ¥10 billion) (To be established in April 2017)
- Introduce innovative production lines for magnetic materials. Total investment: approx. ¥18 billion (Scheduled for operation in 1H 2018)
- Increased production capacity of heat-resistant cast steel for turbos. Total investment: approx. ¥7 billion (Began operation in October 2016)

# Expanded global businesses

- Began mass production of SLD-i<sup>TM</sup>, a new type of cold-rolled tool steel produced with a new melting facility. (April 2016)
- Established Hitachi Metals San Huan Magnetic Materials (Nantong) Co., Ltd. (September 2016)
- Dedicated a plant to ductile cast iron and a plant to gray iron at Waupaca. (October 2016)
- Enhanced capacity at overseas plants for growth areas of the cable materials (rolling stock, medical devices, automotive electronic components). (Began operation in 1H FY2016)

# Carried out business restructuring

- Consolidated and fortified roll production in Japan. (Terminated production at China location) (September 2016)
- Transfer the Information Systems Business. (December 2016)
- Accelerate restructuring by selling the Lead Frame Business and making the Copper Product Business a subsidiary. (January 2017)

### Reinforced the business base

• Improve inventory turnover rate and defect rate through the Monozukuri Innovation Project.

### 3-6. FY2018 Medium-Term Management Plan: Main Numerical Goals for Management



(¥100 million)

(¥billions)	FY2015 business performance (US\$1=¥120)	FY2016 forecast 1H actual rate: US\$1=¥105 2H actual rate: US\$1=100
Revenues	1,017.6	880.0
Adjusted operating income	<sup>[7.5%]</sup> 76.1	[7.6%] 67.0
IFRS operating income	100.0	68.0
EBIT	99.1	65.2
Income before income taxes	96.2	63.0
Net income*	69.1	45.0
Total assets	1,033.3	986.0
Shareholders' equity	495.9	499.0
Interest-bearing debt	220.4	192.0
D/E ratio	0.44	0.38
ROA	6.5%	4.5%
ROE	14.4%	9.0%
Percentage of revenues from overseas markets	56%	55%
Employees	29,157	28,400

FY2018 plan (Target) (US\$1=¥115)
1,120.0
<sup>[10.7%]</sup> 120.0
112.0
112.0
107.5
75.0
1,250.0
645.0
246.0
0.38
6.4%
12.2%
58%
29,400

<sup>\*</sup> Net income attributable to owners of the parent company

### 3-7. Monozukuri Innovation



### Monozukuri abilities that realize the expansion of organic growth

Achieve innovative Monozukuri through IoT



Achieve innovation in manufacturing technology in overall material flow

### Improve cash flow by rolling out company-wide activities

Metal materials

- Establish a production management system through manufacturing data analysis and visualization.
- · Reduce lead time and inventory assets through company-wide activities.

Magnetic materials

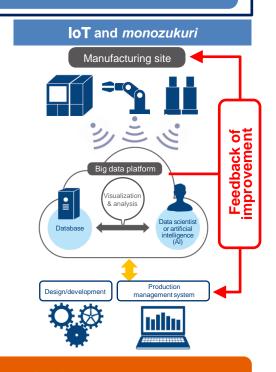
- Establish innovative production lines using IoT. (Scheduled to begin operation in 1H FY2018)
- Improve defect rate through magnet's sintered condition analysis.

Functional components

- Improve loss cost through analysis of casting conditions and launch new products quickly.
- Improve productivity by improving the utilization rates of processing machines and precision.

Wires, cables, and related products

 Establish a continuous rolling line using IoT. (Scheduled for operation in FY2018)



### 3-8. Innovations in R&D Activities



### Become a true development-driven company

### Realize R&D that leads the business strategy

Establish the Corporate Research Lab (April 2017)

### **Overview**

Constructed new building. Investment: approx.
 ¥10 billion (To be completed in April 2018)
 Magnetic Materials Research Laboratory and
 Production System Laboratory located in the same building.

• 250 staff globally.

Plan to establish an overseas location within five years.

### Concept

Promote medium- to long-term and cross-sectional innovation.

- Integrate advanced materials development and process development.
- Promote open innovation.
- Enhance functions as a human resources development institution.

# Promote new business creation theme

- Currently promoting 15 themes concentrated on threats and opportunities.
- 2025: Expected revenues: ¥180 billion
   Expected incomes: ¥20–25 billion
- Focus on the development of compound materials and multiple materials.

# Corporate Research Lab building



### 3-9. High-Grade Metals Company



### Fortify the *monozukuri* of core businesses and accelerate overseas sales

Accelerate global expansion of tool steel sales

### Promote front-loaded investments to increase added value to products.

→ Establish a system for optimal location for optimal production with the aim of international expansion of sales.

Heat-treatment facilities
China

Processing
facilities
US, China,
Thailand, Korea

Surface treatment facilities Korea, Taiwan

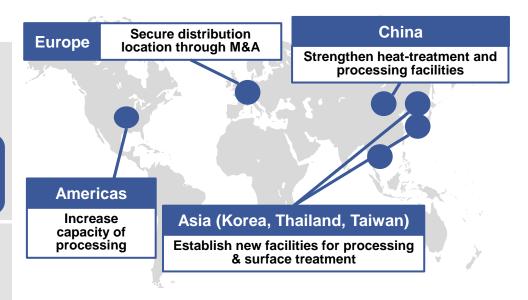
### Secure distribution locations through M&A

→ Americas: Diehl Tool Steel, Inc. (Nov. 2015)

**Europe: Ongoing** 

A new cold-rolled tool steel, SLD-i<sup>TM</sup> (Began mass production in Apr. 2016

→ Expand mass production in FY2017)



Accelerate fortification of overseas locations
(Heat-treatment, processing, surface treatment)

Consolidation and fortification of roll production in Japan

Consolidated production into locations in Japan (Terminated production at China location) (Sep. 2016)

Overseas expansion of new products & development of rolls of cold rolling for ultra-high tensile strength steel mills

Toward new growth through consolidation of production in Japan

(Productivity innovation & accelerated development)

### 3-10. High-Grade Metals Company



### Continue investment in new drivers of growth

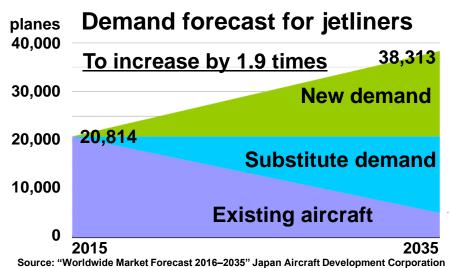
Strengthen and expand the aircraft and energy business

Aim for sales of ¥60 billion in FY2025









Manifestation of synergies between the three firms

New order intake and certified mass production progressed

by the 50,000-ton press and 840-ton ring mill as weapons

Capture demand with certainty

Take on the challenge of becoming one of the top four in the world

Sales plan for the High-Grade Metals Company ¥256.7 billion (FY2015) ⇒ ¥310 billion (FY2018)

### 3-11. Magnetic Materials Company



### Address demand for HEV & EV, and make the China location competitive

### Address expanding demand for HEV & EV

Make the Kumagaya Works a main plant and introduce innovative production lines. (Bring online in 1H FY2018)

Move the Magnetic Materials Research Laboratory to the Kumagaya district. (Move in April 2018)

Strengthen material flow through raw material recycling and inhouse production. (Begin in FY2018)

# Outlook of HEV & EV production units Approx. 20% Asia Europe Americas China Japan 2015 2018 2022 Source: Hitachi Metals' estimate based on various materials

### ■ Make the China location competitive quickly

(Established September 2016)

Start of production: Scheduled for March 2017

Production capacity: 1,000 tons/year (FY2017) ⇒ 2,000 tons/year

Sales target: ¥10 billion (FY2018)



Exterior of Hitachi Metals San Huan Magnetic Materials (Nantong) Co., Ltd.

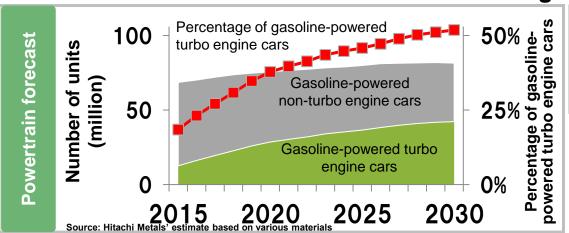
Sales plan for the Magnetic Materials Company ¥105.3 billion (FY2015) ⇒ ¥132 billion (FY2018)

### 3-12. High-Grade Functional Components Company



Maintain a firm hold on the No. 1 rank in the world by fortifying the *monozukuri* base

■HERCUNITE<sup>™</sup> heat-resistant cast steel casting line began operation in October



60% increase in production capacity.
Orders already secured.
Start front-loaded full production in 2H.





Further expansion of capacity



■ Cast iron: Maintain a firm hold on the No. 1 rank in the world through material design abilities and overwhelming production volumes

Add value to products

Waupaca Foundry, Inc.: Dedicated a plant to ductile cast iron and a plant to gray iron. (October 2016)

Respond to auto makers' expansion into Central & South America

Consider a new supply system for the Central & South American markets.

Increase sales for nonpassenger cars Increase sales for commercial trucks, construction machinery, and agricultural machinery through large-item production capacity enhancement.



Sales plan for the High-Grade Functional Components Company ¥365.1 billion (FY2015) ⇒ ¥375 billion (FY2018)

### 3-13. Wire Materials Company



### Establish a high-profit structure through portfolio remodeling

### Concentrate management resources in the three growth areas

Rolling	
Stock	

China: Increased production capacity of electric wires & cables for rolling stock. (Began operation in 1H FY2016)
Czech: Introduce harness assembly lines. (Bring online in 2H FY2016)



### Medical Devices

• HTP-Meds: Established new mass production plant (Began operation in 1H FY2016)





### Automotive Electronic Components

• Introduce new production lines for automotive electronic components at the location in Mexico. (Bring online in 1H FY2016)



### Global Business Expansion Including in Further M&A

### Implement business restructuring

Transfer the Information Systems Business (information network business, wireless antenna business). (December 2016)

Accelerate business restructuring by selling the Lead Frame Business and making the Copper Product Business a subsidiary. (January 2017)

Sales plan for the Cable Materials Company ¥288.2 billion (FY2015) ⇒ ¥290 billion (FY2018)



# 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: ¥1,120 billion** 

Adjusted Operating Income: ¥ 120 billion (Margin: 10.7%)

(Exchange rate assumption US\$1 = ¥115

Strive for sustainable growth by executing global growth strategies and strengthening the business base

### Information on Risks Inherent in Future Projections



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 United States, 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