

# Financial Results for Second Quarter FY2016 (for the year ending March 31, 2017)

November 1, 2016

**IHI Corporation**

## **1. Consolidated Results for Second Quarter FY2016**

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# 1. Consolidated Results for Second Quarter FY2016

# 1. Consolidated Results for Second Quarter FY2016

## Summary of Financial Results

Note: Average exchange rates for FY2016.2Q US\$ 1.00= ¥105.25

July 29, 2016 Forecast

(In billion yen)

	FY2015.2Q	FY2016.2Q		Change
<b>Orders received</b>	<b>707.7</b>		<b>640.2</b>	<b>▲ 67.4</b>
<b>Net sales</b>	<b>688.2</b>	700.0	<b>691.7</b>	▲ 8.3 <b>3.5</b>
<b>Operating income</b>	<b>0.2</b>	23.0	<b>11.9</b>	▲ 11.1 <b>11.6</b>
<b>Ordinary income</b>	<b>▲ 4.0</b>	16.0	<b>5.0</b>	▲ 11.0 <b>9.1</b>
<b>Profit (loss) before income taxes</b>	<b>▲ 4.0</b>		<b>5.0</b>	<b>9.1</b>
<b>Profit (loss) attributable to owners of parent</b>	<b>▲ 3.9</b>	9.0	<b>▲ 5.2</b>	▲ 14.2 <b>▲ 1.3</b>

Effective from the fiscal year under review, the closing date of the fiscal year of certain overseas consolidated subsidiaries has been changed from December 31 to March 31. As a result, for the six months ended September 30, 2016, those overseas consolidated subsidiaries have a nine-month accounting period. The impact of these changes was an increase of ¥25.2 billion in net sales and an increase of ¥2.7 billion in operating income.

# 1. Consolidated Results for Second Quarter FY2016

## Financial Results by Segment

### ■ Orders received & Order backlog

(In billion yen)

	Orders received			Order backlog		
	FY2015.2Q	FY2016.2Q	Change	FY2015	FY2016.2Q	Change
Resources, Energy and Environment	221.7	176.3	▲ 45.4	843.4	766.7	▲ 76.6
Social Infrastructure and Offshore Facility	74.7	73.6	▲ 1.1	194.3	200.0	5.7
Industrial System and General-Purpose Machinery	220.3	211.4	▲ 8.8	138.0	146.0	7.9
Aero Engine, Space and Defense	182.2	167.1	▲ 15.0	541.0	475.5	▲ 65.5
<b>Total Reportable Segment</b>	<b>699.1</b>	<b>628.5</b>	<b>▲ 70.5</b>	<b>1,716.8</b>	<b>1,588.4</b>	<b>▲ 128.4</b>
Others	32.6	34.2	1.5	24.7	24.4	▲ 0.2
Adjustment	▲ 24.1	▲ 22.5	1.5	-	-	-
<b>Total</b>	<b>707.7</b>	<b>640.2</b>	<b>▲ 67.4</b>	<b>1,741.6</b>	<b>1,612.8</b>	<b>▲ 128.7</b>
<b>Overseas orders received / order backlog</b>	<b>322.4</b>	<b>299.7</b>	<b>▲ 22.6</b>	<b>757.9</b>	<b>596.4</b>	<b>▲ 161.4</b>
<b>% of Overseas orders received / order backlog</b>	<b>46%</b>	<b>47%</b>	<b>1%</b>	<b>44%</b>	<b>37%</b>	<b>▲ 7%</b>

# 1. Consolidated Results for Second Quarter FY2016

## Financial Results by Segment

### ■ Net sales & Operating income

(In billion yen)

	Net sales			Operating income		
	FY2015.2Q	FY2016.2Q	Change	FY2015.2Q	FY2016.2Q	Change
Resources, Energy and Environment	209.9	208.5	▲ 1.3	5.2	▲ 6.8	▲ 12.0
Social Infrastructure and Offshore Facility	66.4	66.6	0.1	▲ 34.5	▲ 19.9	14.6
Industrial System and General-Purpose Machinery	190.2	202.9	12.6	3.9	7.9	3.9
Aero Engine, Space and Defense	216.5	205.9	▲ 10.6	31.0	31.5	0.4
<b>Total Reportable Segment</b>	<b>683.3</b>	<b>684.1</b>	<b>0.7</b>	<b>5.6</b>	<b>12.6</b>	<b>7.0</b>
Others	25.7	32.2	6.4	▲ 0.1	0.4	0.5
Adjustment	▲ 20.7	▲ 24.5	▲ 3.7	▲ 5.2	▲ 1.1	4.0
<b>Total</b>	<b>688.2</b>	<b>691.7</b>	<b>3.5</b>	<b>0.2</b>	<b>11.9</b>	<b>11.6</b>

The impact of sales by the change of closing date of the fiscal year of certain overseas consolidated subsidiaries were ¥10.9 billion for the Resources, Energy and Environment segment, ¥0.3 billion for the Social Infrastructure and Offshore Facility segment, and ¥11.7 billion for the Industrial System and General-Purpose Machinery segment. Segment profit was ¥0.6 billion for the Resources, Energy and Environment segment, and ¥2.0 billion for the Industrial System and General-Purpose Machinery segment.

# 1. Consolidated Results for Second Quarter FY2016

## Financial Results by Segment

■ Analysis of change in operating income

(In billion yen)

	Change in net sales	Change in construction profitability	Change in foreign exchange rate	Change in SG&A	Total
Resources, Energy and Environment	▲ 2.4	▲ 6.5	▲ 1.7	▲ 1.4	▲ 12.0
Social Infrastructure and Offshore Facility	0.3	14.6	▲ 0.7	0.4	14.6
Industrial System and General-Purpose Machinery	3.4	3.4	▲ 0.7	▲ 2.2	3.9
Aero Engine, Space and Defense	1.7	0.7	▲ 5.4	3.4	0.4
<b>Total Reportable Segment</b>	<b>3.0</b>	<b>12.2</b>	<b>▲ 8.5</b>	<b>0.2</b>	<b>7.0</b>
Others	0.4	▲ 0.2		0.3	0.5
Adjustment		3.5		0.5	4.0
<b>Total</b>	<b>3.4</b>	<b>15.5</b>	<b>▲ 8.5</b>	<b>1.0</b>	<b>11.6</b>

There are cases that the aggregated amount of each segment or factor doesn't match to the total due to rounding off.

# 1. Consolidated Results for Second Quarter FY2016

## Non-operating Income / Expenses and Extraordinary Income / Losses

### ■ Non-operating Income / Expenses

(In billion yen)

	FY2015.2Q	FY2016.2Q	Change
Net interest expense (incl. dividend income)	▲ 0.8	▲ 0.3	0.5
Share of profit / losses of entities accounted for using equity method	1.2	▲ 0.4	▲ 1.6
Foreign exchange gains / losses	▲ 2.0	▲ 6.4	▲ 4.4
Others	▲ 2.6	0.3	2.9
<b>Non-operating income / expenses</b>	<b>▲ 4.2</b>	<b>▲ 6.8</b>	<b>▲ 2.5</b>
<b>Extraordinary income / losses</b>	—	—	—

**Change of the rate(USD)** FY2015.2Q ▲0.21yen (beginning 120.17yen→end 119.96yen)  
 FY2016.2Q ▲11.56yen (beginning 112.68yen→end 101.12yen)

# 1. Consolidated Results for Second Quarter FY2016

## Balance Sheets

(In billion yen)

	As of March 31, 2016	As of September 30, 2016	Change
<b>Total assets</b>	<b>1,715.0</b>	<b>1,593.7</b>	<b>▲ 121.2</b>
(Trade receivables)	(444.8)	(337.2)	(▲ 107.5)
(Inventories)	(410.3)	(452.4)	(42.1)
<b>Total liabilities</b>	<b>1,381.6</b>	<b>1,281.7</b>	<b>▲ 99.9</b>
(Trade payables)	(297.4)	(272.7)	(▲ 24.7)
(Advance received)	(180.3)	(197.7)	(17.3)
(Interest-bearing debt)	(374.5)	(342.4)	(▲ 32.1)
<b>Total net assets</b>	<b>333.3</b>	<b>312.0</b>	<b>▲ 21.2</b>
Shareholders' equity	305.8	300.3	▲ 5.4
Accumulated other comprehensive income	12.4	▲ 2.3	▲ 14.8
<b>Total liabilities and net assets</b>	<b>1,715.0</b>	<b>1,593.7</b>	<b>▲ 121.2</b>
<b>D/E ratio (times)</b>	<b>1.12</b>	<b>1.10</b>	<b>▲ 0.02</b>
<b>Equity ratio</b>	<b>18.6%</b>	<b>18.7%</b>	<b>0.1%</b>

**Note:** Interest-bearing debt includes the amount of lease obligations.

(as of March 31, 2016: 17.9 billion yen / as of September 30, 2016: 16.6 billion yen )

# 1. Consolidated Results for Second Quarter FY2016



Realize your dreams

## Cash Flows

(In billion yen)

	FY2015.2Q	FY2016.2Q	Change
<b>Operating activities</b>	<b>▲ 24.0</b>	<b>42.3</b>	<b>66.3</b>
<b>Investing activities</b>	<b>▲ 28.3</b>	<b>▲ 30.4</b>	<b>▲ 2.0</b>
<b>Free cash flows</b>	<b>▲ 52.3</b>	<b>11.8</b>	<b>64.2</b>
<b>Financing activities</b>	<b>46.0</b>	<b>▲ 30.3</b>	<b>▲ 76.4</b>

# 1. Consolidated Results for Second Quarter FY2016 Supplementary Information

## (1) R&D/CAPEX/Depreciation & Amortization

(In billion yen)

	<b>FY2015.2Q</b>	<b>FY2016.2Q</b>
<b>R&amp;D</b>	<b>18.4</b>	<b>14.6</b>
<b>CAPEX</b>	<b>21.2</b>	<b>23.9</b>
<b>Depreciation &amp; Amortization</b>	<b>21.4</b>	<b>22.4</b>

## (2) Overseas Sales by Region

(In billion yen)

	<b>FY2015.2Q</b>	<b>FY2016.2Q</b>
<b>Asia</b>	<b>91.5</b>	<b>95.0</b>
<b>China</b>	<b>41.2</b>	<b>37.2</b>
<b>North America</b>	<b>166.8</b>	<b>154.5</b>
<b>Central and South America</b>	<b>12.4</b>	<b>14.3</b>
<b>Europe</b>	<b>72.2</b>	<b>62.3</b>
<b>Others</b>	<b>15.4</b>	<b>20.7</b>
<b>Total</b>	<b>399.7</b>	<b>384.2</b>
<b>% of overseas sales</b>	<b>58%</b>	<b>56%</b>

## 2. Forecast of the Consolidated Results for FY2016

## 2. Forecast of the Consolidated Results for FY2016

### Summary of Forecast for FY2016

<assumed exchange rate>

US\$ 1.00 = ¥100 (assumed in July, ¥105)

Euro 1.00 = ¥110 (assumed in July, ¥115)

(In billion yen)

	FY2016 Forecast		FY2015 Actual	Change
	In July	In November		Vs. Forecast in July
Orders received	1,450.0	1,400.0	1,605.3	▲ 50.0
Net sales	1,520.0	1,500.0	1,539.3	▲ 20.0
Operating income	58.0	38.0	22.0	▲ 20.0
Ordinary income	44.0	18.0	9.7	▲ 26.0
Profit attributable to owners of parent	22.0	0.0	1.5	▲ 22.0

The forecast in November remains unchanged from announced on October 24, 2016.

#### <For reference> Sensitivity to foreign exchange rates by currency

1 yen per US\$ corresponds to 0.5billion yen, and per Euro, 0.0 billion yen in operating income.

The IHI Group forecasts decreased net sales, operating income, ordinary income, and profit attributable to owners of parent respectively from the forecast announced in July, owing to the effect of the change of assumed exchange rate, as well as the deteriorated profitability of the three projects in F-LNG Business (floating LNG storage facilities, offshore structures) for the second quarter under review and the impact of increased tax expenses.

## 2. Forecast of the Consolidated Results for FY2016 Forecast for FY2016 by Segment

■ Orders received

(In billion yen)

	FY2016 Forecast (In July)	FY2016 Forecast (In November)	Change
Resources, Energy and Environment	470.0	430.0	▲ 40.0
Social Infrastructure and Offshore Facility	120.0	120.0	0.0
Industrial System and General-Purpose Machinery	430.0	430.0	0.0
Aero Engine, Space and Defense	420.0	410.0	▲ 10.0
<b>Total Reportable Segment</b>	<b>1,440.0</b>	<b>1,390.0</b>	<b>▲ 50.0</b>
Others	70.0	70.0	0.0
Adjustment	▲ 60.0	▲ 60.0	0.0
<b>Total</b>	<b>1,450.0</b>	<b>1,400.0</b>	<b>▲ 50.0</b>

The forecast in November remains unchanged from announced on October 24, 2016.

## 2. Forecast of the Consolidated Results for FY2016 Forecast for FY2016 by Segment

### ■ Net sales & Operating income

(In billion yen)

	FY2016 Forecast (In July)		FY2016 Forecast (In November)		Change	
	Net sales	Operating income	Net sales	Operating income	Net sales	Operating income
Resources, Energy and Environment	480.0	14.0	470.0	9.0	▲ 10.0	▲ 5.0
Social Infrastructure and Offshore Facility	160.0	▲ 1.0	160.0	▲ 15.0	0.0	▲ 14.0
Industrial System and General-Purpose Machinery	410.0	12.0	410.0	12.0	0.0	0.0
Aero Engine, Space and Defense	460.0	36.0	450.0	36.0	▲ 10.0	0.0
<b>Total Reportable Segment</b>	<b>1,510.0</b>	<b>61.0</b>	<b>1,490.0</b>	<b>42.0</b>	<b>▲ 20.0</b>	<b>▲ 19.0</b>
Others	70.0	3.0	70.0	2.0	0.0	▲ 1.0
Adjustment	▲ 60.0	▲ 6.0	▲ 60.0	▲ 6.0	0.0	0.0
<b>Total</b>	<b>1,520.0</b>	<b>58.0</b>	<b>1,500.0</b>	<b>38.0</b>	<b>▲ 20.0</b>	<b>▲ 20.0</b>

The forecast in November remains unchanged from announced on October 24, 2016.

## 2. Forecast of the Consolidated Results for FY2016 Forecast for FY2016 by Segment

■ Analysis of change in operating income

(In billion yen)

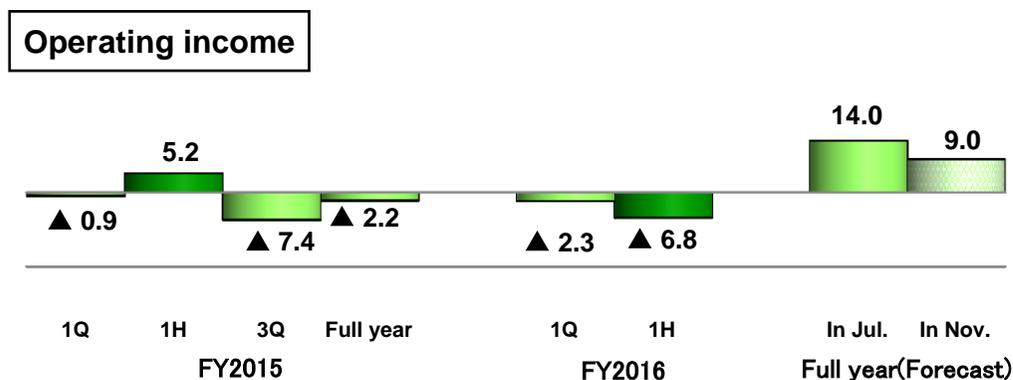
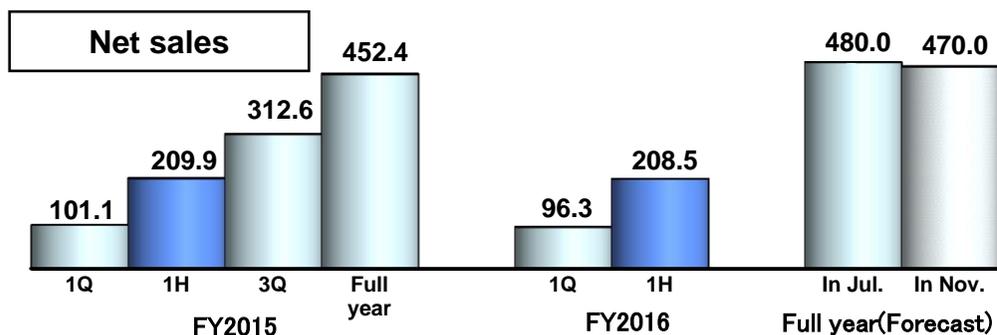
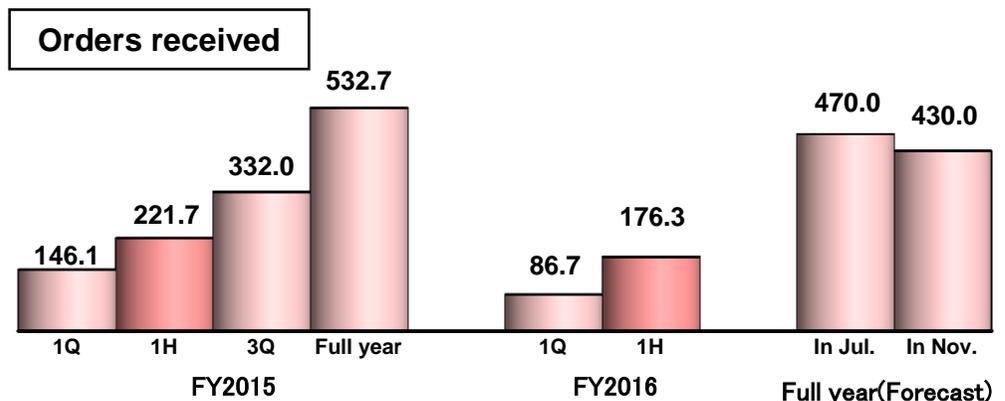
	Change in net sales	Change in construction profitability	Change in foreign exchange rate	Change in SG&A	Total
Resources, Energy and Environment	▲ 2.0	▲ 3.0	▲ 1.0	1.0	▲ 5.0
Social Infrastructure and Offshore Facility		▲ 14.0			▲ 14.0
Industrial System and General-Purpose Machinery			▲ 1.0	1.0	0.0
Aero Engine, Space and Defense		2.0	▲ 2.0		0.0
<b>Total Reportable Segment</b>	<b>▲ 2.0</b>	<b>▲ 15.0</b>	<b>▲ 4.0</b>	<b>2.0</b>	<b>▲ 19.0</b>
Others		▲ 1.0			▲ 1.0
Adjustment					0.0
<b>Total</b>	<b>▲ 2.0</b>	<b>▲ 16.0</b>	<b>▲ 4.0</b>	<b>2.0</b>	<b>▲ 20.0</b>

## 3. Financial Results by Segment

# 3. Financial Results by Segment

## Resources, Energy and Environment

(In billion yen, accumulated amount)



### <Results by business segment>

#### 【 Orders received】

Orders received declined, reflecting a pullback from large orders secured in the previous corresponding period for Boiler Business, and decreases in orders secured for Power systems for land and marine use Business, affected by the low crude oil prices.

#### 【 Net sales】

Sales decreased because of the impact of large construction projects of LNG storage facilities in Japan and Asia that were ongoing in the previous corresponding period having now reached the final phase of construction in Process plants Business, and decreased sales in Power systems for land and marine use Business, partially offset by increased revenues owing to progress in major construction projects in Boiler Business.

#### 【 Operating income】

An operating loss was recorded mainly due to the impact of a decrease in revenues as per the above, and deterioration in profitability from some boiler projects.

### <FY2016 Forecast (vs. In July)>

Orders received and sales are revised down owing to the effect of yen appreciation and the impact of timing delays in Process plants Business.

Operating income is revised down owing to the above-mentioned decrease in sales amount and the deterioration in profitability in Boiler Business and other businesses, partially offset by reduction of SG&A expenses.

### 3. Financial Results by Segment Resources, Energy and Environment

(In billion yen)

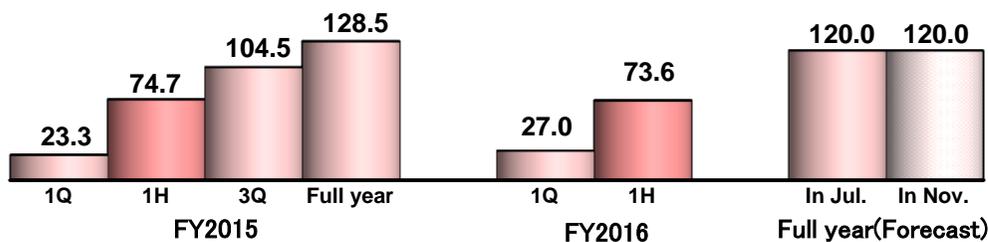
	Orders received		Net sales						
	FY2015 Full yaer	FY2016 Full yaer (Forecast)	FY2015			Full yaer	FY2016		
			1Q	1H	3Q		1Q	1H	Full yaer (Forecast)
<b>Boiler</b>	170.1	90.0	18.2	44.7	56.9	80.8	24.5	60.9	120.0
<b>Power system plants</b>	22.1	45.0	4.3	9.0	19.8	31.8	5.8	10.4	25.0
<b>Power systems for land and marine use</b>	81.1	65.0	20.9	37.6	57.7	77.8	13.3	26.4	55.0
<b>Process plants</b>	107.1	80.0	30.6	63.4	95.1	123.1	21.5	48.6	120.0
<b>Nuclear power</b>	38.6	40.0	3.8	11.0	14.7	32.5	2.2	6.9	35.0

# 3. Financial Results by Segment

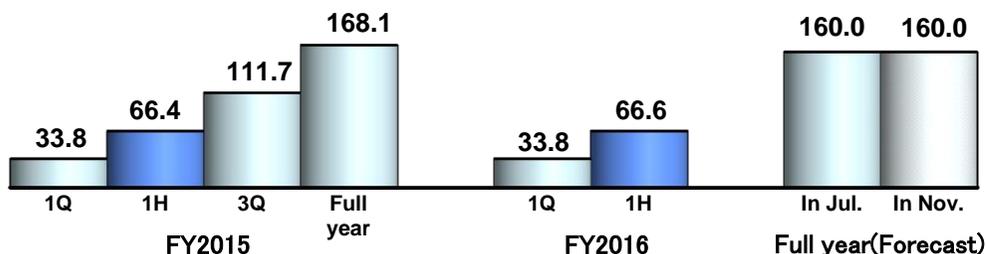
## Social Infrastructure and Offshore Facility

(In billion yen, accumulated amount)

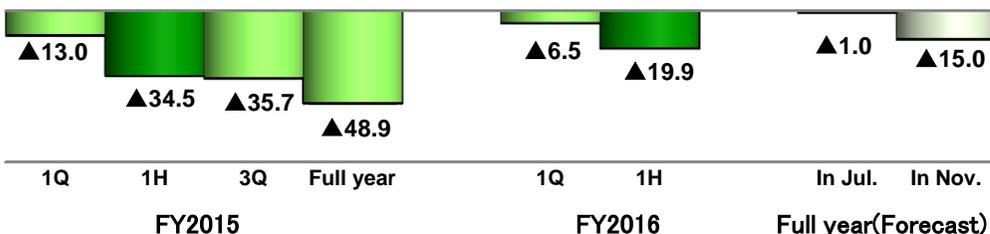
### Orders received



### Net sales



### Operating income



### <Results by business segment>

#### 【 Orders received】

Orders received were at the same level as the previous corresponding period, owing to decreases in Transport system Business and Shield tunneling machine Business, offset by an increase in Bridge/water gate Business.

#### 【 Net sales】

Sales were at the same level as the previous corresponding period, owing to increased revenues from construction progress of F-LNG Business (floating LNG storage facilities, offshore structures), offset by a decrease in Bridge/water gate Business, due to the decline in sales from the Izmit Bay Crossing Bridge construction project in Turkey, for which an opening ceremony was held on June 30, 2016.

#### 【 Operating income】

In terms of operating loss, there was a reduced deficit, due to the improved profitability in Bridge/water gate Business and the impact of drastic deterioration of profitability related to F-LNG Business in the previous corresponding period. However, as announced on October 24, 2016, there was further deteriorated profitability in the second quarter under review.

#### <FY2016 Forecast (vs. In July)>

Operating income is expected to be a heavy deficit reflecting the deteriorated profitability of F-LNG Business, partially offset by improved profitability in Bridge/water gate Business and other businesses.

The forecasts of Orders received and Sales remain unchanged.

### 3. Financial Results by Segment

## Social Infrastructure and Offshore Facility

(In billion yen)

	Orders received		Net sales						
	FY2015	FY2016	FY2015				FY2016		
	Full yaer	Full yaer (Forecast)	1Q	1H	3Q	Full yaer	1Q	1H	Full yaer (Forecast)
Bridge/Water gate	76.6	65.0	17.5	33.7	53.3	76.0	15.0	30.6	60.0
F-LNG	▲ 15.5	0.0	3.6	6.8	14.4	21.4	8.0	10.7	30.0
Urban development	16.2	15.0	5.1	8.8	12.7	17.6	3.4	7.1	15.0

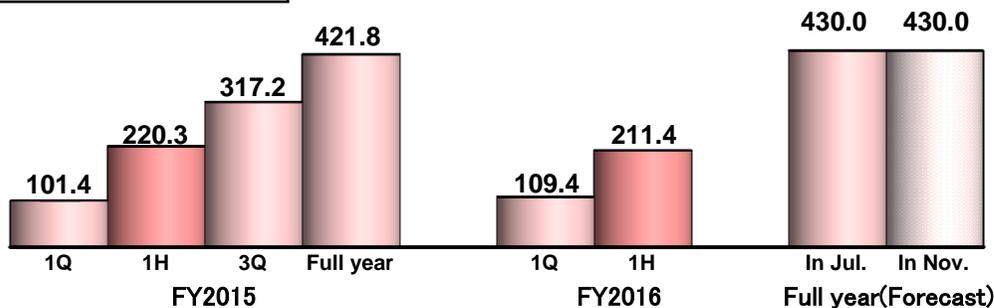
**For related information of "Urban development" in Toyosu, please refer to <Appendices> on page 31, 32.**

# 3. Financial Results by Segment

## Industrial System and General-Purpose Machinery

(In billion yen, accumulated amount)

### Orders received



### <Results by business segment>

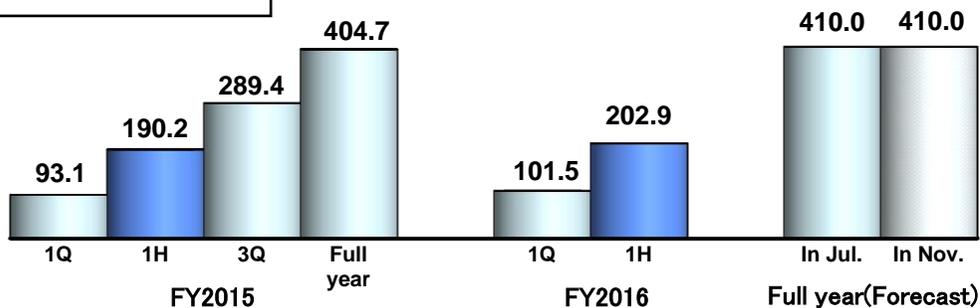
#### 【 Orders received】

Orders received decreased from the previous corresponding period, owing to decreases in Transport machinery Business and Construction machinery Business, partially offset by increases in Vehicular turbocharger Business and Parking Business.

#### 【 Net sales】

Sales increased from the previous corresponding period, owing to progress in large construction in Logistics/industrial system Business and increases in Vehicular turbocharger Business and Rotating machinery Business.

### Net sales

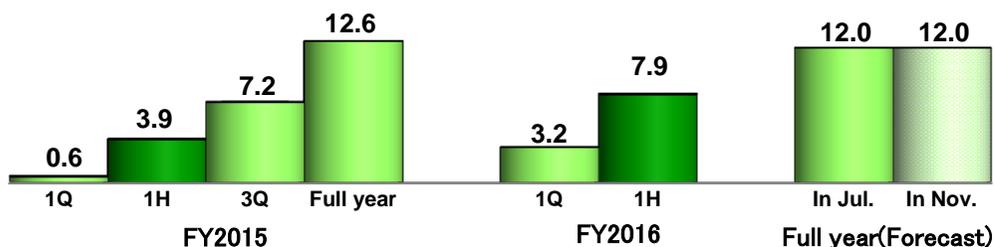


<Number of vehicular turbochargers delivered>

(10,000 Units)

	2Q	Full Year
FY2015	275	536
FY2016	293	613

### Operating income



#### 【 Operating income 】

Operating income rose from the previous corresponding period, owing to the effect of the aforementioned revenue increases and improvement in profitability in Logistics/industrial system Business, Rotating machinery Business and Parking Business.

#### <FY2016 Forecast (vs. In July)>

In operating income, there is an effect of yen appreciation, offsetting reduction of SG&A expenses, hence the forecast remains unchanged.

The forecasts of Orders received and Sales remain unchanged.

### 3. Financial Results by Segment

## Industrial System and General-Purpose Machinery

(In billion yen)

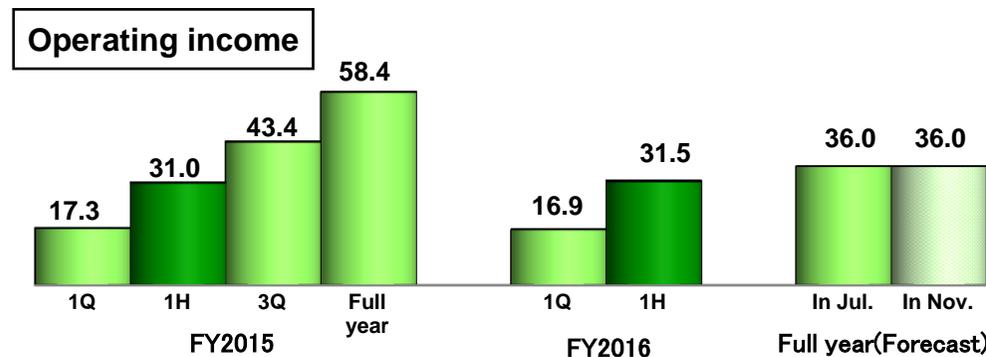
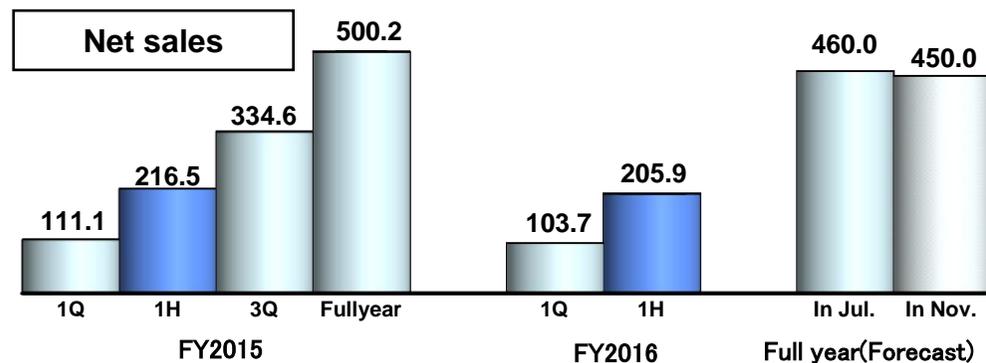
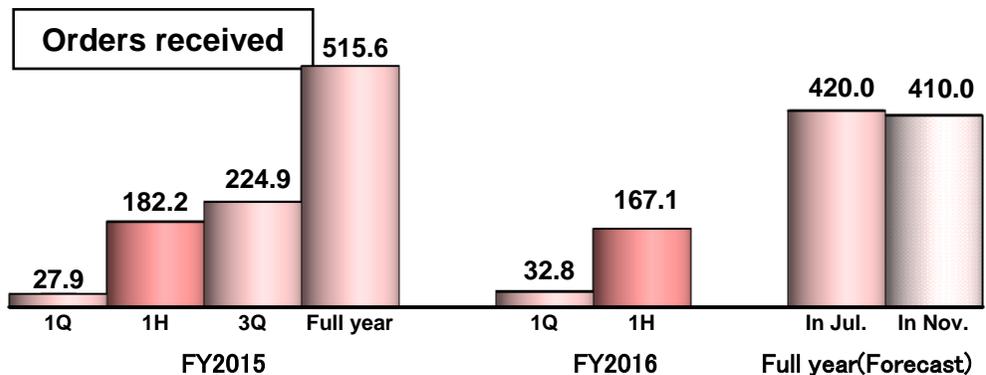
	Orders received		Net sales						
	FY2015 Full yaer	FY2016 Full yaer (Forecast)	FY2015			Full yaer	FY2016		
			1Q	1H	3Q		1Q	1H	Full yaer (Forecast)
Transport machinery	35.8	35.0	3.5	9.8	15.6	21.8	5.4	11.6	25.0
Parking	39.6	40.0	8.7	19.5	29.8	42.6	7.5	18.4	40.0
Thermal and surface treatment	29.8	33.0	7.0	14.5	23.1	31.7	7.8	15.6	35.0
Vehicular turbocharger	162.0	170.0	44.0	82.8	121.8	161.6	47.4	86.8	170.0
Rotating machinery	48.7	50.0	8.4	19.4	29.5	46.4	10.3	21.7	50.0

**For details of "Vehicular turbocharger", please refer to <Appendices> on page 30.**

# 3. Financial Results by Segment

## Aero Engine, Space and Defense

(In billion yen, accumulated amount)



### <Results by business segment>

#### 【 Orders received】

Orders received decreased from the previous corresponding period due to a decrease in civil aero engines.

#### 【 Net sales】

Sales decreased owing to a decrease in civil aero engines mainly as a result of the effect of yen appreciation and delivery of gas turbines for naval vessels in Defense systems Business in the previous corresponding period.

#### <Number of civil aero engines delivered>

	(Units)	
	2Q	Full Year
FY2015	646	1,260
FY2016	641	1,450

#### 【 Operating income】

Operating income was at the same level as the previous corresponding period, owing to a decrease in R&D expenses related to the “GE9X” aero engine for the next-generation wide-body jets being promoted to the preparatory stage for mass production, offset by the impact of yen appreciation.

#### <FY2016 Forecast (vs. In July)>

Orders received and sales are revised down owing to effect of yen appreciation.

In operating income, there is the above-mentioned decrease in net sales, offsetting improving profitability of civil aero engines, hence the forecast remains unchanged.

### 3. Financial Results by Segment Aero Engine, Space and Defense

(In billion yen)

	Orders received		Net sales						
	FY2015 Full year	FY2016 Full year (Forecast)	FY2015			Full year	FY2016		
			1Q	1H	3Q		1Q	1H	Full year (Forecast)
Civil aircraft engine	276.1	280.0	77.8	149.0	224.2	299.1	69.8	135.2	290.0

For details of "Civil aircraft engine", please refer to <Appendices> on page 29.

## <Appendices>

- Progress in Large Overseas Projects
- Topics in the second quarter under review
- Aero engines
- Vehicular turbocharger
- Urban development

# Progress in Large Overseas Projects

## Dominion Cove Point Liquefaction Project



Aerial photo as of Sept. 2016    Nitrogen Stripper installation

### <Current status (Sept. 2016)>

- Engineering is essentially complete.
- Procurement of equipment is essentially complete.
- Overall project is 73% complete.
- Installation of structural steel and piping is underway.

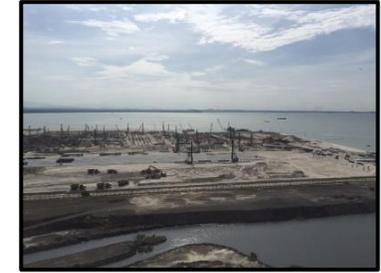
### <Key milestones>

April 2013:	Contract award
September 2014:	FERC Order received & accepted
March 2015:	Groundbreaking Ceremony held
Late 2016:	DCS in Service
Mid 2017:	Mechanical Completion
Oct. to Dec. 2017:	Commencement of operations

### <Project Brief>

IHI E&C International Corporation and Kiewit Energy Company have entered into an engineering, procurement and construction contract to develop the Cove Point liquefied natural gas facility located on the Chesapeake Bay in Lusby, Maryland. The IHI/Kiewit joint venture will design, construct, commission and start up the estimated 5.25 million tons per annum liquefaction facility.

## Jimah East Power coal fired power plant



Expected Completion Image    As of end of Sept. 2016

### <Status>

As of end of Sept. 2016, reclamation & marine works (Other Party's Scope) were completed and piling and foundation works for boiler & TG area are in progress. For boiler portion, 70% of engineering and 25% of procurement activity were completed. As total 20% was completed.

### <Key Milestones>

Aug 2014: EPC Contract	Oct 2018: Initial Firing(#1)
Jan 2017: Boiler Erection Start(#1)	Apr 2019: Initial Firing(#2)
Jul 2017: Boiler Erection Start(#2)	Jun 2019: COD (#1)
Apr 2018: Hydro Test(#1)	Dec 2019: COD (#2)
Nov 2018: Hydro Test(#2)	

### <Project Brief>

- Contract: Full turn key contract for ultra-supercritical boiler for Jimah East Power Sdn. Bhd. (IPP)
- Site: Jimah, Negeri Sembilan, Malaysia
- Scope: Engineering, Procurement, Construction and Commissioning of Ultra-supercritical boiler

## Completion of new processing center at Soma No. 1 Aero-Engine Works

IHI completed the new processing center, which was being constructed at the Soma No. 1 Aero-Engine Works, which produces aircraft engine parts, on August 19.

The new processing center is the 5th building at the Soma Works, and from December 2016, it will produce parts such as the carbon fiber reinforced plastic (CFRP) structural guide vane (SGV) for the “PW1100G-JM” engine, a high-performance engine fitted to the Airbus A320neo. The demand for this engine is expected to be high, as the A320neo is a single-aisle type aircraft, the most in-demand civil passenger aircraft. In addition to its existing production lines, IHI will commence operation of the 5th processing center in December 2016, and this will ensure that IHI can respond to the production increases as planned.



new processing center at Soma No. 1  
Aero-Engine Works

Turbo rotating machine



## Joint development of a rotating machine for turbo refrigerators

In Rotating machinery Business, IHI has developed a turbo rotating machine for large-capacity Turbo-Brayton refrigerators, which are capable of cooling superconducting power equipment to below  $-200^{\circ}\text{C}$ , in collaboration with Taiyo Nippon Sanso Corporation.

The IHI Group has an extensive delivery record for cryogenic compressors, including delivery to CERN (European Organization for Nuclear Research). IHI will continue to contribute to the further development of superconducting technology, based on cutting-edge cryogenic rotating machinery technology, such as our optimal design knowhow for different refrigerants and conditions.

# Aero engines

## (1) Net sales of civil aircraft engine

(In billion yen)

	Actual								Forecast		
	'11	'12	'13	'14	FY2015				FY2016		
					1Q	1H	3Q	Full Year	1Q	1H	Full Year
Net sales	143.6	169.8	226.0	267.0	77.8	149.0	224.2	299.1	69.8	135.2	290.0

## (2) Number of civil aircraft engine delivered

(Units)

	Actual (accumulated)												Main loading
	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16/2Q	
V2500	2,850	3,154	3,474	3,828	4,168	4,551	4,980	5,468	5,969	6,469	6,896	7,076	Airbus A319/320/321
GE90	464	579	742	896	1,071	1,223	1,399	1,589	1,806	2,039	2,257	2,368	Boeing B777
CF34	1,027	1,374	1,802	2,274	2,604	2,919	3,242	3,548	3,820	4,156	4,471	4,654	For regional jet (70 to 110 seats)
GEnx							118	259	468	751	1,035	1,160	Boeing B787/B747-8
PW1100G											16	58	Airbus A320Neo
<b>Total</b>	<b>4,341</b>	<b>5,107</b>	<b>6,018</b>	<b>6,998</b>	<b>7,843</b>	<b>8,693</b>	<b>9,739</b>	<b>10,864</b>	<b>12,063</b>	<b>13,415</b>	<b>14,675</b>	<b>15,316</b>	

(Note) The number of civil aircraft engine delivered is the number handed over to the airframe maker, and differs from the number of factory shipments.

## <Net sales by region>

(In billion yen)

	Actual										Forecast
	'11	'12	'13	'14	FY2015				FY2016		
					1Q	1H	3Q	Full Year	1Q	1H	Full Year
Japan	33.1	33.9	35.3	37.5	8.4	17.2	25.5	34.6	8.5	18.0	35.0
Asia	16.9	24.8	29.8	27.5	7.8	12.9	16.6	21.6	6.6	9.6	14.0
China	14.3	18.1	23.4	24.3	7.1	11.8	17.9	24.9	11.8	20.5	47.0
North America	1.1	1.3	1.6	1.8	0.5	1.2	1.8	2.4	1.3	1.9	3.0
Central and South America	0.0	0.0	0.0	0.7	0.8	1.6	2.4	3.4	2.9	4.3	7.0
Europe	43.7	43.2	60.2	75.6	19.2	37.8	57.3	74.3	16.0	32.2	64.0
Others	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>109.4</b>	<b>121.6</b>	<b>150.7</b>	<b>167.7</b>	<b>44.0</b>	<b>82.8</b>	<b>121.8</b>	<b>161.6</b>	<b>47.4</b>	<b>86.8</b>	<b>170.0</b>

## (1) Lease revenue in Toyosu

(In billion yen)

	Actual										Forecast
	'11	'12	'13	'14	FY2015				FY2016		
					1Q	1H	3Q	Full Year	1Q	1H	Full Year
Lease revenue	9.5	9.2	9.1	9.3	2.5	5.0	7.6	10.1	2.3	4.6	9.3

## (2) Lease revenue and expense in Toyosu (FY2016.2Q)

(In billion yen)

	Lease revenue	Lease expense		Lease income
		Depreciation	Others	
FY2016.2Q	4.6	1.7	1.1	1.7

# Development Plan for Toyosu 1 to 3 chome Area

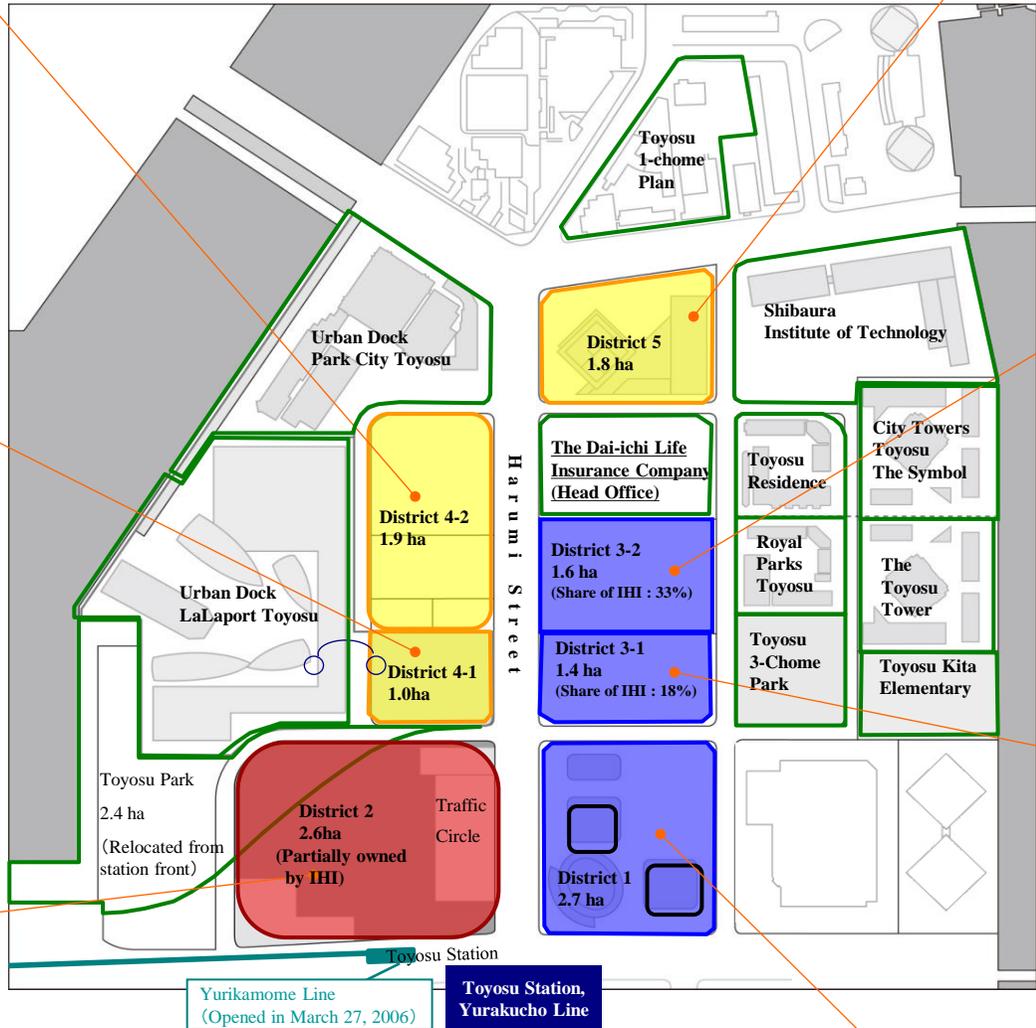
**Kindergarten, Nursery school, Café, Marriage ceremonial hall.**  
 Site area : 19,492㎡  
 Completed in March 2010 to February 2011



**Urban Dock LaLaport Toyosu ANNEX (Mitsui Fudosan Co., Ltd.)**  
 5 floors above ground, Approx. 25m high  
 Store floor space : 24,721㎡  
 Opened in October 2006



**Complex building A•C, (IHI and Mitsui Fudosan)**  
 36 floors above ground, Approx. 178m high  
 Gross floor area : 185,000㎡  
 Scheduled for completion in April 2020

**Toyosu IHI Building**  
 25 floors above ground, Approx. 125m high  
 Gross floor area : 97,617㎡  
 Completed in February 2006



**Toyosu Foresia (IHI & Mitsubishi Estate Company, Ltd.)**  
 16 floors above ground, Approx. 75m high,  
 Gross floor area : 101,503㎡  
 Completed in July 2014



**Toyosu Front (IHI, Mitsubishi Estate Company, Ltd. and Mitsubishi UFJ Trust and Banking Corporation)**  
 15 floors above ground, Approx. 75m high  
 Gross floor area : 106,861㎡  
 Completed in August 2010



**Toyosu Center Building**  
 37 floors above ground, Approx. 165m high  
 Gross floor area : 100,069㎡  
 Completed in October 1992

**Toyosu Center Building Annex**  
 33 floors above ground, Approx. 150m high  
 Gross floor area : 105,448㎡  
 Completed in August 2006



Civic Center : Opened in September 2015  
 Fire department office : Completed in June 2016

Property of IHI	Approx. 8ha
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- Office Leasing
- Land Leasing
- Category 1 Urban Redevelopment Project ※1
- Sold, Donated, Exchanged

※1 One of the way to redevelop that was defined by Urban Renewal Act.

# IHI

**Realize your dreams**

Forward-looking figures shown in this material with respect to IHI's performance outlooks and other matters are based on management's assumptions and beliefs in light of the information currently available to it, and therefore contain risks and uncertainties. Consequently, you should not place undue reliance on these performance outlooks in making judgments. IHI cautions you that actual results could differ materially from those discussed in these performance outlooks due to a number of important factors. These important factors include political environments in areas in which IHI operates, general economic conditions, and the yen exchange rate including its rate against the US dollar.