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Results for the Nine Months Ended December 31, 2015, and Revised Forecasts

February 2, 2016

IHI Corporation
Tamotsu Saito, President and Chief Executive Officer

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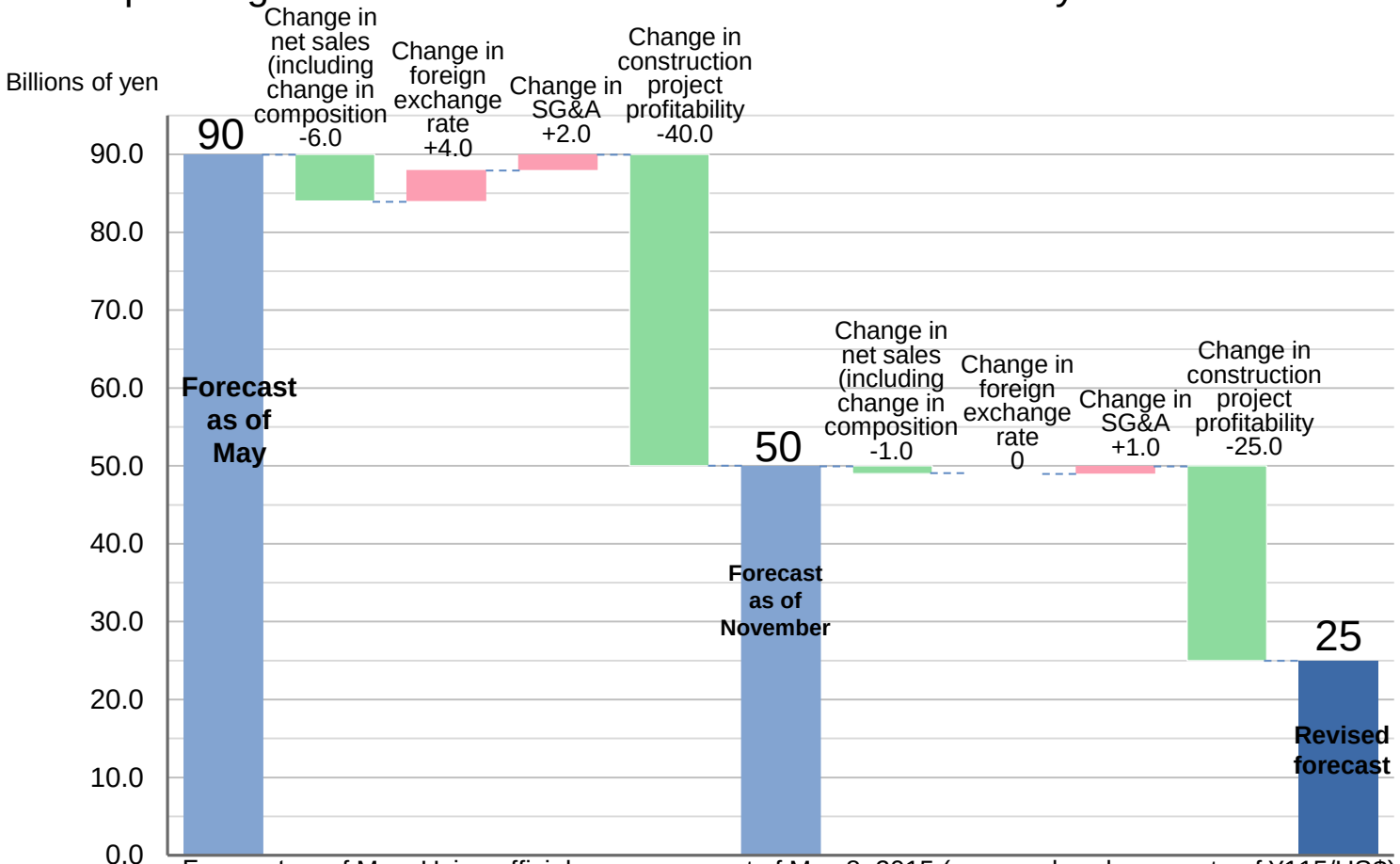
Forecasts

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Forecasts for Fiscal 2015 (Operating Income)

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Factors in operating income fluctuations from forecasts as of May and November 2015



- Forecast as of May: Using official announcement of May 8, 2015 (assumed exchange rate of ¥115/US$); Forecast as of November: Using official announcement of November 4, 2015 (assumed exchange rate of ¥115/US$)
- Exchange rate assumption for FY15 forecasts: ¥115/US$

Forecast assumptions

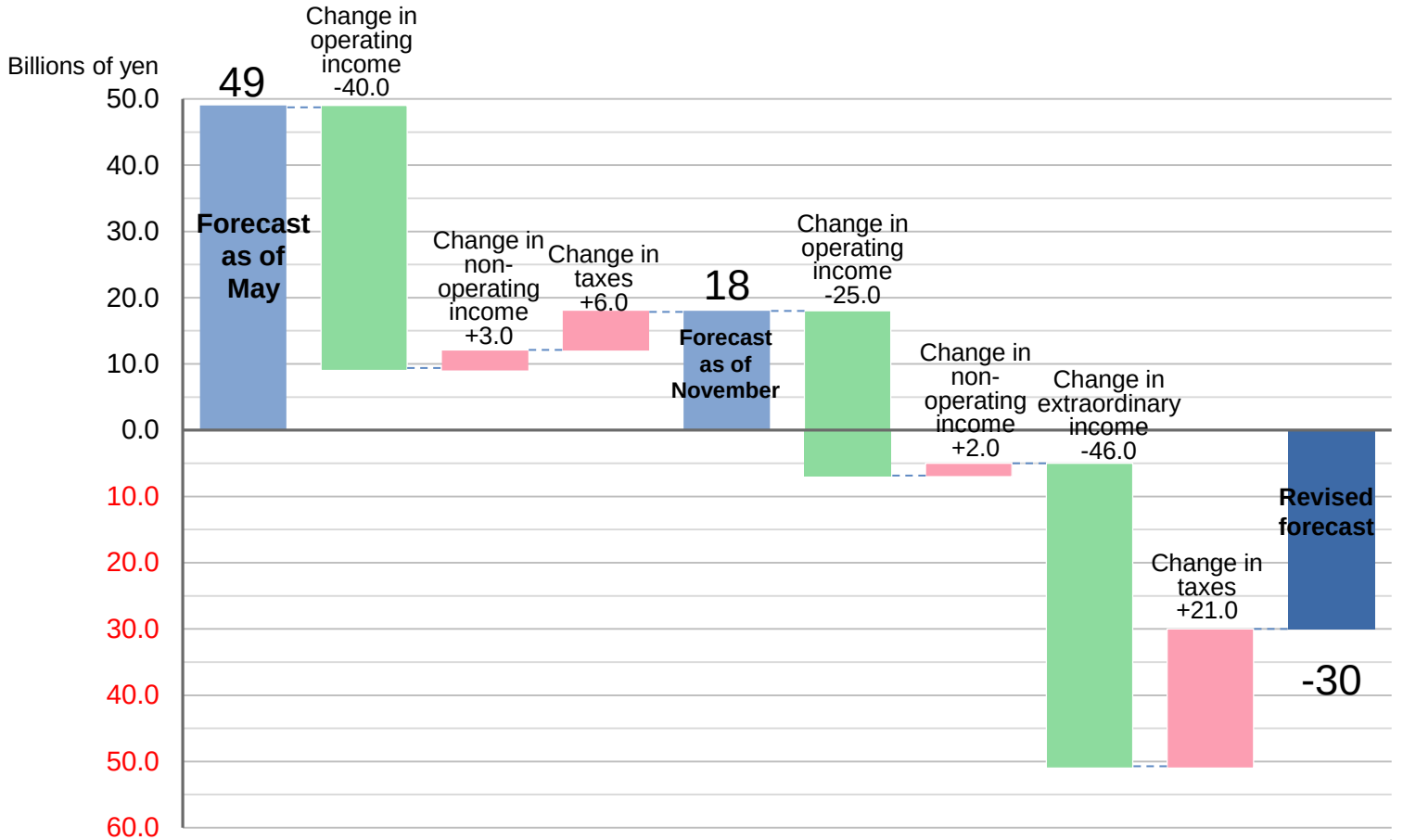
- Changes for worse from November forecasts
  - Deteriorating profitability of F-LNG and offshore structure business
  - Construction expenses after collapse of catwalk of Izmit Bay Crossing Bridge
  - Additional costs of boiler parts fabrication
- Changes for worse from current forecasts
  - Costs of repairing noncompliant boiler welding
  - Deteriorating profitability of F-LNG and offshore structure business
  - Deteriorating profitability of Izmit Bay Crossing Bridge construction

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Forecasts for Fiscal 2015 (Net Income)

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Factors in net income fluctuations from forecasts as of May and November 2015



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Forecast assumptions

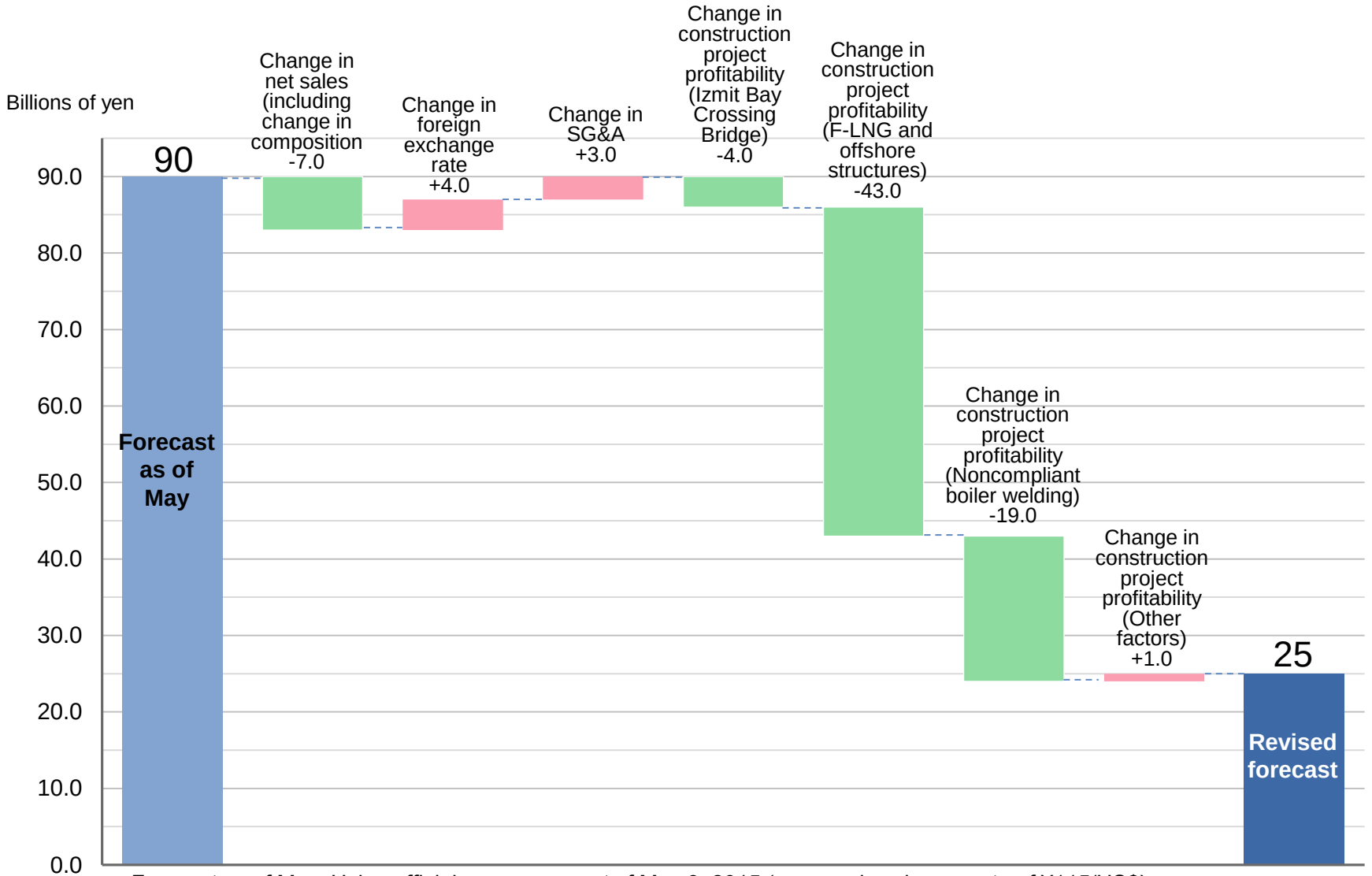
- As of November forecast
  - Non-operating income +¥3.0 billion ・・・Upturn in equity investment earnings
- Current forecast
  - Non-operating income +¥2.0 billion ・・・Net income and other improvements
  - Extraordinary loss ¥46.0 billion ・・・Costs from contracted delivery delays

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Forecasts for Fiscal 2015 (Operating Income)

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- Factors in operating income fluctuations from forecasts as of May 2015



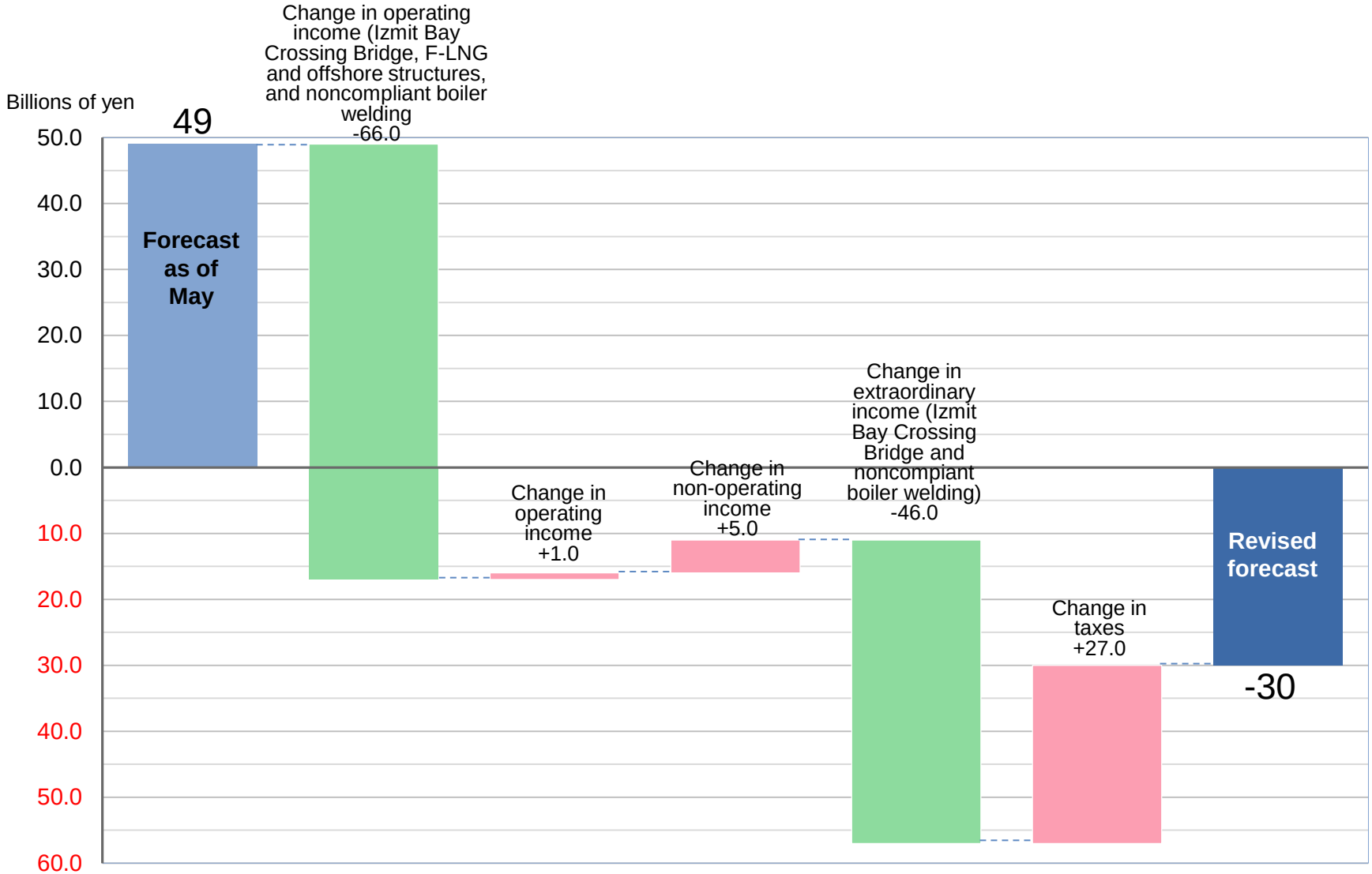
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Forecasts for Fiscal 2015 (Net Income)

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• Forecast as of May: Using official announcement of May 8, 2015 (assumed exchange rate of ¥115/US$)
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Forecasts by Business Area (Net Sales)

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(Billions of yen)

	Net Sales					
			FY2015			
	FY2013 (Results)	FY2014 (Results)	Outlook as of May	Outlook as of August	Outlook as of November	**Current outlook**
Resources, Energy and Environment	344.0	415.3	480.0	480.0	480.0	**450.0**
Social Infrastructure and Offshore Facilities	150.3	188.6	180.0	180.0	180.0	**180.0**
Industrial Systems and General-Purpose Machinery	397.8	411.7	430.0	430.0	410.0	**410.0**
Aero Engine, Space and Defense	406.0	434.8	470.0	470.0	490.0	**490.0**
Others	58.9	62.8	70.0	70.0	70.0	**70.0**
Adjustment	-53.2	-57.5	-50.0	-50.0	-50.0	**-50.0**
Total	1,304.0	1,455.8	1,580.0	1,580.0	1,580.0	**1,550.0**
Exchange rate	¥99.05/$	¥110.31/$	¥115/$	¥115/$	¥115/$	¥115/$

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Forecasts by Business Area (Operating Income)

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(Billions of yen)

	Operating Income					
			FY2015			
	FY2013 (Results)	FY2014 (Results)	Outlook as of May	Outlook as of August	Outlook as of November	**Current outlook**
Resources, Energy and Environment	11.6	24.0	31.0	31.0	24.0	**2.0**
Social Infrastructure and Offshore Facilities	2.3	-3.2	7.0	-8.0	-31.0	**-39.0**
Industrial Systems and General-Purpose Machinery	15.1	10.2	14.0	14.0	12.0	**12.0**
Aero Engine, Space and Defense	36.7	39.5	43.0	43.0	47.0	**49.0**
Others	1.9	1.2	2.0	2.0	2.0	**2.0**
Adjustment	-14.4	-8.6	-7.0	-7.0	-4.0	**-1.0**
Total	53.2	63.2	90.0	75.0	50.0	**25.0**
Exchange rate	¥99.05/$	¥110.31/$	¥115/$	¥115/$	¥115/$	¥115/$

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Details of Downward Revision and Future Initiatives

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Repairs of Noncompliant Boiler Welding (1/4)

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(1) Occurrence in Third Quarter of FY2015 and Backdrop

It was learned before the delivery of a boiler for which IHI received an order that Indonesian subsidiary PT Cilegon Fabricators used welding materials that did not comply with design instructions on some parts of the boiler. We are discussing repair details and approaches with the customer and are pushing ahead with repairs in four stages to expedite delivery (see Reference 1: Boiler Plant Overview).

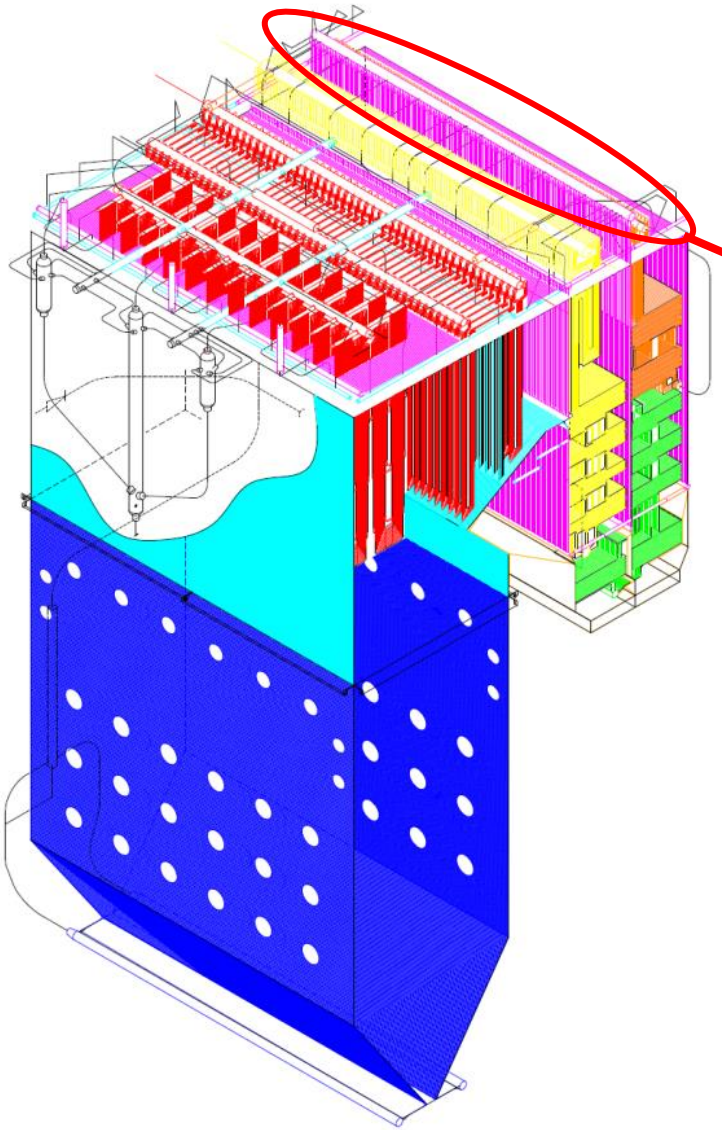
Backdrop

Occurrence	Timing	Details
Usage of noncompliant welding materials discovered	Early to late August 2015	• Water pressure testing (see note) revealed leaks from Cilegon Fabricator welds • An investigation revealed the use of noncompliant welding materials
First investigation	Late August to early October	• Investigation into weld management and job instructions
Investigation expanded to other construction	Mid-October to end-December	• Investigation into other ongoing installation work at Cilegon Fabricator at same time
Second investigation	Late October to early December	• Identifying occurrence, causes and formulating corrective measures
Repair details confirmation	Late October to end-January 2016	• Holding discussions with customer and confirming repair technique and scope

Note: Injecting water into pipes at high pressure during main boiler production process and checking for leaks

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Reference 1: Boiler Plant Overview



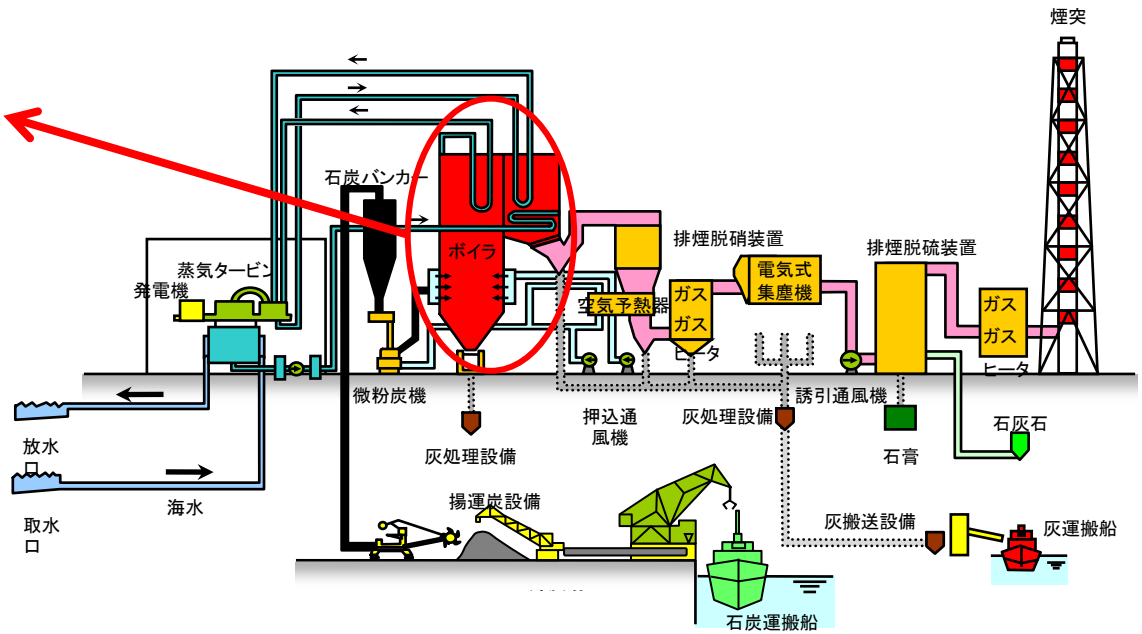
Bird's eye view of boiler



Pipe headers



Welding procedure



Thermal power plant layout

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Repairs of Noncompliant Boiler Welding (2/4)

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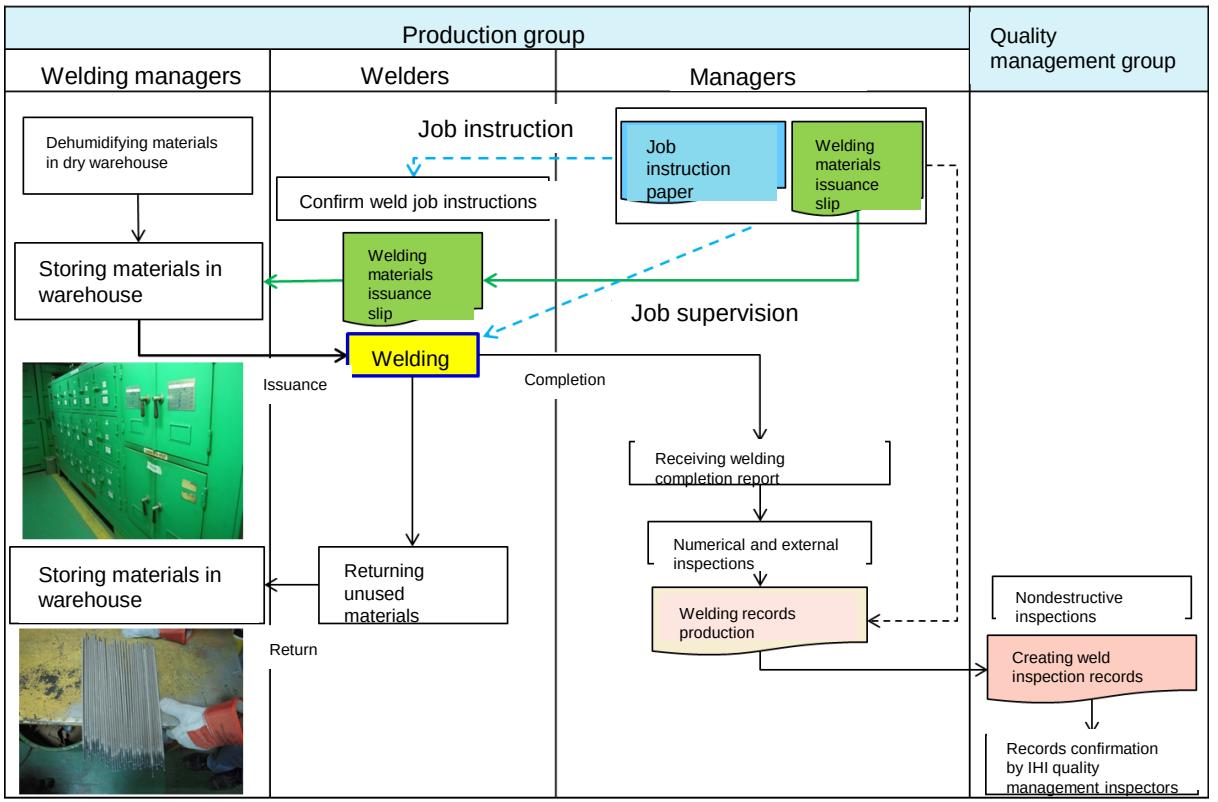
(2) Causes of noncompliant welding at Cilegon Fabricators plant

While the plant based its quality management system on the well-proven setup of the Aioi Works, which assumed that welders, welding materials managers (who oversee materials issuance) and managers had certain knowledge and experience.

From around July 2013, the plant increased the number of welders and welding materials managers to accommodate a production capacity expansion. But some of these people were insufficiently experienced and trained, so the quality management system failed to function fully. This resulted in the use of noncompliant welding materials.

Boiler welding characteristics and complexity

- An important stage to ensure air-tightness in high temperatures and pressure
- Specifying materials types (five categories), welding techniques, and heat treatment and other processes in keeping with customer requirements
- Assigning the right workers



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Repairs of Noncompliant Boiler Welding (3/4)

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(3) Measures to prevent a recurrence

Quality management measures at Cilegon Fabricators plant

- Conducted component analysis (to identify any mixups of welding materials) of all welds in final shipment inspections
- Dispatched special team from IHI Head Office and the Aioi Works, which is reviewing quality management processes and deploying measures to prevent a recurrence
  (1) Halted all work at Cilegon Fabricators plant and rigorously assessed all prospective causes of noncompliance
  (2) Verified and reconstructed quality management processes (see Reference 2)
  (3) Tightened welder and welding materials manager qualification requirements
  (4) Retrained welders and welding materials managers
- Bolstered quality management audits
  (1) Stationed monitoring team at site
  (2) Aioi Works quality management department and Head Office Quality Assurance Div. conducts regular audits
- Reinforced governance at Cilegon Fabricators plant
  (1) Sent additional management personnel to plant
  (2) Aioi Works formulated plant's production plans
  (3) Trained plant management personnel at Aioi Works

Group-wide measures

Established Company-wide Council to Prevent Quality Noncompliance in December 2015 to conduct special emergency inspections of quality management processes for welding and other work through the entire Group

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(Reference 2) Countermeasures 1: Post-Improvement Materials Identification Management in Welding Materials Management Shop

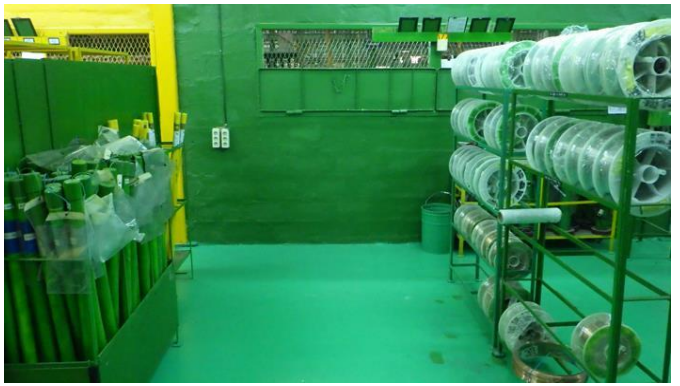
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Materials (JIS standard)	Color code
Carbon steel (P1)	White
1% chromium steel (P4)	Green
2.25% chromium steel (P5)	Yellow
9% chromium steel (P15E)	Blue
Stainless steel (P8)	Black

Color coding of materials



Welding materials issuance and returns section (White: P1, Green: P4, Yellow: P5, Blue: P15E)



Management zone of welding materials management shop (color coding by welding materials type): P4



Management zone of welding materials management shop (color coding by welding materials type): P5



Covered electrode drying furnace color coding

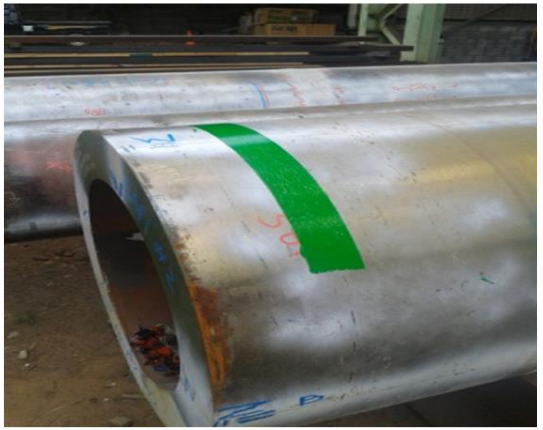
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(Reference 2) Countermeasures 2: Post-Improvement Materials Identification Management in Welding Materials Management Shop

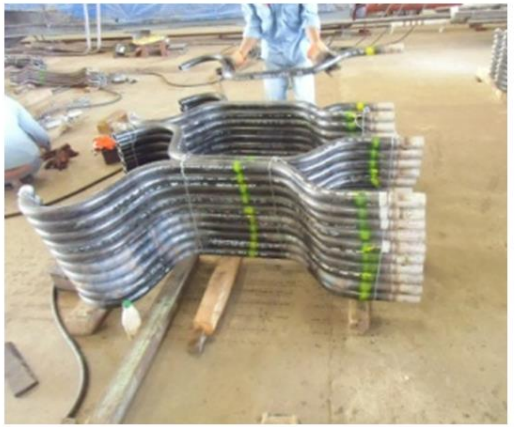
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Color coding of materials



Color coding on materials (large diameter pipe)



Color coding on materials (small diameter pipe)



Color coding on production trestles



Color coding on welder armbands



Using trestles for color coding of base materials



Welder identification armband

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Repairs of Noncompliant Boiler Welding (4/4)

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(4) Impact on full-year forecasts

- In accordance with the repair scope and techniques, we estimated the costs of work for which we have reached agreement with the customer on repair details. With work for which discussions with the customer are ongoing, we reflected costings in total construction costs according to repair scopes and techniques that are most likely to be used at this juncture
- Extraordinary losses include contract delivery delay damages that could be charged owing to construction delays from repair work

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F-LNG and Offshore Structure Business (1/2)

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(1) Drill ship hull construction for Singapore

- Progressed to hull flotation stage and started commissioning large machinery. Have broadly resolved design delays that caused confusion
- Although making progress, have yet to completely resolve outfitting (piping) issues. Extended the period for resolution, and process costs could increase

(2) FPSO hull construction for Norway

- Making progress with block construction at Aichi Works and at yards in Japan and abroad
- Looking to secure more engineers and expecting risks of rearranging procurements to ensure the quality of outsourced engineering and address delays in the outfitting process

(3) SPB tank construction for LNG ships

- Progressing well with block construction for four tanks on first ship. Planning to start work on second ship in February
- Expecting risks of higher materials and transportation costs for shortening delivery periods for procured items while also expecting risks from shortfalls in work efficiency improvements owing to delays in increasing number of aluminum welding technicians

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F-LNG and Offshore Structure Business (2/2)

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(4) Rectification efforts at Aichi Works

(1) Proper personnel placements
Completed shipment on December 18, 2015, of SPB tanks constructed for China. For FPSO hull construction for Norway, basically decided to undertake outfitting and final processes at overseas yard. Looking to swiftly deploy resources from this work to SPB tank construction

(2) Company-wide corporate support
Undertook wide-ranging support from July last year, including for Group companies. Deployed more human resources, particularly for engineering, procurement, commissioning planning, site management, and technicians. Aiming to maintain and reinforce such efforts

Project	Overview		
	Order date	Completion rate on cost basis (see note)	Completion rate on process basis
Drill ship hull construction for Singapore	December 2013	77%	83%
FPSO hull construction for Norway	May 2014	26%	50% (including outsourcing)
Two SPB tank construction for LNG ships for China	April 2014	95%	Delivered
Four SPB tanks for four LNG ships each	March 2014 (1st ship) March 2015 (4th ship)	63% (1st ship) 10% (2nd ship) 0% (3rd & 4th ships)	20% (1st ship) 0% (2nd to 4th ships)

Note: Completion rate as of end-December 2015 based on percentage of completion accounting method

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Construction of Izmit Bay Crossing Bridge (1/2)

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(1) Developments to date and construction situation

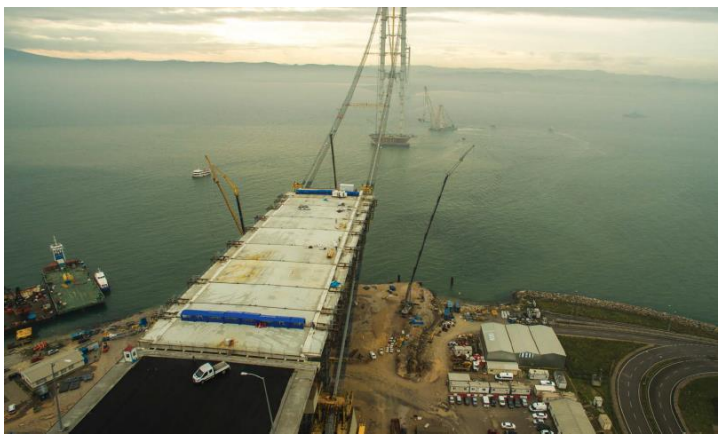
- On March 21, 2015, a tension rod linking a catwalk to the south main tower broke, with the catwalk falling into the sea
- Completed catwalk restoration work on August 16, 2015. Finished cable installation on January 10, 2016, and are continuing to work on clamp (to attach hanger ropes to cable) and hanger rope attachments as part of main girder construction
- Endeavoring in various ways to mitigate delays, such as by increasing the number of construction and site personnel and deploying more construction equipment. Aiming to complete work so bridge is open to traffic in spring 2016



Clamp attachment



Main girder installation on main tower



Approach construction

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Construction of Izmit Bay Crossing Bridge (2/2)

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(2) Impact on full-year forecasts

- Expenses for the accident recovery factored in the expenses of constructing a replacement catwalk in fiscal 2014 and expenditure for catching up to cover process delays in the first quarter of fiscal 2015 were incorporated.

- Impacts of additional catch-up expenses and setbacks from process delays on the third quarter were reflected.

- Extraordinary loss to cover possible claims for costs incurred owing to delivery delays was booked, since it became difficult to complete construction by contracted deadline of February 2016.

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Companywide Measures

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- Complete construction safely and swiftly
- Implement rigorous measures to prevent issue recurrences
- Roll out measures to prevent recurrences laterally
- Implement special company-wide inspections to prevent nonconformities from recurring

*Company-wide units
- Izmit Bay Crossing Bridge Accident Response Headquarters
- Offshore and steel structures sector company-wide corporate support
- Response headquarters for Cilegon Fabricators nonconformity measures
- Committee to address quality nonconformity on important company-wide products

Reinforce manufacturing capabilities, including quality

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Revised Dividends Forecast

	Previous Forecasts	Revised Forecasts	(Reference: Previous Dividends
Interim	¥3	¥3 (actual)	¥3
Year-end	¥3	¥0	¥3
Annual	¥6	¥3	¥6

Note: The numbers for previous forecasts were as of May 8, 2015

Management has cut its planned year-end dividends per share for the current fiscal year to zero in view of results.

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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.