
Financial Results for Second Quarter FY2021

November 2nd, 2021

Hitachi Zosen Corporation

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Financial Information

**Director,
General Manager of
Corporate Planning HQ
Michi Kuwahara**

**Highest first half order intake and sales
in 10 years**

(Billions of JPY)

| | FY2020-2Q (a) | FY2021-2Q (b) | Difference (b)-(a) |
|----------------------|------------------|------------------|-----------------------|
| Order intake | 221.2 | 380.6 | 159.4 |
| Net sales | 166.8 | 180.4 | 13.6 |
| Operating income | -1.3 | -1.4 | -0.1 |
| (Ratio to Net sales) | (- 0.8%) | (- 0.8%) | |
| Ordinary income | -2.4 | -2.8 | -0.4 |
| (Ratio to Net sales) | (- 1.4%) | (- 1.6%) | |
| (Extraordinary loss) | 0.0 | 0.0 | 0.0 |
| Net income | -1.9 | -3.0 | -1.1 |
| (Ratio to Net sales) | (- 1.1%) | (- 1.7%) | |

(Billions of JPY)

| | FY2020-2Q (a) | FY2021-2Q (b) | Difference (b)-(a) |
|---------------------------------|------------------|------------------|-----------------------|
| Environment | 166.3 | 319.8 | 153.5 |
| Machinery and Infrastructure | 50.7 | 56.8 | 6.1 |
| Others | 4.2 | 4.0 | -0.2 |
| Total | 221.2 | 380.6 | 159.4 |

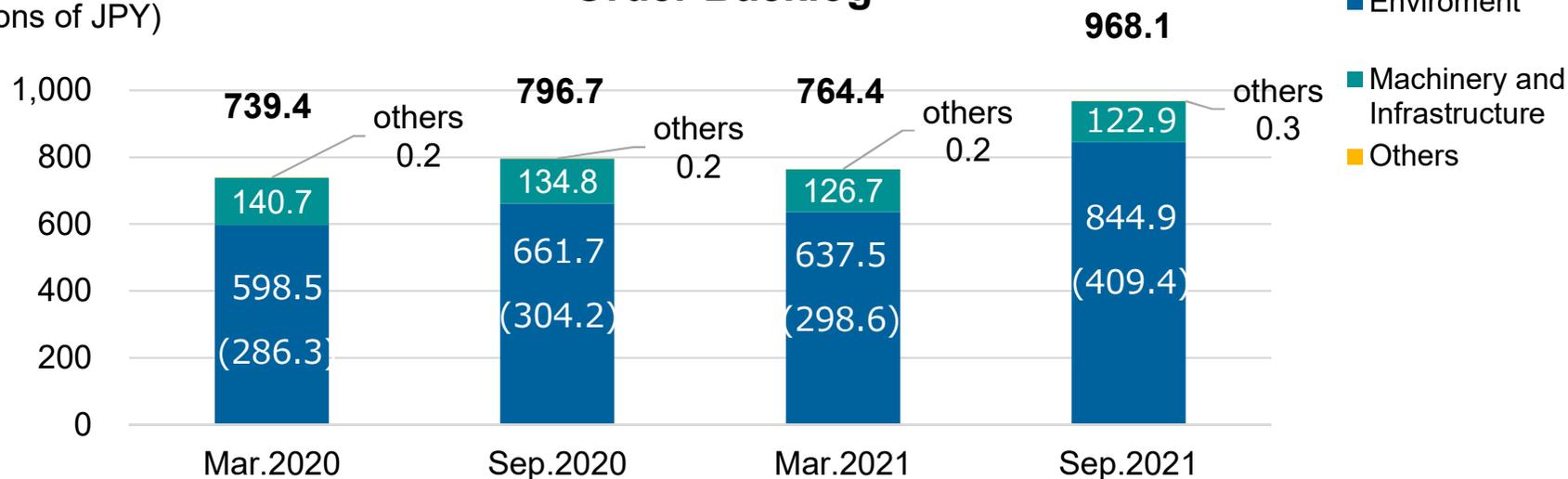
FY2021 2Q Results – Order backlog

(Billions of JPY)

| | End of Mar. 2020 | End of Sep. 2020 | End of Mar. 2021 (a) | End of Sep. 2021 (b) | Difference (b)-(a) |
|-------------------------------|------------------|------------------|----------------------|----------------------|--------------------|
| Environment | 598.5 | 661.7 | 637.5 | 844.9 | 207.4 |
| of which, long-term operation | 286.3 | 304.2 | 298.6 | 409.4 | 110.8 |
| Machinery and Infrastructure | 140.7 | 134.8 | 126.7 | 122.9 | -3.8 |
| Others | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 |
| Total | 739.4 | 796.7 | 764.4 | 968.1 | 203.7 |

Order Backlog

(Billions of JPY)



(Billions of JPY)

| | FY2020-2Q (a) | FY2021-2Q (b) | Difference (b)-(a) |
|---------------------------------|------------------|------------------|-----------------------|
| Environment | 106.3 | 123.5 | 17.2 |
| Machinery and Infrastructure | 56.4 | 52.9 | -3.5 |
| Others | 4.1 | 4.0 | -0.1 |
| Total | 166.8 | 180.4 | 13.6 |

FY2021 2Q Results – Operating income

(Billions of JPY)

| | FY2020-2Q (a) | FY2021-2Q (b) | Difference (b)-(a) |
|---------------------------------|------------------|------------------|-----------------------|
| Environment | -1.3 | -0.7 | 0.6 |
| Machinery and Infrastructure | 0.0 | -0.9 | -0.9 |
| Others | 0.0 | 0.2 | 0.2 |
| Total | -1.3 | -1.4 | -0.1 |

| | | | (Billions of JPY) |
|--|--|-------|-------------------|
| FY2020-2Q Operating income | | | - 1.3 |
| Breakdown of changes in Operating income | • Improvement in Inova Group | +2.2 | - 0.1 |
| | • Decrease in highly profitable projects (Water business, retrofit works) | - 1.5 | |
| | • Decrease in profit in Press Machine (due to sales decrease from low order intake in the previous year) | - 0.6 | |
| | • Others | - 0.2 | |
| FY2021-2Q Operating income | | | - 1.4 |

FY2021 2Q Results – Balance Sheet

(Billions of JPY)

| | End of Mar. 2020 (a) | End of Sep. 2021 (b) | Difference (b)-(a) |
|---|----------------------------|----------------------------|-----------------------|
| Cash and deposits | 47.3 | 67.2 | 19.9 |
| Operating assets | 193.2 | 147.0 | - 46.2 |
| Trade notes and accounts receivable | 169.3 | 127.9 | - 41.4 |
| Inventories | 23.9 | 19.1 | - 4.8 |
| Tangible & intangible fixed assets | 122.8 | 121.3 | - 1.5 |
| Others | 66.0 | 62.9 | - 3.1 |
| Total Assets | 429.3 | 398.4 | - 30.9 |
| Operating liabilities | 88.3 | 86.4 | - 1.9 |
| Notes and accounts payable | 63.4 | 48.9 | - 14.5 |
| Advances received | 24.9 | 37.5 | 12.6 |
| Interest bearing debt | 98.1 | 82.4 | - 15.7 |
| Others | 114.7 | 107.3 | - 7.4 |
| Total Liabilities | 301.1 | 276.1 | - 25.0 |
| Equity | 126.4 | 120.5 | - 5.9 |
| Non-controlling interests | 1.8 | 1.8 | - 0.0 |
| Total Net Assets | 128.2 | 122.3 | - 5.9 |
| Total Liabilities and Net Assets | 429.3 | 398.4 | - 30.9 |
| Equity Ratio | 29.4% | 30.3% | 0.9% |

Cash flows

(Billions of JPY)

| | FY2020-2Q (a) | FY2021-2Q (b) | Difference (b)-(a) |
|--|------------------|------------------|-----------------------|
| Cash flows from operating activities | 12.4 | 38.6 | 26.2 |
| Cash flows from investing activities | - 5.6 | - 0.8 | 4.8 |
| Cash flows from financing activities | - 9.5 | - 18.0 | - 8.5 |
| Increase in cash and cash equivalents | (Note 1) - 2.5 | (Note 1) 19.9 | 22.4 |
| Cash and cash equivalents at beginning | 41.5 | 45.8 | 4.3 |
| Cash and cash equivalents at end | 39.0 | 65.7 | 26.7 |

Interest-bearing debt

(Billions of JPY)

| | End of Mar. 2020 (a) | End of Sep. 2021 (b) | Difference (b)-(a) |
|------------|----------------------------|----------------------------|-----------------------|
| Borrowings | (Note 2) 73.1 | (Note 2) 62.4 | -10.7 |
| Bond | 25.0 | 20.0 | -5.0 |
| Total | 98.1 | 82.4 | -15.7 |

Note 1: Including Foreign exchange translation (FY2020-2Q: 0.2, FY2021-2Q: 0.1)

Note 2: Including lease obligation

Forecast of FY2021

(Billions of JPY)

| | FY2020 | FY2021 | | Difference | |
|--|----------------|------------------------------|-------------------------------|------------|-----------|
| | Results (a) | Forecast as of May (b) | Forecast as of Nov. (c) | (c) - (a) | (c) - (b) |
| Order intake | 429.4 | 450.0 | 580.0 | 150.6 | 130.0 |
| Net sales | 408.5 | 400.0 | 400.0 | -8.5 | 0.0 |
| Operating income (Ratio to Net sales) | 15.3 (3.8%) | 14.0 (3.5%) | 14.0 (3.5%) | -1.3 | 0.0 |
| Ordinary income (Ratio to Net sales) | 11.7 (2.9%) | 9.0 (2.3%) | 9.0 (2.3%) | -2.7 | 0.0 |
| Net income (Ratio to Net sales) | 4.2 (1.0%) | 5.0 (1.3%) | 5.0 (1.3%) | 0.8 | 0.0 |

(Billions of JPY)

| | FY2020 | FY2021 | | Difference | |
|---------------------------------|----------------|------------------------------|-------------------------------|------------|---------|
| | Results (a) | Forecast as of May (b) | Forecast as of Nov. (c) | (c)-(a) | (c)-(b) |
| Environment | 303.7 | 315.0 | 445.0 | 141.3 | 130.0 |
| Machinery and Infrastructure | 117.3 | 125.0 | 125.0 | 7.7 | 0.0 |
| Others | 8.4 | 10.0 | 10.0 | 1.6 | 0.0 |
| Total | 429.4 | 450.0 | 580.0 | 150.6 | 130.0 |

(Billions of JPY)

| | FY2020 | FY2021 | | Difference | |
|---------------------------------|----------------|------------------------------|-------------------------------|------------|---------|
| | Results (a) | Forecast as of May (b) | Forecast as of Nov. (c) | (c)-(a) | (c)-(b) |
| Environment | 269.4 | 265.0 | 265.0 | -4.4 | 0.0 |
| Machinery and Infrastructure | 130.8 | 125.0 | 125.0 | -5.8 | 0.0 |
| Others | 8.3 | 10.0 | 10.0 | 1.7 | 0.0 |
| Total | 408.5 | 400.0 | 400.0 | -8.5 | 0.0 |

FY2021 Forecast – Operating income

(Billions of JPY)

| | FY2020 | FY2021 | | Difference | |
|---------------------------------|----------------|------------------------------|-------------------------------|------------|---------|
| | Results (a) | Forecast as of May (b) | Forecast as of Nov. (c) | (c)-(a) | (c)-(b) |
| Environment | 12.6 | 13.0 | 13.0 | 0.4 | 0.0 |
| Machinery and Infrastructure | 2.6 | 1.0 | 1.0 | -1.6 | 0.0 |
| Others | 0.1 | 0.0 | 0.0 | -0.1 | 0.0 |
| Total | 15.3 | 14.0 | 14.0 | -1.3 | 0.0 |

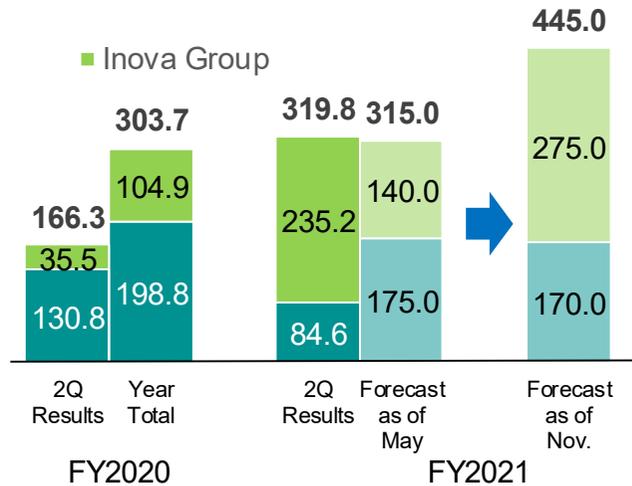
(Billions of JPY)

| | FY2018 Results | FY2019 Results | FY2020 Results | FY2021 Plan |
|-----------------------|-------------------|-------------------|-------------------|----------------|
| Total assets | 429.0 | 409.5 | 429.3 | 430.0 |
| Cash and deposits | 35.6 | 42.9 | 47.3 | 48.0 |
| Equity | 119.5 | 118.0 | 126.4 | 130.0 |
| Equity ratio | 27.8% | 28.8% | 29.4% | 30.0% |
| ROE | 4.6% | 1.9% | 3.5% | 3.9% |
| Interest-bearing debt | 126.3 | 99.6 | 98.1 | 96.5 |
| Capital investment | 6.9 | 10.3 | 10.8 | 10.0 |
| Depreciation | 8.9 | 10.1 | 10.2 | 11.0 |

Balance sheet items are as of the end of each year

Details by Segments

【Order intake】



(Billions of JPY)

Order intake

■ 2Q Results (vs. FY2020 2Q)

319.8 (+153.5)

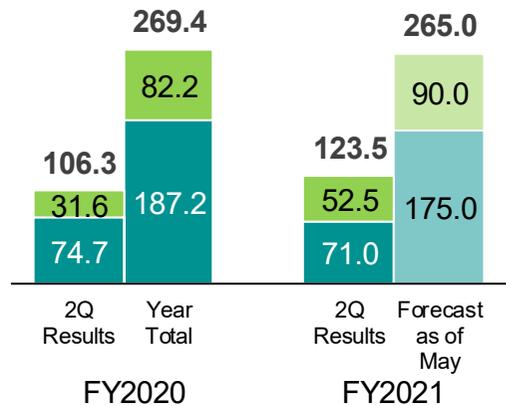
- Order intake in Dubai (EPC, O&M), UK (EPC)

■ FY2021 Forecast (vs. as of May)

445.0 (+130.0)

- Upward revision based on the above

【Net sales】



Net sales

■ 2Q Results (vs. FY2020 2Q)

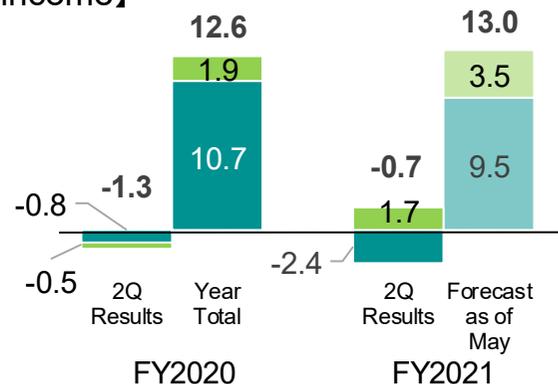
123.5 (+17.2)

- Steady progresses in Inova's construction

■ FY2021 Forecast (vs. as of May)

265.0 (No change)

【Operating income】



Operating income

■ 2Q Results (vs. FY2020 2Q)

-0.7 (+0.6)

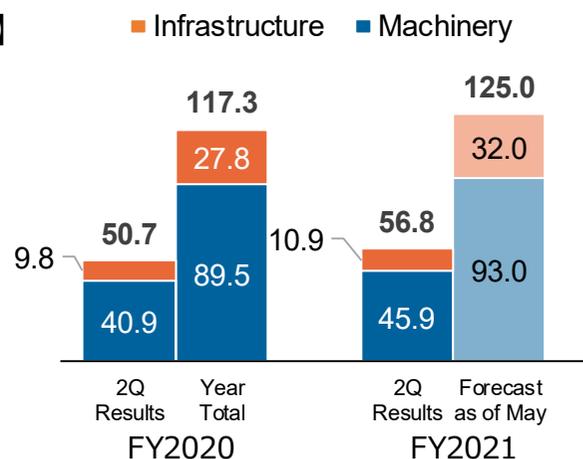
- Improvement in Inova

■ FY2021 Forecast (vs. as of May)

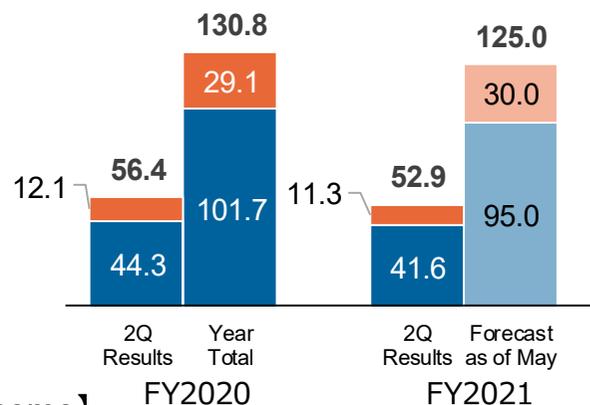
13.0 (No change)

(Billions of JPY)

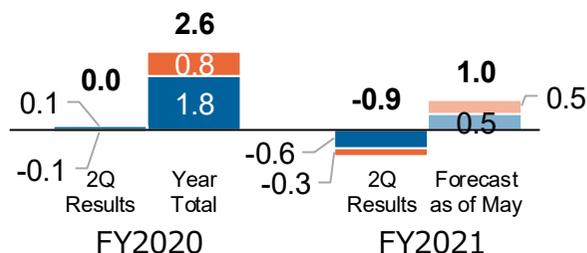
【Order intake】



【Net sales】



【Operating income】



Order intake

■ 2Q Results (vs. FY2020 2Q)

56.8 (+6.1)

- Increase in marine diesel engine, press machine and precision machinery

■ FY2021 Forecast (vs. as of May)

125.0 (No change)

- Increase in process machine
- Decrease in marine diesel engine and other machinery

Net sales

■ 2Q Results (vs. FY2020 2Q)

52.9 (-3.5)

- Decrease in press machine and process equipment

■ FY2021 Forecast (vs. as of May)

125.0 (No change)

- Decrease in press machine and process equipment

Operating income

■ 2Q Results (vs. FY2020 2Q)

-0.9 (-0.9)

- Decrease in press machine and precision machinery

■ FY2021 Forecast (vs. as of May)

1.0 (No change)

- Decrease in press machine, precision machinery and other machinery

Management and Business Information

President and COO
Sadao Mino

Medium-Term Management Plan

Contribute to the realization of sustainable and safe & secure society through overall corporate activities. Aim to be corporate group capable of sustainable growth by strengthening profitability.

| Basic Policy and Initiatives | Progress |
|--|---|
| <p>Increase the added value of products and services</p> <ol style="list-style-type: none"> 1) Cutting-edge technologies 2) Shift business positioning, Close dialogue with customers and markets 3) Group's comprehensive strengths | <p>Deployment of AI and IoT in products and services</p> <ul style="list-style-type: none"> ▶ Promotion of manpower saving and automation in EfW plants ▶ AI ultrasonic inspection systems, inspection in food factories, etc. <p>O&M for energy-from-waste plants globally (Istanbul, Australia, UAE)</p> <p>Wind power and Power to Gas (PtG) businesses</p> <ul style="list-style-type: none"> ▶ Issuance of green bond (for wind power project) ▶ Selected as Green Innovation Fund project (Electrolyzer - larger scale and modularization, Methane slip reduction for LNG fuel vessels) |
| <p>Promote business selection and concentration of businesses and shift resources to growth areas</p> <ol style="list-style-type: none"> 1) Utilizing Hitz Goal Achievement Monitoring System 2) Further promote portfolio management | <p>Promoting portfolio management</p> <ul style="list-style-type: none"> ▶ Assessing the market growth potential of each business from a sustainability perspective (Sustainability of society - company) ▶ Quantitative and qualitative assessments of of each business and discussion by the Board of Directors on counter-measures ▶ New company for shield machine biz with Kawasaki Heavy Ind. |
| <p>Promoting work style reforms by improving operational efficiency and productivity</p> <ol style="list-style-type: none"> 1) Improve operationalefficiencybyreforming thegroup management system 2) Review of manufacturing businesses 3) Develop human resources & work style reform | <p>Strategic staffing</p> <ul style="list-style-type: none"> ▶ Development of management personnel and DX personnel, Selection of young managers, etc. <p>Work style reform</p> <ul style="list-style-type: none"> ▶ Improving productivity by utilizing ICT ▶ Best Practice Awards |

First Half Results and Status of Each Business

Orders Received (Japan)

| Order received | Project/Order | Outline | Capacity, etc. | Schedule, delivery |
|----------------|--|---|------------------------|--|
| April | <p>Methanation</p> <p>Received order for methanation equipment from Tokyo Gas</p> | <p>Installed in Tokyo Gas's Yokohama Techno Station. Demonstration to begin in 2021.</p> | 12.5Nm ³ /h | Feb. 2022 |
| June | <p>Water business</p> <p>Contract awarded for construction of sludge recycling treatment centre in Koga City</p> | <p>New sludge reclamation centre to be built next to existing ageing manure treatment facility</p> | 52kL/day | Dec. 2023 |
| July | <p>PPS</p> <p>Supplying renewable electricity to the main office building of the city hall and the water and sewerage bureau building in Itami City</p> | <p>Switch to renewable electricity is expected to reduce greenhouse gas emissions by approx. 712 tonnes per year for 2 facilities in total.</p> | 2.2 mil. kWh | <p>Main office : Sep.21-Dec.22</p> <p>Water bureau : Sep.21-Sep.24</p> |



Methanation equipment



HiMethz (Methanation catalyst)

Orders Received (Global)

| Order received | Project/Order | Outline | Capacity, etc. | Schedule, delivery |
|----------------|---|---|------------------------------------|--------------------|
| May | Water treatment : Osmoflo | Scope : Water filtration and treatment equipment for water from rivers, RO water treatment plants, etc. Customer : JGC | 12,500m ³ /day | Aug. 2022 |
| | Water treatment plants in Iraq | | | |
| June | Energy-from-waste plant : Inova | Scope : EPC、 O&M Place : Warsan, Dubai, UAE | 1.9 mil.t/yr (5 lines) 200MW | Jul. 2024 |
| | EfW plant in Dubai, UAE | | | |
| June | Energy-from-waste plant | Scope : Design of plant, grates and other major equipment and SV Customer : FengYu Resources Co., Ltd. Place : Changhua Coastal Industrial Park | 350t/day 15.5MW | Jun. 2024 |
| | EfW plant in Taiwan | | | |
| July | Energy-from-waste plant : Inova | Scope : EPC Customer : enfinium Skelton Grange Limited Place : Leeds, West Yorkshire | 0.41mil.t/yr 49MW | Jul. 2025 |
| | EfW plant in Skelton Grange, U.K. | | | |
| Sep. | Energy-from-waste plant :HZIND | Scope : Design of plant, grates and other major equipment Supply SV dispatch Customer : Antony Lara Renewable Energy Pvt. Ltd Place : Pune, Maharashtra | 700t/day 14MW | May 2023 |
| | EfW plant in India HZIND: Hitachi Zosen India Private Limited. | | | |

Dubai, UAE



Skelton Grange, U.K.



Pune, India



Environment Business - Major Projects

Execution O&M

| | Place (Country) | Order | completion | Formation | Scope | Calendar year | | | | | | |
|--------|------------------|----------|------------|------------|-------|---------------|------|------|------|------|------|------|
| | | | | | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| Japan | Shiga | Mar.2017 | Mar.2023※ | JV | DBO | | | | | | | |
| | Shiga | Mar.2017 | Jun,2022 | JV | DBO | | | | | | | |
| | Gunma | Jun.2018 | Jan.2025 | Solo | EPC | | | | | | | |
| | Hokkaido | Nov.2019 | Jul.2024 | JV | EPC | | | | | | | |
| | Chiba | Feb.2020 | Mar.2023 | JV | DBO | | | | | | | |
| | Niigata | Mar.2020 | Mar.2024 | JV | BTO | | | | | | | |
| | Kumamoto | Jul.2020 | Mar.2024 | JV | DBO | | | | | | | |
| | Saga | Aug.2020 | Mar.2024 | Solo | DBO | | | | | | | |
| | Tokyo | Sep.2020 | May.2027 | JV | EPC | | | | | | | |
| | Kagoshima | Feb.2021 | Aug.2024 | JV | DBO | | | | | | | |
| Global | Chansha(China) | Dec.2018 | Feb.2022 | Solo | EP+SV | | | | | | | |
| | Zuzhou(China) | Jan.2019 | Dec.2021 | Solo | EP+SV | | | | | | | |
| | Rayong(Thailand) | May.2019 | Jul.2021 | Consortium | EP+SV | | | | | | | |
| | Shanghai(China) | Jul.2019 | Jan.2023 | Solo | EP+SV | | | | | | | |
| | Shanghai(China) | Aug.2020 | Apr.2023 | Solo | EP | | | | | | | |
| | Bidadi(India) | Dec.2020 | Oct.2022 | Consortium | EP+SV | | | | | | | |
| | Changhua(Taiwan) | Aug.2021 | Jun.2024 | Solo | EP+SV | | | | | | | |
| | Moshi(India) | Sep.2021 | May.2023 | Consortium | EP+SV | | | | | | | |

※Demolition work, etc. until Mar. 2023.

Hitachi Zosen Inova - Major Projects

Execution O&M

| Project (country) | Order | Completion | Formation | Inova's Scope | Calendar year | | | | | | | |
|-----------------------|----------|------------|------------|----------------------|---------------|------|------|------|------|------|------|--|
| | | | | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | |
| Istanbul(Turkey) | Sep.2017 | Oct.2021 | JV | EP+O&M(1-year) | | | | | | | | |
| Ivery(France) | Nov.2018 | 2021 | Sole | EP+SV | | | | | | | | |
| Rookery(UK) | Mar.2019 | Feb.2022 | Sole | EPC | | | | | | | | |
| Moscow1-4(Russia)* | Nov.2019 | Jun.2023 | Consortium | EP+SV | | | | | | | | |
| Rockingham(Australia) | Jan.2020 | Dec.2022 | Consortium | EP+SV+O&M(long term) | | | | | | | | |
| Newhurst(UK) | Feb.2020 | - | Sole | EPC | | | | | | | | |
| Emmenspitz(Swiss) | Feb.2020 | Dec.2025 | Sole | EP+SV | | | | | | | | |
| Slough(UK) | Dec.2020 | 2024 | Sole | EPC | | | | | | | | |
| Dubai(UAE) | Jun.2021 | Jul.2024 | Consortium | EP+SV+O&M(long term) | | | | | | | | |
| Skelton Grange(UK) | Jul.2021 | Jul.2025 | Sole | EPC | | | | | | | | |

*Order received for Moscow 1 in 2019, Moscow 2-3 in 2020



【Istanbul site】



【Rookery site】

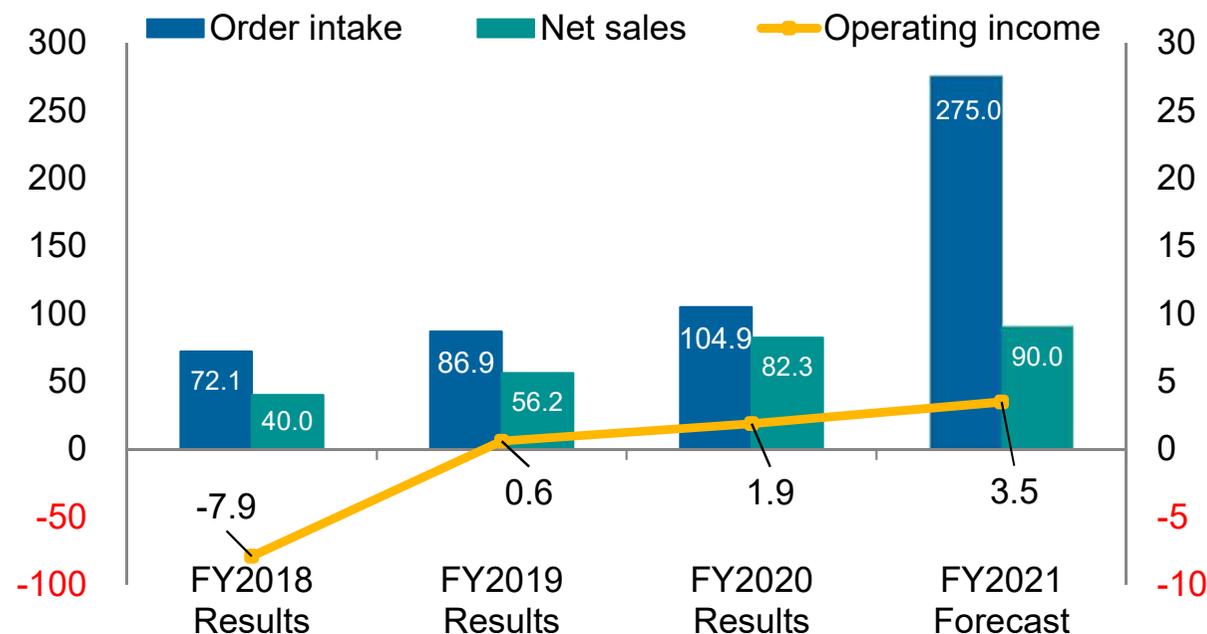
Major results for the first half of 2021

| | |
|--|---|
| 2 EfW orders 1H order intake JPY235.2bn | UAE (Dubai) ▶ Long-term O&M contract also awarded U.K. (Skelton Grange) ▶ 15th order in UK and Ireland |
| Istanbul Project | Completion in Oct. 2021 (Under customer's acceptance process) Our O&M to start |
| Renewable Gas | 100th order for Kompogas (dry methane fermentation) Acquisition of biogas companies in Germany (wet type methane fermentation) |

Order intake/Sales
(Billions of JPY)

Inova's performance

Operating income
(Billions of JPY)

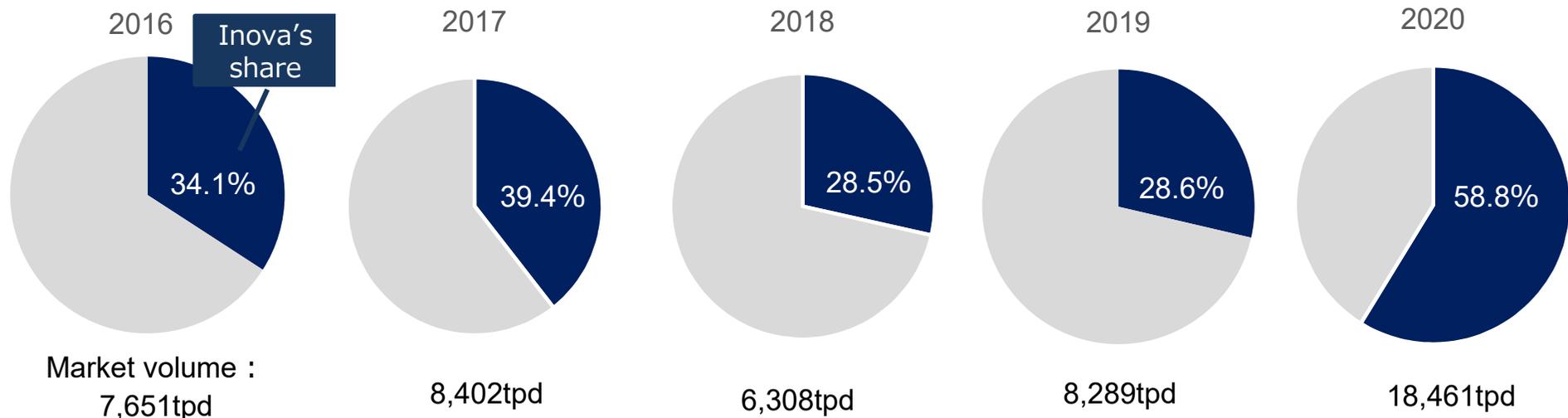


Medium- to Long-Term Initiatives

| | |
|--|---|
| Synergies with Hitachi Zosen | Standardization of specifications for major equipment, cooperation in procurement, and collaboration in Dubai (UAE) |
| New markets outside EU | Turkey (2017) Russia (2019) Australia (2020) UAE (2021) |
| 3rd order intake of O&M | Turkey (2017) Australia (2020) UAE (2021) |
| Establishing O&M service network in Europe | Expanded service network in France, Germany, and the U.K. through M&A, etc. Covers 70% of energy-from-waste plants in Europe |
| Future business structure | Targeting energy-from-waste: 50%, renewable gas: 25%, O&M services: 25%. |

Inova's Market Share (EMEA) Order intake (capacity base)

Source: A.Vaccani & Partner AG research



Environment Business (Hitachi Zosen, group companies other than Inova)

■ Energy from waste (EPC)

- Japan : Orders in the market is about 30% less than the previous year. Next year will be back to the same level as the previous year.

(Our order intake expected mainly in 2nd half.)

- Order intake in Taiwan and India in 1st half.

■ Energy from waste (O&M)

- Demand pauses for major retrofit works
- Aiming to improve profit margins using ICT
- Promoting O&M biz with local partner in China

■ Electricity sales

- Electricity wholesaling contracts with new sales partners

■ Water business (EPC, O&M)

- Order intake: Sludge recycling facility(Koga city)
- Retrofit down from last year
- Strengthening comprehensive management proposals, differentiation through sophistication of processing systems and operational management using AI and ICT

Risks and responses to changes in the external environment

■ Impact of Covid-19

- No major impact on the construction schedule, either in Japan or abroad
- Limited travel for overseas projects, but handled by remote supervisors, etc.

■ Generally material cost increase exceeding a certain level is passed on to prices.

■ Tight logistics

- Delays in delivery of procured goods are almost under control both in Japan and overseas. (International logistics still limited by space.)

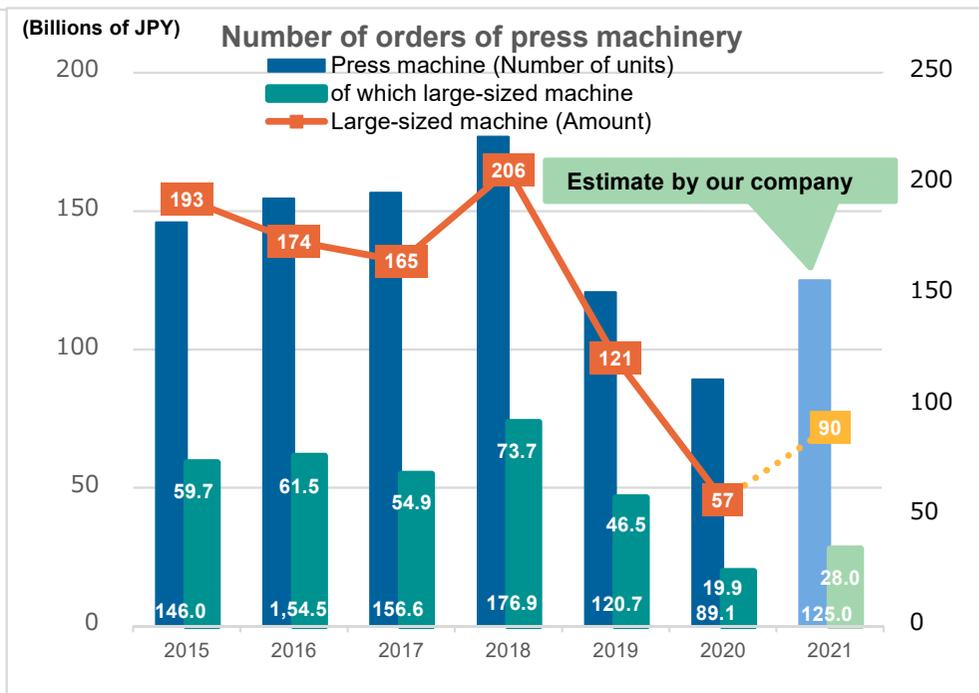
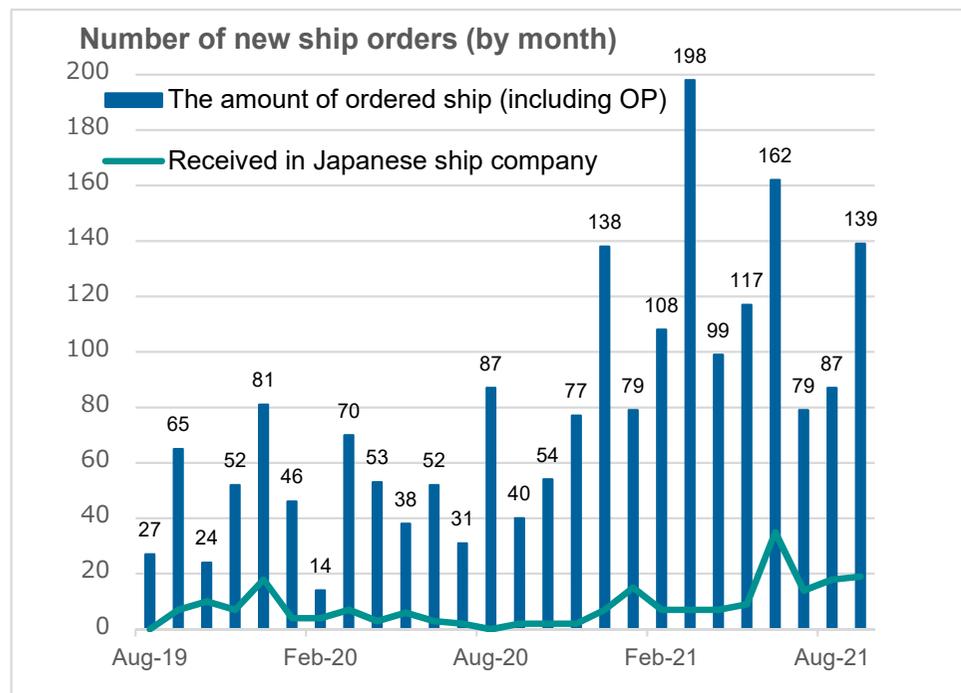
Machinery & Infrastructure Business

■ Marine Diesel Engine

- Orders in the shipbuilding industry high, but engine prices remain tough
- Strengthen after-sales service business (Expand menu, increase staff)
- SCR systems to comply with NOx regulations
Cumulative orders exceeded 100 units
Proposal leveraging our strengths (engine + SCR)

■ Press Machine

- While business negotiations are gradually increasing, full recovery in orders will take time.
- Aim to improve operating income through cost reduction and expense reduction
- Allocate sales resources to areas of high demand
- Increased demand for effective use of existing facilities, focus on O&M services



Source: Edited based on article of Kaiji Press

Source: Japan Forming Machinery Association

Machinery & Infrastructure Business

■ Process Equipment

- Declined investment in refining and petrochemicals
Movements in petrochemical sector, incl. ammonia
- Focus on models that take our advantage
- Use a JV in India, mainly for non-special products
- Strengthening after-sales service in Japan

■ Precision Machinery

- Semiconductor equipment orders remain strong
- China accelerates domestic production of Semiconductors
Set up local production and maintenance bases

■ Steel Structure & Disaster Prevention

- Bridge market size is about the same as usual year
- Orders for bridges, sluice gates, iron pipes and other public projects, mainly in the second half of the year (as in previous years)

■ Shield Machine

- **Underground Infrastructure Technologies**

Corporation - equity method affiliate (50:50)

Integration of sales and engineering divisions with Kawasaki Heavy Industries for strengthening competitiveness in Japan and overseas

Risks and responses to changes in the external environment

■ Material cost increase

- In Machinery business, working to reduce costs and expenses in design and manufacturing, and at the same time striving to receive orders at reasonable prices
- In infrastructure, generally material cost increase exceeding a certain level is passed on to prices.

Topics

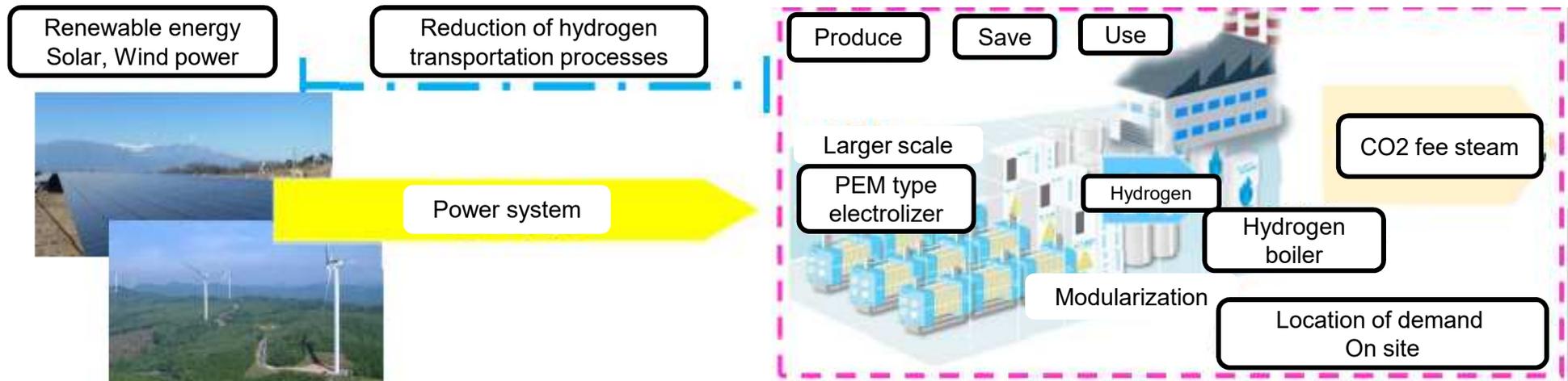
Hydrogen production by water electrolysis using renewable power (Yamanashi Pref.) Selected as a NEDO subsidized project (Green Innovation Fund Project)

Design and testing of PEM water electrolyzers for larger scale and modularization

■ Members of the consortium
 Yamanashi Prefecture, Hitachi Zosen,
 Tokyo Electric Power Holdings,
 TEPCO Energy Partner,
 Toray Industries, Siemen's Energy, Kaji Tech,
 Miura, Nichicon

- Secretary Yamanashi Prefecture
- Place Several sites in Yamanashi
- Project period FY2021~FY2025
- Facility size 16MW (total)

NEDO : New Energy and Industrial Technology Development Organization



(Source: Yamanashi Prefecture)

Feasibility Study on High-Pressure PEM-type Electrolyzer for Green Ammonia Production and Supply Project in Lao PDR Adopted as a commissioned project by NEDO

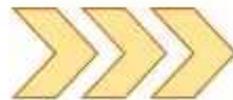
This study aims to develop and commercialise technology to produce green hydrogen from unused renewable energy generated in Laos and to convert it into green ammonia that is in line with the energy development policy of the ASEAN region and Japan's decarbonization policy.

- Name of Study:
2021 International Demonstration Project of Japanese Technologies for Efficient Energy Consumption – Study on compliance with demonstration requirement
- Representative company: Hitachi Zosen
- Proposing company: Hitachi Zosen, Renova

Renewable energy



Unused power



Electrolyzer



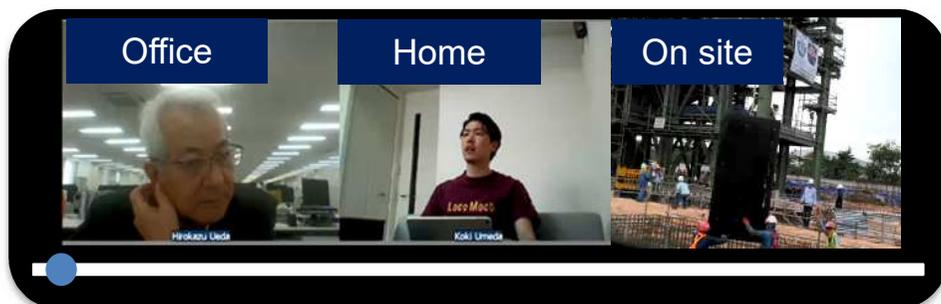
Completion of Energy-from-Waste (EfW) Plant in Rayong Province, Thailand

“Remote Supervisor” to complete facility construction (July, 2021) , while unable to travel overseas due to the spread of COVID-19

(Outline of Project) Customer : Jurong Engineering Limited (Singapore)

Ultimate customer : Global Power Synergy Public Co., Ltd. (Bangkok)

Facility : Stoker type, capacity 300tpd, output : 9.8MW



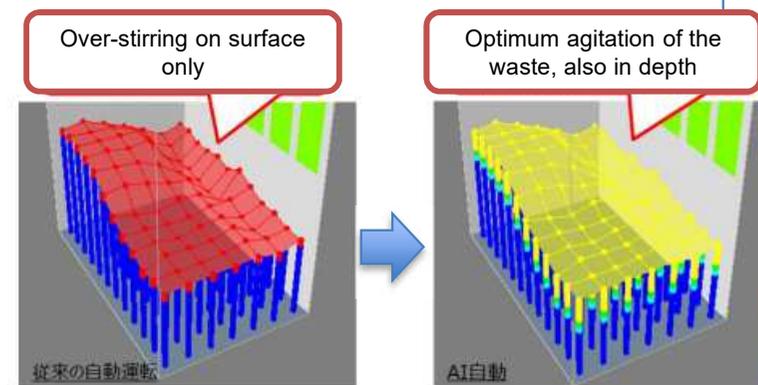
Field staff wearing smart glas (Thailand)



Advanced Optimal Operation Using Big Data from EfW Plant

Completed "Research and Development of Advanced Control Technology for EfW Plants" at Suginami Incineration Plant with the cooperation of Clean Authority of Tokyo

- Waste bunker & crane 3D system with priority input of agitation degree, AI automatic operation, the next generation automatic combustion control using AI technology. Operated simultaneously.
- Confirmed that it can contribute to the realization of more stable furnace operation, saving of labor, power consumption and service cost.



Supplementary Information (Breakdown by Small Segments)

Order Intake, Net Sales, Operating Income (2Q Results)

(Billions of JPY)

| | | FY2018 2Q | FY2019 2Q | FY2020 2Q (a) | FY2021 2Q (b) | Difference (b)-(a) |
|------------------|----------------------------|--------------|--------------|---------------------|---------------------|---------------------------|
| Order intake | Environment | 123.4 | 115.4 | 166.3 | 319.8 | 153.5 |
| | Machinery & Infrastructure | 56.1 | 79.3 | 50.7 | 56.8 | 6.1 |
| | Other | 6.0 | 5.5 | 4.2 | 4.0 | -0.2 |
| | Total | 185.5 | 200.2 | 221.2 | 380.6 | 159.4 |
| Net sales | Environment | 87.9 | 106.4 | 106.3 | 123.5 | 17.2 |
| | Machinery & Infrastructure | 59.9 | 56.3 | 56.4 | 52.9 | -3.5 |
| | Other | 5.4 | 5.5 | 4.1 | 4.0 | -0.1 |
| | Total | 153.2 | 168.2 | 166.8 | 180.4 | 13.6 |
| Operating income | Environment | -8.1 | -0.5 | -1.3 | -0.7 | 0.6 |
| | Machinery & Infrastructure | -0.6 | -6.2 | 0.0 | -0.9 | -0.9 |
| | Other | 0.3 | 0.4 | 0.0 | 0.2 | 0.2 |
| | Total | -8.4 | -6.3 | -1.3 | -1.4 | -0.1 |

Order Intake, Net Sales, Operating Income (Full year Results and Forecast)

(Billions of JPY)

| | | FY2018 | FY2019 | FY2020 | FY2021 | | Difference | Difference |
|------------------|----------------------------|---------|---------|----------------|------------------------------|-------------------------------|------------|------------|
| | | Results | Results | Results (a) | Forecast as of May (b) | Forecast as of Nov. (c) | (c)-(a) | (c)-(b) |
| Order intake | Environment | 314.7 | 289.4 | 303.7 | 315.0 | 445.0 | 141.3 | 130.0 |
| | Machinery & Infrastructure | 128.3 | 154.0 | 117.3 | 125.0 | 125.0 | 7.7 | 0.0 |
| | Other | 12.0 | 10.7 | 8.4 | 10.0 | 10.0 | 1.6 | 0.0 |
| | Total | 455.0 | 454.1 | 429.4 | 450.0 | 580.0 | 150.6 | 130.0 |
| Net sales | Environment | 228.3 | 254.3 | 269.4 | 265.0 | 265.0 | - 4.4 | 0.0 |
| | Machinery & Infrastructure | 138.4 | 136.7 | 130.8 | 125.0 | 125.0 | - 5.8 | 0.0 |
| | Other | 11.4 | 11.4 | 8.3 | 10.0 | 10.0 | 1.7 | 0.0 |
| | Total | 378.1 | 402.4 | 408.5 | 400.0 | 400.0 | - 8.5 | 0.0 |
| Operating income | Environment | 5.6 | 15.8 | 12.6 | 13.0 | 13.0 | 0.4 | 0.0 |
| | Machinery & Infrastructure | 1.0 | - 2.8 | 2.6 | 1.0 | 1.0 | - 1.6 | 0.0 |
| | Other | 0.7 | 0.8 | 0.1 | 0.0 | 0.0 | - 0.1 | 0.0 |
| | Total | 7.3 | 13.8 | 15.3 | 14.0 | 14.0 | - 1.3 | 0.0 |

Small Segment : Environment Business (2Q Results)

| | | FY2018 2Q | FY2019 2Q | FY2020 2Q (a) | FY2021 2Q (b) | Difference (b)-(a) |
|------------------|-------|--------------|--------------|---------------------|---------------------|-----------------------|
| Order intake | EPC | 43.0 | 54.8 | 85.5 | 138.1 | 52.6 |
| | AOM* | 80.4 | 60.6 | 80.8 | 181.7 | 100.9 |
| | Total | 123.4 | 115.4 | 166.3 | 319.8 | 153.5 |
| Net sales | EPC | 42.8 | 55.1 | 57.4 | 72.0 | 14.6 |
| | AOM* | 45.1 | 51.3 | 48.9 | 51.5 | 2.6 |
| | Total | 87.9 | 106.4 | 106.3 | 123.5 | 17.2 |
| Operating income | EPC | -9.7 | -2.6 | -2.3 | -1.2 | 1.1 |
| | AOM* | 1.6 | 2.1 | 1.0 | 0.5 | -0.5 |
| | Total | -8.1 | -0.5 | -1.3 | -0.7 | 0.6 |

(Billions of JPY)

【Of which, Inova Group (consolidated)】

| | | FY2018 2Q | FY2019 2Q | FY2020 2Q (a) | FY2021 2Q (b) | Difference (b)-(a) |
|------------------|-------|--------------|--------------|---------------------|---------------------|-----------------------|
| Order intake | EPC | 1.9 | 6.5 | 32.2 | 115.3 | 83.1 |
| | AOM* | 5.0 | 6.1 | 3.3 | 119.9 | 116.6 |
| | Total | 6.9 | 12.6 | 35.5 | 235.2 | 199.7 |
| Net sales | EPC | 14.7 | 18.4 | 25.8 | 47.5 | 21.7 |
| | AOM* | 3.4 | 4.9 | 5.8 | 5.0 | -0.8 |
| | Total | 18.1 | 23.3 | 31.6 | 52.5 | 20.9 |
| Operating income | EPC | -7.6 | -2.6 | -1.4 | 1.3 | 2.7 |
| | AOM* | 0.0 | 0.1 | 0.9 | 0.4 | -0.5 |
| | Total | -7.6 | -2.5 | -0.5 | 1.7 | 2.2 |

(Billions of JPY)

*AOM:
After-sales operation and
maintenance and other
post-completion services.

Small Segment : Environment Business (Full year Results and Forecast)

| | | FY2018 | FY2019 | FY2020 | FY2021 | | Difference | Difference | (Billions of JPY) |
|-----------------|-------|---------|---------|----------------|------------------------------|-------------------------------|------------|------------|-------------------|
| | | Results | Results | Results (a) | Forecast as of May (b) | Forecast as of Nov. (c) | (c)-(a) | (c)-(b) | |
| Order intake | EPC | 148.5 | 132.9 | 168.7 | 195.0 | 210.0 | 41.3 | 15.0 | |
| | AOM | 166.2 | 156.5 | 135.0 | 120.0 | 235.0 | 100.0 | 115.0 | |
| | Total | 314.7 | 289.4 | 303.7 | 315.0 | 445.0 | 141.3 | 130.0 | |
| Net sales | EPC | 107.3 | 125.8 | 136.6 | 140.0 | 140.0 | 3.4 | 0.0 | |
| | AOM | 121.0 | 128.5 | 132.8 | 125.0 | 125.0 | - 7.8 | 0.0 | |
| | Total | 228.3 | 254.3 | 269.4 | 265.0 | 265.0 | - 4.4 | 0.0 | |
| Operatng income | EPC | - 9.3 | 1.7 | 1.1 | 1.5 | 1.5 | 0.4 | 0.0 | |
| | AOM | 14.9 | 14.1 | 11.5 | 11.5 | 11.5 | 0.0 | 0.0 | |
| | Total | 5.6 | 15.8 | 12.6 | 13.0 | 13.0 | 0.4 | 0.0 | |

【Of which, Inova Group (consolidated)】

| | | FY2018 | FY2019 | FY2020 | FY2021 | | Difference | Difference | (Billions of JPY) |
|-----------------|-------|---------|---------|----------------|------------------------------|-------------------------------|------------|------------|-------------------|
| | | Results | Results | Results (a) | Forecast as of May (b) | Forecast as of Nov. (c) | (c)-(a) | (c)-(b) | |
| Order intake | EPC | 63.7 | 62.5 | 97.7 | 124.0 | 144.0 | 46.3 | 20.0 | |
| | AOM | 8.4 | 24.4 | 7.2 | 16.0 | 131.0 | 123.8 | 115.0 | |
| | Total | 72.1 | 86.9 | 104.9 | 140.0 | 275.0 | 170.1 | 135.0 | |
| Net sales | EPC | 33.9 | 47.2 | 70.8 | 77.0 | 77.0 | 6.2 | 0.0 | |
| | AOM | 6.1 | 9.0 | 11.5 | 13.0 | 13.0 | 1.5 | 0.0 | |
| | Total | 40.0 | 56.2 | 82.3 | 90.0 | 90.0 | 7.7 | 0.0 | |
| Operatng income | EPC | - 9.2 | 0.3 | 1.8 | 3.0 | 3.0 | 1.2 | 0.0 | |
| | AOM | 1.3 | 0.3 | 0.1 | 0.5 | 0.5 | 0.4 | 0.0 | |
| | Total | - 7.9 | 0.6 | 1.9 | 3.5 | 3.5 | 1.6 | 0.0 | |

Small Segment: Machinery and Infrastructure Business (2Q Results)

(Billions of JPY)

| | | FY2018 2Q | FY2019 2Q | FY2020 2Q (a) | FY2021 2Q (b) | Difference (b)-(a) |
|------------------|----------------------|--------------|--------------|---------------------|---------------------|-----------------------|
| Order intake | Marine Diesel Engine | 5.2 | 15.2 | 10.5 | 12.5 | 2.0 |
| | Press Machine | 13.4 | 12.9 | 4.8 | 7.7 | 2.9 |
| | Process Equipment | 4.0 | 6.9 | 3.7 | 2.4 | - 1.3 |
| | Precision Machinery | 10.5 | 8.9 | 11.3 | 14.4 | 3.1 |
| | Other Machinery | 9.4 | 11.7 | 10.6 | 8.9 | - 1.7 |
| | Infrastructure | 13.6 | 23.7 | 9.8 | 10.9 | 1.1 |
| | Total | 56.1 | 79.3 | 50.7 | 56.8 | 6.1 |
| Net sales | Marine Diesel Engine | 8.0 | 8.0 | 10.3 | 10.9 | 0.6 |
| | Press Machine | 12.5 | 11.3 | 9.7 | 6.1 | - 3.6 |
| | Process Equipment | 7.9 | 5.7 | 6.7 | 5.0 | - 1.7 |
| | Precision Machinery | 12.1 | 9.8 | 9.5 | 10.4 | 0.9 |
| | Other Machinery | 6.7 | 8.2 | 8.1 | 9.2 | 1.1 |
| | Infrastructure | 12.7 | 13.3 | 12.1 | 11.3 | - 0.8 |
| | Total | 59.9 | 56.3 | 56.4 | 52.9 | - 3.5 |
| Operating income | Marine Diesel Engine | - 0.9 | - 0.1 | 0.0 | 0.0 | 0.0 |
| | Press Machine | 0.3 | 0.2 | 0.5 | 0.0 | - 0.5 |
| | Process Equipment | 0.3 | - 2.8 | - 0.7 | - 0.5 | 0.2 |
| | Precision Machinery | 0.2 | - 0.4 | 0.0 | - 0.4 | - 0.4 |
| | Other Machinery | - 0.4 | - 0.1 | 0.3 | 0.3 | 0.0 |
| | Infrastructure | - 0.1 | - 3.0 | - 0.1 | - 0.3 | - 0.2 |
| | Total | - 0.6 | - 6.2 | 0.0 | - 0.9 | - 0.9 |

Small Segment: Machinery and Infrastructure Business (Full year Results and Forecast)

(Billions of JPY)

| | | FY2018 | FY2019 | FY2020 | FY2021 | | Difference (c)-(a) | Difference (c)-(b) |
|------------------|----------------------|---------|---------|----------------|------------------------------|-------------------------------|-----------------------|-----------------------|
| | | Results | Results | Results (a) | Forecast as of May (b) | Forecast as of Nov. (c) | | |
| Order intake | Marine Diesel Engine | 21.8 | 26.7 | 28.4 | 19.5 | 19.5 | - 8.9 | 0.0 |
| | Press Machine | 23.6 | 21.3 | 12.7 | 15.0 | 15.0 | 2.3 | 0.0 |
| | Process Equipment | 12.5 | 22.1 | 4.9 | 18.0 | 18.0 | 13.1 | 0.0 |
| | Precision Machinery | 24.9 | 23.4 | 24.3 | 25.5 | 25.5 | 1.2 | 0.0 |
| | Other Machinery | 17.9 | 20.8 | 19.2 | 15.0 | 15.0 | - 4.2 | 0.0 |
| | Infrastructure | 27.6 | 39.7 | 27.8 | 32.0 | 32.0 | 4.2 | 0.0 |
| | Total | 128.3 | 154.0 | 117.3 | 125.0 | 125.0 | 7.7 | 0.0 |
| Net sales | Marine Diesel Engine | 20.3 | 22.7 | 24.0 | 24.5 | 24.5 | 0.5 | 0.0 |
| | Press Machine | 25.3 | 23.1 | 16.6 | 14.0 | 14.0 | - 2.6 | 0.0 |
| | Process Equipment | 18.9 | 14.3 | 18.4 | 14.0 | 14.0 | - 4.4 | 0.0 |
| | Precision Machinery | 25.3 | 23.5 | 23.9 | 25.5 | 25.5 | 1.6 | 0.0 |
| | Other Machinery | 16.8 | 19.6 | 18.8 | 17.0 | 17.0 | - 1.8 | 0.0 |
| | Infrastructure | 31.8 | 33.5 | 29.1 | 30.0 | 30.0 | 0.9 | 0.0 |
| | Total | 138.4 | 136.7 | 130.8 | 125.0 | 125.0 | - 5.8 | 0.0 |
| Operating income | Marine Diesel Engine | - 1.2 | - 0.4 | 0.0 | 0.1 | - 0.1 | - 0.1 | - 0.2 |
| | Press Machine | - 0.1 | 0.6 | 0.3 | - 0.5 | - 0.3 | - 0.6 | 0.2 |
| | Process Equipment | - 0.5 | - 2.9 | - 0.5 | - 0.3 | - 0.3 | 0.2 | 0.0 |
| | Precision Machinery | 1.0 | 0.7 | 1.0 | 0.8 | 0.8 | - 0.2 | 0.0 |
| | Other Machinery | 0.5 | 0.8 | 1.0 | 0.4 | 0.4 | - 0.6 | 0.0 |
| | Infrastructure | 1.3 | - 1.6 | 0.8 | 0.5 | 0.5 | - 0.3 | 0.0 |
| | Total | 1.0 | - 2.8 | 2.6 | 1.0 | 1.0 | - 1.6 | 0.0 |



地球と人のための技術をこれからも

日立造船はつないでいきます。かけがえのない自然と私たちの未来を。

(将来に関する記述等についてのご注意)

本資料に記載されている業績予想等の将来に関する記述は、当社が現時点で入手している情報及び合理的であると判断する一定の前提に基づいており、実際の業績等は様々な要因により異なる結果となる可能性があります。

Hitz

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<https://www.hitachizosen.co.jp/>