

TOKYO KEIKI INC.



Financial Results Briefing for the Fiscal Year Ended March 31, 2022 (FY2021)

May 13, 2022

Forward-looking statements in this presentation are based on assumptions made by our management based on information available at the time of publication. Therefore, please be aware that there may be differences due to factors such as the business environment in the future.

Financial Results Summary

◆ Results for FY2021

- Sales declined slightly, and operating profit increased significantly.
- The main reason for the decline in revenues was a significant decline in revenues in the Defense business at Defense & Communications Equipment Business due to the off-period in projects up to the fiscal year under review. All other segments saw higher sales. The main reason for the increase in profits was an improvement in the cost of sales ratio.
- Hydraulics and Pneumatics Business posted higher sales and profits year on year, but racked up operating loss due to the impact of soaring raw material prices.
- Fluid Measurement Equipment Business achieved record-high net sales and operating profit.
- Annual dividends are ¥5 for the 125th anniversary, totaling ¥30.

◆ Progress of FY2022 Plan and Medium-Term Business Plan

- Plan to increase sales and profits by capturing strong demand.
- Prioritize investment in human resources and R&D.
- Incorporate external environmental risks to a certain extent, and implement necessary measures.
- The plan is somewhat out of line with the initial plan for the second year of the medium-term management plan, but the company continues to work toward achieving the initial plan.
- The annual dividend is planned to increase the ordinary dividend by ¥5, for a total of ¥30.

◆ TOKYO KEIKI Vision 2030 Progress

- Steady progress is made in future growth drivers and foundation enhancement. It will further accelerate.

◆ Topics

- Marine Systems Business's efforts to reduce greenhouse gas emissions and launch strategic products in existing vessel marketplace.

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- 1. Results for fiscal year ended Mar 2022 (FY2021)**
- 2. Plans for the year ended Mar 31, 2023 (FY2022) and medium-term business plans**
- 3. Topics**

References

Business Trends

Our Business

Net Sales and P/L

- ◆ Net sales declined slightly, all profits exceeded the previous forecast, and profits increased significantly year on year.
- ◆ The operating profit margin and ROE are positive y-o-y, but the Company is aiming to further improve them.

(Million yen)	FY2020 Results	FY2021 Results	YoY change		Vs. Previous forecast (Announced on Feb. 10, 2022)		
			Amount	Rate	Forecast	Amount	Rate
Net sales	42,081	41,510	▲572	▲1.4%	42,100	▲590	▲1.4%
Operating profit	1,250	1,635	+385	+30.8%	1,440	+213	+14.8%
Ordinary profit	1,458	1,926	+468	+32.1%	1,730	+196	+11.3%
Profit attributable to owners of parent	945	1,493	+549	+58.1%	1,310	+183	+14.0%

Operating profit margin	3.0%	3.9%	+0.9pt
ROE	3.1%	4.6%	+1.5pt

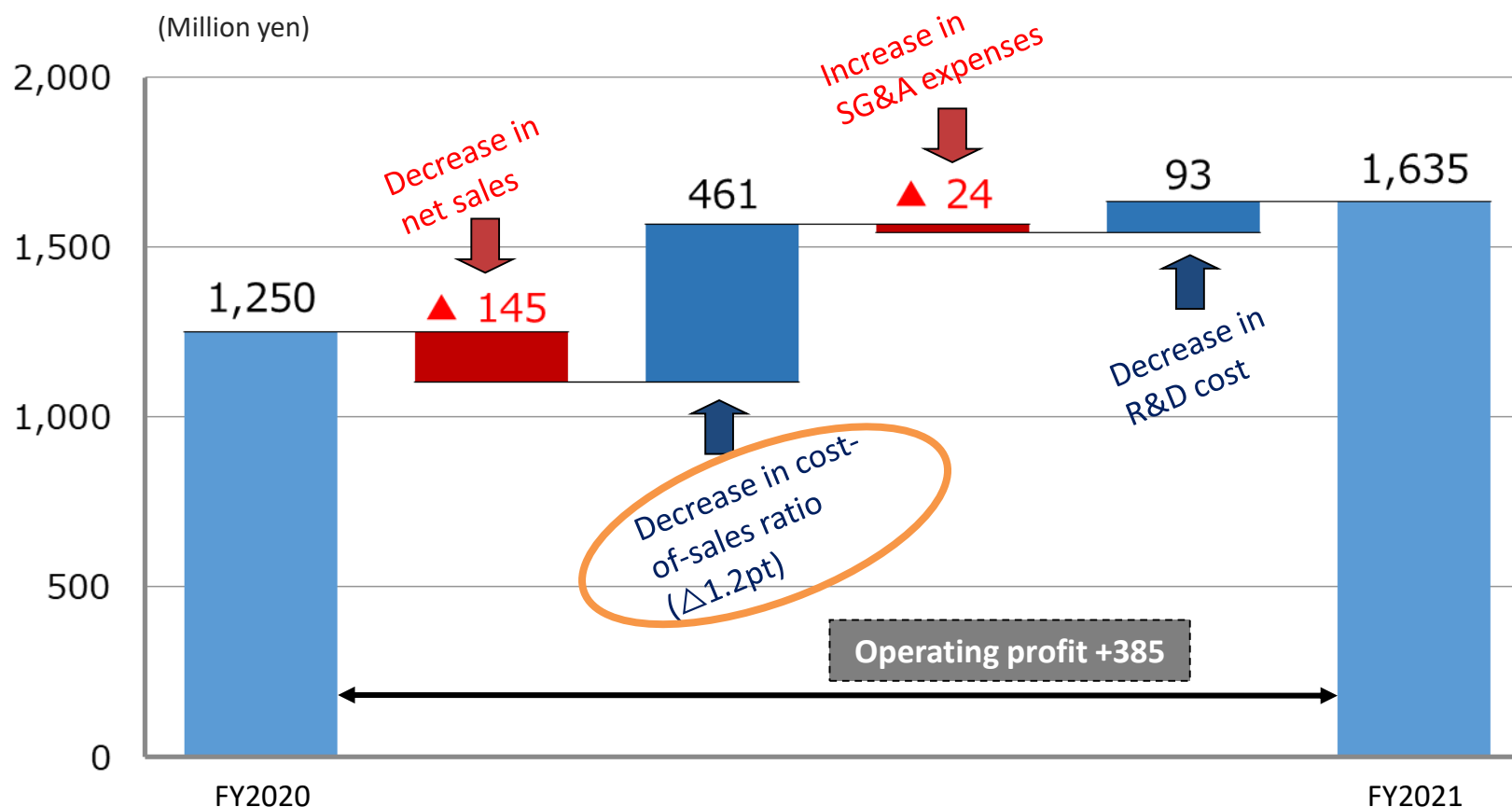
Net Sales and Operating Profit by Segment

- ◆ Marine Systems : Sales and profits increased due to robust sales of equipment for new ships and maintenance services.
- ◆ Hydraulics and Pneumatics : Although sales and profits increased due to demand recovery in all markets, operating loss was affected by soaring raw material prices.
- ◆ Fluid Measurement Equipment : Both net sales and operating income reached record highs due to strong sales of mainstay ultrasonic flowmeters and strong sales of fire extinguishing facilities and inspection work.
- ◆ Defense & Communications Equipment : Although sales and profits increased in Communication & Control Equipment business, sales and profits declined overall because of a decline in the Defense business due to the off-period in projects.
- ◆ Others : Sales increased in Printing Inspection Equipment business as replacement demand recovered, but profit decreased overall due to a decrease in sales of mainstay ultrasonic rail inspection cars in Railway Maintenance Business.

	Net sales							Operating profit						
(Million yen)	FY2020 Results	FY2021 Results	YoY change		Previous forecast (Announced on Feb. 10, 2022)			FY2020 Results	FY2021 Results	YoY change		Vs. Previous forecast (Announced on Feb. 10, 2022)		
			Amount	Rate	Forecast	Change				Amount	Rate	Forecast	Change	
						Amount	Rate						Amount	Rate
Marine Systems	8,522	8,700	+179	+2.1%	8,800	▲100	▲1.1%	246	388	+141	+57.4%	340	+48	+14.1%
Hydraulics and Pneumatics	10,351	11,526	+1,175	+11.4%	11,830	▲304	▲2.6%	▲424	▲115	+309	-	20	▲135	
Fluid Measurement Equipment	4,003	4,432	+429	+10.7%	4,350	+82	+1.9%	647	915	+267	+41.3%	750	+165	+22.0%
Defense & Communications Equipment	16,281	13,884	▲2,397	▲14.7%	14,130	▲246	▲1.7%	537	312	▲225	▲41.9%	270	+42	+15.6%
Others	2,924	2,966	+43	+1.5%	2,990	▲24	▲0.8%	330	250	▲81	▲24.4%	150	+100	+66.7%
Total	42,081	41,510	▲572	▲1.4%	42,100	▲590	▲1.4%	1,250	1,635	+385	+30.8%	1,440	+195	+13.5%

Changes in Operating Profit (YoY)

- ◆ Profit increased mainly due to an improvement in the cost of sales ratio.
- ◆ Cost of sales ratio improved due to higher output at Hydraulics and Pneumatics Business and higher sales at Fluid Measurement Equipment Business.



Trends in Key Indicators

- ◆ The company aims to further improve ROE, although it is positive year-on-year.
- ◆ The equity ratio continues to maintain financial soundness.

	FY2017	FY2018	FY2019	FY2020	FY2021
ROE (%) (Return on equity)	4.1	6.8	4.9	3.1	4.6
ROA(%) (Return on asset)	2.7	4.6	3.6	2.7	3.5
Equity ratio (%)	48.3	49.8	53.5	58.7	58.7
EPS (yen) (Earnings per share)	67.6	117.2	86.8	57.7	91.1
BPS (yen) (Book-value per share)	1,695.2	1,764.2	1,782.4	1,919.2	2,005.0

Status of Orders Received and Order Backlog

- ◆ Orders received and order backlog increased in all businesses except for orders received for Defense & Communications Equipment.
 - Marine Systems : Demand for new shipbuilding remained firm, and both orders received and order backlog increased.
 - Hydraulics and Pneumatics : Demand recovered in all markets, and both orders received and order backlog increased.
 - Fluid Measurement Equipment : Both orders and order backlog increased due to strong demand from the public sector.
 - Defense & Communications Equipment : Orders received declined because there were no large-scale projects in the Defense business in the fiscal year under review. The order backlog increased due to a lump-sum contract for multiple-year deliveries in the Defense business prior to the previous fiscal year.
 - Others : Orders backlog increased due to the concentration of deliveries of ultrasonic rail inspection cars in FY2022.

	Amount of orders Received For FY2021				Amount of order backlog at the end of FY2021			
(Million yen)	FY2020	FY2021	Amount of Change	Rate of Change	FY2020	FY2021	Amount of Change	Rate of Change
Marine Systems	8,123	9,772	+1,649	+20.3%	2,277	3,348	+1,071	+47.0%
Hydraulics and Pneumatics	10,463	12,126	+1,664	+15.9%	2,659	3,260	+601	+22.6%
Fluid Measurement Equipment	4,055	4,571	+515	+12.7%	1,015	1,153	+138	+13.6%
Defense & Communications Equipment	16,582	15,088	▲ 1,494	▲ 9.0%	15,571	16,775	+1,204	+7.7%
Others	3,398	3,520	+122	+3.6%	903	1,467	+565	+62.6%
Total	42,621	45,077	+2,456	+5.8%	22,425	26,003	+3,579	+16.0%

Cash Flows

- ◆ Free cash flow remained positive, despite a decline in deliveries of large-scale projects in Defense & Communications Equipment Business, upfront arrangements for parts and materials, and an increase in inventories in line with an increase in orders.

(Million yen)	FY2017	FY2018	FY2019	FY2020	FY2021
Operating CF	463	1,638	2,915	7,068	2,256
Investment CF	△1,374	△1,135	△1,139	△928	△572
FCF	△911	503	1,776	6,140	1,684
Financial CF	2,589	△920	△3,456	△2,247	△1,120
Cash and cash equivalents at end of period	9,828	9,397	7,709	11,588	12,208

※ FCF (Free Cash Flow): Calculated by operating CF + Investment CF.

Depreciation	1,221	1,338	1,230	1,128	1,073
Capital investment	1,363	1,102	993	1,145	815

Balance Sheet

- ◆ The equity ratio stood at 58.7% at the end of Mar 2022, continuing to maintain financial soundness.
- ◆ Inventories and notes and accounts payable increased due to higher materials prices, advance arrangements for longer procurement periods and an increase in orders.

(Assets)

(Liabilities and Net Assets)

(Million yen)	As of Mar 31,2021	As of Mar 31, 2022	Amount of change	Million yen	As of Mar 31,2021	As of Mar 31, 2022	Amount of change
Current assets	40,950	43,102	+2,152	Current liabilities	17,722	19,031	+1,309
Cash and deposits	11,620	12,244	+624	Notes and accounts payable	5,093	6,565	+1,472
Notes and accounts receivable	12,568	11,976	△592	Short-term loans payable	8,516	8,102	△414
Electronically recorded monetary claims	3,816	3,353	△462	Provision for bonuses	1,097	1,159	+62
Inventories	12,673	14,979	+2,305	Non-current liabilities	3,884	3,640	△245
Accounts receivable	32	245	+213	Long-term loans payable	2,424	2,136	△288
Other	245	307	+61	Total liabilities	21,607	22,671	+1,064
Non-current assets	12,596	12,916	+320	Shareholders' equity	29,619	30,708	+1,089
Tangible assets	6,970	6,617	△353	Retained earnings	23,076	24,152	+1,075
Intangible assets	33	94	+61	Accumulated other comprehensive income	1,835	2,180	+344
Investment securities	3,606	3,956	+350	Total net assets	31,939	33,348	+1,409
Total assets	53,546	56,018	+2,473	Total liabilities and net assets	53,546	56,018	+2,473

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Business Trends

Our Business

Our mission

**Achieve safety for society and happiness
for people through proprietary technology
centered on measurement, recognition,
and control.**

Our values

Untiring challenge

Net Sales and Profit/Loss Forecast for FY2022

<Year-on-year change>

- ◆ Sales and profits are expected to increase year-on-year by capturing the increased order backlog and strong demand in each market.

<Comparison with the medium-term Business plan>

- ◆ In the Defense Business, due to the timing lag in projects, the Company is currently not expected to reach its medium-term business plan targets, but it intends in all the business to continue responding to the initial plan by launching new products and strengthening existing businesses.

(Million yen)	FY2021	FY2022				FY2023 Medium-Term Business Plan Targets*
		Forecast	YoY change	Medium-Term Business Plan Targets*		
			Change Amount (rate)	Plan	Change Amount (rate)	
Net sales	41,510	45,400	+3,890 (+9.4%)	47,100	▲ 1,700 (▲ 3.6%)	49,400
Operating profit	1,635	1,850	+215 (+13.2%)	2,490	▲ 640 (▲ 25.7%)	3,500
Ordinary profit	1,926	2,100	+174 (+9.0%)	2,560	▲ 460 (▲ 18.0%)	3,550
Profit attributable to owners of parent	1,493	1,550	+57 (+3.8%)	1,750	▲ 200 (▲ 11.4%)	2,580

*Announced on Jun 10, 2021.

Medium-Term Business Plan: Progress by Segment

- ◆ All segments saw year-on-year increases in sales. Profits are expected to increase as a whole due to higher profits in Hydraulics and Pneumatics Business and Other Business.
- ◆ Operating profit at Marine Systems Business and Fluid Measurement Equipment Business declined temporarily due to investments in human resources and R&D for the future.
- ◆ In Defense & Communications Equipment business, sales and profits declined from the medium-term plan targets due to a delay in projects in the Defense business, but sales and profits increased YoY.

	Net sales						Operating profit					
Unit : (Million yen)	FY2021	FY2022				FY2023 Medium-Term Business Plan Targets*	FY2021	FY2022				FY2023 Medium-Term Business Plan Targets*
		Forecast	YoY change	Medium-Term Business Plan Targets*				Forecast	YoY change	Medium-Term Business Plan Targets*		
			Amount (rate)	Plan	Change Amount (rate)				Change (rate)	Plan	Change Amount (rate)	
Marine Systems	8,700	9,500	+800 (+9.2%)	9,500	0 (0%)	9,700	388	330	▲58 (▲14.9%)	400	▲70 (▲17.5%)	510
Hydraulics and Pneumatics	11,526	12,400	+874 (+7.6%)	12,100	+300 (+2.5%)	12,800	▲115	270	+385 (-)	320	▲50 (▲15.6%)	740
Fluid Measurement Equipment	4,432	4,500	+68 (+1.5%)	4,500	0 (0%)	4,700	915	500	▲415 (▲45.4%)	420	+80 (+19.4%)	490
Defense & Communications Equipment	13,884	15,200	+1,316 (+9.5%)	17,000	▲1,800 (▲10.6%)	18,500	312	420	+108 (+34.6%)	710	▲290 (▲40.8%)	1,230
Others	2,966	3,800	+834 (+28.1%)	4,300	▲500 (▲11.6%)	4,000	250	490	+240 (+96.0%)	810	▲320 (▲39.5%)	690
Total	41,510	45,400	+3,890 (+9.4%)	47,100	▲1,700 (▲3.6%)	49,400	1,635	1,850	+215 (+13.1%)	2,490	▲640 (▲25.7%)	3,500

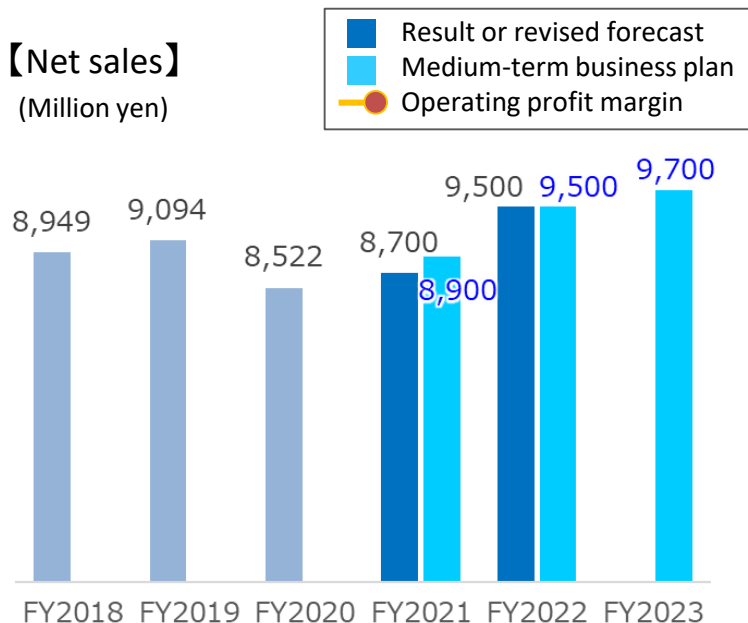
*Announced on Jun. 10, 2021.

(Segment sales and operating profit are before adjustments.)

Marine Systems Business

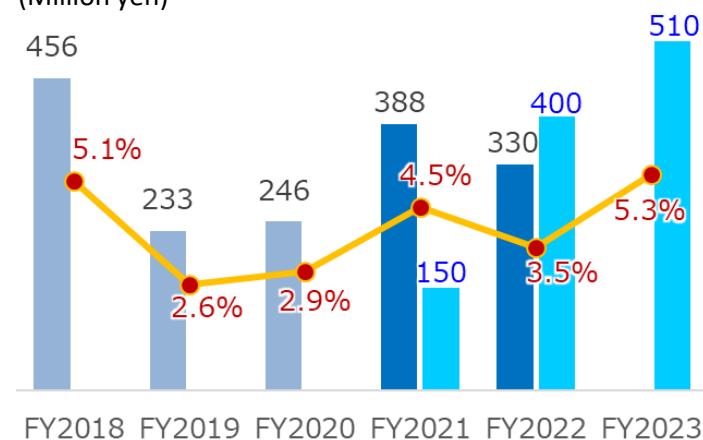
【Net sales】

(Million yen)



【Operating profit】

(Million yen)



Medium-Term Business Plan

- New shipbuilding market: Secure profits by increasing further market share and reducing costs for mainstay products such as autopilots and marine gyrocompasses.
- Existing vessel market: Focus on expanding sales of new electronic chart display and information systems (ECDIS) and equipment replacement and maintenance services.
- Overseas market (China): Expand sales of compact marine gyrocompasses and medium-sized autopilot for inland shipping and fishing vessels in China.

Progress

- In FY2021, sales of equipment for newly built vessels increased, and demand for maintenance services increased. Due in part to the weaker yen, operating profit increased substantially YoY and compared to forecasts.
- In FY2022, sales of equipment for newly built vessels and demand for maintenance services are expected to be steady. However, profits are expected to decrease from the previous period due to the enhancement of upfront investment in human resources, R&D, etc.
- Participating in demonstration tests on unmanned vessels and vessels that can reduce greenhouse gas emissions.

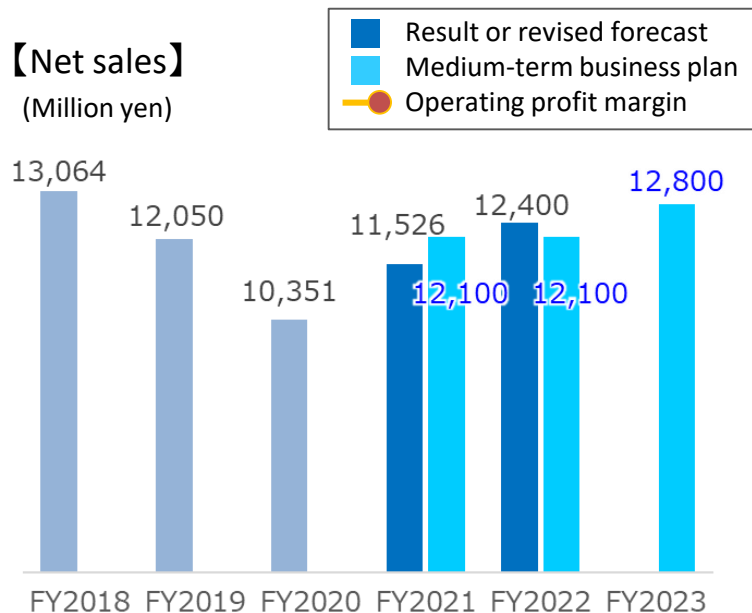
Future Measures

- Expand sales of New ECDIS, launched in Apr 2022, mainly for existing vessel.
- Thorough cost reductions and creation of investment capacity by withdrawing from unprofitable products.
- In the medium to long term, develop products and businesses for autonomous and unmanned vessels.
- Develop energy-saving maneuvering and other technologies that contribute to the reduction of greenhouse gases.

Hydraulics and Pneumatics Business

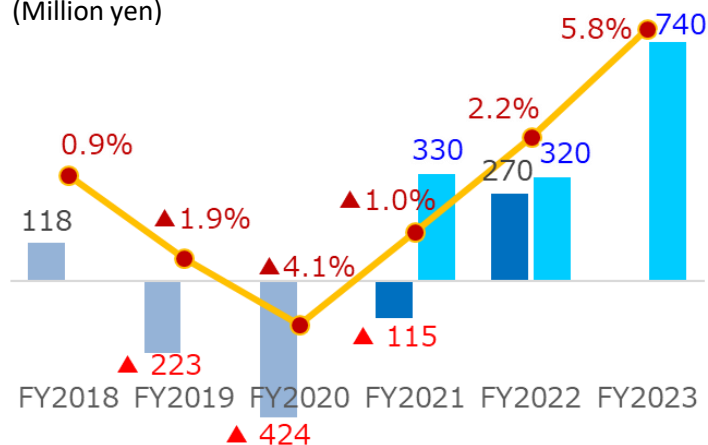
【Net sales】

(Million yen)



【Operating profit】

(Million yen)



Medium-Term Business Plan

- Expand sales of high-value-added products and launch high-pressure, large-capacity products in the market.
- Expand business domains in hydrogen-related businesses as a business that contributes to the realization of a decarbonized society.
- Enter the steel and chemical plant markets for existing hydraulic products.
- Develop high-value-added hydraulic units in response to the shift to IoT.
- Develop electronic devices for next-generation construction machinery.

Progress

- In FY2021, although the cost of sales ratio improved due to an increase in production volume, profits were down from the initial plan caused by a raw material cost rise.
- In FY2022, we anticipate that demand will continue to recover in all of the market, but surges in raw material costs will continue.
- Launch and expand sales of new products, such as a new positive displacement flowmeter and solenoid directional valves with an explosion-proof and pressure-resistant specifications.

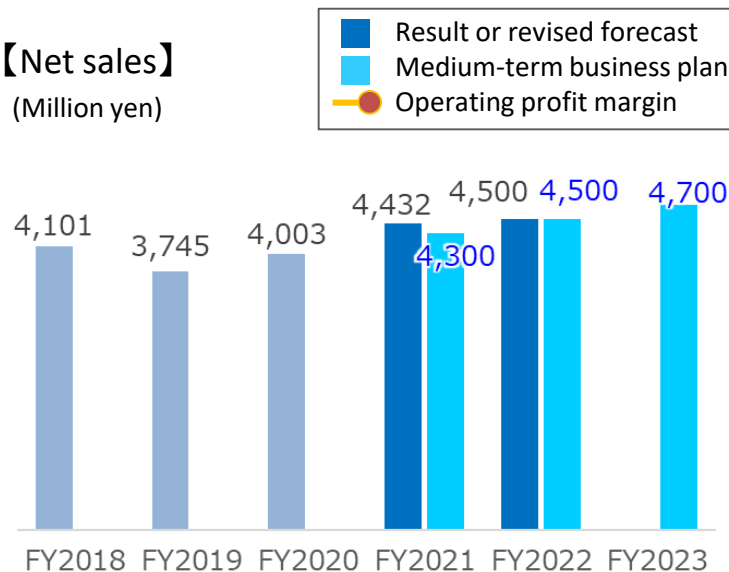
Future Measures

- Continue to negotiate selling prices with customers so that they can pass on the sharp rise in raw material prices due to high resource prices.
- Develop various devices for hydrogen filling stations.
- Develop high-pressure, large-capacity pumps for light-weight alloy molding for EV/FCV.

Fluid Measurement Equipment Business

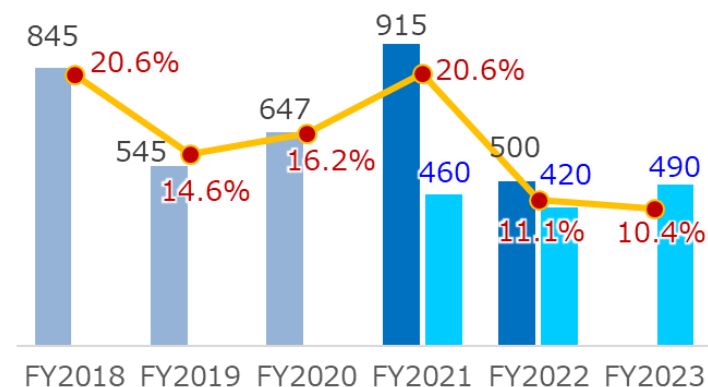
【Net sales】

(Million yen)



【Operating profit】

(Million yen)



Medium-Term Business Plan

- Domestic public-sector market
 - Expand sales of high-precision ultrasonic flowmeters in the water and sewerage markets.
 - Expand sales of water level measuring systems for disaster prevention markets.
- Private market
 - Increase shares of microwave level gauges for plants.
 - Introduce and expand sales of new docking support systems.
- Fire extinguishing systems market
 - Promote gas cylinder valve inspections and repairs to strengthen accident-prevention measures.

Progress

- In FY2021, sales of the flagship ultrasonic flowmeters and sales and inspection of fire extinguishing systems were strong, and operating profit was significantly higher than planned.
- In FY2022, demand for measuring instruments, sales of fire extinguishing systems and their inspections continued to be steady.
- Operating profit is expected to achieve the target, but profits declined year on year due to soaring raw material prices, changes in the product mix, and investment in human resources.

Future Measures

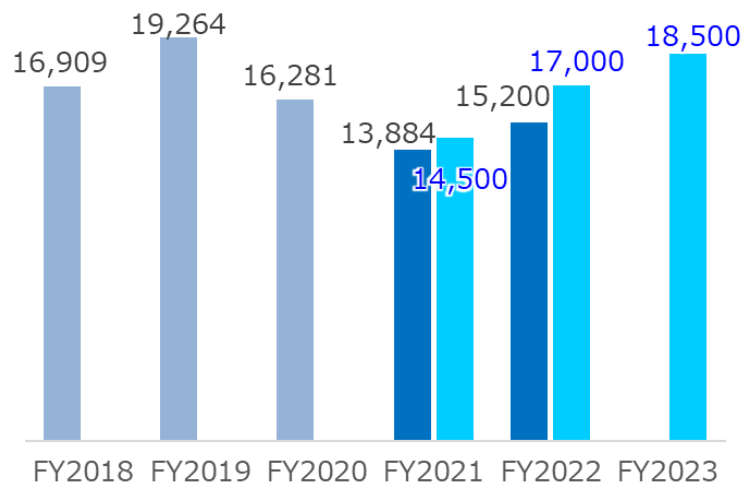
- Measuring equipment: Expanded series of high-precision ultrasonic flowmeters, small-scale system products, and new docking support systems.
- Fire extinguishing systems: Expand sales in new markets by expanding customers, target facilities, product groups, etc.
- Overseas: Promote sales and technical support for dealers in Southeast Asia through the use of Representative Office in Ho Chi Minh City.

Defense & Communications Equipment Business

【Net sales】

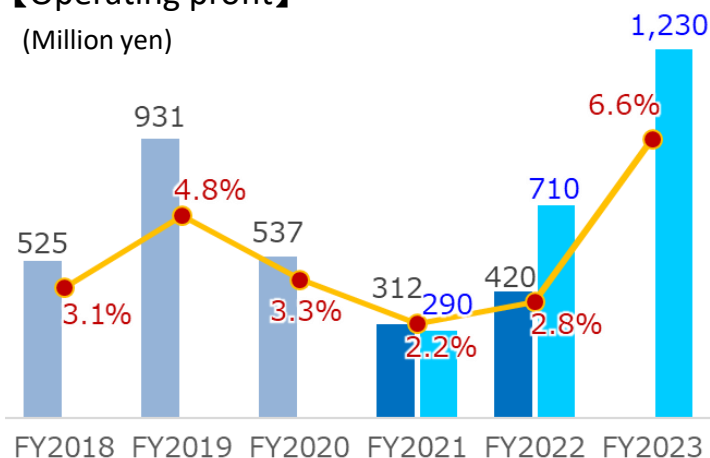
(Million yen)

■ Result or revised forecast
■ Medium-term business plan
● Operating profit margin



【Operating profit】

(Million yen)



Medium-Term Business Plan

- Defense business
 - Defense equipment: Expand applications through microwave-related R&D.
 - Marine Traffic Equipment: Promote sales expansion in foreign markets of new models of solid-state radars for coastal monitoring, which contributes to safe marine traffic.
- Communication & Control Equipment business
 - Inertial sensor and applied equipment: Continue to develop and expand sales of equipment related to automation for agricultural machinery that contributes to efficiency in agriculture.
 - High-Frequency Applications: Develop products such as expanding applications for microwave amplifiers for semiconductor production equipment, with a prospect of two to three years ahead.

Progress

- In FY2021, sales of equipment for semiconductor production equipment increased, while sales in the Defense business decreased due to an off-period in projects that had already been factored in. So it was basically in line with the plan.
- In FY2022, there will be a delay in the delivery period for defense equipment, so the delivery plan should be carried forward to the next fiscal year.
- In the maritime traffic system business, there were discrepancies in FY2021 and FY2022, and both are scheduled to be carried forward to the next fiscal year respectively.

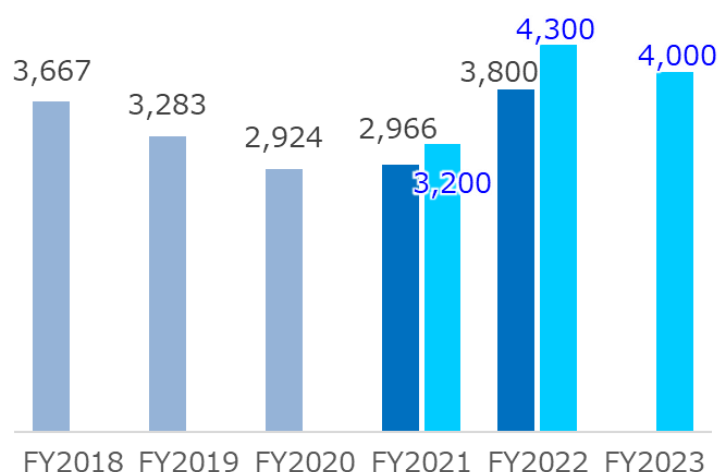
Future Measures

- Defense equipment: Increase orders for fiber optic gyrocompasses (FOG) .
- Maritime traffic equipment: Expand sales of VTS radars in Europe.
- Inertial sensor and applied equipment: Expand the scope of automation for agricultural machinery. In addition, we will expand the technologies we have cultivated in agricultural machinery to other markets, such as social infrastructure and construction machinery.
- High-frequency application equipment: Expand the use of solid-state microwave power supplies, including for semiconductor production equipment .
- Communication & control equipment: Expand attitude control technology in the fields of information and communications, video media, and disaster prevention.

Other Businesses (Inspection Systems, Railway Maintenance)

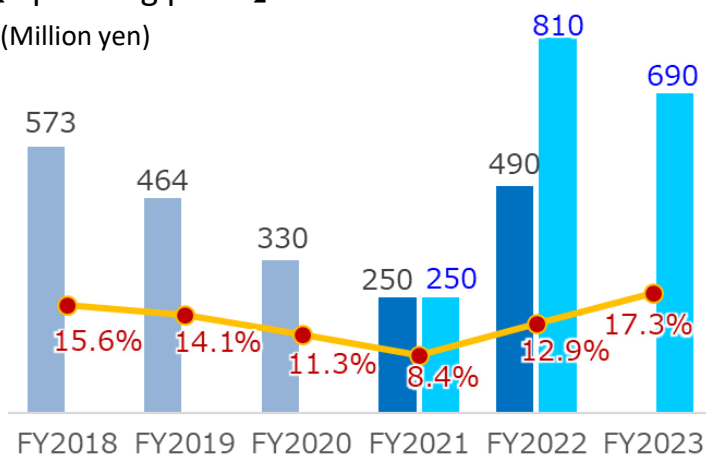
【Net sales】

(Million yen)



【Operating profit】

(Million yen)



Medium-Term Business Plan

- Inspection Systems business
 - Focus on expanding market share, centered on the gravure printing market, which holds the top share of the domestic market.
 - Strongly promote globalization.
- Railway Maintenance business
 - R&D and launch next-generation strategic products that will lead to the safety and security of railway transportation as a social infrastructure, as a core product following rail inspection cars.
 - Create new inspection services.

Progress

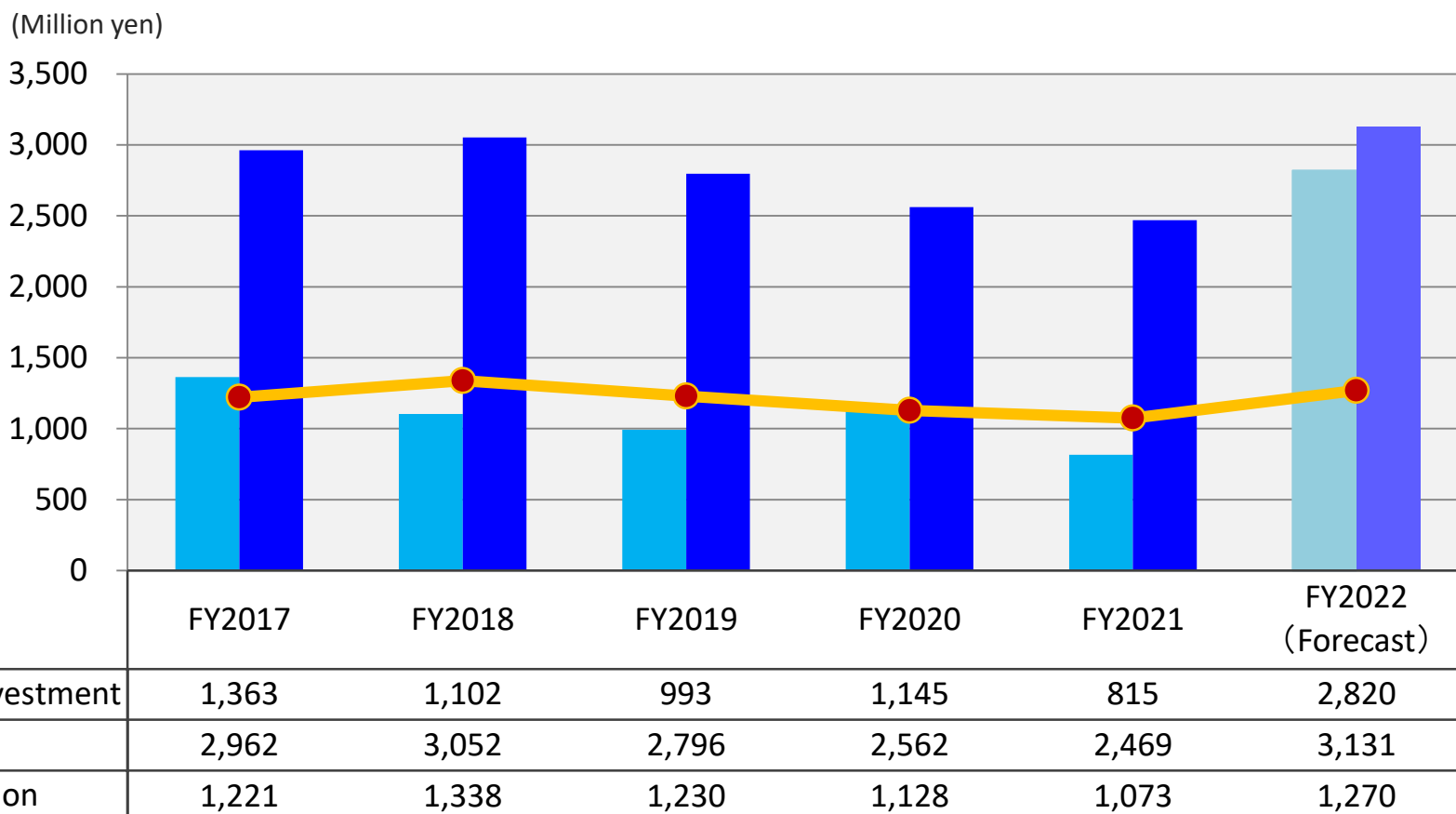
- In FY2021, Inspection Equipment business was steady. In Railway Maintenance business, sales of the mainstay ultrasonic rail inspection cars declined y-o-y, but have already been factored into the forecast since the beginning.
- In FY2022, we forecast higher sales and profits YoY by delivering rail inspection cars in Railway Maintenance business.
- On the other hand, it is expected to be difficult to achieve the plan due to the postponement of equipment upgrades by railway companies because of the prolonged collapse of COVID-19.

Future Measures

- Inspection Systems business
 - Develop printing inspection Equipment for bag-making equipment and introduce inspection equipment for plain-surface.
 - Promote Internet-based marketing and strengthen overseas sales.
- Railway Maintenance business
 - Develop and launch new inspection equipment.
 - Expand sales of new switch profile gauges for railway.

Capital Investment, R&D, Depreciation

- ◆ In FY2022, we plan to significantly increase our capital investment compared to the previous period by making growth investments in Marine Systems Business and Defense & Communications Equipment Business and upgrading our company-wide system.



Status of External Environmental Risks

	Occurrences	Target Business	Response	Degree of impact
Difficulty of obtaining materials and rises in raw material prices	<ul style="list-style-type: none"> • In private-sector products, difficulty in obtaining some electronic components continues. • Difficulty in obtaining some overseas purchased products becomes chronic. • Material costs continue to deteriorate due to soaring prices for metal materials such as iron, copper, and aluminum, and for semiconductors, connectors, and switches. • The situation in Ukraine deteriorates the costs further. 	✓All businesses	<ul style="list-style-type: none"> • Continue to adjust delivery by advance arrangements etc. • Secure market inventory by expanding suppliers. • Adjust delivery timing. • Procure substitutes. • Continue negotiations with customers to raise sales prices. 	Medium
Situation in Ukraine (Sales side)	<ul style="list-style-type: none"> • Decrease in sales to Russia makes minimal impact on overall businesses. 	✓Marine Systems Business	<ul style="list-style-type: none"> • Recover through sales activities in other countries. 	Low
Shanghai Lockdown	<ul style="list-style-type: none"> • Difficulty in obtaining parts and purchased products arises. 	<ul style="list-style-type: none"> ✓Marine Systems Business ✓Hydraulics and Pneumatics Business 	<ul style="list-style-type: none"> • Adjust delivery timing. 	Low
Exchange rate	<ul style="list-style-type: none"> • Depreciation of the yen contributes to higher sales and profits. 	✓Marine Systems Business	<ul style="list-style-type: none"> • Watch price increases of purchases. 	Low

Profit returns to shareholders

[Dividend Policy]

Our basic policy is to implement optimal shareholder returns measures that take into account an optimal capital structure, while giving top priority to growth-oriented investments, with a view to balancing these investments with our financial base, in order to increase corporate value by realizing TOKYO KEIKI Vision 2030. In accordance with this stance, we will strive for stable and continuous shareholder returns with regard to dividends for each fiscal year, taking into account our past dividend performance.

[Commemorative dividend]

We celebrated the 125th anniversary of our founding on May 1, 2021. To commemorate this situation, we will pay a total of ¥30 per share for FY2021, including a commemorative ¥5 per share for an ordinary dividend of ¥25 per share. In FY2030, we plan to pay an ordinary dividend of ¥30 per share.

[Shareholder benefits program (TOKYO KEIKI Premium Benefits Club)]

No plans at present to change the shareholder benefits program.

Dividend for the last five years and forecast for FY2022

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022 (Forecast)
Annual dividend per share (yen)	20.00	25.00	25.00	25.00	Common, 25.00 +Commemorative 5.00	30.00
Payout ratio (consolidated) (%)	29.6	21.3	28.8	43.4	32.9	31.7
Total return ratio (consolidated) (%)	37.1	25.6	34.7	43.4	33.0	—

Status of recent acquisition of treasury shares

	May 2014	May 2015	Nov 2015	Nov 2017	Feb 2019	Nov 2019
Total number of reacquired shares (yen) *	310,000	300,000	335,000	58,000	76,800	84,700
Acquisition cost (million yen)	84	84	84	85	85	85

*From Nov 2017 onward, the numbers of shares are those after consolidation of shares.
(The numbers before consolidation shares are 1/5 of the stated numbers.)

TOKYO KEIKI Vision 2030 Progress

Growth Drivers

	Business Activities	Progress
Edge AI business	<ul style="list-style-type: none"> ● Create new businesses through the conversion of DAPDNA, our proprietary dynamic reconfigurable processors, to edge-AI. 	<ul style="list-style-type: none"> ✓ Developing tools for AI-programming on DAPDNA. ✓ Expanding use of the development tools by disclosing them.
Hydrogen & energy business	<ul style="list-style-type: none"> ● Systematize the hydrogen compressor. ● Enter hydrogen related fields other than compression equipment. 	<ul style="list-style-type: none"> ✓ Entered into a business alliance with Sunny Ltd., as a step toward promoting packaged sales of hydrogen filling stations. ✓ Considering the possibility of becoming a maintenance business.
Aerospace business	<ul style="list-style-type: none"> ● Expand sales of microwave amplifiers for SAR satellites. ● Develop a business that utilizes satellite image data in the existing markets of our business. 	<ul style="list-style-type: none"> ✓ Mass producing microwave amplifiers for small SAR satellites. ✓ The business of utilizing satellite image data is under investigation.

Strengthen core areas

Promoting open innovation with partners who share our vision of the future	<ul style="list-style-type: none"> ● Entered into a business alliance with Sunny Ltd. to develop the hydrogen business.
Creating a motivating and pioneering culture	<ul style="list-style-type: none"> ● Revised to a new personnel system to promote reforms to a corporate culture of “challenge”.

High-level management practices

Sustainability management	<ul style="list-style-type: none"> ● Established the Sustainability Committee and the Sustainability Promotion Office, and published Sustainability Report 2021.
DX initiatives (Internal system renovation)	<ul style="list-style-type: none"> ● Promoting the project to integrate core systems within the company.

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1. Results for fiscal year ended Mar 2022 (FY2021)
2. Plans for the year ended Mar 31, 2023 (FY2022) and medium-term business plans
3. Topics

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Our Business

Topic 1

High-Tech Large Sailing Carriers to the World's Seas Wind Challenger Project progresses

The Wind Challenger Project involves research and development of large sailing vessels that use wind as a propulsion force for ships.

Tokyo Keiki offers marine autopilots and gyrocompasses that employ a new control scheme.



[What is Wind Challenger Project?]

The Wind Challenger is a project aimed at significantly reducing greenhouse gas (GHG) emissions by utilizing wind power as a propulsion force for a vessel by the large rigid sail. The sail, made by glass fiber reinforced plastics (GFRP), can be automatically extended and shrunk. By using this sail, **GHG emissions are expected to reduce by 5-8% per sail** compared to conventional similar sized vessels.

This project is a joint industry-academia project led by Mitsui O.S.K. Lines, Ltd. and Oshima Shipbuilding Co., Ltd., and **Tokyo Keiki provides marine autopilots and gyrocompasses**. Aiming for the completion of the first vessel during FY2022, **the rigid sail was completed in March 2022**.



Image of a cargo ship with rigid sails



Rigid sail that can expand, shrink, and rotate automatically according to wind directions and speeds

[Tokyo Keiki Technology]

In the case of sailing vessels that are more affected by wind than normal vessels, energy-efficient navigation cannot be realized unless outside disturbances including wind and waves and tidal currents are estimated more accurately for the best rudder control.

Therefore, **Tokyo Keiki has developed a new control method, "NCTeN"**. NCTeN can estimate the vessel's motion characteristics and outside disturbance more accurately using various navigation data **to maintain appropriate navigation routes without turning wasteful rudders**.

Tokyo Keiki will feed back NCTeN's techniques to regular autopilots as well to develop safer, more energy-efficient products.



Tokyo Keiki Participates in the project with autopilots and Gyrocompasses.

Topic 2

New Electronic Chart Display and Information Systems (ECDIS)
Contributing to Solving Social Issues with Three Concepts

Tokyo Keiki has begun sales of new ECDIS based on the three concepts related to social contribution. In this product, we have been promoting development with the aim of reducing the shortage of crew members and the difficulty of acquiring skills in the shipping industry.

[What is ECDIS?]

ECDIS has a function to display the position of own ship on the same screen based on electronic navigational charts, and to display radar, scheduled route, etc. overlapping each other. Electric navigational charts indicate information necessary for the safety of navigation, such as own ship's location, course, and speed, in addition to information in conventional paper charts.



[Three concepts]

The new ECDIS can reduce the burden on the crew and realize efficient operation by acquiring easy learning of operation techniques and shortening of maintenance hours.

① Simple operation via
Multifunction touch screen

- A new touch Panel LCD allowing for easy smart phone style operation.
- The touch panel can be laid flat so that multiple crew members may operate simultaneously.



<https://youtu.be/eVAYqL4xbaA>

② Familiarization Training
via built in Tutorial Function

- A built-in tutorial function makes possible to watch operation procedure on ECDIS itself, by PC at cabin or shore side.
- Training records can be issued as a certificate to support the crew's knowledge and proficiency.



https://www.youtube.com/watch?v=L4Kg_ipinPM

③ Easy onboard maintenance
by crews

- Main parts can be easily replaced without any special tools by the ship's crew, using spare parts onboard.
- There is no loss of time because the system can be restored without a service engineer's attendance.



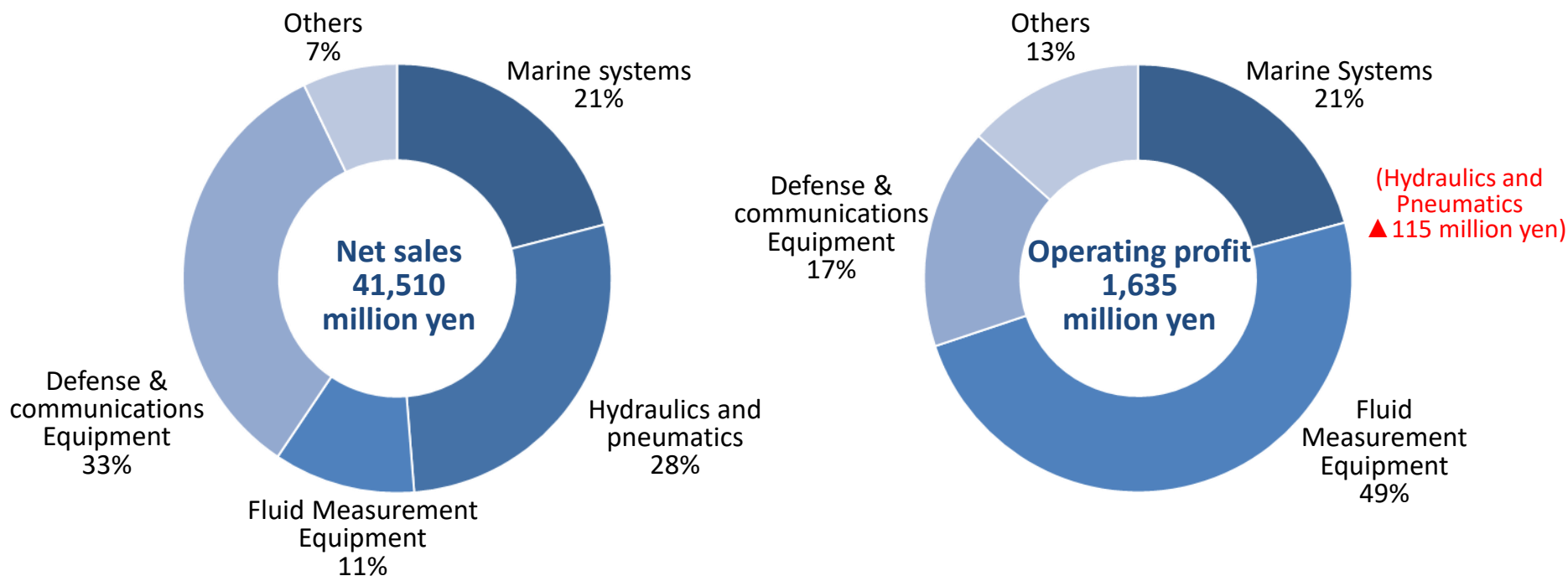
<https://www.youtube.com/watch?v=qH8vszJT7il>

References

Business Trends

Our Business

Segment Ratio of Net Sales and Operating Profit for FY2021

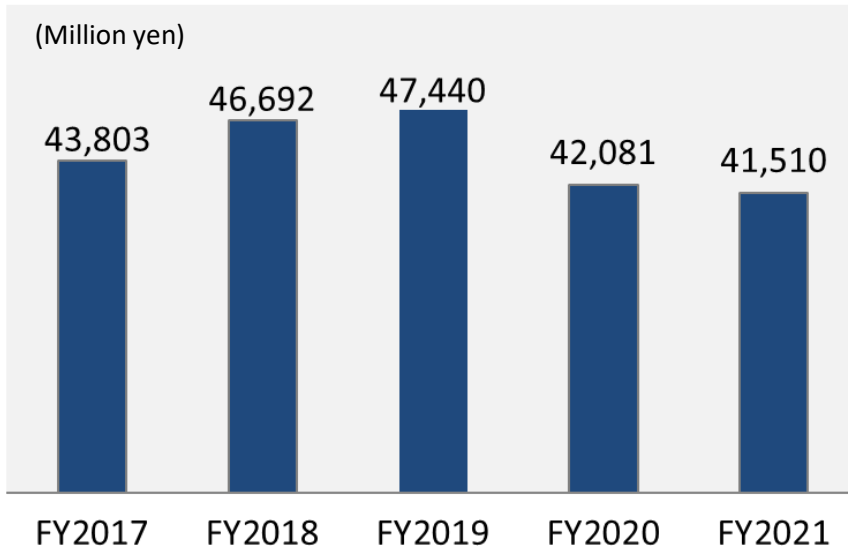


Business characteristics

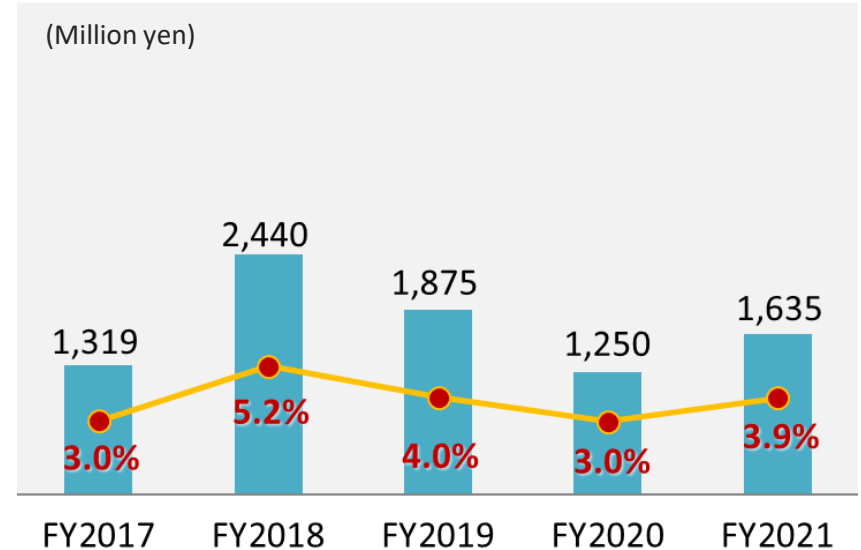
- ◆ Due to the nature of the business, Fluid Measurement Equipment Business, Defense and Communications Equipment Business, and Others in Railway Maintenance Business have sales and earnings weighted in the second half, while there is little seasonality in Marine Systems Business and Hydraulics and Pneumatics Business.
- ◆ Performance of Hydraulics and Pneumatics Business is affected by the economy.
- ◆ In Defense and Communications Equipment Business, the profit margin of Defense equipment business is low, but profits tend to fluctuate greatly depending on types of projects, as well in Marine traffic equipment business. Therefore, the Company is working to improve and stabilize the profit margin by expanding sales in Communication & control equipment business.

Changes in Net Sales and Operating Profit

【Net sales】



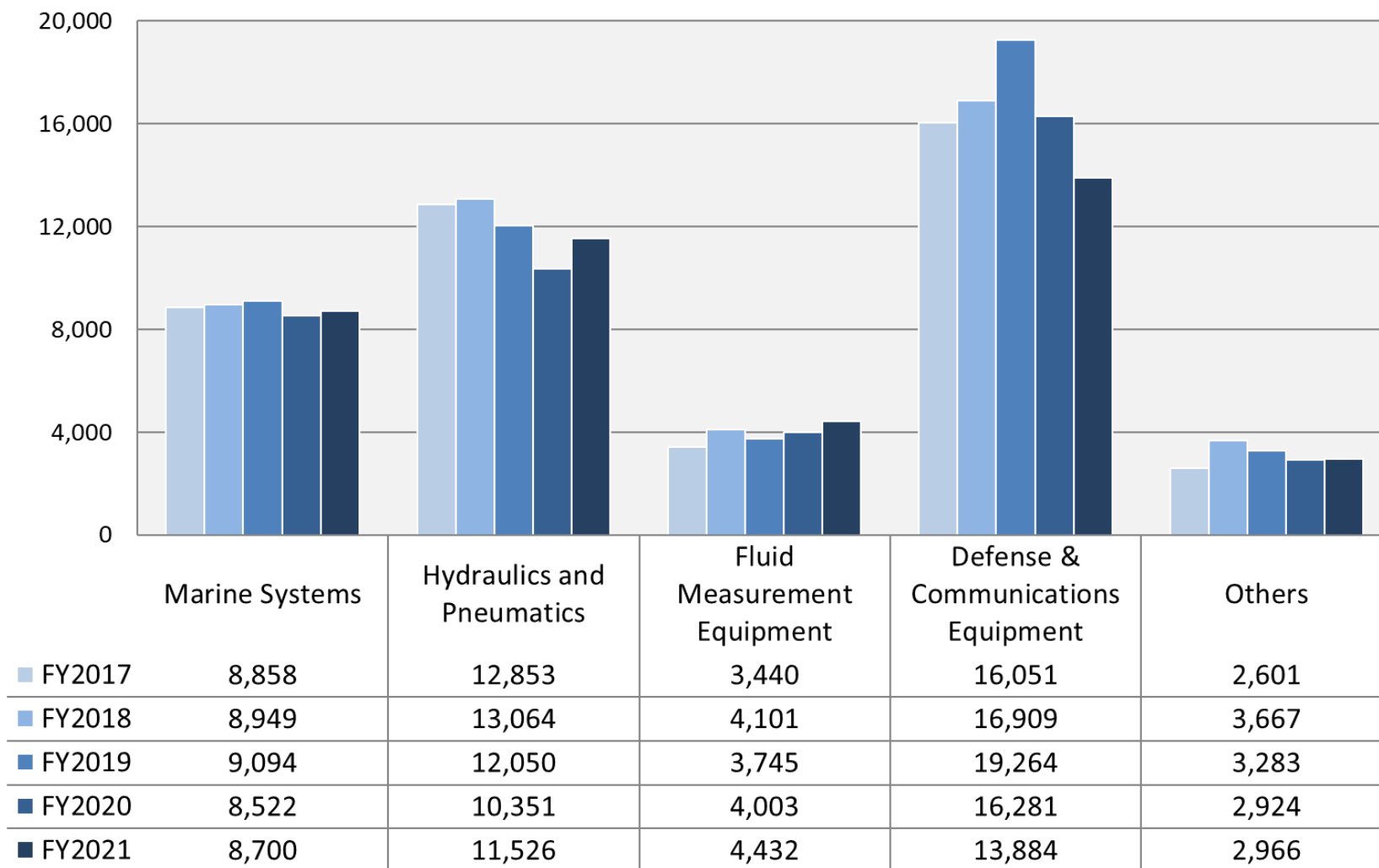
【Operating profit】



(Million yen)	FY2017	FY2018	FY2019	FY2020	FY2021
Net sales	43,803	46,692	47,440	42,081	41,510
Operating profit	1,319	2,440	1,875	1,250	1,635
Ordinary profit	1,511	2,660	2,011	1,458	1,926
Profit attributable to owners of parent	1,120	1,936	1,425	945	1,493
Operating profit margin	3.0%	5.2%	4.0%	3.0%	3.9%

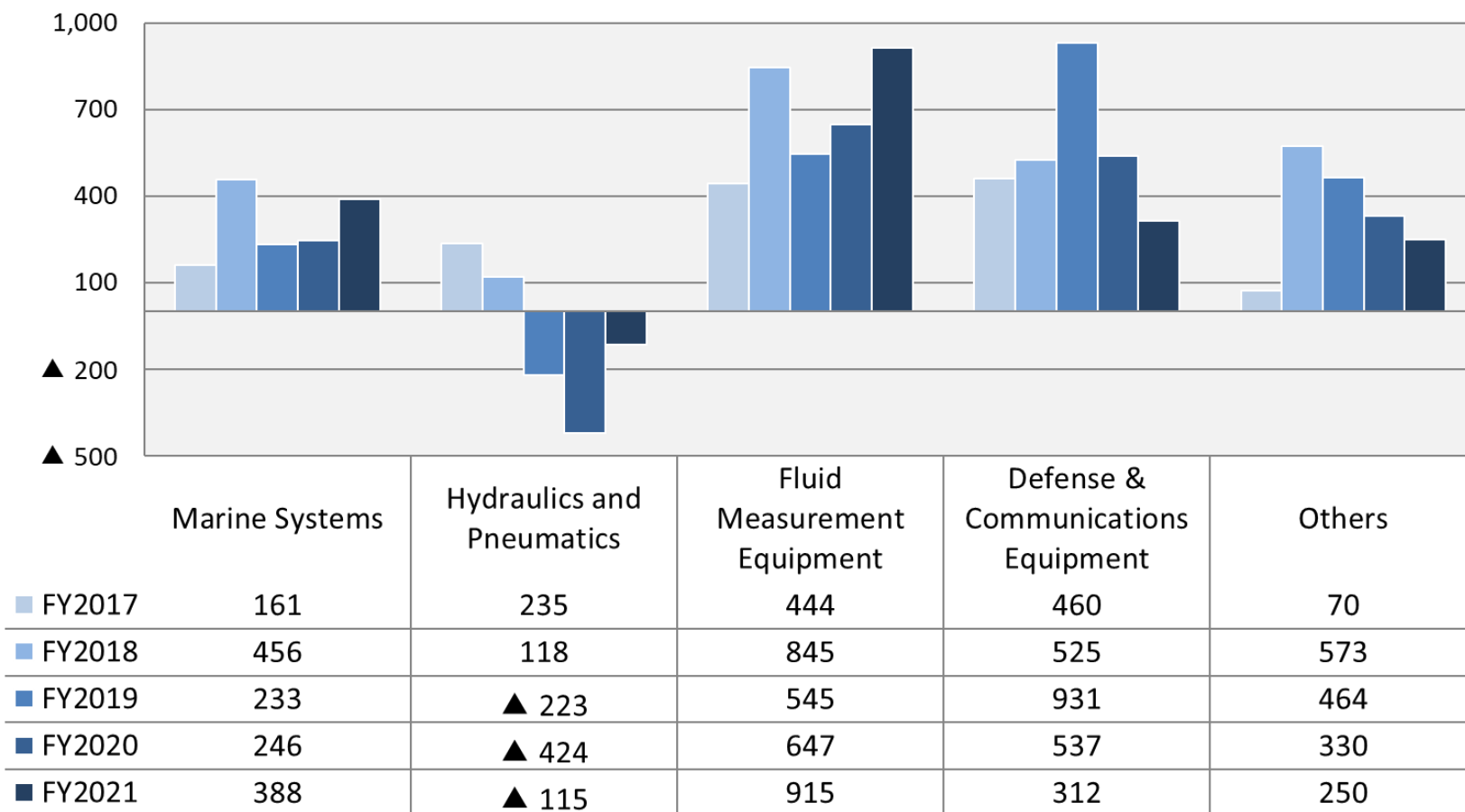
Changes in **Net Sales** by Segment

(Million yen)



Changes in **Operating Profits** by segment

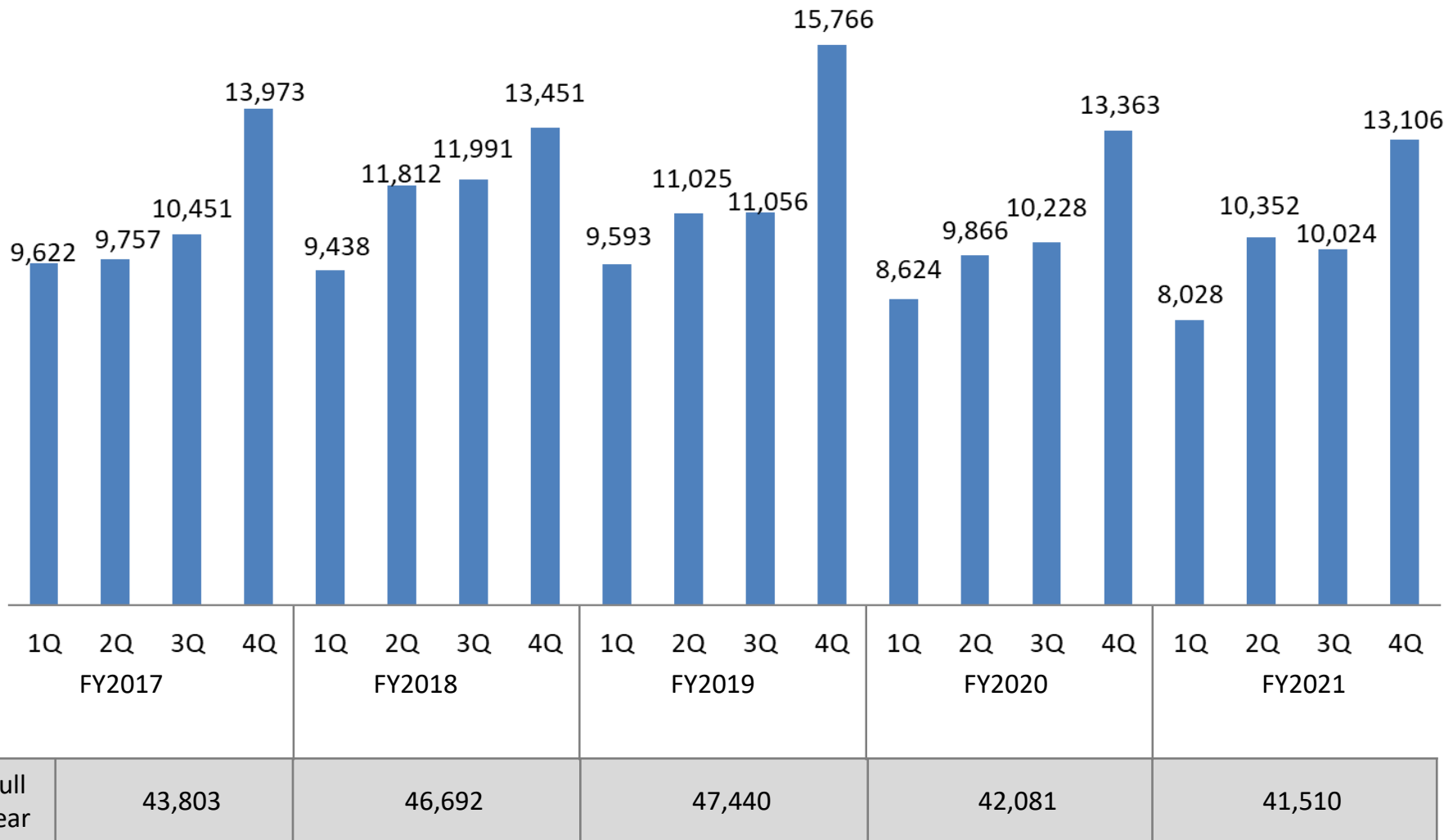
(Million yen)



※Operating profits before adjustment

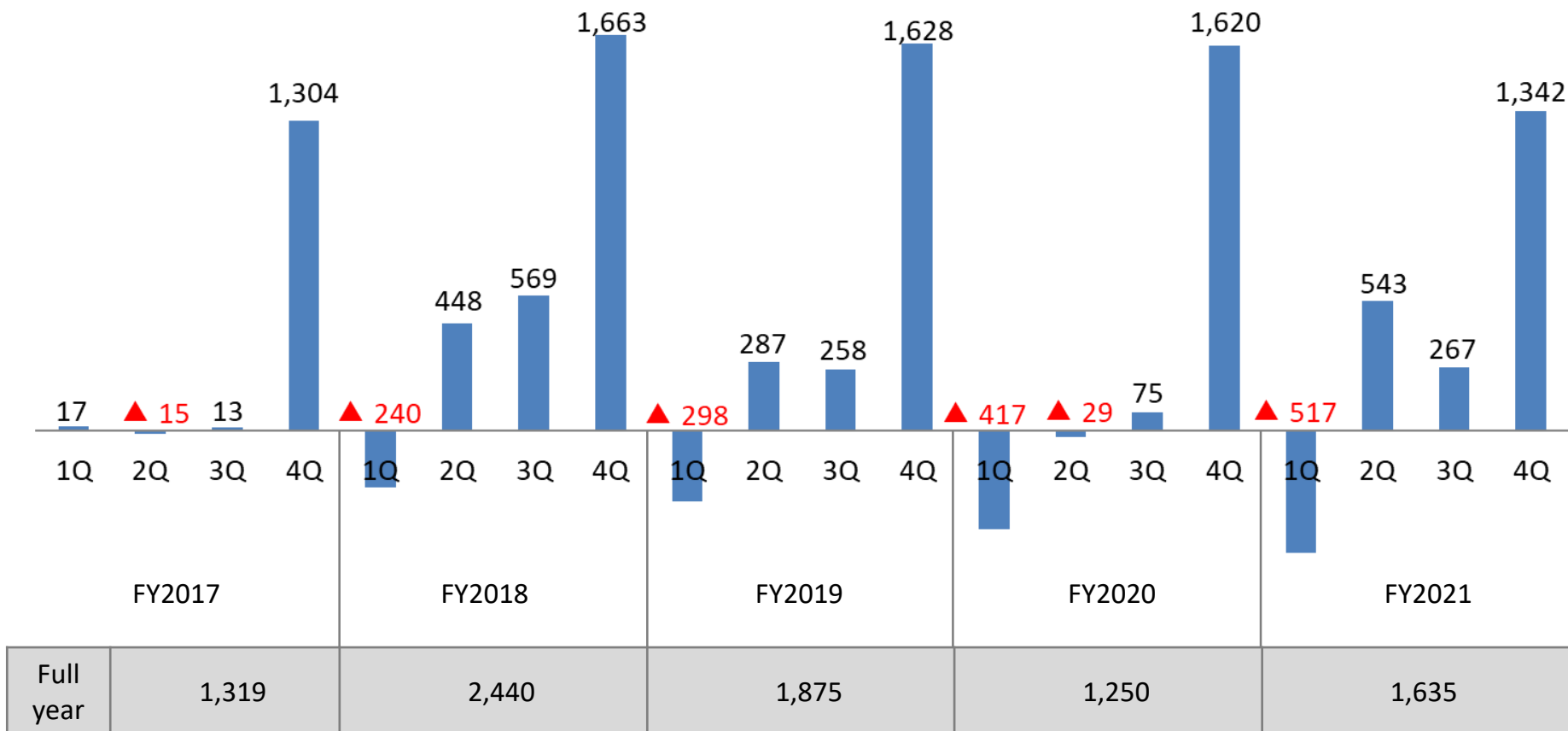
Quarterly Changes in Net Sales

(Million yen)



Quarterly Changes in Operating Profits

(Million yen)



References

Business Trends






Our Business

Principal Businesses of TOKYO KEIKI Group



TOKYO KEIKI Group's businesses are divided into four segments and others, and there are a large number of 11 businesses within these segments.

Segment (4+ Others)	Business (11)
Marine Systems Business	Navigational equipment
Hydraulics and Pneumatics Business	Hydraulic and pneumatic equipment
Fluid Measurement Equipment Business	Measuring instruments
	Fire extinguishing systems
Defense & Communications Equipment Business	Defense equipment
	Marine traffic equipment
	Inertial sensor and applied equipment
	High-frequency application equipment (microwave applied equipment)
	Communication & control equipment
Others	Inspection systems
	Railway maintenance






[Marine Systems Business]

Navigational equipment	Contributing to safe navigation and energy-saving ship steering
	<ul style="list-style-type: none"> ■ Offering a complete lineup of essential marine systems for ships and supplies them globally. ■ Pioneer in marine systems as the the first in Japan to manufacture marine radar, gyrocompasses, and autopilots. ■ More than 60% of the global commercial vessels market and more than 80% of the domestic coastal vessels market. <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>Autopilots for steering systems, such as automatic rudders, etc.</p> </div> <div style="text-align: center;">  <p>Gyrocompasses that indicate direction of ship's heading</p> </div> <div style="text-align: center;">  <p>Fiber Optic Gyro (FOG) without moving parts for periodic replacement of the sensor</p> </div> <div style="text-align: center;">  <p>Electronic Chart Display and Information Systems (ECDIS) that display navigational charts in real time</p> </div> </div>
	<ul style="list-style-type: none"> ■ As a leader in marine gyrocompasses and autopilots, we have also participated in the autonomous ship development project and the next-generation wind powered vessel project, which contributes to reducing GHG emissions. <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>    "DFFAS Project for Realizing Autonomous ships" </p> </div> <div style="text-align: center;">  <p>  "Wind Challenger Project" </p> </div> </div>

[Hydraulics and Pneumatics Business]

Hydraulic and pneumatic equipment	Supporting the manufacturing floor and frontline of infrastructure		
For industrial machinery	<p>■ Hydraulic and pneumatic equipment with excellent energy saving performance and controllability to support manufacturing.</p> <p>■ Approximately 40% of the domestic market for plastic injection molding machines used in motor vehicle manufacturing.</p> <div> <div data-bbox="571 498 745 615"> <p>Low-noise fixed displacement vane pump widely used in general industrial machinery</p> </div> <div data-bbox="942 475 1155 592"> <p>Solenoid directional valves controlling velocity and pressure proportionally</p> </div> <div data-bbox="1309 504 1622 689"> <p>Compact power unit widely used as a hydraulic power source for machine tools and general industrial machinery</p>  </div> </div>		
For construction machinery	<p>■ Combining hydraulic equipment and electronic products to support infrastructure development.</p> <div> <div data-bbox="591 791 857 1019"> <p>High-capacity and quick response cartridge valves used in construction machinery</p> </div> <div data-bbox="1000 782 1309 943"> <p>Electric direct control piston pumps for construction machinery</p> </div> <div data-bbox="1572 776 1746 919"> <p>Displays for construction machinery</p> </div> </div>		
Utilization of hydrogen energy	<p>■ Promoting hydrogen-energy use by hydraulic-drive hydrogen compressors for hydrogen filling stations</p> <div> <div data-bbox="664 1090 954 1369"> <p>Hydrogen compressors for mobile hydrogen filling stations</p> </div> <div data-bbox="1128 1258 1441 1350"> <p>Hydrogen compressors for stationary hydrogen filling stations</p>  </div> </div>		

[Fluid Measurement Equipment Business]

Measuring instruments	Protecting life and human life: Contributing to the safety of life through water resource management and river disaster prevention
Flow monitoring	<ul style="list-style-type: none"> ■ The first pioneer in the world to commercialize ultrasonic flowmeters. ■ Our ultrasonic flowmeters, the first in the world to be put into practical use, are used to monitor flow rates in water supply and sewerage systems as well as agricultural water pipelines. ■ Over 60% of the market for domestic water and sewerage systems and agricultural water management. <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>High-precision ultrasonic flowmeters for monitoring water supply, agricultural water, and industrial water</p> </div> <div style="text-align: center;">  <p>Microwave level gauges widely used in food manufacturing plants and industrial plants in oil tanks, etc.</p> </div> </div>
Land disaster prevention	<ul style="list-style-type: none"> ■ Systems use microwave level gauges to protect lives from the spate of river and urban flooding. <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>Crisis management water gauges that provide early detection of rising river levels</p> </div> <div style="text-align: center;">  <p>Flood-control level gauges that indicate the risk of urban flood damage caused by sewage overflowing from manholes</p> </div> </div>
Fire extinguishing systems	Protecting against fires: Gas-agent fire extinguishing systems are widely used in facilities that are strictly prohibited from getting wet.
	<ul style="list-style-type: none"> ■ Miscellaneous gas-agent fire extinguishing systems, developed based on our Japan's first inert gas fire extinguisher systems, contributing to safe living. <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <p>Gas-agent fire extinguishing systems are widely used in parking garages, museums, art museums, office buildings and factories with printing machinery, etc., where the use of water or foam-based fire extinguishers are not suitable</p>  </div>






[Defense & Communications Equipment Business]

Defense equipment	Contributing to national defense: Our strength lies in microwave application technologies and inertial sensor technologies
	<p>■ Development, production, and repair and maintenance of defense avionics equipment and warship navigation systems.</p> <div data-bbox="421 382 691 558"> </div> <div data-bbox="417 562 853 596"> <p>Air Self-Defense Force website https://www.mod.go.jp/asdf/komatsu/3/third/images/gallery/photo/hy5.html</p> </div> <div data-bbox="417 625 846 746"> <p>Radar warning receivers that instantly analyze radio waves around aircraft and warn pilot of threat radar signals</p> </div> <div data-bbox="697 419 900 558"> </div> <div data-bbox="1064 354 1315 625"> </div> <div data-bbox="944 625 1421 775"> <p>Inertial navigation system using high-precision ring laser gyro, installed on submarines that cannot use any external signals such as GPS for azimuth measurement</p> </div> <div data-bbox="1514 372 1837 601"> </div> <div data-bbox="1508 625 1870 775"> <p>Air data computer (ADC) that calculates the altitude and speed of the aircraft. This is mounted on Blue Impulse aircraft.</p> </div>
Marine traffic equipment	Contributing to safe vessel navigation: Providing maritime monitoring systems that can be called a "marine traffic control tower"
	<p>■ Providing VTS*¹ systems including the maritime surveillance radars and AIS*² information management equipment, which are required for traffic control operations on congested waterway. Domestic VTS system market share 100%.</p> <p>■ Started delivering VTS radars to the gulf coasts and rivers in Europe.</p> <div data-bbox="417 1058 691 1265"> </div> <div data-bbox="417 1272 784 1365"> <p>Maritime surveillance radar installed at "Umihotaru" in Tokyo Bay.</p> </div> <div data-bbox="923 1058 1199 1258"> </div> <div data-bbox="842 1272 1402 1365"> <p>VTS systems responsible for monitoring operations at Vessel Traffic Service Centers deployed in seven ports across Japan</p> </div> <div data-bbox="1387 1072 1750 1100"> <p>*1 VTS:Vessel Traffic Services</p> </div> <div data-bbox="1387 1115 1885 1229"> <p>*2 AIS:Automatic Identification System System for exchanging information between vessels and between vessels and navigation aid facilities</p> </div>

[Defense & Communications Equipment Business]

Inertial sensor and applied equipment	Promoting Smart Agriculture: Realizing by combining inertial sensors and control technologies
	<ul style="list-style-type: none"> ■ For linear-motion assistance for agricultural vehicles, gyro-technology, inertial-sensor, and proprietary software technologies are integrated. ■ The share of accelerometers used in seismometers for Japan Meteorological Agency is approximately 80%. <div data-bbox="479 432 691 572"></div> <div data-bbox="710 449 981 561">Seismic accelerometer which is essential for measuring seismic magnitude</div> <div data-bbox="1222 392 1497 572"></div> <div data-bbox="1516 449 1818 561">Linear-motion assistance for agricultural vehicles to reduce the burden of working on the farm</div>
High-frequency application equipment	Entry into advanced industries: Contributing to semiconductor manufacturing equipment components and space business by making full use of microwave application technologies
	<ul style="list-style-type: none"> ■ Solid-state microwave power supplies used in semiconductor production equipment to achieve semiconductor miniaturization. ■ Providing microwave amplifiers that amplify radar signals emitted from SAR satellites toward the earth's surface. <div data-bbox="479 815 653 978"></div> <div data-bbox="672 849 1020 961">Solid-state microwave power supply used for next-generation semiconductor production equipment</div> <div data-bbox="1188 789 1497 978"></div> <div data-bbox="1516 878 1883 961">Synthetic aperture radar (SAR) satellite with the microwave amplifier onboard</div>
Communication & control equipment	Contributing to broadcasting quality improvement: Implementing by integrating technologies such as gyro sensors, accelerometers, and magnetic azimuth sensors
	<ul style="list-style-type: none"> ■ Realizing stable image transmission by attitude control equipment mounted on news helicopters and relay vehicles. ■ Antenna directioning systems are mounted on more than 90% of news helicopters of the national TVs, leading to reliable transmission of aerial images. <div data-bbox="440 1229 633 1366"></div> <div data-bbox="653 1240 1284 1352">Antenna directioning systems which continuously grasp the position and attitude directions of helicopters, control relay antennas towards receiving stations, and transmit videos without interruption</div> <div data-bbox="1348 1196 1468 1366"></div> <div data-bbox="1487 1240 1883 1352">Camera stabilizer installed on relay vehicles for marathons and news helicopters used by broadcasting stations</div>

[Others (Inspection/Railroad)]

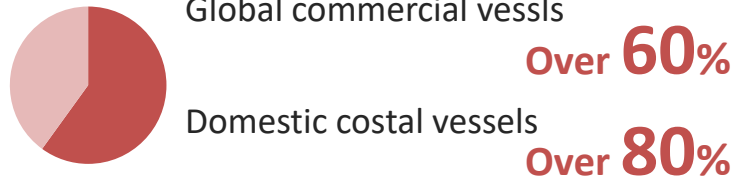
Inspection Equipment	Contributing to improving the quality of printing: Detecting printing defects and material surface problems through high-precision image processing technologies
	<ul style="list-style-type: none"> ■ Realizing high-speed and real-time image processing with in-house developed chips. ■ Automatically detecting printing errors and foreign matter contamination at high speed to improve work efficiency and eliminate material waste. ■ Top share of the domestic market for gravure printing presses. <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Print inspection system that ensures print quality by detecting print-defects</p> </div> <div style="text-align: center;">  <p>Material inspection equipment that detects flaws and foreign matter contaminations in plain materials such as films, non-woven fabrics, and metal foils.</p> </div> </div>
Railway Maintenance	Contributing to safe operations of railways: Utilizing ultrasonic technology for railway maintenance
Business at TOKYO KEIKI RAIL TECHNO INC., our subsidiary	<ul style="list-style-type: none"> ■ Ultrasonic rail inspection cars are in operation at more than 70% of domestic railway companies. ■ Supporting railway maintenance work with maintenance equipment and maintenance services such as ultrasonic rail flaw detectors and switch profile gauges <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Ultrasonic rail inspection car that performs non-destructive inspections using ultrasonic wave</p> </div> <div style="text-align: center;">  <p>Ultrasonic rail flaw detector that inspects rail flaws in detail</p> </div> <div style="text-align: center;">  <p>Switch profile gauge that simultaneously measures rails wear, crossing wear, and track geometry</p> </div> </div>

Share in key niche markets

*In-company investigations

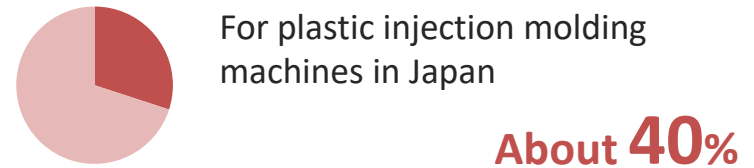
【Marine Systems Business】

Marine gyrocompasses, Marine autopilots



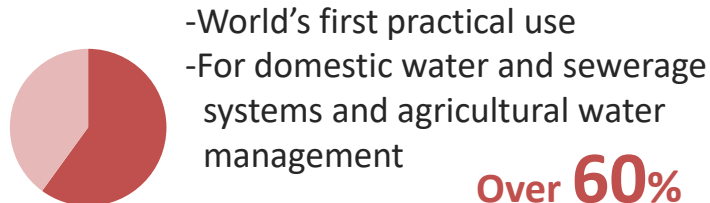
【Hydraulics and Pneumatics Business】

Hydraulic equipment



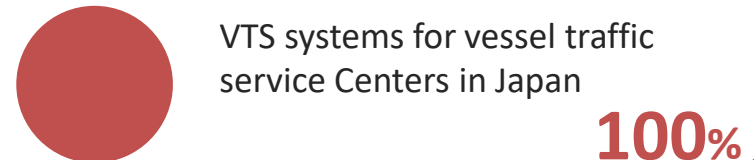
【Fluid Measurement Equipment Business】

Ultrasonic flowmeters



【Defense & Communications equipment Business】

Radars for maritime traffic, VTS systems

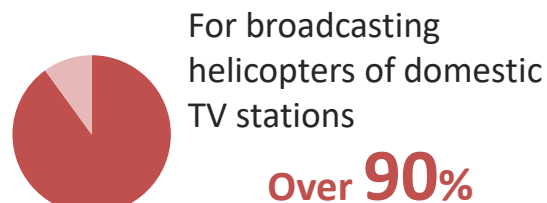


【Defense & Communications equipment Business】

Accelerometers for seismometers

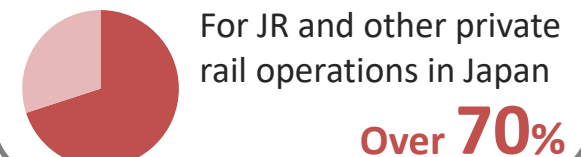


Antenna directioning systems



【Others】

Ultrasonic rail inspection cars



Thank you for your attention.

