



Steel Founders' Society of America

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2024 Industry Market Forecast

Marketing Committee Role

The function of the Marketing Committee is to **broaden the market for and promote the use of steel castings** by investigating and developing new markets, developing and implementing an effective marketing program, and communicating the advantages of steel castings to present and prospective consumers in an effective manner.

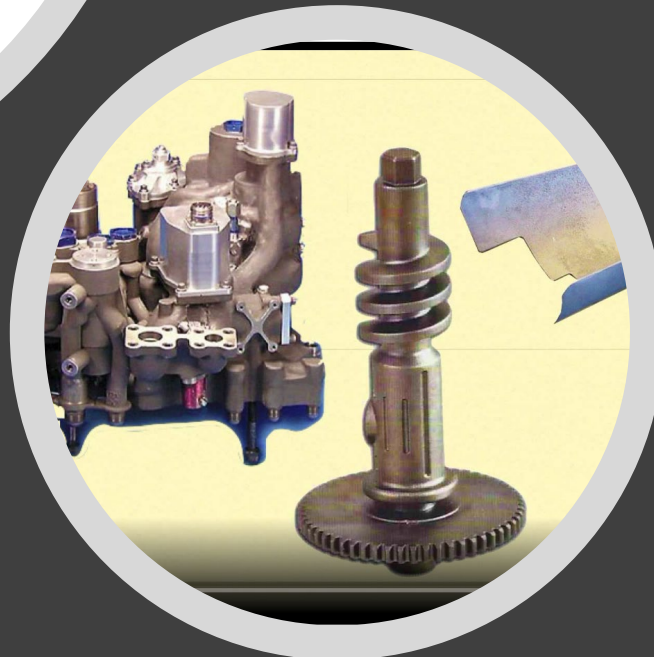
To carry out its mission, the committee maintains liaison with other committees of the Society through the staff, identifies technical, business and market topics of interest to customers and SFSA members, directs development of the material and delivery of the information. The committee develops the deliverables for the marketing program such as messaging, competitive input, target market, and specific planning, The committee also performs related market research to help guide the work of the Society and **prepares each year for the Society an annual forecast of steel casting demand.....**



Steel Founders' Society of America

Customer Education Resources

- Steel Foundry Directory
- Free SFSA Publications
- Online Specification/Material Database
- Customer Webinars
- White Papers
- Foundry Glossary
- **New Steel Casting Design Videos**
- **Handbook Supplement 6 Update**
- **Steel Casting NDT Methods**



Properties/Chemistry By Standard By Alloy Family By Microstructure By UNS By Wrought Equivalent

Mechanical

Standards specify either a minimum or a range of mechanical properties. Your entered value(s) must be equal to or higher than the minimum or within the range of the mechanical properties specified for a grade in a standard to have a match result.
You can search tensile strength (UTS), yield strength (YS), impact toughness, and rupture strength in Metric (SI) or Imperial System. You only need to input values using one unit and your entered value will automatically be converted to the other unit.

Hardness BHN HBW HRC

Tensile strength ksi or MPa

Yield strength ksi or MPa

Elongation%

Reduction in area%

Impact Foot-pounds or Joules

Impact test temperature in °F or °C

Stress rupture test ksi or MPa

100 hour rupture test MPa at temperature in °C (Optional)

Chemistry

All values are in weight percent (wt%)
Standards specify either a maximum or a range of wt% for various elements. Your entered value(s) must be equal to or lower than the maximum or within the range of wt% of elements specified for a grade in a standard to have a match result.
Elements that are specified as "Others" in a standard are not included in the search algorithm. To see these "Other" elements of a certain grade, click the tab for that specific grade (either shown in the search results or by going to the other tabs e.g. By Standard)

Al% <input type="text"/>	As% <input type="text"/>	Ba% <input type="text"/>	Bi% <input type="text"/>
C% <input type="text"/>	Co% <input type="text"/>	Cr% <input type="text"/>	Fe% <input type="text"/>
Mn% <input type="text"/>	Mo% <input type="text"/>	N% <input type="text"/>	Si% <input type="text"/>
Ni% <input type="text"/>	P% <input type="text"/>	S% <input type="text"/>	Sn% <input type="text"/>
Se% <input type="text"/>	Sr% <input type="text"/>	W% <input type="text"/>	
Ti% <input type="text"/>	V% <input type="text"/>		

RESOURCES

About the Steel Founders' Society

Dedicated to the advancement of the steel casting industry through manufacturing and design R&D, customer education, specifications development, and 120 years of operating and business knowledge

[Join Now](#)

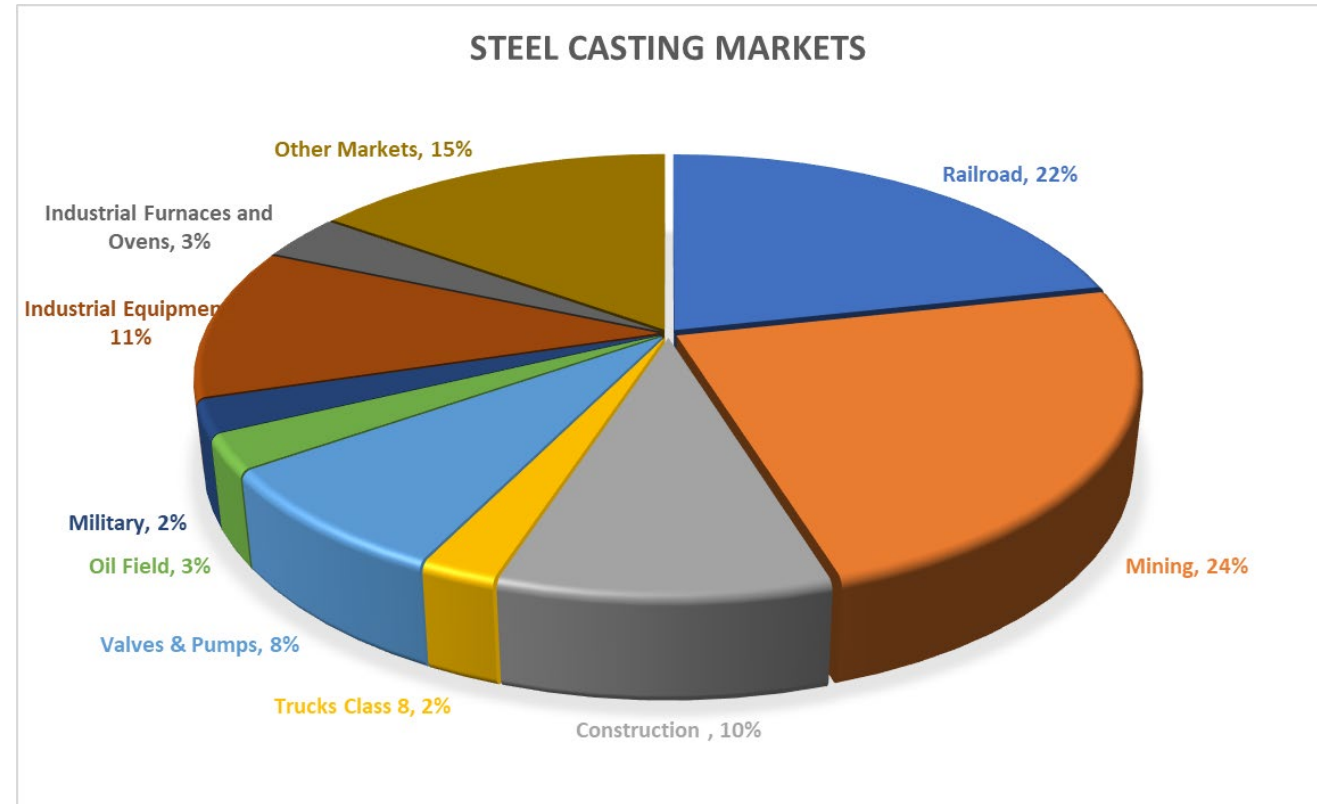
Customer Education Training Case Studies

Steel Markets Survey

SFSA Markets	Steel Casting Examples
Rail/Transit	frames, couplings, bolsters, track components
Mining - Equipment	axle housing, frame components, suspension, gear case
Mining - Consumables	G.E.T., liners, hammers, grate plates, cement and aggregate components
Construction Equipment	axle components, sprocket, end caps, transmission housing
Truck - Class 8	suspension brackets, brake components, axle spindles, fifth wheels
Pump	housing, impeller, covers, bowls
Valve	strainer bodies, bonnets, butterfly valves
Oil & Gas	port adapters, brackets, levers, slip linkages
Military	ground vehicle and maritime components
Industrial Furnace and Oven Mfg.	Furnace, heat treat, steel mill components - rollers, links, baskets
Industrial Machinery	Industrial equipment parts - pulp & paper, food, shotblast - plates, wheels, sprockets, flanges
OTHER MARKETS	
Agricultural Implement Manufacturing	Agricultural Products - Hitch Links, Sprockets
Electric Power Generation	Power Generation - Coreforms, deflector blocks
Aerospace Product and Parts Manufacturing	Aerospace bearing supports, combustor cases, compressor cases, exhaust diffusers, stationary inlet guides, swirlers
Engine, Turbine, and Power Transmission Equipment	Turbine engine - compressor cases, combustor basket
Special Die and Tool Manufacturing	Dies, Tooling, fixtures

Forecast Process

- Segmented primary markets
- Identified key customers and users in each market
- Analyze customer top line sales
- Market survey to members
- Leverage customer associations
 - Pumps, Valves, Rail, Equip. Mfg.
- Review analyst reports



Market Segments – Annual Production

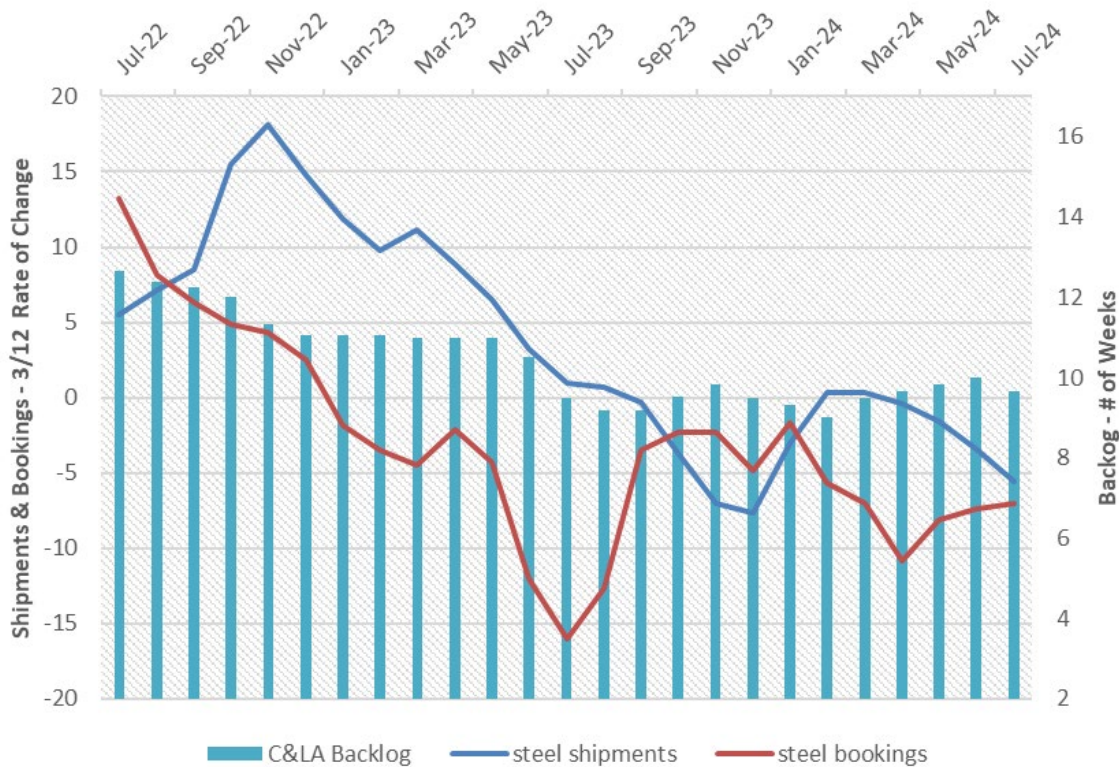
Market	Industry	% of total market prod.	SFSA Members	% of Industry Production
Railroad	161,200	22%	26,300	16%
Mining	177,300	24%	122,100	69%
Valve and Pump	59,800	8%	21,600	36%
Oil & Gas	19,300	3%	14,500	75%
Construction	73,400	10%	11,400	16%
Trucks	17,000	2%	500	3%
Military	18,200	2%	12,500	69%
Industrial Equip.	84,200	11%	30,400	36%
Industrial Furn.	25,450	3%	14,700	58%
Other Industrial	112,800	15%	41,100	36%
Total	748,650		295,100	39%

SFSA Trends Report

Monthly Business Trends Survey

- YoY comparison of C&LA and stainless shipments and bookings
- Current order backlog
- Business bookings – 3-month outlook
- Workforce – 3-month outlook

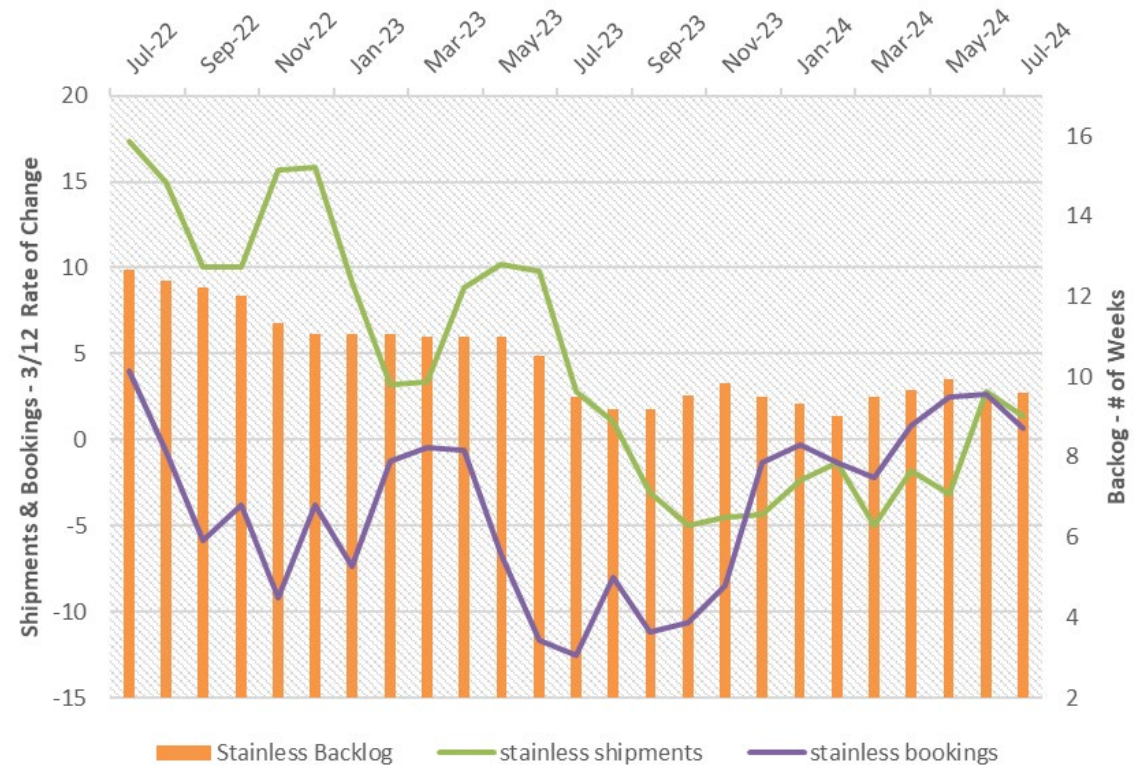
SFSA Trend Cards



July Trends

- Stainless bookings and shipments close to parity to year ago levels
- C&LA and Stainless backlogs trending towards year ago levels
- Business bookings – 80% anticipate flat or increase
- Workforce – 70% anticipate stable, 20% downsize

SFSA Trend Cards



	Historical 12/12	Historical 12MMT/A	Current 12/12	2024	2025	2026	Highlights
US Metalworking Machinery New Orders			-0.6	3.3	4.2	1.9	General New Orders 12MMT rise will persist through at least 2026. The growth will be muted into mid-2025 and then pick up.
US Machinery New Orders			0.3	-0.3	5.0	4.4	New Orders will generally plateau this year given divergent machinery markets and then rise in 2025 and 2026.
US Construction Machinery New Orders			6.9	2.3	1.7	3.0	A strong US dollar and elevated rates weigh on New Orders. Marked decline is unlikely given government spending and inflation.
US Electrical Equipment New Orders			5.4	-1.6	4.3	2.2	Electrical equipment orders will be hindered by high interest rates impacting construction and industrial markets into early 2025.
US Computers & Electronics New Orders			3.1	-0.9	2.0	1.4	The 12MMT will plateau or very mildly decline into the first half of 2025 alongside stagnant B2B activity, then rise through at least 2026.
US Defense Capital Goods New Orders			-4.0	2.7	-1.9	6.7	The 12MMT will rise briefly. Anticipate mild decline and potential margin pressure for much of 2025 followed by rise in 2026.
North America Light Vehicle Production			3.3	0.5	0.9	3.7	Dealers have raised incentives to attract buyers, but Production will stagnate through mid-2025. The 12MMT will then rise through 2026.
US Oil & Gas Extraction Production			5.2	2.8	2.2	4.2	Production will rise through at least 2026. Lower upstream activity supports our expectation for further Phase C, Slowing Growth.
US Mining Production (excluding oil & gas)			-4.6	-4.1	2.6	2.0	Production may trend around the lower boundary of the forecast range following a revision from the Federal Reserve Board.
US Chemicals & Chemical Products Production			1.1	-0.2	1.2	0.9	Utilization rates and expected business-to-business activity suggest Production will plateau this year. Plan for rise in 2025-26.
US Civilian Aircraft Equipment Production			-5.5	3.1	5.7	3.1	A robust backlog suggests room to ramp up Production, if suppliers are able to increase capacity. The 12MMA will rise into late 2025.
US Medical Equipment & Supplies Production			0.5	-1.1	0.9	0.8	Phase D, Recession is likely in the near term, but reshoring suggests decline will be mild. Expect mild rise in much of 2025 and 2026.
US Heavy-Duty Truck Production			1.6	-3.9	2.7	2.6	Downside pressures will likely outweigh upside pressures into early next year. Expect rise for most of 2025 into mid-2026.
US Food Production			-1.6	-0.2	1.7	1.5	Upstream agriculture indicators are in Phase A, Recovery. Food Production has formed a flat trough and is likely to rise soon.

Note: Forecast color represents what Phase the market will be in at the end of the year.

PHASE KEY



**Phase A:
Recovery**



**Phase B:
Accelerating Growth**



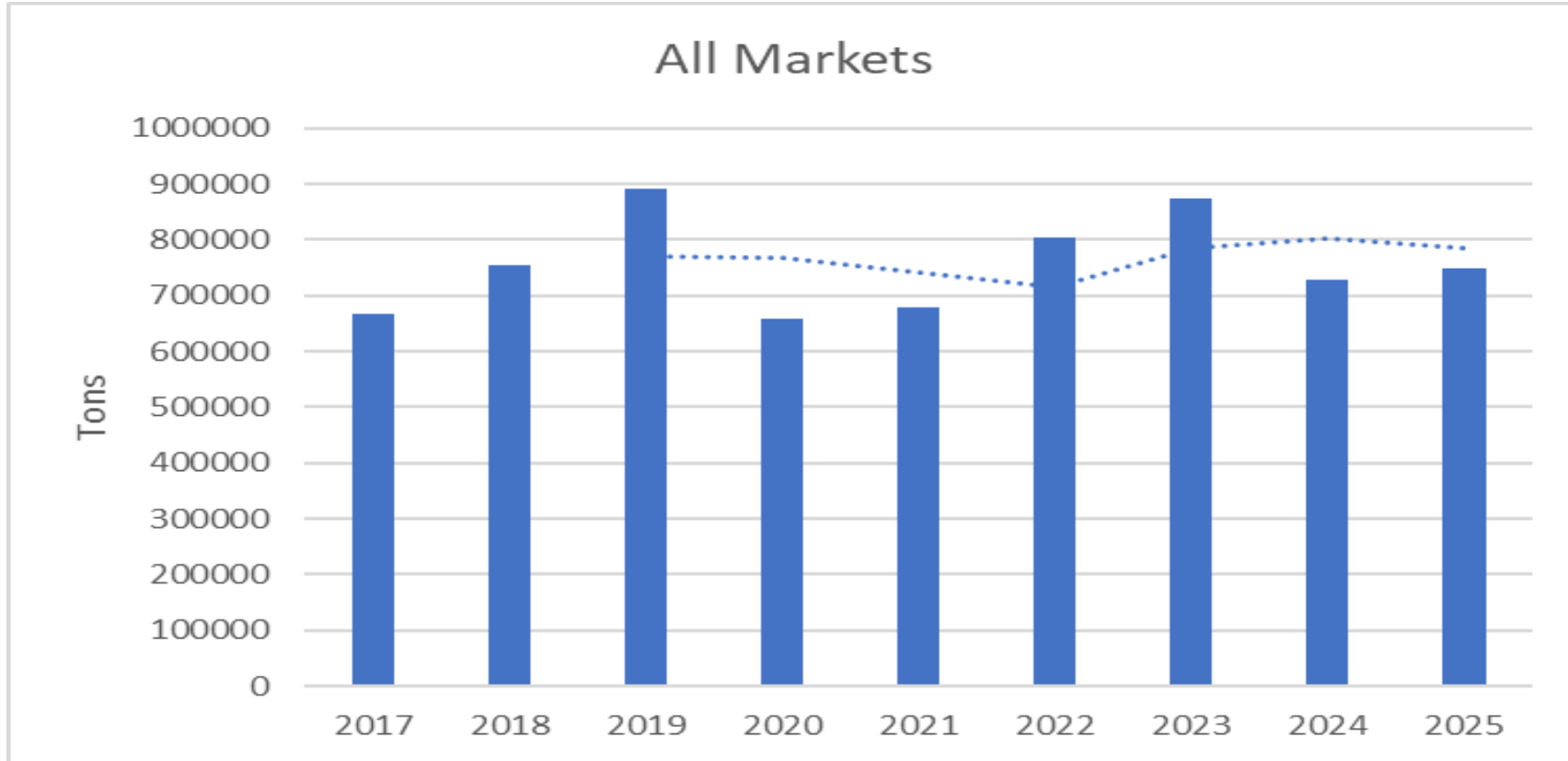
**Phase C:
Slowing Growth**



**Phase D:
Recession**

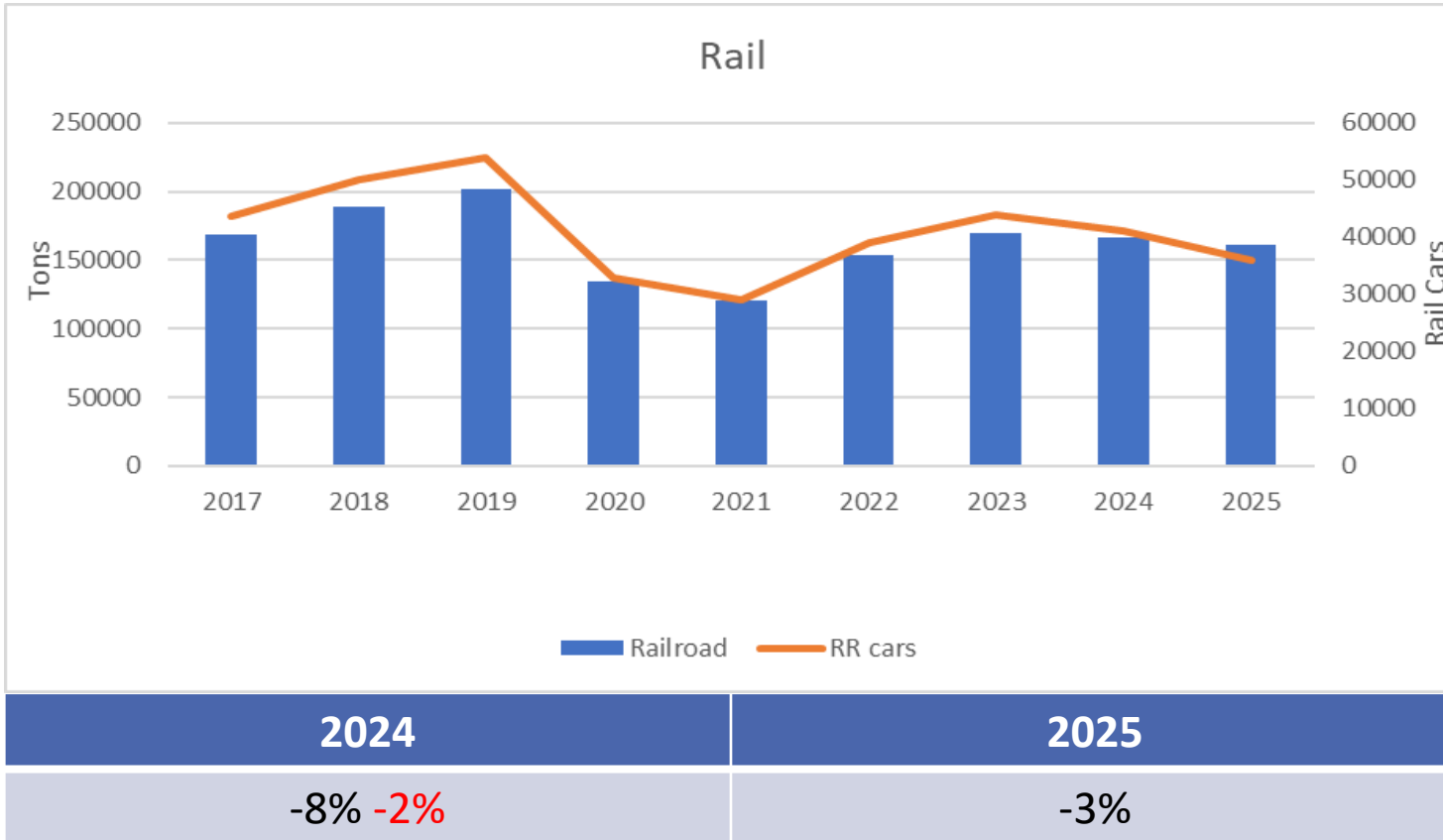
Source: [ITR Trends Report](#)

Total Steel Castings Market



2024		2025	
Total Market	Excluding Rail	Total Market	Excluding Rail
1% -0.5%	5% 0.1%	3%	4.5%

Rail Forecast



Projected Car Deliveries

2024 – 41,000

2025 – 36,000

2026 – 39,000

- Transit up YoY
- Decline in railcar deliveries

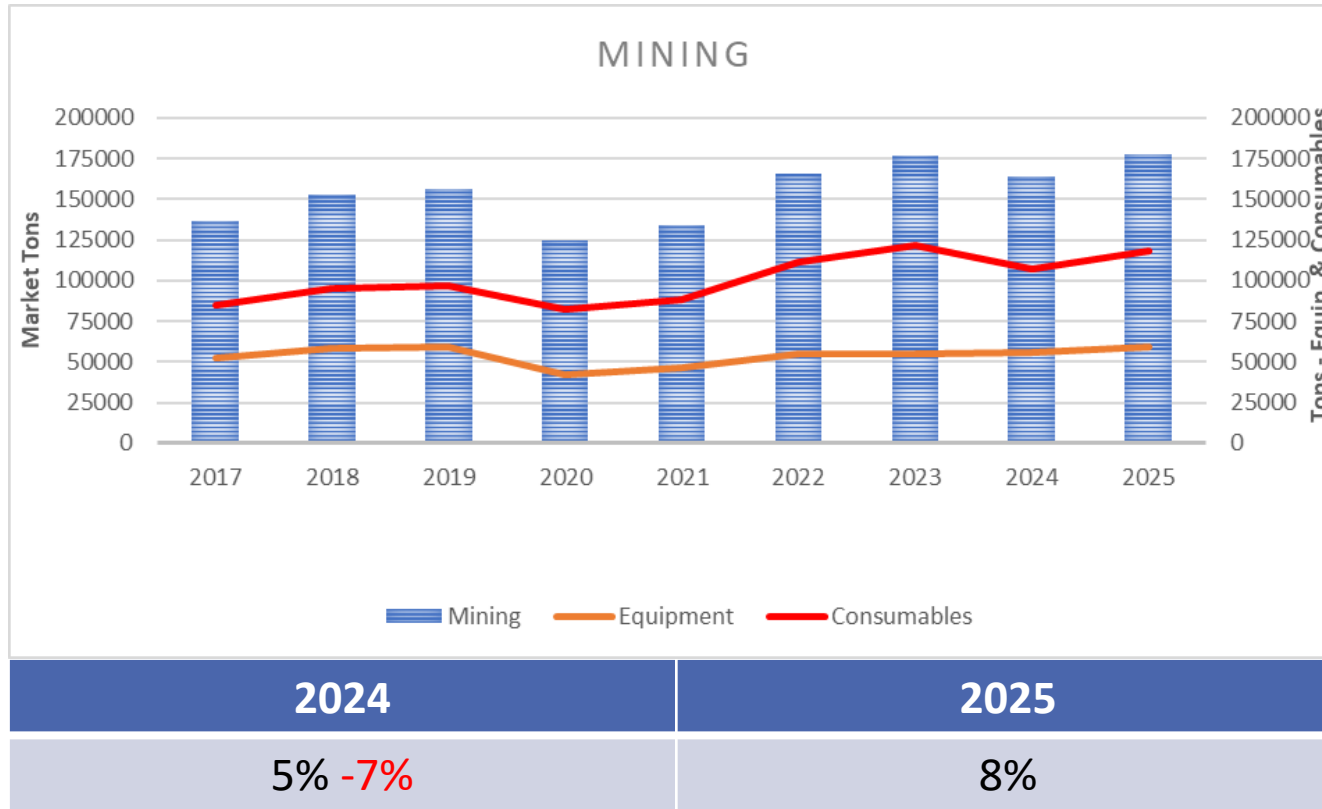
Customer Market Sales Forecast

% change from prior year

Railroad	2022	2023	2024	2025
Railroads (sales)	14.4%	-2%	1.5%	5.2%
Equipment (sales)	57.5%	32.4%	4.2%	2.8%
SFSA Forecast (tonnage)	27%	11%	-2%	-3%

Note: Customer market data is percentage change in sales, SFSA forecast is percentage change in tonnage.

Mining Forecast



Equipment

- 2024 Projection – up 2%
- 2025 Forecast – up 5%

Consumables

- 2024 Projection – down -11%
- 2025 Forecast – up 9%

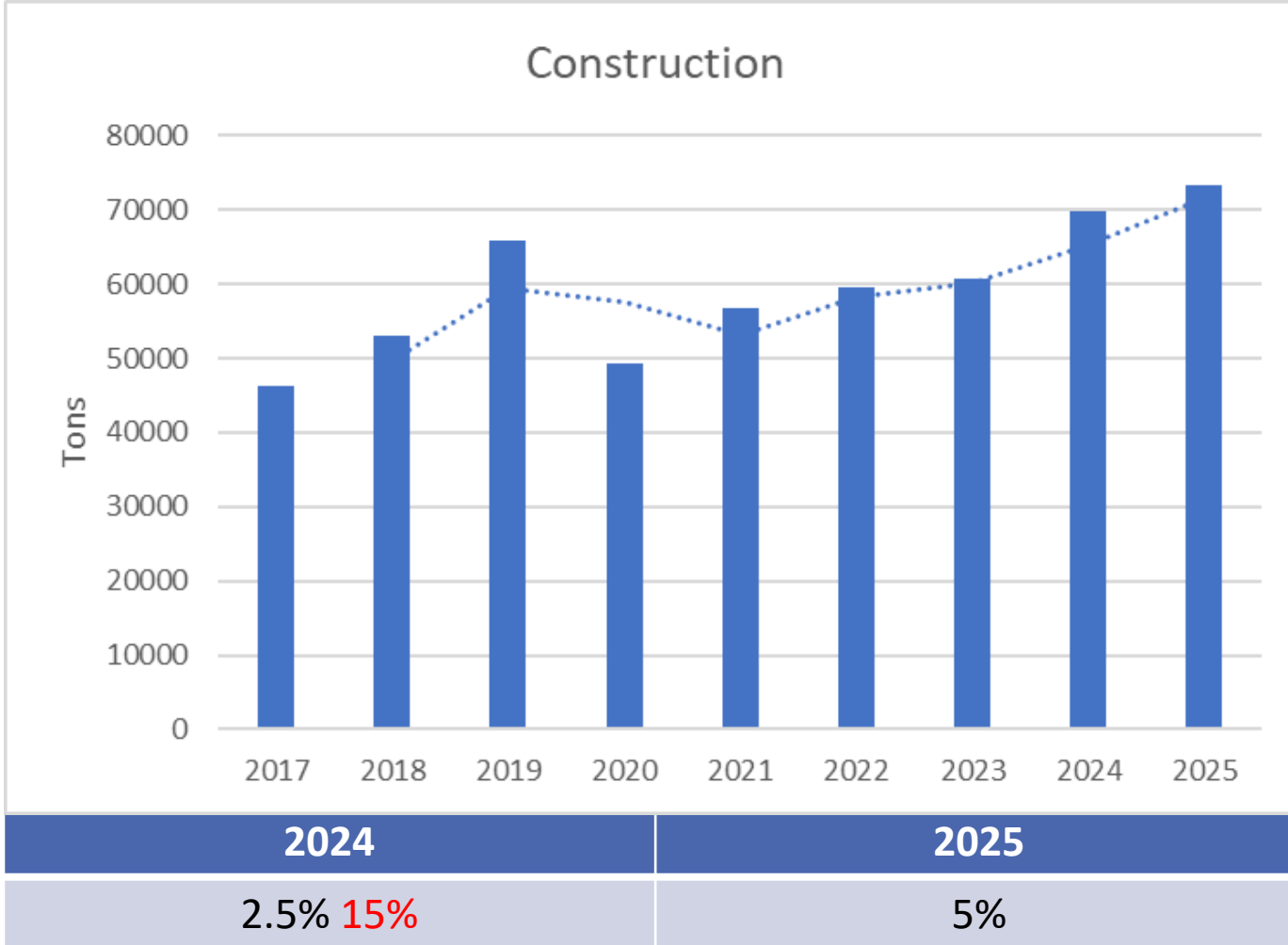
- Growing ESG Initiatives
- Geopolitical Factors

Customer Market Sales Forecast

% change from prior year

Mining	2022	2023	2024	2025
Mines (sales)	-7.1%	-6.5%	1.9%	2.4%
Equipment (sales)	19.8%	13%	-1.2%	5.2%
SFSA Consumables (tonnage)	26%	15%	-11%	10%
SFSA Equipment (tonnage)	20%	7%	2%	5%

Construction Forecast



ITR – US Construction machinery new orders - '24: 2.3%, '25: 1.7%

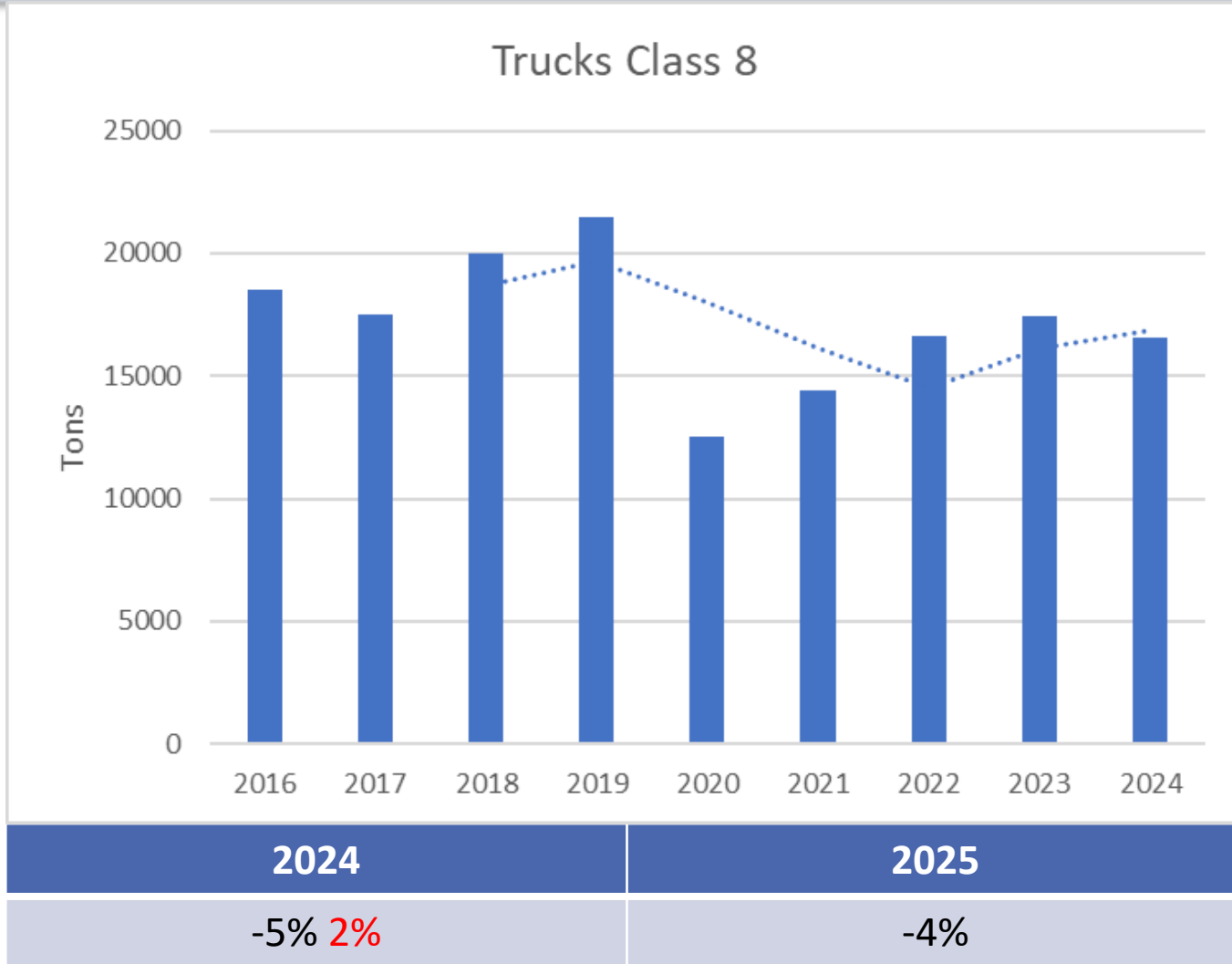
- Annual U.S. Construction Machinery New Orders hit record high in 2024
- Anticipated slowing growth into 2025

Customer Market Sales Forecast

% change from prior year

Construction	2022	2023	2024	2025
Equipment (sales)	15.7%	13.3%	2.1%	3.7%
SFSA Forecast (tonnage)	5%	2%	25%	5%

Truck Forecast



Class 8 Truck Shipments

	2023	2024f	2025f
Class 8	330,000	308,200	280,000
% Change	4.2%	-6.6%	-9.1%

Source: FTR

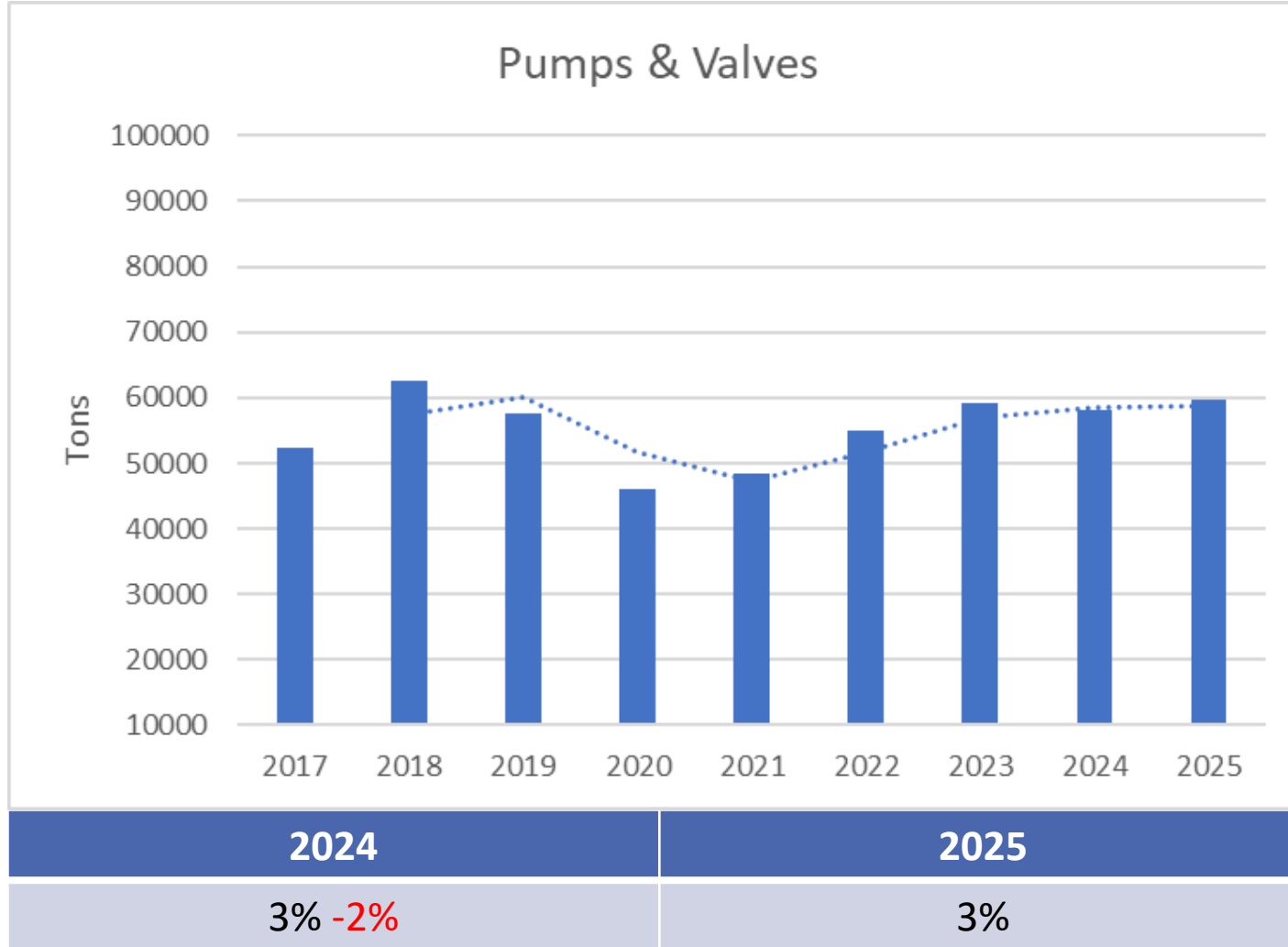
- '27 EPA emissions restrictions pre-buy
- 2025 market to soften
 - Low freight rates
 - Equipment surplus

Customer Market Sales Forecast

% change from prior year

Trucks	2022	2023	2024	2025
Manufacturers (sales)	23.1%	13.4%	-4.2%	3.8%
SFSA Forecast (tonnage)	15%	5%	2%	-4%

Pump and Valve Forecast



Projected 2024 vs. 2023 Tonnage

- Pumps – -4%
- Valves – 2%

2025 Forecast

- Pumps – 5%
- Valves – 0%

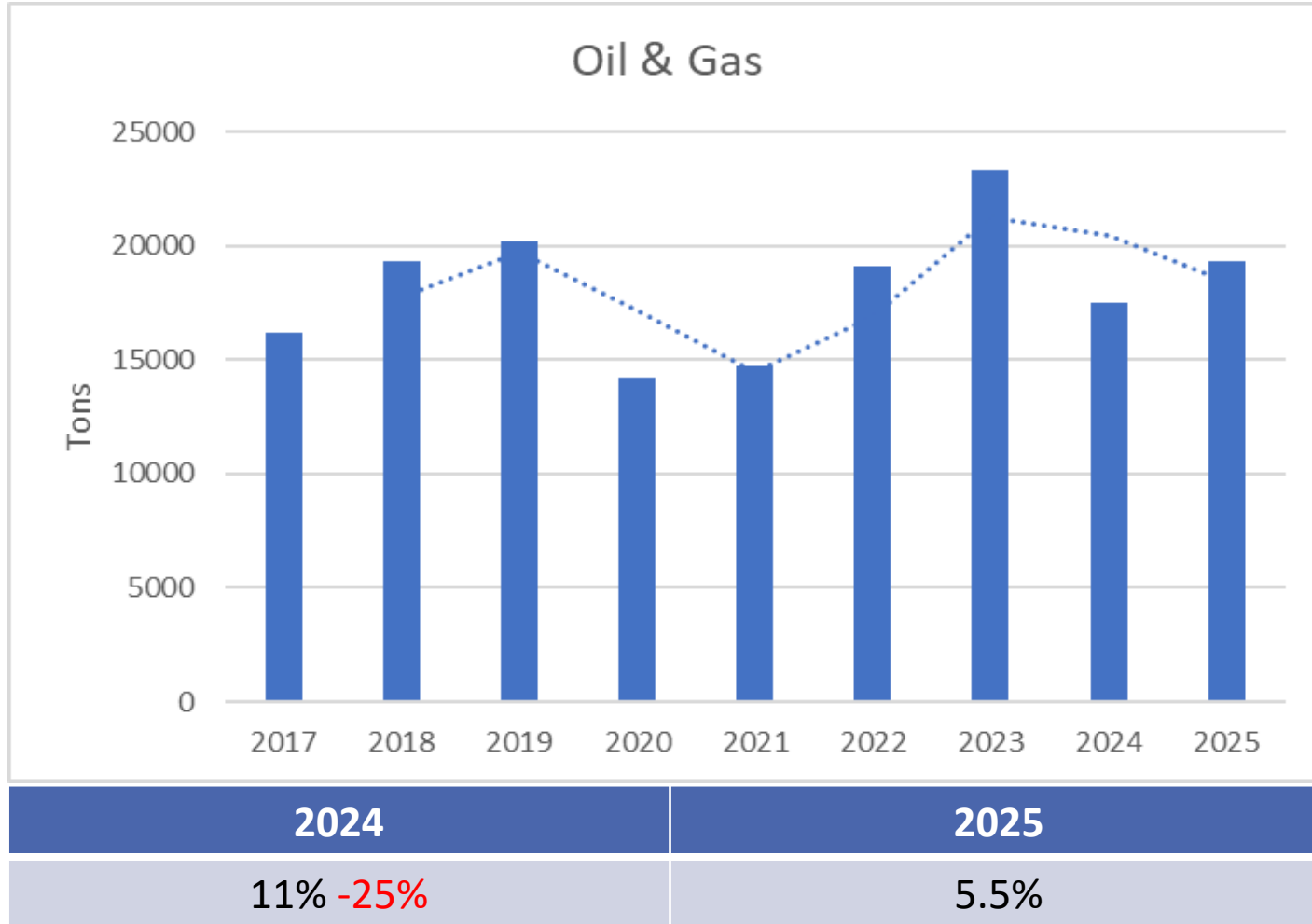
- Customer Forecast
- Presidential Election

Customer Market Sales Forecast

% change from prior year

Pumps and Valves	2022	2023	2024	2025
Manufacturers (sales)	11.5%	8.9%	8.8%	5.3%
SFSA Forecast (tonnage)	13%	8%	-2%	3%

Oil Field Forecast



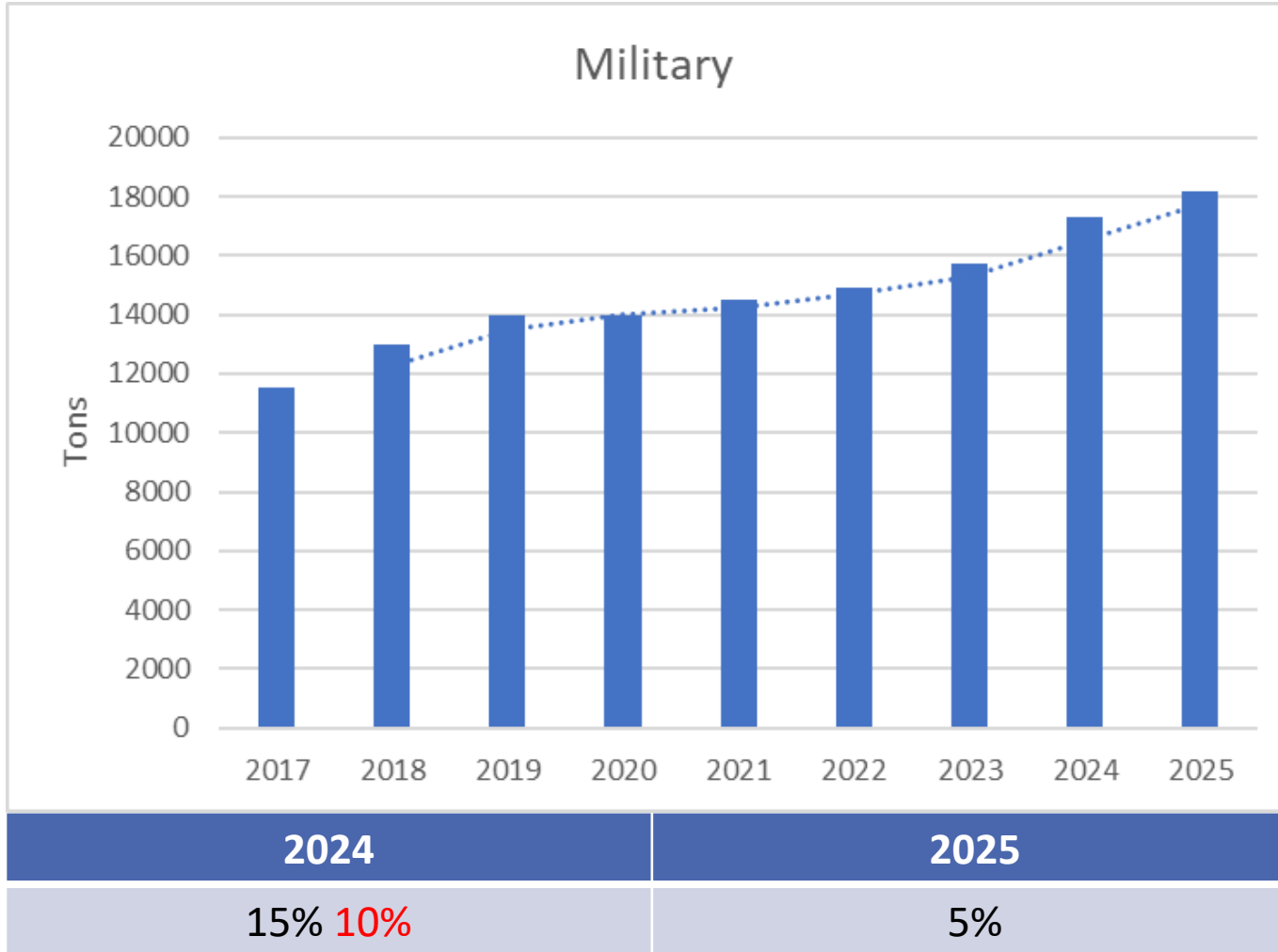
- Fewer wells being brought online
- Current wells more productive
- Reduction in oil and gas exploration
- ITR – O&G Production – '24: 2.8%, '25: 2.2%

Customer Market Sales Forecast

% change from prior year

Oil Field	2022	2023	2024	2025
Manufacturers (sales)	20.8%	15.7%	10.8%	5.5%
SFSA Forecast (tonnage)	30%	22%	-25%	10%

Military Forecast



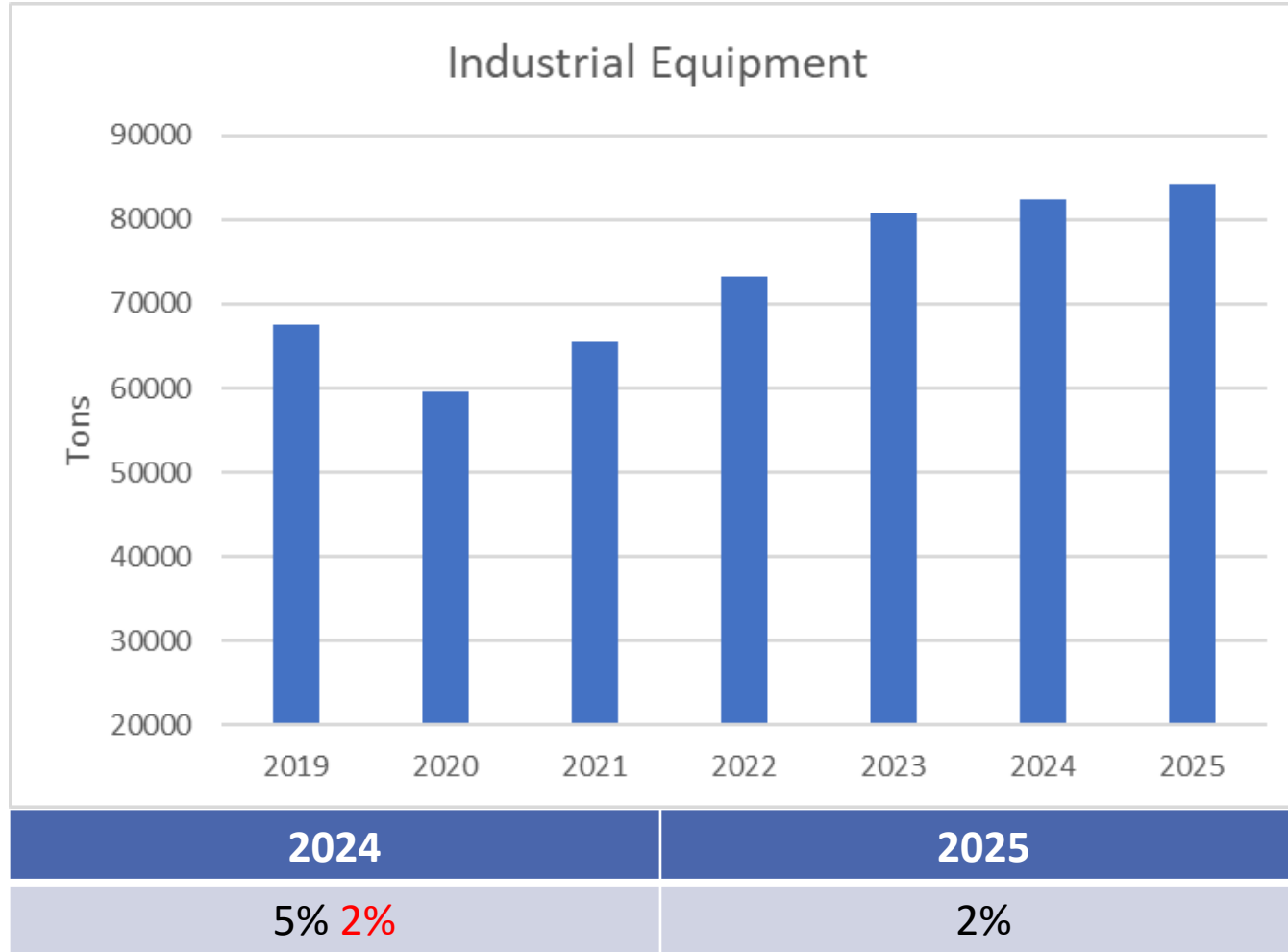
- ITR – US Defense Capital Goods New Orders – '24: 2.7%, '25: -1.9%
- Reduction in defense budget
- Mild decline in new orders for 2025

Customer Market Sales Forecast

% change from prior year

Military	2022	2023	2024	2025
Ground Systems (sales)	3.9%	8.7%	11.7%	3.8%
Naval Systems (sales)	6.5%	6.1%	8.1%	3.7%
SFSA Forecast (tonnage)	3%	5%	10%	5%

Industrial Equipment Forecast

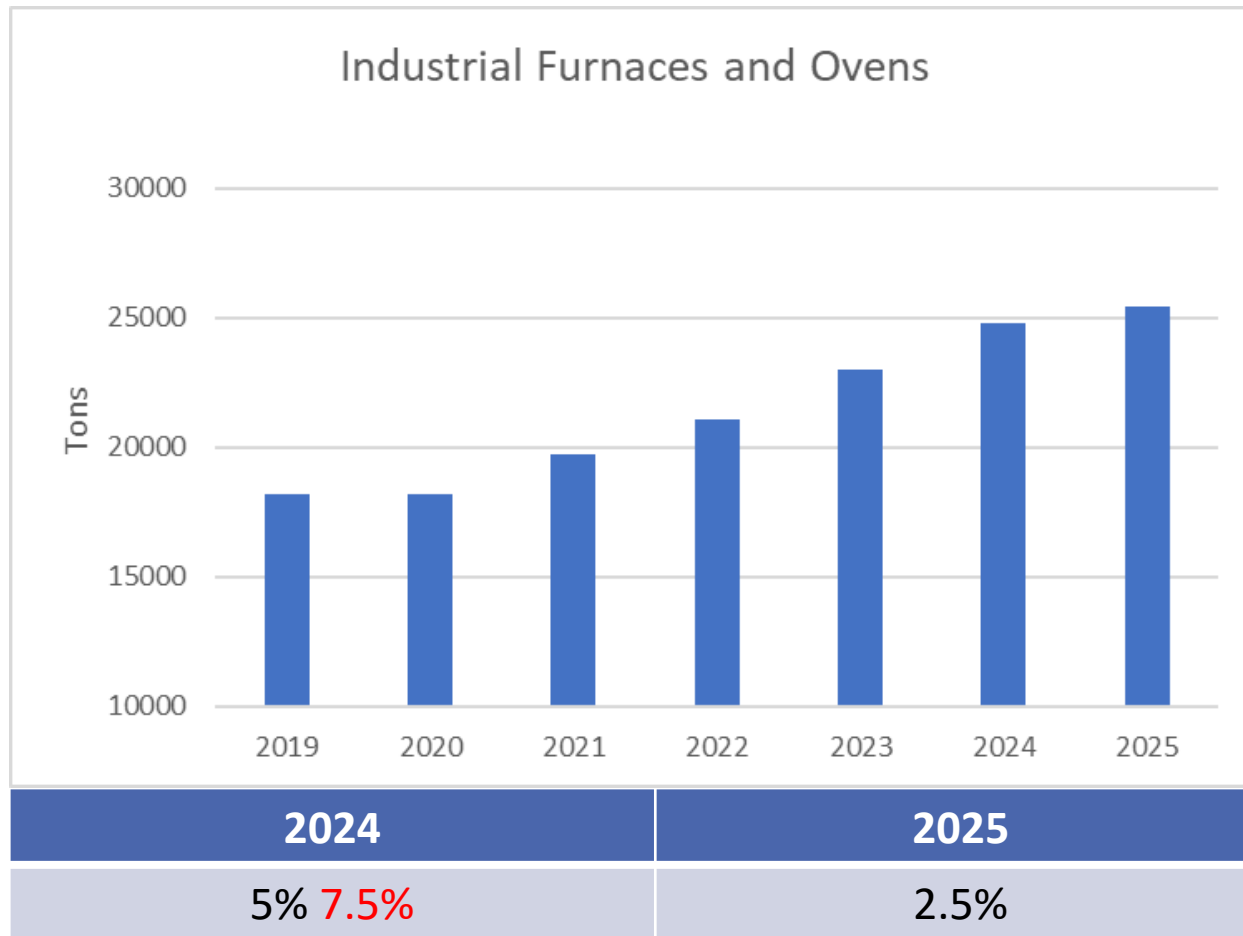


Industrial equipment parts - pulp & paper, food, shotblast - plates, wheels, sprockets, flanges

ITR Forecast – US Machinery New Orders

- '24: 0.3%
- '25: 5%
- Interest rates
- Slowing economy

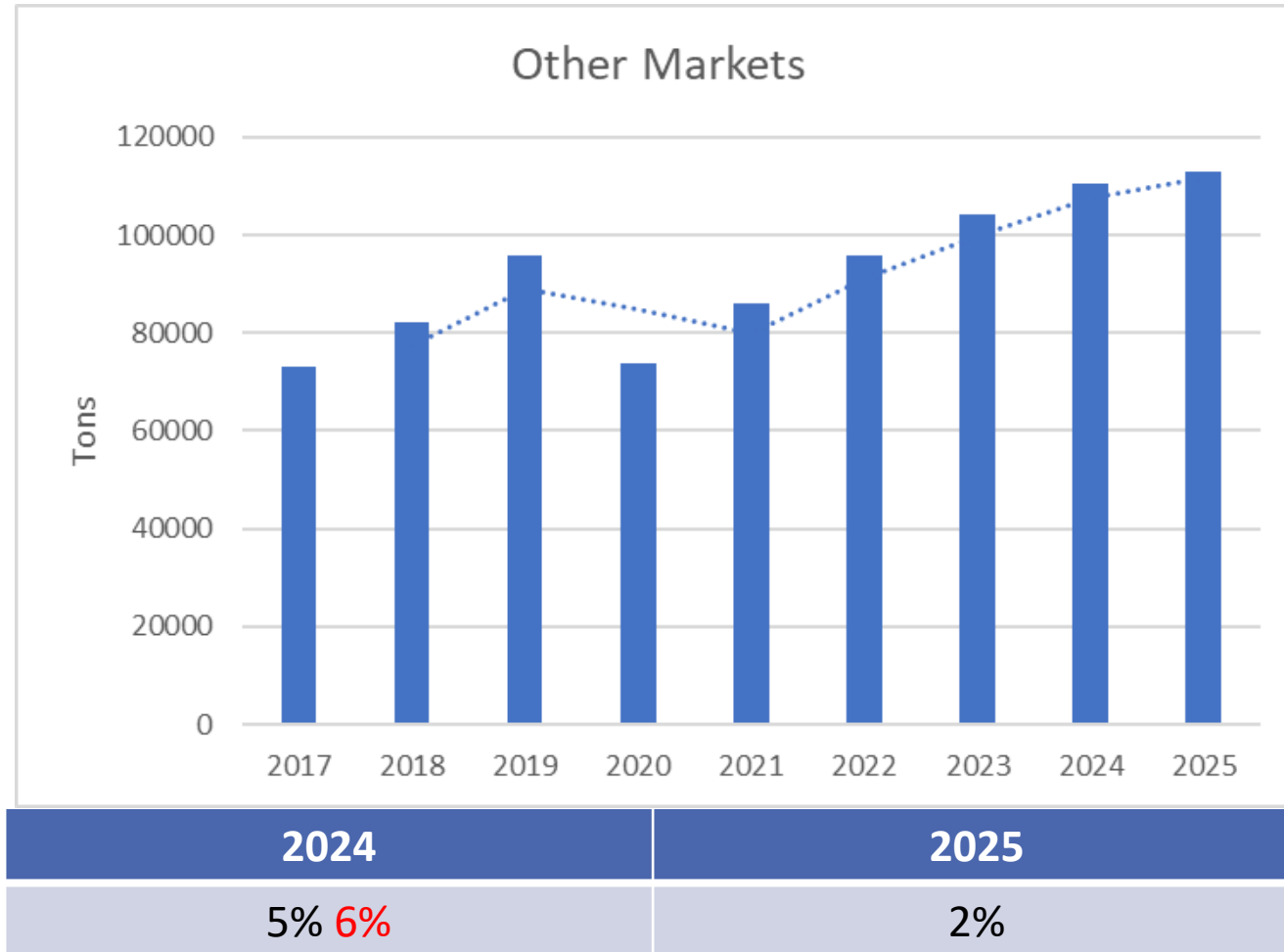
Industrial Furnace and Oven Mfg. Forecast



Industrial Process Ovens, Induction Heating, and Kilns - furnace, heat treat, steel mill components - rollers, links, baskets

- Customer forecast
- Market conditions

Other Markets Forecast



Markets included:

- Tooling
- Agriculture
- Cement
- Engine/Turbine
- Municipal
- Power Generation