



## Nippon Sanso Holdings Corporation

# An individual investor’s perspective on the potential of the industrial gas business and its contribution to carbon neutrality

## A hundred-year history and efforts to reduce CO<sub>2</sub>

**Harlan** I looked at the history of Nippon Sanso; is it true that the Company has supplied oxygen for more than a hundred years?

**Hamada** Yes, the Company has supplied oxygen ever since it was founded 113 years ago. As oxygen enables efficient combustion for welding and melt-cutting, it was regarded as essential at the dawn of Japanese industry. Supplying that oxygen is fundamental to our hundred-year-old company.

**Harlan** As an individual investor, there’s something I’d like to know: Will oxygen remain the Company’s core business?

**Hamada** Oxygen will continue to play a key role within our business. In fact, oxygen is currently attracting greater interest than previously in the context of efforts to achieve carbon neutrality. It promotes combustion very effectively, and this facilitates substantial improvements in terms of efficiency. Combustion in a high-oxygen environment increases the concentration of the carbon dioxide (CO<sub>2</sub>) emitted. When the concentration of CO<sub>2</sub> is higher, it is far more efficiently recovered.

**Harlan** So, concentrated CO<sub>2</sub> is actually easier to recover; I didn’t realize that.

**Hamada** We do more than just supply oxygen, though: As “The Gas Professionals,” we offer customers individual recommendations regarding how they can best utilize gases, and also help them to reduce CO<sub>2</sub> emissions in their businesses.



**Harlan** At the worldwide level, accords such as the Paris Agreement exist, but their targets have not yet been met. I think investors internationally need to keep an eye on progress in ESG-focused management within companies and put firm pressure on them to do more. With this in mind, can I ask what Nippon Sanso Holdings is doing to achieve carbon neutrality?

**Hamada** Industrial gas is manufactured using air separation units, which consume a large amount of electricity. But we managed to reduce our electricity consumption, and therefore our CO<sub>2</sub> emissions, by researching and developing highly efficient manufacturing plants employing a new process, and using them to replace our old plants. Besides this, in our medium-term management plan entitled NS Vision 2026, we set carbon neutrality and net-zero CO<sub>2</sub> emissions as our targets for 2050. As the first step toward achieving these goals, in 2026 we aim to achieve a CO<sub>2</sub> emissions reduction of 18% compared to 2019.

**Harlan** It sounds like the Company’s making steady progress toward carbon neutrality in terms of both its customers’ businesses and its own internal initiatives.

## Business model for industrial gases and their increasing usefulness

**Harlan** Could you explain the basic business model in the industrial gas industry?

**Hamada** The usual business model involves building plants adjacent to customers’ factories. The model of supplying gases via direct pipelines to customers’ factories ensures particularly reliable business operations because the contracts are tailored to each individual customer. This means that, even if the upfront investment is large, it’s possible to predict earnings potential and the path toward recovery of the investment.

**Harlan** The trust the Company’s built up over more than a hundred years is no small matter given that no company can even enter this business without relationships of trust with customers, as well as the technology and financial means to build plants. I must admit, though, that I tend to think of “gas” as being potentially dangerous: What’s the Company doing to address issues of safety?

**Hamada** Ever since the Company’s founding, our motto has been “Selling gas is selling safety.” As “The Gas Professionals,” we ensure that all our employees thoroughly understand the properties of gases and are able to recommend the best ways of utilizing gases for individual customers. This motto reflects our intention to value communication with customers founded on our knowledge and experience, our technologies, and the trust we have earned, and to devote ourselves to further learning.

**Harlan** Are there any new gas applications or business areas?

**Hamada** We’re producing specialty gases, chemicals, and other essentials for semiconductor manufacturing. In the medical field, we also supply products including medical oxygen, Nitrous Oxide gas used for anesthesia, and helium used during MRI scans. In terms of new business areas, we supply <sup>18</sup>O, a stable oxygen isotope essential in manufacturing the reagent used for diagnosis via positron emission tomography, or PET; we command the largest share of the worldwide market\* for this product. Reagents manufactured using <sup>18</sup>O accumulate in specific cells within the body, enabling the detection of cancer, and recent research has established that PET-based diagnosis is also effective for predicting Alzheimer’s.

**Harlan** So, is <sup>18</sup>O different from regular oxygen?

**Hamada** It’s totally different, and makes up only 0.2% of the oxygen in the air. Our company’s air separation units are generally 50 to 60 meters tall, but extraction of <sup>18</sup>O requires taller units of over 80 meters. It’s a rare gas that takes time to produce, so it’s a very expensive product.

**Harlan** That’s fascinating.

**Hamada** A business that would be more familiar to most people is our Thermos business. Around 40 years ago we started the development that led to Thermos products; it was our company that launched Japan’s first stainless steel vacuum-insulated bottle.

**Harlan** Thermos is an American brand, isn’t it? I had a Thermos flask as a child.

**Hamada** We bought Thermos, which was originally a German company, and since then, all our vacuum-insulated products have been offered under the Thermos brand.

**Harlan** It seems like Thermos products today are much better than when I was a child.

**Hamada** When we bought the company, Thermos products were made of glass, but we were already selling stainless steel vacuum-insulated bottles, so we started selling these under the Thermos brand name. Since then, the products have got lighter and improved in terms of performance and usability.

**Harlan** Finding out that something I use myself is actually a Nippon Sanso Holdings product makes me feel a real sense of affinity with the Company. When we’re investing in a company, there are all sorts of considerations, such as profitability, future prospects, management philosophy, ESG-focused management, environmental initiatives, and the leadership provided by the CEO. But it could actually be the contact we have with a company’s products and services on a day-to-day basis that makes us want to support the company. That’s one reason why your Thermos business really appeals to me and makes me feel an emotional attachment. Was this something the Company took into consideration when it bought Thermos?

**Hamada** At the time, we were working hard to expand our lineup of everyday products and B2C products derived from industrial gases. Our acquisition of the Thermos business was one element in this effort. Vacuum-insulated bottles are constructed using two layers of thinly processed stainless steel, between which is a vacuum. Their design involves a wealth of know-how relating to metalworking and welding that is very closely connected to our core technologies.

**Harlan** It seems like the ideal to be able to expand into B2C without moving away from the Company’s core business.

**Hamada** Yes, and we are also currently working on recycling our Thermos products to contribute to achieving the United Nations Sustainable Development Goals.

**Harlan** I’m sure that the consumers who had used the products would be pleased to see them turned back into resources.



\* According to the Company’s own research



# Responsibility of industrial infrastructure and the individual investor’s perspective

**Harlan** In January 2024, Japan will launch the new NISA (Nippon [Japan] Individual Savings Account), eliminating the time limits on tax-free investments, and I think this will change investment time spans from short and medium term to long term. I see this as a fantastic investment opportunity for individual investors, so could you explain the Company’s management vision once more for them?

**Hamada** In industrial gases, it’s possible to run a sound and stable business that’s not significantly impacted by business conditions in any single industry by supplying gases to a diverse range of industries including chemicals, steel, non-ferrous metals, glass, electronics, food, and medical.

**Harlan** I see, so there’s an advantage in supplying industrial gases to multiple industries?

**Hamada** Yes, our advantages as a company are the breadth of industries we supply to and the size of the geographical areas we cover. In 2018, we added Europe, which is a valuable market, and in 2020 we transitioned to a holding company structure. That structure is now global, spanning four regions—Japan, the United States, Europe, and Asia and Oceania. This has enabled us to ensure proper balance between revenues and expenditures among industries and among regions, and to develop a competitive framework for operations as a global company that originated in Japan.

**Harlan** It sounds like the Company’s operational stability is rock-solid. Now—to move on to the investor’s perspective—as an individual investor, I’m often asked about investment. I always recommend long-term, diversified investment, which is my own personal approach. I think my best course of action would be to invest in companies that will remain energetic for years to come and companies that I want to go on supporting. In the case of Nippon Sanso Holdings, although it’s one individual stock, I think the nature of the Company is such that investing in it is equivalent to making diversified investments in multiple companies, sectors, and geographical areas. The business is well-balanced in terms of industries and regions, and also benefits consumers, society in general, and the global environment. As an individual investor, I regard the Company as both beneficial to society and impressive from a business perspective.

**Hamada** If we compare Japan and the US, do the two countries’ individual investors differ in terms of their approach, or in other ways?

**Harlan** In the US, people aspire to use the active income they earn through work to make long-term investments, employing those funds to generate passive income after retirement that will enable them to live a life of leisure. Nobody teaches them this; it’s just what people typically aspire to. From around the 1990s, when I was a university student, people increasingly sought to benefit from the growth potential of companies that could beat the competition and flourish. We thought that, if our investment led to a groundbreaking innovation, not only would we have contributed as one of the company’s owners, but also we would receive a return on our investment. It seemed crazy not to take advantage of this potentially lucrative arrangement.

**Hamada** Sooner or later, I think Japan will be the same. So, as a company we need to clearly set out our vision for the future, our projected earnings, and our contributions to society, while also generating solid profits. It will be very important to disclose not only our business results, but also our achievements in non-financial fields. This type of disclosure should reflect specific themes such as initiatives to achieve carbon neutrality, the hiring of women as employees, and the promotion of women to management positions. In non-financial fields, we’re capable of achieving some of our targets ahead of schedule, so I’m keen to take a more aggressive approach and tackle challenging targets.

**Harlan** That’s a great mindset to have. As an investor, I personally believe that what benefits me will benefit the world. It’s been very exciting to hear you talk today about running the business in a way that works for everybody: customers, investors, and the wider society, as well as the Company itself.

**Hamada** Gases are a form of industrial infrastructure. I therefore believe that, alongside developing new technologies, our other key responsibility is to maintain gas supplies. With this in mind, Nippon Sanso Holdings will remain committed to fulfilling its role as an all-inclusive manufacturer and pioneer in the field of industrial gases.

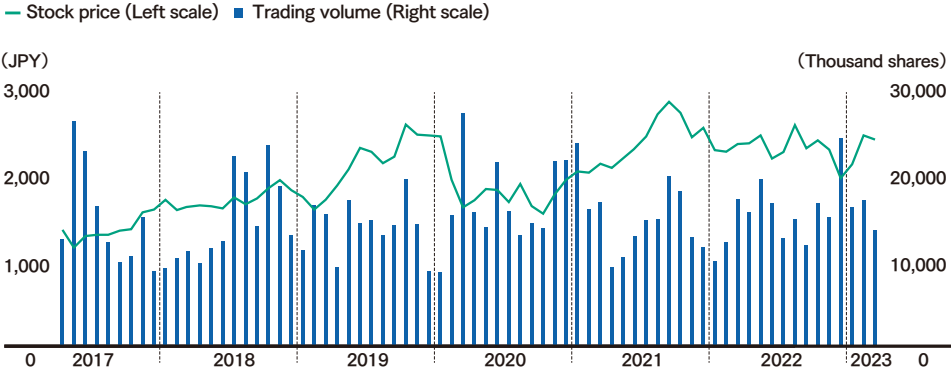
**Harlan** As an individual investor, I look forward to seeing the Company grow and develop further.



## Corporate and Investment Data

### Nippon Sanso Holdings Corporation(4091 Chemistry)

Common Stock Price Range and Trading Volume



Corporate Data <small>(as of March 31, 2023)</small>	
Date founded : October 30, 1910	Number of employees : 19,579
Paid-in capital : ¥37,344 million	Stock exchange listing : Tokyo
Investment Data <small>(as of September 25, 2023)</small>	
Market capitalization : ¥1,560,433 million	EPS (consolidated; the Company's forecast) : ¥162.87
Number of shares issued : 433,092,837	BPS (consolidated; actual result) : ¥1,878.35
Total shareholder return (the Company's forecast) : 1.11%	Minimum purchase price : ¥360,300
Dividend per share (the Company's forecast) : ¥40.00	Number of shares per unit : 100
PER (consolidated; the Company's forecast) : 22.12 times	High for the year : ¥3,688
PBR (consolidated; actual result) : 1.92 times	Low for the year : ¥1,915