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Extended Range of Raw Material CO₂ Concentrations Applicable to CO₂ Recovery Equipment Decarbonization Solutions to a Broader Array of Customers

Taiyo Nippon Sanso Corporation (Headquarters: Shinagawa-ku, Tokyo; President Kenji Nagata; hereinafter "TNSC"), a Japanese industrial gas business company in the Nippon Sanso Holdings Group, has extended the range of raw material carbon dioxide (CO₂) concentrations applicable to CO₂ recovery equipment with a capacity of 10 tons per day, which it launched in April 2023, to enable CO₂ recovery from a wide range of CO₂ emission sources.



Exterior view of small-scale CO₂ recovery equipment

Background of Development

Following the global trend toward carbon neutrality by 2050, TNSC started marketing CO₂ recovery equipment with a capacity of 10 tons per day in April 2023 to support customers' decarbonization efforts. Since launch, we have received many inquiries from customers wanting to capture CO₂ from emission sources outside the specification range (raw material CO₂ concentration of 20-40%) of the CO₂ recovery equipment. To meet such customer needs, we have extended the range of recoverable CO₂ concentrations (up to 60%) by leveraging our accumulated gas separation and purification technologies. This will allow us to provide more customers with decarbonization solutions by capturing CO₂ emissions from a broader range of sources than previously possible.

CO₂ recovery equipment specifications

Recovered CO ₂ amount	10 tons per day
Recovered CO ₂ concentration	98%
Raw material CO ₂ concentration	20%~60%
Equipment dimensions	14.5×5.35×2.75 m

TNSC is also committed to developing technologies to recover CO₂ from low-concentration (less than 20%) raw material CO₂ emission sources and will continuously contribute to achieving a carbon-neutral society by distributing CO₂ recovery equipment with an extended application range to various customers.

【Company Overview】

Taiyo Nippon Sanso Corporation

Business description: Manufacture and sale of various industrial gases such as oxygen, nitrogen, argon, LP gas, gas for medical uses, and specialty gases, manufacture and sale of welding equipment and materials, gas-related devices, and, air separation equipment, assembly, processing, inspection of electrical components, and equipment maintenance

Established: October 30, 1910

Incorporated: February 4, 2020

Capital: 1.5 billion yen

Shareholder: Nippon Sanso Holdings Corporation (Investment ratio: 100%)

Revenue: 420.4 billion yen*

*Note: This figure shows the revenue of Japan for Nippon Sanso Holdings Corporation in FYE2023

Taiyo Nippon Sanso Corporation

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