



**Contributing to the Reduction of CO<sub>2</sub> Emissions Equivalent to More Than 100,000 Tons per Year!**  
**Tsukuba Diecasting Receives IMA Environmental Award by Using MG Shield Firepro of Cover Gas**

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 cooperated with Tsukuba Diecasting Co., Ltd. (hereinafter "Tsukuba Diecasting") to reduce CO<sub>2</sub> emissions equivalent to more than 100,000 tons per year. For this initiative, Tsukuba Diecasting received the 2024 International Magnesium Association (IMA) Award of Excellence in the environment category.\*

\* An award for which the IMA honors companies with their outstanding environmental initiatives in the magnesium industry.



MG Shield cylinder (left), and a cabinet dedicated to MG Shield cylinders

MG Shield is a fireproof cover gas developed by TNSC to prevent oxidation and combustion of molten magnesium alloys. Compared to sulfur hexafluoride (SF<sub>6</sub>), a conventional cover gas for molten magnesium alloys, MG Shield significantly reduces CO<sub>2</sub> emissions per cylinder by a factor of approximately 22,800. Tsukuba Diecasting has reduced its annual SF<sub>6</sub> consumption by 4,500 kg by replacing the conventional cover gas with MG Shield in FY2023, based on its production technology cultivated through years of magnesium production and technical cooperation from TNSC regarding MG Shield. This equates to reducing over 100,000 tons of CO<sub>2</sub> (22,800 in Global Warming Potential).

In addition to its domestic factories, Tsukuba Diecasting is aiming to convert its Vietnamese factories to use MG Shield, and TNSC is also cooperating in this effort by installing local gas supply facilities and establishing a gas supply system. With technologies related to MG Shield,

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TNSC will continue to promote initiatives to reduce CO2 emissions in the magnesium industry and contribute to the realization of a sustainable society.

**【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: 414.3 billion yen\*

\*Note: This figure shows the revenue of Japan for Nippon Sanso Holdings Corporation in FYE2024

Taiyo Nippon Sanso Corporation

[Tnsc.Info@tn-sanso.co.jp](mailto:Tnsc.Info@tn-sanso.co.jp)