

December 13, 2022

Matheson wins Large Hydrogen Business in India

Nippon Sanso Holdings Corporation ("NSHD", President CEO: Toshihiko Hamada) hereby announces that Matheson Tri-Gas, Inc. ("Matheson", headquartered in Texas, U.S.), NSHD's U.S. operating company, received the Award for the Supply of Hydrogen and coproduct steam for a period of 20 years from Numaligarh Refinery Limited (NRL), a Public Sector affiliate of the Government of India.

Matheson will invest and construct a hydrogen plant and supply 132 kNm³/hr (285 Tons/day) to NRL's refinery units at Numaligarh in Assam, India. The engineering and construction of the plant will be executed via Larsen & Toubro Limited, India, and the reforming technology will be licensed from Topsoe A/S, Denmark. Hydrogen and coproduct steam from the plant will support the highly strategic Numaligarh Refinery Expansion Project (NREP) of the prestigious Northeast development initiative of the Government of India that also includes the Paradip Numaligarh Crude Pipeline (PNCP) project, Crude Oil Import Terminal (COIT) at Paradip, India-Bangladesh Friendship Pipeline (IBFP), Numaligarh-Siliguri interstate products pipeline and 2G Ethanol Project^(*1,2). We are proud and honored to be an integral portion of the initiative.

*1: Economic Times, September 19, 2022

*2: The Telegraph, December 8, 2022

The Hydrogen complex solution was developed by Matheson's Global HYCO business unit in collaboration with our leading technology and engineering partners. The solution targets flexibility and operability criteria to enable high-reliability operations with a very wide range of feedstock and fuel, as well as the highest resource utilization efficiency that supports Matheson/NSHD's Carbon Index considerations and economic objectives. Subsequent to completion of engineering and construction, the plant will be streamed in 2025.

This initiative demonstrates NSHD's commitment to significant growth through gases supply for highly strategic, commercially sound projects and represents a significant additional dimension for our Global HYCO footprint. It will strengthen NSHD's presence in the growth segment of south and south-east Asia and establish our Global HYCO operations in India.

NSHD, in its effort to foster a carbon neutral society, is pursuing multiple business and program initiatives under the Global HYCO effort that supplies hydrogen, syngas and carbon monoxide products to select customers for carefully selected projects. We are committed to continue to explore opportunities to realize growth and a carbon-neutral society by expanding this business on a global scale.

NIPPON SANSO HOLDINGS Corporation

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