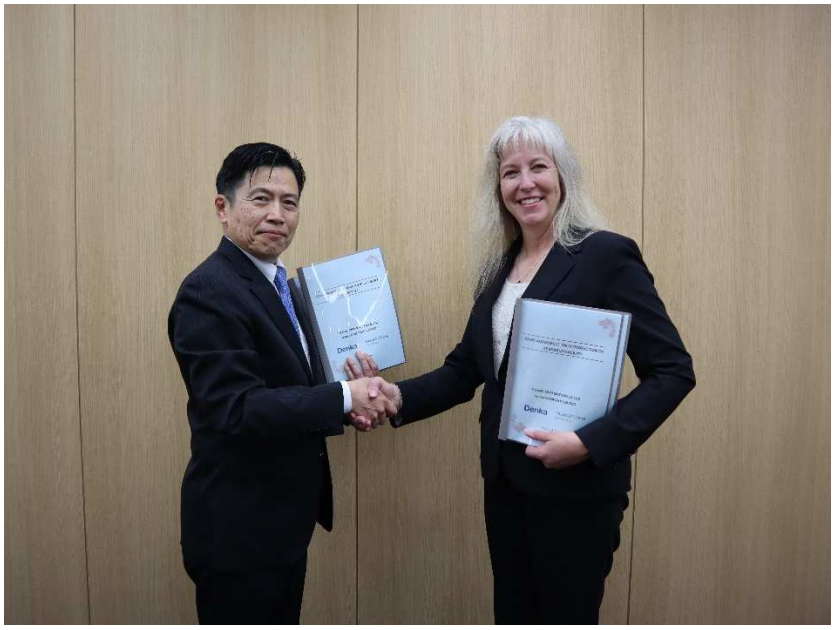
May 25, 2023
Denka Company Limited

Joint R&D and Facility Installation Agreement with Transform Materials to Establish a Low-Carbon Acetylene Supply Chain

− Accelerating the promotion of carbon neutrality under Mission 2030 —

Denka Company Limited (headquarters: Chuo-ku, Tokyo; President: Toshio Imai; hereinafter, "Denka") has decided to conduct joint research with Transform Materials LLC (headquarters: Florida, USA; CEO: Rachelle Goebel; hereinafter, "Transform Materials"), a global microwave plasma technology provider, to establish its technology for realizing the low-carbon production of acetylene. The signing ceremony was held on May 23, 2023.



May 23 Signing Ceremony for the agreement between Denka and Transform Materials
Shown here: Kazuo Takahashi; Representative Director, Rachelle Goebel; CEO

Under our eight-year management plan Mission 2030, which started in fiscal 2023, we aim to achieve 100% of our businesses being "three-star businesses" with the three elements of specialty, megatrends, and sustainability. In addition, as one of our non-financial KPIs, we have also set the goal of reducing CO_2 emissions by 60% by 2030 (compared to fiscal 2013), and are proceeding with the transformation of our portfolio by establishing a low-carbon acetylene chain.[1]

Transform Materials, the company with which we have concluded this agreement, is a private equity backed company based in the United States that owns technology for producing acetylene and hydrogen from methane (and other gaseous hydrocarbons) using microwave plasma reactors.[2] The technology of Transform Materials not only contributes to the reduction of CO_2 emissions from our mainstay products such as chloroprene rubber and acetylene black produced from the existing acetylene chain made from carbide, but also has the potential to create new initiatives that contribute to carbon neutrality by utilizing the by-product hydrogen. This is the reason why we have decided to enter into this agreement. We will install acetylene and hydrogen production equipment based on this technology at our Omuta Plant (Omuta City, Fukuoka Prefecture) to demonstrate and optimize the technology to realize the large-scale mass production of acetylene.

In addition, we plan to make environmental investments totaling 85 billion yen over the eight years up to 2030. We will continue to push forward with various sustainability-related initiatives, both in Japan and overseas, toward the achievement of carbon neutrality in 2050.

Denka continues to contribute to people's lives and the society through the chemistry we can be proud of to the world for the purpose of “Make the world a better place as specialists in chemistry.”

1. Acetylene chain: Production flow of various products made from acetylene
2. Technology to produce acetylene and hydrogen from methane (hydrocarbon) using microwave plasma:
Technology to produce acetylene and hydrogen from methane or any other hydrocarbons using microwave plasma technology.

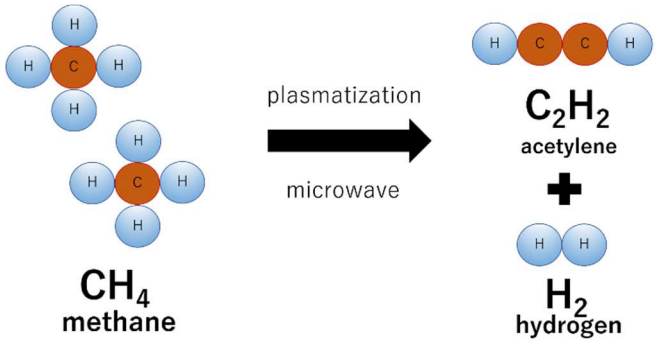


Diagram of the Process

Investment Summary

- Investment location: Omuta Plant
- Facility Outline: Installation of Transform Materials equipment producing acetylene and hydrogen (capacity of 1,600t of acetylene/year) in our demonstration facility
- Joint research period: May 2023-end of 2028
- Facility start-up: First half of FY2026 (scheduled)

Note: The impact of this project on our business results for FY2023 is expected to be negligible.

Company Overview of Transform Materials LLC

- Company name: Transform Materials LLC
- Head Office: Florida, U.S.A.
- Established: 2014
- Chairman: David Soane
- CEO: Rachelle Goebel
- Reference HP: www.transformmaterials.com

Overview of Omuta Plant

-Omuta Plant: 1 Shinkaicho, Omuta City, Fukuoka Prefecture, Japan
-Products: Acetylene black, functional ceramics, heat-dissipating substrates, etc.
- Number of employees: 609

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