

## Grant-in-Aid to be Issued under METI's Plan to Secure Supply of Storage Batteries Toward Development of Technology to Manufacture Low-Carbon Acetylene

Denka Company Limited (headquarters: Chuo-ku, Tokyo; President: Toshio Imai; hereinafter, "Denka") was recognized on June 16 under the storage battery supply security plan of the Ministry of Economy, Trade and Industry (METI) for our efforts to strengthen and expand domestic supply of acetylene black, which is a high-function conductive agent used in xEV lithium-ion batteries, among others. In connection with this, it was formally decided on August 8 that grant-in-aid will be issued by the New Energy and Industrial Technology Development Organization.

Denka is aiming to make 100% of its businesses "three-star businesses," incorporating the three elements of specialty, megatrends, and sustainability as part of its management plan Mission 2030 that was launched in FY2023, while also having a KPI of reducing its CO<sub>2</sub> emissions by 60% (compared to FY2013). Acetylene black is one of Denka's most important products, and it produces the raw material acetylene by two methods, namely the carbide method and the petrochemical method<sup>(\*1)</sup>. A major challenge has been the considerable CO<sub>2</sub> emissions from the carbide method production used at one of its three plants, the Omuta Plant.

With the aim of reducing CO<sub>2</sub> emissions from its production of acetylene-related products (decarbonization), Denka has concluded a joint development agreement with Transform Materials (headquarters: Florida, USA; CEO: Rachelle Goebel), a private equity backed company based in the United States, for the mass production of a technology to produce acetylene and hydrogen from methane (hydrocarbon) using microwave plasma<sup>(\*2)</sup>. The grant-in-aid will help Denka advance the development of low-carbon acetylene mass production technology by enabling it to acquire demonstration and research equipment.

Acetylene black possesses high purity and high conductivity, so it is expected that demand will continue to grow as a key material to boost mobility electrification and storage battery performance, while developing an environmentally friendly and stable production method for the raw material acetylene coincides with the Japanese government's strategy of expanding domestic supply chains for storage batteries. In addition, Denka aims to achieve carbon neutrality by 2050, and its efforts to reduce CO<sub>2</sub> emissions in the acetylene chains<sup>(\*3)</sup> are indispensable to achieve that.

Denka continues to contribute to people's lives and the society through its world-renowned chemistry for the purpose of "Make the world a better place as specialists in chemistry."

### ■ Overview of recognized supply securement plan

(1) Product	Acetylene black (conductive agent)
(2) Total business amount	About ¥6.7 billion yen
(3) Maximum grant amount	About ¥3.3 billion yen
(4) Initiative contents	Technology development aimed at creating a mass production system based on technology to produce acetylene and hydrogen from methane by using microwave plasma

- (\*1) Among the Denka Group's plants producing acetylene black, the Omuta Plant uses the carbide method, while the Chiba Plant and the Merbau Plant (Singapore) of Denka Singapore Ptd Ltd use the petrochemical method
- (\*2) A Technology to produce acetylene and hydrogen from methane or any other hydrocarbons using microwave plasma technology.
- (\*3) Production flows for products made with acetylene, including acetylene black and chloroprene rubber

References: Previous press releases related to the announcement (on Denka's website)

- May 25, 2023, "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"

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