PROTERIAL

News Release

October 31, 2025
Proterial, Ltd.

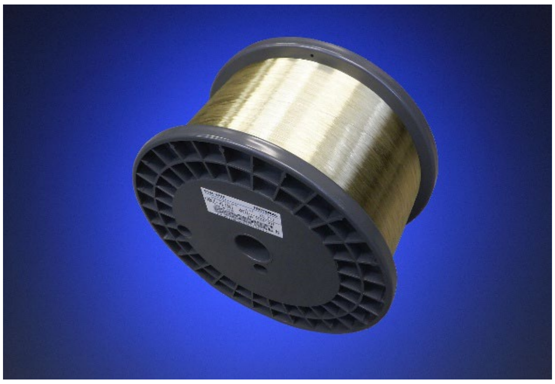
HBZ-B40 EDM Wire Won "Machinery & Robot Parts Award" at the 2025 'CHO' MONODZUKURI Innovative Parts and Components Awards

Proterial, Ltd. ("Proterial") has won the "Machinery & Robot Parts Award" at the 2025 'CHO' MONODZUKURI Innovative Parts and Components Awards for its EDM wire "HBZ-B40", which offers improved machining speed and surface precision. The award is presented by the Monozukuri Nippon Conference and Nikkan Kogyo Shimbun. The award ceremony is scheduled to be held on Thursday, December 11th.

1. Details of the award

Recipient: "HBZ-B40" EDM wire with improved machining speed and surface accuracy.
Award: The "Machinery and Robot Parts Award" at the 2025 Grand Award of 'CHO' MONODZUKURI Innovative Parts and Components Awards by the Monozukuri Nippon Conference and the Nikkan Kogyo Shimbun.

2. Product overview



Electrical discharge machining (EDM) is a machining method in which electrical discharge is repeated between an electrode and metal (such as mold material), and the resulting heat is used to melt the metal and create a shape. Today, the commonly used EDM wire diameters range from 0.1 to 0.3 mm due to processing machinery restrictions. Previously, 0.3 mm wire was considered thick, but its breaking load limited machining efficiency. When a large current was applied to process large workpieces or reduce machining time, the wire often broke due to heat. Additionally, it has recently become necessary to improve the surface accuracy of finish machining processes (reducing surface roughness). Therefore, electrical discharge performance must be improved, and wire diameter must be increased to shorten machining time and improve surface accuracy at the same time.

The HBZ-B40 EDM wire for electrical discharge machining developed by Proterial has a wire diameter of 0.4 mm, which achieves a breaking load that is approximately twice that of the commonly used wire diameter of 0.25 mm. In addition, the increased zinc content improves electrical discharge efficiency and electrical discharge performance. As a result, the new product achieves cutting speeds about 10% faster than previous 0.4 mm wires and improves surface accuracy, reducing surface roughness by approximately 7% (based on a demonstration conducted with Makino Milling Machine Co., Ltd.).

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https://www.cntct.proterial.com/contact/publish/inquiry_eng?g=01&c=001-01
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■About PROTERIAL

PROTERIAL

The Thinking Behind our Company Name
"Proterial" combines **"pro-"** with the word **"material."**
"Pro-" represents elements of our Values:

- **Unparalleled Professionalism**
- **Unbounded Progressiveness**
- **Unleashing Proactiveness**

"Material" refers to the high-performance materials that our original technologies produce and underpinned by the three pros. With our focus on solving customer issues and bringing new levels of value, we promise to contribute to the realization of a sustainable society through the products and services that embody our philosophy.

■Proterial, Ltd. — Company Overview

Established: April 1956
Head office: Toyosu Prime Square, 5-6-36 Toyosu, Koto-ku, Tokyo 135-0061, Japan
Capital : 310 million yen (as of March 31, 2025)
Representative : Sean M. Stack
Representative Director, Chairperson, President, & CEO
Sales revenue: 768.6 billion yen (Term ended March 2025)
History: 1910: Founded as Tobata Foundry Co.
1937: Merged with Hitachi, Ltd.
1956: Established separately as Hitachi Metals Industries, Ltd.
2023: Renamed from Hitachi Metals, Ltd. to Proterial, Ltd.

Proterial is a participant of the United Nations Global Compact and adheres to its principles-based approach to responsible business.
In January 2025, Proterial received a Silver rating in the EcoVadis Sustainability Assessment.

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