

High-precision wire electrical discharge machine that enabled automated connecting for 0.03 mm diameter wires

Registration No.	Number 00376		
Registration Date	September 10, 2024	Registration Category	Category 1

Name (Model, etc.)	Wire Electrical Discharge Machine UPH-1
Location	Miyashiro-cho, Saitama, Japan
	Museum of Industrial Technology, Nippon Institute of Technology
Owner (Custodian)	Museum of Industrial Technology, Nippon Institute of Technology
Manufacturer (Company)	Makino Milling Machine Co., Ltd.
Year Manufactured	1993
Year first appeared	1993
Reason For Selection	This item is a high-precision wire electrical discharge machine that specialized in punching/press manufacturing for micro-precision parts like semiconductor lead frames that were required for the Japanese home appliances and electronics that swept the world in the 1990s. In addition to developing the unprecedented wire side-traversing structure to accommodate advancements in microfabrication, it is also important for being the first machine to bring to the industry the possibility of automated wire connecting for ultra-thin wires of 0.03 mm in diameter, which had a difficulty level far higher than wire connecting for wires with the common diameter of approximately 0.2 mm, and for actualizing continued processing for long periods of time through the providing of a device that automatically exchanges processed materials.
Registration Standard	1-A (Show an important aspect or stage of the development of science and technology.) 1-B (Show a uniquely Japanese scientific or technological development from an international perspective.)

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