

MELTIN holds field test with ENEOS

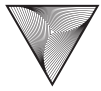


MELTIN MMI (CEO: Masahiro Kasuya, hereinafter MELTIN) held a field test of the MELTANT teleoperated avatar robot with ENEOS Corporation (Representative Director President: Katsuyuki Ota, hereinafter ENEOS)

MELTANT- β enables robotization and remotization of non-routine work with dexterous and powerful five-finger robotic hands

With robotization and remotization of hazardous work at an oil plant in mind, MELTIN held a field test of the MELTANT- β at the Central Technical Research Laboratory of ENEOS, located next to their oil plant. The lab conducts R&D of fuels to improve the oil refining process and quality, and develops functional chemicals and lubricant oil through analysis of molecular structure and composition. At these kinds of facilities, workers need to perform a wide variety of tests and analyses with various instruments through a process of trial and error. As such, these tasks are not easy to standardize and must be performed by humans, even when dealing with dangerous toxic substances. It is hoped that MELTANT- β can be used in these kinds of environments.

MELTANT- β has hands with a high of degree of flexibility – akin to humans, as well as a human-sized body, which allow it to use existing equipment and facilities without modifying them. Furthermore, as it replicates user' s movements and allows the user to act as if locally present, even a first-time operator can perform work at some level. During this field test, ENEOS researchers operated MELTANT- β and performed the following work tasks:



- Pouring of liquid from a beaker into a graduated cylinder to separate it
- Setting of samples in various experimental devices
- Operation of a cart to transport objects
- Opening and closing of the draft chamber shutter doors



Heading toward the removal of human behavioral constraints in dangerous environments

This time, the field test focused on analysis and testing works, but as we move toward the utilization of MELTANT in the entire plant facility, we will continue to carry out research and development to solve various issues in society. The following are some of the expected use cases.

1. Initial response in an emergency, such as status confirmation and first aid (reduction of danger and health damage)
2. Remote operation by workers with special skills / knowledge (simultaneous deployment of rare human resources at multiple locations)
3. Labor-saving combined with automation (solving labor shortage)



MELTIN also held a workshop to discuss how MELTANT can be used at the oil plant and Central Technical Research Laboratory.



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