



MELTIN and MOL Sign Memorandum of Understanding to Introduce Remotely Controlled Robots in Ocean Shipping Business

TOKYO - MELTIN MMI Co., Ltd. (MELTIN; CEO: Masahiro Kasuya; Headquarters: Tokyo) and Mitsui O.S.K. Lines, Ltd. (MOL; President & CEO: Takeshi Hashimoto; Headquarters: Tokyo) today announced the signing of memorandum of understanding (MoU) for installation of remotely controlled robots (Note 1) in ocean shipping operations, including vessels, associated businesses, and offshore businesses.



(Note 1) Image of remote-control robot

https://www.youtube.com/watch?v=Qe66afjYXpk&t=39s

The objective of the MoU is a joint study by MOL and MELTIN to introduce a MELTIN's remote-control robotic technology for adoption in MOL's ocean shipping-related operations.

Issues facing the shipping business include not only prevention of marine accidents and ensuring safe operation, but also improving transport quality to more effectively meet customer needs. Therefore, it is becoming more and more important for the industry to take a mid- and long-term viewpoint in finding solutions by adopting new technologies such as autonomous navigation and remote control. The introduction of MELTIN's remote-control robotic technology, being developed with the assumption that it will be used in areas such as dangerous, time-consuming work or duties done in extremely high and low-temperature environments, can also help reduce the workload on seafarers, particularly in tasks that

present challenges to hands-on operation.

MELTIN and MOL have repeatedly studied the possibility of addressing a wide variety of issues in the ocean shipping industry by introducing MELTIN's technology. In addition, major advances have been made in the high-speed onboard telecommunication environment in recent years, so MOL expects synergistic effects by combining improved telecommunication with MELTIN's remote-control robotic technology. Both companies are committed to building a strategic relationship to introduce MELTIN's technology and proceed with more detailed

and specific studies, which led to the conclusion of the MoU.

The companies will push forward more discussion and action to study details specific to different vessel types and routes for introduction of remotely controlled robots and associated technologies, with an eye toward not only determining the feasibility of introduction and the level of onboard telecommunication technology required at sea, but also implementing Proof of Concept (PoC), which assumes practical use.

<Reference information>

1) MELTIN MMI Co., Ltd.: Corporate outline

Founded in 2013. Its headquarters is located in Tokyo, and it has an R&D center in Minami-soma in Fukushima Prefecture. It is a pioneering company in the cyborg business using bio-signal and robot technology. In 2018, it announced a PoC avatar robot called the "MELTANT-α," and in 2020, the "MELTANT-β," a new model used for verification and testing purposes. It is a certified company in "J-Startup," a startup development support program backed by the Japanese Ministry of Economy, Trade and

Industry.

Website: https://www.meltin.jp/

2) Mitsui O.S.K. Lines, Ltd.: Corporate outline

Founded in 1884. Headquartered in in Tokyo, it is a multimodal transport group based on proven technologies and experience backed 130 years of history, meeting a wide variety of transport needs with one of the world's largest fleets. It promotes technology development using information and communication technologies (ICT) to further enhance tools that support safe operation and further reduce the environmental impact of its business activities.

Website: https://www.mol.co.jp



MELTIN remotely controlled avatar robot (MELTANT-β)



MOL car carrier (Beluga Ace)

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