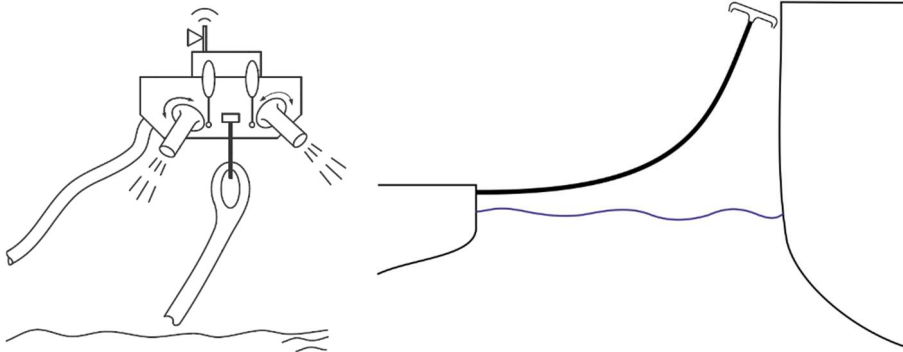


RWTH Technology Automated towline handover



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Challenge

In order to guide large and difficult-to-maneuver vessels safely to their berths in port, small but powerful tugs are needed to influence their direction of movement and their speed, for example by using towline. These towlines are currently handed over by the staff of the tug to the staff of the ship manually. In the future, however, there will be autonomous ships that cross the oceans on their own, there will be autonomous tugs that will bring the large autonomous ships to their berths, and in this scenario, the so-called towline handover will also have to be automated.

Solution

The presented invention describes a technical system, which automatically transfers the towline from the tug to the ship to be towed, using the thrust of water jets. The transport platform has a device for attaching the towline and several nozzles from which water emerges at high velocity. By selectively changing the individual nozzle angles and the respective volume flows, the position and orientation of the platform can be influenced and thus the towline can be transferred automatically.

Advantages

- The transfer of the towline is automated (automation).
- Line transfer is possible especially while ship and tug are moving side by side at the same speed (acceptance).
- The towline is handed over directly instead of a light auxiliary line first (time saving).
- The tug can keep a much greater distance from the moving ship (safety gain).
- The transfer is possible in all weather conditions where ships are still allowed to enter harbors (acceptance).

Status

- Patent application at the German Patent and Trade Mark Office. Patent application not yet disclosed. RWTH Aachen University cannot derive any rights against third parties from the patent application, which has not yet been disclosed.

RWTH Aachen University is looking for research partners for development cooperation's.

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Fields of application

Shipping

Keywords

#autonomous shipping
#autonomous towline transfer
#autonomous tug

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