

MAGNET CRAWLER II

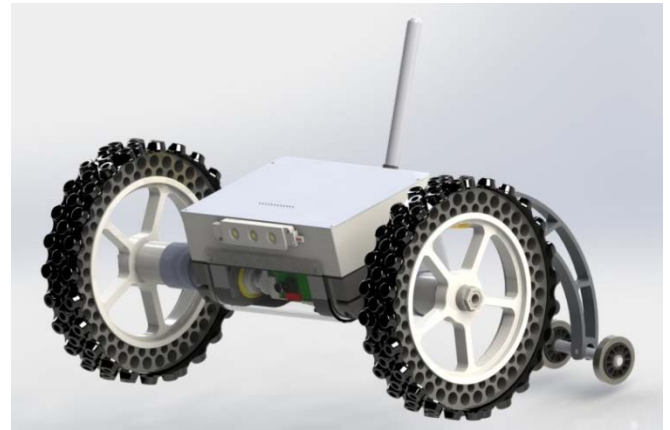
Inspection Robot for Enhanced Ship Safety

System Description

The Magnet-Crawler II is a lightweight, compact climbing-robot for magnetic surfaces. The robot uses two gear motors to drive its magnetic tweels and uses an elastic tail to improve its stability. In the front part of the robot an Odroid embedded system is integrated with a tiltable 720p cam, an I/O-Board, two LED spotlights and one LED tracking light. The Magnet-Crawler II is powered by lithium-polymer batteries and is controlled via WLAN. The video signal of the robot is displayed at the control-terminal of the robot. The robot shall be used for the inspection of ship hulls.

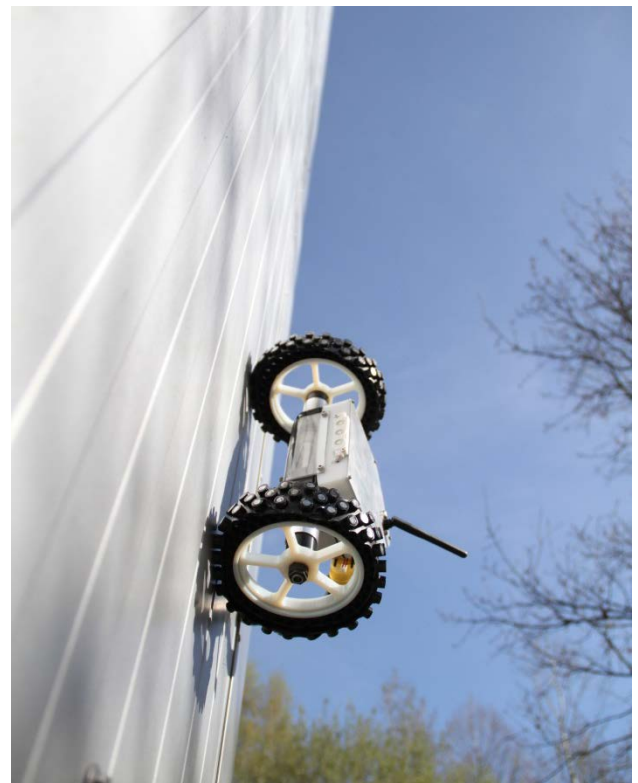
Technical Details

- **Size:** 330 x 300 x 130 mm
- **Weight:** 1230 g total weight
- **Actuation:** 2 X 12 V DC gear motors with encoders
- **Sensors:** 3-axis acceleration sensor
- **Power supply:** 11.1 V – 800 mAh Lithium-Polymer-Battery (operating time about 30 min.)
- Odroid U3 - ARM platform / Ubuntu Linux / ROS
- 720 p Cam (tiltable)
- Tweels with Neodym Magnets
- 2 x LED spotlight (for navigation and structure inspection)
- 1 x tracking LED (for external tracking device)



Application: Logistics, Production and Consumer

Projects: **INCASS**
Inspection Capabilities for
Enhanced Ship Safety
(01/2013 - 04/2017)



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