

Development of a crawler type conveyance support robot

"Crawler TO", to assist materials conveyance

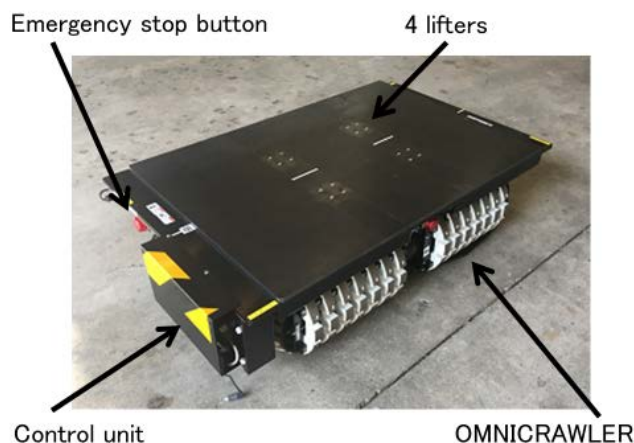
Teaming up with Takenaka Corporation (Mr. Masahiro Miyashita, President) and Topy Industries, Ltd. (Mr. Nobuhiko Takamatsu, President), Okaya & Co., Ltd. has successfully developed the "Crawler TO (*1)", an omnidirectional crawler type conveyance support robot that enables the conveyance of materials by wireless communication using smartphones, as a measure to reduce the burden on workers at construction sites.

Amid the increasing demands for new building construction in Japan, a lack of construction workers is becoming an outstanding issue. "Crawler TO" is a robot that supports conveyance of materials under larger trucks. It has the advantage of conveying heavy items in all directions of back and forth, right and left using "OMNICRAWLER (*2)". It also enables elderly and female workers to convey heavy item, and labor saving can be achieved at construction worksites.

Elevators for construction are used for lifting and conveyance at construction sites. At the sites where the cargo handling space is large, forklifts can be used for loading materials. However, at sites where the cargo handling space is small, it is necessary to use trucks for loading heavy materials by moving them to elevators by operators' labor-intensive work, which also takes up time. One of the features of "Crawler TO" is that it uses "OMNICRAWLER", which has a small enough size to go under conveyance trucks loaded with heavy materials by easy operation of smartphones in small areas.

Going forward, we will jointly develop "Crawler TO" by trial manufacture and improvement in our company and its affiliates, and in a construction machinery rental company. We plan to start selling and renting the robot for supporting conveyance from February 2018.

You can meet the actual robots at the Okaya & Co., Ltd. booth at "Messe Nagoya 2017", scheduled to be held on November 8 through 11 at Portmesse Nagoya (Nagoya International Exhibition Hall).



Specifications:

Main body: 54cm wide, 92cm long and 24.6cm high, Main body weight: 120kg;

Travelling speed: 3km/h

Continuous operation time: 2 to 4 hours; Load capacity: 500kg (tow: 1t);

Level-difference climb: 25kg

*1 Okaya & Co., Ltd. is now filing for trade mark registration.

*2 "OMNICRAWLER" is a mobile mechanism developed by Topy Industries, Ltd. based on the results of research by Kenjiro Tada, Associate Professor at Tohoku University's Graduate School of Information Sciences.

Topy Industries, Ltd. has filed for trademark registration and patent application.