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Proposal of a decentralized peristaltic movement generation based on actual intestines and verification by content transfer experiment

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Abstract

The intestines are an autonomous decentralized system with a neural network independent of the brain. Until now, some devices could reproduce the movement of the intestines, but autonomously switching the movement pattern as the biological intestine was impossible. In this study, we proposed a method for generating an autonomous peristaltic movement of a peristaltic continuous mixing conveyor that mimics the intestines. Peristaltic movements contribute to the transport of intestinal contents. With the proposed method, peristaltic movement is generated when the intestinal contents are detected by a unit with a unitized device. The proposed method was installed in a peristaltic continuous mixing conveyor and experimentally verified. The peristaltic movement was generated when there was content, and the content was successfully transported.

■理工学研究所との関連

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