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Smart Belt Technology

Smart Belt technology detects internal belt damage and simultaneously monitors tension to prevent catastrophic equipment failures and costly downtime in industrial operations.

Belts are used in many applications to transmit goods and power. Due to quality control issues from belt manufacturers, catastrophic belts can cause failures that create downtime and halt productivity in many industries. Currently, there are systems that monitors a belt's alignment, tension, and slippage; however, these systems are not comprehensive and can be expensive.

Researchers at Purdue University have developed Smart Belt, a technology that detects belt damage before catastrophic failure occurs. With this technology, tension and damage can be monitored simultaneously. Smart Belts provide information about damages that are not visible inside the belt. Smart Belts allow for constant observation of the whole belt.

Advantages:

-Provides information about damages inside the belt

-Monitors tension and damage simultaneously

-Allows for constant observation of the whole belt

Potential Applications:

-Belt manufacturers

TRL: 3

Intellectual Property:

Provisional-Patent, 2015-02-27, United States | PCT-Patent, 2016-02-25, WO | NATL-Patent, 2017-08-09, United States

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Category

Robotics & Automation/Perception & Sensing

Robotics & Automation/Automation & Control

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