

Title (en)

SENSOR BOLT FOR MEASURING FORCE AND GROUND CONVEYOR HAVING THE SAME

Title (de)

SENSORBOLZEN ZUR KRAFTERFASSUNG SOWIE DAMIT AUSGESTATTETES FLURFÖRDERZEUG

Title (fr)

BOULON CAPTEUR POUR DÉTECTER DES FORCES, AINSI QUE CHARIOT DE MANUTENTION QUI EN EST ÉQUIPÉ

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Application

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Abstract (en)

[origin: WO2010089052A1] The invention relates to a sensor bolt 13 for measuring force and a ground conveyor having the same. The sensor bolt 13 comprises a sensor element 1 made of a material having light transmission properties varying as a function of external forces and disposed in a light beam path between a light source and a light receiver 7. The sensor element 1 is mechanically operationally connected to a force receiving device. According to a preferred embodiment, the sensor element 1 is placed between a main shell part 5 and a form shell part 6, secured by bearing shells 3 and 4. A light beam is transmitted from a light source (e.g. LED) disposed in an end cap 2, through the sensor element 1 made of e.g. an epoxy core, and captured by a light receiver 7 disposed in a housing 8. Then the form shell part 6 is loaded by an external force, the epoxy core of the sensor element 1 deforms and the light transmission is reduced. The change in the light signal can be captured by the light receiver 7 and analyzed, e.g. by a signal processing component connected downstream.

IPC 8 full level

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