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**(54) Title (EN):** METHOD AND SENSOR FOR ROTATION MEASUREMENT OF AN ELONGATED OBJECT

**(54) Title (FR):** PROCÉDÉ ET CAPTEUR DE MESURE DE ROTATION D'UN D'OBJET ALLONGÉ

**(57) Abstract:**

**(EN):** The present invention relates to a sensor for contactless measurement of local rotation on an elongated object, preferably a yarn, the sensor being composed of a first circular pattern (A) of electrodes around the longitudinal axis of the object and a second circular pattern (B) of grounding electrodes arranged around the longitudinal axis of the object, where the second pattern is interdigitated with the first pattern such that the grounding electrons function as a screen between any two consecutive electrodes of the first pattern and further a method therefor, as well as improved methods and systems for twisting yarns based on the data obtained from this sensor and the aforementioned methods.

**(FR):** La présente invention concerne un capteur de mesure sans contact de rotation locale d'un objet allongé, de préférence un fil, le capteur étant composé d'un premier motif circulaire (A) d'électrodes autour de l'axe longitudinal de l'objet et d'un second motif circulaire (B) d'électrodes de mise à la masse disposées autour de l'axe longitudinal de l'objet, le second motif étant interdigité avec le premier motif de sorte que les électrons de mise à la masse fonctionnent comme un écran entre deux électrodes consécutives quelconques du premier motif et concerne en outre un procédé associé, ainsi que des procédés et des systèmes améliorés de torsion de fils sur la base des données obtenues à partir dudit capteur et des procédés susmentionnés.

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