

Title (en)

DEVICES AND METHODS FOR YARN QUALITY MONITORING

Title (de)

VORRICHTUNGEN UND VERFAHREN ZUR ÜBERWACHUNG DER GARNQUALITÄT

Title (fr)

PROCÉDÉS ET SYSTÈMES DE SURVEILLANCE DE LA QUALITÉ DE FILS

Publication

EP 3732470 A2 20201104 (EN)

Application

EP 18847153 A 20181224

Priority

- US 201715854014 A 20171226
- US 201715854018 A 20171226
- IB 2018060583 W 20181224

Abstract (en)

[origin: WO2019130209A2] Disclosed are methods of monitoring textile yarn quality and apparatuses for monitoring textile yarn quality. Moving textile yarn 1 is monitored for its quality to meet required criteria, e.g. evenness or presence of unwanted foreign fibers. Light illuminating by light sources 2 and/or 7 and an image sensor 3 are used. The yarn 1 is placed as an obstacle into the pathway 100 of one diffused 5 light 2, contours of the light being focused 6 for a sharp yarn contours image capture. The light 7 is reflected from the yarn 1 and propagates along a path 100 to the image sensor through diffraction element 8. Portion of reflected light is diffracted 8 and creates interference pattern. Remaining reflected light creates yarn image. Thus light 2 directly illuminates image sensor. Light 7 illuminates moving yarn 1 and light from light source 7 is reflected from the yarn and illuminates image sensor. The yarn diameter is determined by processing of the yarn contours image or yarn image. The color analysis of the yarn 1 is determined by processing of captured interference patterns. Further evaluation of yarn diameters is used for yarn evenness monitoring and further color analysis results evaluation is used for foreign fibers monitoring.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

See references of WO 2019130209A2

Cited by

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