

Title (en)

Method for winding a yarn with stepped precision winding

Title (de)

Verfahren zum Aufspulen eines Fadens in gestufter Präzisionswicklung

Title (fr)

Procédé pour enrouler un fil par bobinage de précision étagé

Publication

EP 0578966 B1 19960911 (DE)

Application

EP 93109171 A 19930608

Priority

DE 4223271 A 19920717

Abstract (en)

[origin: US5447277A] The stepwise high precision winding method includes winding the yarn on the bobbin with a reciprocating yarn changing guide in a series of steps so that an outer circumferential speed of the yarn-bobbin package is constant; reducing the yarn guide reciprocation frequency in each step from a starting frequency value to a final frequency value while keeping a winding number constant during each step so that the final frequency value is proportional to a bobbin rotation frequency in each step, and then increasing the yarn guide reciprocation frequency discontinuously to another starting frequency value and beginning a following step with the yarn guide reciprocation frequency equal to the other starting frequency value; setting the starting frequency value in each step to not more than a fixed maximum frequency; setting the final frequency value in each step to not less than a certain fixed minimum frequency; and setting the winding number in the Sth step equal to either $iS - iSx / (MS + x)$ or $iS + iSx / (MS - x)$, wherein $x = a/2H$; iS is a mirror value for the Sth step, MS is the order of the mirror value for the Sth step, a is the lay spacing between windings of a Kth lay and a $(K + MS)$ th lay and H is a total height of the yarn-bobbin package.

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CPC (source: EP US)

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Cited by

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