

Title (en)  
REDUCING ERRORS OF A ROTARY DEVICE, IN PARTICULAR FOR THE DETERMINATION OF COORDINATES OF A WORKPIECE OR THE MACHINING OF A WORKPIECE

Title (de)  
REDUZIEREN VON FEHLERN EINER DREHVORRICHTUNG, INSBESONDERE FÜR DIE BESTIMMUNG VON KOORDINATEN EINES WERKSTÜCKS ODER DIE BEARBEITUNG EINES WERKSTÜCKS

Title (fr)  
RÉDUCTION DES ERREURS D'UN DISPOSITIF ROTATIF, EN PARTICULIER POUR LA DÉTERMINATION DES COORDONNÉES D'UNE PIÈCE OU POUR L'USINAGE D'UNE PIÈCE

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Application  
**EP 14750742 A 20140814**

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• EP 2014067410 W 20140814

Abstract (en)  
[origin: WO2015022398A1] The invention relates to a method for reducing errors of a rotary device (11, 12), which comprises a first part (12), a second part (11), which can be rotated in relation to the first part (12) about an axis of rotation (A1) of the rotary device (11, 12), and a rotational-position measuring device (74, 75) for measuring the rotational positions of the first part (12) and of the second part (11) in relation to each other, wherein the rotational-position measuring device (74, 75) comprises a rotational-position sensor (74) and a measurement body (75) that interacts with the rotational-position sensor (74) for the measurement of the rotational position, wherein the rotational-position sensor (74) is connected to the first part (12) and the measurement body (75) is connected to the second part (11) or vice versa, and wherein the method comprises the following steps: - (21): errors of the rotary device (11, 12) caused by deviations between actual positions and actual orientations of the axis of rotation (A1) on the one hand and corresponding ideal positions and an ideal orientation of an ideal axis of rotation (A2) of the rotary device (11, 12) on the other hand are measured in a range of rotational angles, i.e., at various rotary positions of the first part (12) and of the second part (11) in relation to each other, and corresponding error measured values are obtained, - (23): expected fluctuations of the radial position of the first part (12) or of the second part (11) of the rotary device and/or fluctuations of the position of the first part (12) or of the second part (11) with respect to a direction tangential to the direction of rotation of the rotary device, which arise because of a deviation of the rotational motion of the rotary device (11, 12) from an ideal rotational motion about the ideal axis of rotation (A2), are determined from the error measured values for a plurality of rotational-position measurement locations of the rotational-position sensor (74), at which rotational-position measurement locations the rotational-position sensor (74) can measure the rotational position of the rotary device, - (25): in consideration of the expected fluctuations, at least one rotational-position measurement location of the rotational-position sensor (74) is determined, for which rotational-position measurement location the expected fluctuations of the position with respect to the direction tangential to the direction of rotation are smaller than for other possible rotational-position measurement locations and/or satisfy a specified condition.

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Citation (search report)  
See references of WO 2015022398A1

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WO 02090879 A2 20021114 - ZEISS CARL [DE], et al

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