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(54) **MACHINING METHOD FOR HARD-FINE MACHINING OF NOISE-OPTIMIZED GEARS ON A GEAR-CUTTING MACHINE**

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See application file for complete search history.

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(57) **ABSTRACT**

The present invention relates to a method for hard-fine machining of tooth flanks with corrections and/or modifications on a gear-cutting machine, wherein respective toothed wheel pairings which mesh with one another within a transmission or a test device are machined while taking account of the respective mating flanks, and wherein the tooth flanks of the relevant workpieces are provided with periodic waviness corrections or waviness modifications. In accordance with the invention, the rotational error extent is determined by means of rotational distance error measurement of the toothed wheel pairs in a gear measuring device and/or transmission. This measurement result serves as an input value for defining the amplitude, frequency and phase position for the periodic flank waviness corrections on the tooth flanks of the toothed wheel pairings for production in the gear-cutting machine.

20 Claims, 2 Drawing Sheets