

Title (en)

ROTATING OR OSCILLATING TOOL PROVIDED WITH METAMATERIALS FOR REDUCING SOUND EMISSION AND VIBRATIONS

Title (de)

ROTIERENDES ODER OSZILLIERENDES WERKZEUG VERSEHEN MIT METAMATERIALIEN ZUR REDUKTION VON SCHALLABSTRAHLUNG UND VIBRATIONEN

Title (fr)

OUTIL ROTATIF OU OSCILLANT COMPRENANT DES MÉTAMATÉRIAUX POUR RÉDUIRE LES ÉMISSIONS SONORES ET LES VIBRATIONS

Publication

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Application

EP 22761072 A 20220728

Priority

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Abstract (en)

[origin: WO2023006931A1] Tool comprising a first tool part (1, 14, 15, 16), which is designed to rotate, to oscillate or to perform some other periodic movement, and a second tool part (18, 20, 21, 23), which is designed for securing or guiding the first tool part and does not move with the first tool part, wherein the tool is provided with an arrangement of local resonators (2), which each comprise at least one oscillating mass (3) and one spring element (4), which connects the oscillatory mass (3) to the tool, and are tuned to having at least one resonance in a relevant, frequency range around a first relevant frequency, wherein the arrangement of the local resonators (2) creates at least one stopband for elastic wave propagation in the tool around at least the first relevant frequency.

IPC 8 full level

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