

MEASUREMENT AND EVALUATION OF COUPLING FORCES WHEN USING HAND-HELD POWER TOOLS

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SUMMARY

Coupling forces at the interface of the hand-arm system and the vibrating tool have a substantial effect on the actual vibration exposure. The paper presents a method for the qualitative assessment of coupling forces. This method - presently under discussion in the form of a draft standard within DIN (1) and ISO (2) - is mainly based on the results of a joint research project (University of Dortmund, University of Mainz and BIA). The workplace-related determination of a coupling factor can be considered the very heart of the method. For technical reasons, the coupling force is split up into the gripping and the pushing force. The paper describes the requirements applying to the measurement and evaluation. Examples are given to illustrate the determination of coupling forces with a view to assessing vibration exposure.

Key words: coupling forces, vibration, power tools

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