Semiactive Seat Suspension With a Vibration Absorber

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The paper deals with modelling and optimization of dynamic characteristics of a semiactive suspension of the working machine seat with a vibration absorber. The suspension is composed of a spring paralelly ordered with a semiactive damper controled by the sky-hook control algorithm. For the improvement of the dynamic characteritics of the semiactive suspension there is also analysed the effect of a vibration absorber. The dynamic characteritics of the suspensions are optimized by the multiobjective optimization, where besides the component respecting the effect of the effective accleration of the seat also the effect of the effective relative displacement between the seat and fhe floor of the working machine cabin is considered.

Keywords: semiactive seat suspension, sky-hook control, vibration absorber, modelling, optimization

Acknowledgement
This work was supported by grant project VEGA No. 1/1205/12.

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 Paper number: M201399

Manuscript of the paper received in 2013-09-24. The reviewer of this paper: *Juraj Gerlici*.