

Experimental determination of natural frequencies and response stiffness elastically supported body

Josef Soukup, František Klimenda, Blanka Skočilasová, Lenka Rychlíková, Jan Skočilas

Abstract: prerequisite for dynamic analysis and evaluation of rolling stock is experimental determination. Verification of basic suspension characteristics. A method was developed and used to determine these characteristics for two-axle vehicles. This method requires knowledge of the center of gravity and the major mean moments of inertia. When examining these characteristics, it is assumed that the vehicle body, chassis frames and wheelsets are rigid units. The spring characteristics are linear or can be linearized. The vehicle housing generally performs a spatial motion. A method for obtaining search characteristics required for dynamic vehicle analysis is proposed.

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- ¹⁾ Josef Soukup, Associate Professor: University of J. E. Purkyne in Usti nad Labem, Faculty of Mechanical Engineering, Na Okraji 1001, 400 01, Czech Republic (CZ), josef.soukup@ujep.cz.
 - ²⁾ František Klimenda, Ph.D.: University of J. E. Purkyne in Usti nad Labem, Faculty of Mechanical Engineering, Na Okraji 1001, 400 01, Czech Republic (CZ), frantisek.klimenda@ujep.cz.
 - ³⁾ Blanka Skočilasová, Ph.D.: University of J. E. Purkyne in Usti nad Labem, Faculty of Mechanical Engineering, Na Okraji 1001, 400 01, Czech Republic (CZ), blanka.skocilasova@ujep.cz.
 - ⁴⁾ Lenka Rychlíková, M.Sc. (Ph.D. student): University of J. E. Purkyne in Usti nad Labem, Faculty of Mechanical Engineering, Na Okraji 1001, 400 01, Czech Republic (CZ), lenka.rychlikova@ujep.cz.
 - ⁵⁾ Jan Skočilas, Ph.D.: CTU in Prague, Faculty of Mechanical Engineering, Technicka 4, 166 07, Prague 6, Czech Republic (CZ), jan.skocilas@fs.cvut.cz.