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Res. Agr. Eng.

**Z. Tkáč, J. Jablonický,
R. Abrahám, J. Klusa**

Measurement of

pressure in hydraulic system of the ZTS 160 45 tractor

Res. Agr. Eng., 51 (2005): 140-144

This contribution is oriented on the field of dynamic loading analysis of three-point hitch of tractor hydraulic pump. The hydraulic pump is placed in circuit of three-point hitch of the tractor ZTS 160 45. Obtained data from operation experiments will be applied for simulation of dynamic loading of the tested hydraulic pump. The measurements were realized during position control with ploughing sets: tractor ZTS 160 45 + plough 5-PN-30 and tractor ZTS 160 45 + plough 7-PHX-35. During the test physical and mechanical properties of soil and operating parameters of ploughing sets were investigated. Pressures of hydraulic system were in range from 3.2 to 7 MPa at aggregation with plough 5-PN-30 and hydraulic pump was loaded. Pressures of hydraulic system during ploughing with ploughing set tractor ZTS 160 45 + plough 7-PHX-35 were in range from 1.8 to 14 MPa and two times hydraulic pump was unloading in time 2 seconds.

Keywords:

tractor; ploughing set; pressure; hydraulic pump; three-point hitech

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