

## Non-Destructive Experimental Method for Determination of Modulus of Elasticity of Hydraulic Hoses

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**This article deals with a non-destructive experimental method for determination of modulus of elasticity of hydraulic hoses. There is described experimental equipment for determination of the modulus of elasticity of hydraulic hoses by expansion method. The modulus of elasticity is determined for several hydraulic hoses of different parameters on basis of combined hydraulic capacity of oil and hose. Furthermore it is necessary to know oil bulk modulus. The modulus of elasticity of hoses is very important during design of a hydraulic system. It is necessary to take into account the modulus of elasticity of hoses in a mathematical simulation model of dynamic parameters of a given hydraulic system. A designer can subsequently utilize maximal flexibility, maximal stiffness or required ratio of the mentioned hose properties. The measured hose isn't destructed and can be subsequently used in hydraulic systems. It is a big advantage of this method.**

**Keywords:** Modulus of Elasticity, Hydraulic Hose, Oil, Non-Destructive Method.

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