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SUMMARIES

DYNAMICAL ANALYSIS OF PLANAR RRRRT TYPE FIVE-BAR HINGED MECHANISM WITH TWO DEGREES OF FREEDOM WITH TAKING INTO ACCOUNT CLEARANCES AND IMPACTS IN KINEMATIC PAIR. **N. Davitashvili, A. Sharvashidze, A. Talakvadze.** "Problems of Mechanics". Tbilisi, 2018, № 2 (71), pp. 5-15, (Engl.).

Is stated the dynamical research of planar RRRRT type five-bar hinged mechanism with two degrees of freedom with taking into account clearances and impacts in kinematic pair in the connection of two couplers. Are determined the velocities of colliding masses of links before and after of impact as well as restoring coefficients. Is defined that with increasing of restoring coefficient the maximal magnitudes of reaction forces and number of breakings in kinematic chain are reducing. Is solved the numerical example. 8 ill. Bibl. 22. Engl.; sum. in Russian.

DYNAMICS AND STABILITY OF HYDRAULIC DRIVE OF FAN TYPE AGRICULTURAL MACHINES. **R. Makharoblidze, Z. Makharoblidze.** "Problems of Mechanics". Tbilisi, 2018, № 2(71), pp. 17-24, (Engl.).

The problems of dynamics and stability of hydraulic drives are considered on the example of the fan type working members of the tea-plucking machine "Sakartvelo" chaser. Are derived the design formulae for the angular velocity and acceleration of the shaft of the hydraulic motor as a function of time from the condition of equilibrium stability. Is determined that at selection of a pump and hydraulic motor would be taken into account the characteristics of the fan and the leakage coefficients of hydraulic units. Bibl. 5. Engl.; sum. in Russian.

DEFINING THE TYPES AND PARAMETERS OF IMPACT LOADS BY USING PHENOMENOLOGICAL MODELS. **S. Mebonia, T. Morchadze, N. Rusadze.** "Problems of Mechanics". Tbilisi, 2018, № 2 (71), pp. 25-32, (Engl.).

In article ehe classification of forces acting in the interaction of solids is given. The main rheological models describing the impact interaction of bodies in the presence of elastic, viscous elastic and plastic deformation are considered. Recommendations for the choice of the type and parameters of models under different conditions of loading of interacting bodies are given. 5 ill. Bibl. 8. Engl.; sum. in Russian.

NEW ENGINEERING COMPLEXES FOR EXTREM CONDITIONS. **E. Medzmariashvili, N. Tsignadze, G. Khazaradze, G. Partskhaladze, T. Kikava.** "Problems of Mechanics". Tbilisi, 2018, № 2(71), pp. 33-41, (Engl.).

In the article are considered the creation of extreme, rapidly-erected, mechanized bridges. Here are considered similar bridges that are already developed in Georgia, as well as new solutions that give the possibility to overcoming arbitrary the obstacle by mechanized structure of the bridge. 7 ill. Bibl. 5. Engl.; sum. in Russian.

FLOW OF VISCOUS FLUID IN INITIAL SECTION OF PLANE CHANNEL WITH POROUS WALLS. **V. Tsutskiridze**. "Problems of Mechanics". Tbilisi, 2018, № 2 (71), pp. 43-47, (Engl.).

In the article is considered the steady flow of viscous non-compressive fluid half-infinite planar channel with parallel walls, through that is supplied the liquid with constant speed v_0 . Bibl. 12. Engl.; sum. in Russian.

A PILOT STUDY OF TORSIONAL VIBRATIONS CAUSED BY PERTURBATION ACTION OF THE ENGINE'S TORQUE. **M. Tevzadze, Z. Chkhartishvili**. "Problems of Mechanics". Tbilisi, 2018, № 2 (71), pp. 49-55, (Engl.).

For the purpose of identifying all possible resonances in the vehicle's transmission, selecting a more dangerous resonance and the optimal installation of an elastic-friction damper at this resonance, the paper describes the method of a pilot study of torsional vibrations. The paper also proposes the method of installing a damper at resonance, which allows for determining its optimal parameters depending on load condition of engine. As a result of a pilot study of resonance triggered from the engine, the paper presents the elastic-hysteretic characteristics of a damper, which allow for damping the three-phase resonance to be absorbed in the transmission of vehicle under study. 5 ill. Bibl. 3. Engl.: sum. in Russian.

Development of Methods for Calculating Reinforced Composites Used in Construction. **P. Geradze, P. Kipiani, S. Mindadze**. "Problems of Mechanics". Tbilisi, 2018, № 2 (71), pp. 57-60, (Engl.).

The paper dwells on numerical method of research of new designs of the latticed shells by using mathematical programming, to produce such constructions, which have high strength in one direction, and high flexibility in another direction, and for which, the use of reinforced composites is highly effective. In research, using a micro-model of composite material, taking into account the arrangement of mutually intersecting reinforcing threads, the winding angle and the coordinate system related to threads, there has been obtained a boundary problem, which is solved by method of linearization. In research, it is possible to take into account the impact of the winding angle, mechanical properties and cylinder geometry on strength of the latticed shells. Bibl. 5. Engl.: sum. in Russian.