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SUMMARIES

PRECISION OF RRRRT TYPE SPHERICAL FIVE-BAR HINGED MECHANISM WITH TWO DEGREES OF FREEDOM WITH CLEARANCES IN KINEMATIC PAIRS. **Keburia N., Davitashvili N.** “Problems of Mechanics”. Tbilisi, 2021, № 1 (82), pp. 7-19, (Engl.).

The research of precision of RRRRT type spherical five-bar hinged mechanism with two degrees of freedom with clearances in the kinematic pairs is stated, for performing of that with taking into account the primarily errors of mechanism are determined the functions of positions of output links and their points. By differential method are find the errors of output links and, their points and mechanism. Based on the obtained formulae are solved the numerical case, the results of that are presented as diagrams that gives the possibility to carry out the comparative analysis of ideal and real mechanisms with revealing of reliability and precision of five-bar mechanism. 8 ill. Bibl. 21. Engl.; sum. in Russian.

SUSTAINABLE FISHING ON BALTIC SEA. **O. Klyus, P. Rajewski.** “Problems of Mechanics”. Tbilisi, 2021, № 1 (82), pp. 21-27, (Engl.).

Forced fishing create new problems such as the overexploitation. Many fisheries have significantly improved their performance, sometimes productivity has decreased, leading to further requirements to improve the organization of fishing so as to reduce the negative impact on the environment, including reducing the energy consumption of fishing vessels. as well as reducing the negative impact on the environment caused by pollution from the residues of used and lost fishing gear. The article presents the directions of research work carried out at the Maritime University of Szczecin, Poland aimed at indicating the directions of further modernisation of engine injection equipment on fishing vessels and the possibility of using used nets for fuel production. 5 ill. Bibl. 14. Engl. sum. in Russian.

METHOD OF CALCULATING THE DEFORMATION FORCE DURING PLASTIC PROCESING OF AXISSYMMETRIC LONG-LENGTH HOLLOV PRODUCT. **T. Natriashvili, S. Mebonia, A. Shermazanashvili.** “Problems of Mechanics”. Tbilisi, 2021, № 1(82), pp. 29-35, (Engl.).

Method of calculation of stress in the deformation zone radial forging machine is presented. This method will allow engineers to more accurately calculate the forging process products, and designers to more reasonable to determine the forces acting on the tool during forging, which depend on the size of the engine, the drive power and the allowable deformation of the metal. 4 ill. Bibl. 8. Engl.; Sum. in Russian.

TWO TASKS OF SYNTHESIS OF SPHERICAL FIVE-BAR HINGED RRRRT TYPE MECHANISM. **N. Davitashvili, N. Keburia.** “Problems of Mechanics”. Tbilisi, 2021, № 1 (82), pp. 37-46, (Engl.).

Are derived the conditions of existence of crank - one input link and possibilities of translational motion - second input link. Are defined the dimensions of links of mechanism with taking into account the angle of transmission. 2 ill, Bibl. 16. Engl.; sum. in Russian

SYNTHESIS OF RRRRT TYPE SPHERICAL FIVE-BAR HINGED MECHANISM WITH TWO DEGREES OF FREEDOM BY DESIRED CONDITIONS. **N. Davitashvili, N. Keburia.** "Problems of Mechanics". Tbilisi, 2021, № 1 (82), pp. 47-57, (Engl.).

Is stated the synthesis of RRRRT type spherical five-bar hinged mechanism with two degrees of freedom by desired conditions. Besides the derivation of equations of trajectory of connecting point of couplers of spherical RRRRT type mechanism in the geographic and orthogonal coordinates is given. 1 ill. Bibl. 14. Engl.; sum. in Russian.

STUDY OF NATURAL AND RESONANT TORSIONAL OSCILLATIONS IN THE TRANSMISSION OF THE FRONTWHEEL-DRIVE CAR. **M. Tevzadze, Z. Chkhartishvili.** "Problems of Mechanics". Tbilisi, 2021, № 1 (82), pp. 59-66, (Engl.).

When the transmission operates in resonant mode, the amplitude of torsional oscillations increases, which, in turn, leads to an increase in the tension in the transmission elements.

To study free and resonant torsional oscillations of the transmission, we have proposed a rather simple and effective method for calculating the systems taking into account various types of nonlinearities. This once again emphasizes that nonlinear oscillations of systems are very complex in their nature and, unlike linear ones, are characterized by a wide variety of manifestations of their properties. 4 ill. Bibl. 3. Engl.; sum. in Russian.

DEVELOPMENT OF THE AXEL DESIGN OF CAR WITH INDEPENDENT SUSPENSIONS. **M. Sharmiashvili, R. Pharts Khaladze, V. Margvelashvili, S. Mebonia.** "Problems of Mechanics", Tbilisi, 2021, №1(82), pp. 67-72, (Engl.).

In article a parallel-frame suspension with two levers of equal length is developed. The main elastic elements of the suspension are longitudinal torsion bars, which have the ability to compress to adjust the ground clearance. The advantage of independent suspension in comparison with continuous axles is as follows: uniform grip on the surface of movement and in off-road conditions; reduction of un sprung masses. 3 ill. Bibl. 6. Engl.; Sum. in Russian.

ON HEAT EFFECTS AT ELECTRICAL CONDUCT FLUIDS FLOW BETWEEN PARALLELIC WALLS. **E. Elerdashvili.** "Problems of Mechanics". Tbilisi, 2021, № 1(82), pp. 73-77, (Engl.).

In the article is studied the flow of viscous electrical conducting fluid in a planar pipe at existence of a magnetic field and a heat exchange. Bibl. 11. Engl.; sum. in Russian.