

Title: INCREASING THE COMPETITIVENESS OF PRECESSIONAL TRANSMISSIONS BY DEVELOPING AND CAPITALIZING ON THE GEAR WITH "CONFORMING" CONTACT OF THE TEETH.

Patent/project number: Patent nr. 1616 Y MD, of 30.04.2022

Author/s: Ion Bostan, Viorel Bostan, Maxim Vaculenco, Ion Bodnariuc, Valeriu Dulgheru, Sergiu Mazuru, Mihai Țopa, Radu Ciobanu, Oleg Ciobanu, Nicolae Trifan, Malcoci Iulian, Dumitru Vengher, Serghei Scaticailov, Valeriu Odainâi, Victor Pavelco, Alina Bregnova, Vasile Muntean.

Institution: Technical University of Moldova

Category: B

Description: Creating contact between teeth with convex-concave geometry and small difference in curves. It was found that the absolute multiplicity of tooth engagement (100%) in compliance with the three defining conditions can occur only when using the variable convex / concave profile of the tooth flanks, usually the central wheels, depending on the values of conical axoid angles and notation the radius of



Catalog 3rd International Exhibition

InventCor

15-17.12.2022 – Deva, Romania

CORNELIUGROUP
research-innovation
association

INVENTCOR

Power of Creative Mind

curvature of the profiles of the teeth of the crowns of the satellite wheel, as well as the number of teeth of the Z wheels and their ratio.

The purpose of the stage:

- to identify the conditions for increasing the load-bearing capacity of the gearing ADCX-CV and AD, β CX-CV, and for decreasing the energy losses in the convex-concave contact of the multiparous teeth;*
- determining the functional characteristics of the kinematic precessional transmissions with gearing ADCX-CV and identifying the technical solutions to increase them.*

The technical solutions mentioned above are the basis for the development of transmissions with precessional gearing.

State of development: Implemented at laboratory level, prototype inside the Technical University of Moldova.

Contact: maxim.vaculenco@dip.utm.md

Presentation link: www.utm.md