ANALYSIS THE INFLUENCE OF THE PARAMETERS ON THE CHARACTERISTICS AT THE HYDRODYNAMIC CLUTH FOR MOTOR VEHICLES

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ABSTRACT: *The paper presents large number of data, originating from the past researches, that may be used at definitions of shapes of meridian cross-section and the position of blade circuits within the operating space of the hydraulic turbo converter. The experimental results concerning the influences of shape overall size qualities of injected media, type of operating media and number of blades in a circuit to the characteristics of turbotransmissions.*

KEYWORDS: *motor vehicle, transmission, hydrodynamic cluth*

1. INTRODUCTION

For conducting experimental researches, indirect measuring method is used, based on the definition of the pressure distributed at the speed sondes walls. While improving solutions for the turbojunctions that have already been derived and particulary, while developing completely new solutions, results obtained during these reserches can be used. On the base of the same, detailed analysis of the influence of some geometric, hydrodynamic and kinematic parameters to the fluids circulation parameters in the working space of the turbojunction, can be performed. Obtained results are particulary important for analysis the circulation at the working regime of the turbojunction, with the higher sliding coefficient than nominal is. Non regulate turbojunction with the radial paddels D370, produced by "14. Oktober" from Kruševac, is used as the object of research. From that purpose, original experimental equipment was developed. Researches are conducted at the three different values. For the angle turing speed of the pump cycle (ω_p), two values for clearance between the paddle cycles (m) with the threg values for the sliding coeficient (s) and the turbojunction charging of 85%.

2. EXPERIMENTAL RESEARCHES

From that purpose original experimental eqquipment (Fig.1, Fig.2) was developed. Original testing plant has been used and the schematic review of the same is shown in the Fig.2. It consists of electric motor (A), reductor (B), accepted device (C), figured dimension device (D) and measuring shafts (E).
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On the base of the acquired experimental data a conclusion can be drawn about shape and geometric measures of the turbojunction driving cycles and at which working regimes they give the most favorable results. For conducting experimental researches, indirect mesuring metod is used, based on the definition of the pressure distributed at the speed sondes walls.
Non regulate turbojunction with the radial paddels D370, produced by "14.Oktober" from Kruševac (Fig.3), is used as the object of research. Object of the researchg (turbo coupling) is placed in the accepted device(C-Fig.2 and Fig.6), which presents original solution and enables the exchange of the size of the clearance (m) between moving blades of the turbo couplings. Schematic review of the positioning the cylindrical sonders in the work area of the testing turbo coupling and it's meridian section is shown in the Fig.4. Number of the pump circuit blades (P) is 45 and of the turbine (T) is 43. Braking device (D Fig. 5) is of the hydraulic type UT30, produced by Schenk. Reduktor (B) increases the possibility for the utilization the plant. Following measuring equipment, produced by company HBM, has been used measuring shafts, type T30FN3/5, with a pressure of P4AK, universal measuring device for electrical sizes and amplifier. Researches are conducted at the three different values. For the angle turning speed of the pump cycle, two values for clearance between the paddle cycles with the three values for the sliding coefficient and at the turbojunction charging of 85 %. Also, mineral oil with viscosity of 21 mm^2/s, at 323K, is used.

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