UDC 621.313.33:004

THE ADJUSTABLE ELECTRIC DRIVE FOR PRINTING PRESSES

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**Research methodology.** The analysis of offered PWM-pressure has been done with the use of the Fourier theorem for continuous function. Research had established and transients in the electric drive had been carried out by mathematical modelling on the basis of computing MatLab-Simulink environment.

**Results.** Analysis of Fourier theorem has shown possibility of elimination of some higher harmonious components in offered pressure. It improves electromagnetic and electromechanical processes in the electric drive with the asynchronous short-circuited engine. The developed program on the basis of MatLab–Simulink is original. Calculations established and transients confirm expected results of application of PWM-management. In feeding stator windings the asynchronous engine pressure under the higher harmonious components had been eliminated. Had been stated their most negative influence on the electromagnetic point and speed. The target characteristic of a semi-conductor regulator of pressure becomes linear on the first power component of pressure. Influence of losses of capacity decreases for heating of the asynchronous engine. It expands a range of regulation of speed.

**Novelty.** Novelty consists in reception of adjustable and not sinusoidal symmetric pressure in which the higher harmonious components of a small order are destroyed. It cannot be received at classical parametrical regulation of pressure. The developed model eliminates discrepancies of models of the electric drive offered by regular blocks MatLab-Simulink.

**The practical significance.** PWM-management application in pressure regulators (in soft starter) will reduce capacity losses in transients. Such management of the adjustable electric drive saves up energy. Calculations have shown, that at start-up of the electric drive with the engine Рnom = 2,2 kw heating losses of capacity at phase management a little more than twice, exceed similar losses at PWM-pressure. The developed program is universal and can be used for calculations of electric drives with regulators of pressure of any mechanisms.