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**INFORMATION TECHNOLOGY OF OPTIMIZATION PROCESS  
OF PREPARATION TO PRINTING FOR INK PRINTING SYSTEM  
WITH THREE FORM ROLLERS**

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***Research methodology.*** *To research the optimization process of preparation to printing for ink printing system with three form rollers scientific methods we have used: analysis, comparison and generalization. During the fulfillment of the scientific work for construction of an ink printing system model we have used methods of state space, operational calculus, discrete conversion and automatic control theory. Researches were conducted using a computer simulation of an ink printing system model in the environment of Matlab - Simulink*

***Results.*** *An ink printing system vector-matrix model with three form rollers has been constructed. The simulator of an ink printing system model has been built in the environment of Matlab – Simulink On the basis of the conducted researches the optimal amount of working cycles of ink printing system with three form rollers for previous ink filling has been determined. The character of dependence of the previous ink filling for ink printing system with three form rollers previous from the form loading by printing elements has been set.*

***Novelty.*** *The algorithm for determining the amount of previous ink filling cycles of ink printing system with three form rollers has been developed to decrease the time of printing press preparation to printing and significantly reduce the number of substandard imprints.*

***Practical significance.*** *The simulator of ink printing system with three form rollers based on its vector-matrix model has been built. It is an integral part of the information technology and gives an opportunity to recreate the process of ink rolling and transfer, to simulate the pressure of form rollers.*