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**MODEL OF INK APPLICATION ON RASTER ELEMENTS   
OF SQUARE SHAPE**

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***Research methodology.*** *To develop a mathematical model of inking raster elements of square shape (ink application) at a constant and descending thickness of ink layer, to define and to design characteristics of ink application for the element of square shape and to analyse the results.*

***Results.*** *The mathematical dependence of ink quantity on the surface of the screen elements has been received in the case of permanent ink flow drop for a given range of raster tone reproduction. The results of simulation modelling as ink application characteristics have been presented which are nonlinear. At a constant thickness of ink the characteristics changes by a quadratic dependence. Deviations from non-linearity in tone mid-range are –26.7%, in dark tones is reduced to 0%.*

***Novelty.*** *The**model of inking of square raster elements at a constant and descending thickness of ink layer has been analysed.*

***The practical significance.*** *These articles can be used for the information technology as a source of characteristics of ink application and models of a raster element of square shape.*