Study of Direct-on-Line Starting of Low Power Asynchronous Motors

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Abstract—**This paper emphasizes technical and economic parameters at direct-on-line starting of low power asynchronous motors. There are presented a lot of simulations and there are carried out experimental tests, in order to establish deviations which occur between the two methods. On the basis of the mathematical model presented, it is also possible to study other dynamic states: variation of voltage, of resistant torque, by some predetermined laws etc. The starting characteristics have been computed considering magnetic saturation and current pressing, the results being: starting current $I_P=4.208*I_N$, starting time $t_P=0.17s$. The research opportunity is justified by progresses obtained in modelling and simulation of asynchronous motors, in order to increase the technical and economic parameters of starting. That is why, we consider as being justified this study of asynchronous motor starting, with an eye to obtaining some indications for their optimum construction and operation.**

Keywords— **low power asynchronous motor, dynamic state, simulation.**

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