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## CONTRIBUTIONS OF CONTROLLERS TUNING IN THE MULTIPLE-LOOP FEEDBACK CONTROL SYSTEM TO THE OBJECTS' MODELS WITH INERTIA OF THIRD ORDER AND NON MINIMAL PHASE

BY

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**Abstract:** A tuning algorithm of linear controllers P, PI, PID in multiple-loop feedback control systems is proposed in this paper. The control objects consist of two subprocesses, which are described by dynamical models with inertia (first and second order) and non minimal phase. The controllers in the internal contour and in the external contour are tuning using the maximal stability degree method. In the internal contour is used controllers P and PI, in the external contour is used controllers P, PI, PID.

**Keywords:** multiple-loop feedback control system, tuning of controllers, internal contour, external contour, non minimal phase, maximal stability degree method.