

DECENTRALIZED PID CONTROLLER DESIGN FOR MIMO SYSTEMS USING HEURISTIC ALGORITHMS

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In this paper, tuning of decentralized multivariable PID controller is designed for Tyreus Stabilizer(TS), Wardle and wood(WW) and Vinante and Luyben(VL) distillation columns using Firefly Algorithm for diagonal elements of the transfer function models of benchmark distillation column. From MatLab simulation, optimum solutions for controller parameters are obtained and during implementation provides challenging results for both top and bottom products. It can be observed that performance of FA is better than Particle swarm optimization for taken models in terms of integral error criteria's ISE, ITAE and ITSE.

