



Fig. 11. Armature current

V. CONCLUSIONS

Robust controller has been applied in this study for precise positioning of a DC Servo mechanism according to hybrid Fuzzy logic scheme with classical controller i.e. Position-Velocity (PV) controller. The proposed controller has been merged the merit of both Fuzzy and PV controllers. This controller is designed to provide control signal components which based on: 1st fuzzy logic controller with respect to position and velocity error signals, and 2nd PV controller with respected to position error and velocity signal, in order to provide collected satisfied control signal. The positioning performance using the proposed controller (Hybrid Fuzzy/PV) compared with those of our previous paper 2018 (PV scheduled controller and PV controller) has been provided. The results confirm the effectiveness of the proposed control system as indicated in its ability to track the predetermined positioning path with load disturbances and approach the required specifications.

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