















correct commutation point. Test results bear out the feasibility of the control method.

## 6. CONCLUSION

Here we propose a MAEKF-based sensorless controller for brushless DC motor, which enables the estimation on the motor rotor position angle and speed by measuring the motor phase current. After the test, the following conclusions are drawn:

1 The method can well give the rotor position signal in the cases when there is a constant load and the torque changes abruptly. With this method, the motor runs stably and there is no stall and other poor phenomena appeared, and the control system has a strong robustness against motor parameter perturbation and model error, etc. It is therefore proved that the method has high reliability and practicability.

2 The method has a low requirement for motor parameters and model accuracy, but it renders its service at a higher accuracy for parameter measurement. During the commissioning, the attenuation factor can be adjusted according to the system conditions to balance the interference of the model inaccuracy and the parameter measurement error in the system, thus to achieve the system optimality.

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