Id=0时

Te=3/2f\*pn\*flux\*iqmax

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Ld | Lq | Flux | Pn | Rs |
| 0.002 | 0.004 | 0.08 | 4 | 0.02 |
| Voltage | MaxCurrent | MaxTorque | MaxSpeed(id=0) |  |
| 300 | 50\*sqrt(2) | 33.94 | 2500[RPM] |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 各个控制算法的PID参数 | | | | | |
| 速度环 | | | 电流环 | | |
| Id=0 | P=0.073 | I=0.12 | 50\*sqrt(2) | 136 | 0 | 300\* sqrt(3) |
| DTC | 0.0114 | 0.019 | [33.49 -33.49] |  |  |  |
| 弱磁 |  |  |  |  |  |  |

DTC控制通常运用于隐极电机即Ld=Lq ，此外由于没有对id iq轴电流直接进行控制，那么就没有进行反电动势的反馈，所以当参考速度为2500时往往跑不掉，这个时候可以加电压。

MPTA控制

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Id | Iq | Te | We | is |  |
| A点 | -40.9902 | 57.6177 | 55.9977 | 751.499 | 50\*sqrt(2) |  |
| B点 | -65.7267 | 26.0768 | 33.0842 | 1489.2 | 50\*sqrt(2) |  |