

**FIGURE P2-3**

Torque-speed characteristic of a 1/8 hp, 2500 rpm, PM DC motor for Problem 2-20

- 2-33 The approximate torque-speed curve and its equation for a 1/4 hp shunt-wound DC motor are shown in Figure P2-14 (p. 90). The rated speed for this fractional horsepower motor is 10 000 rpm at a rated voltage of 130 V. Determine:
- The rated torque in oz-in (ounce-inches, the U.S. industry standard for fractional hp motors)
  - The no-load speed
  - The operating speed range
  - Plot the power-torque curve in the operating range and determine the maximum power that the motor can deliver in that range.