PROBLEM 15.8

The rotor of a gas turbine is rotating at a speed of 6900 rpm when the turbine is shut down. It is observed that 4 min is required for the rotor to coast to rest. Assuming uniformly accelerated motion, determine (a) the angular acceleration, (b) the number of revolutions that the rotor executes before coming to rest.

PROBLEM 15.12

The bent rod $ABCDE$ rotates about a line joining Points $A$ and $E$ with a constant angular velocity of 9 rad/s. Knowing that the rotation is clockwise as viewed from $E$, determine the velocity and acceleration of corner $C$.

PROBLEM 15.28

Cylinder $A$ is moving downward with a velocity of 9 ft/s when the brake is suddenly applied to the drum. Knowing that the cylinder moves 18 ft downward before coming to rest and assuming uniformly accelerated motion, determine (a) the angular acceleration of the drum, (b) the time required for the cylinder to come to rest.