

FIGURE 2.1

Comparison of the streamline through the point  $(1, 1)$  at  $t = 0$  with the pathline of a particle that passed through the point  $(1, 1)$  at  $t = 0$  and the streakline through the point  $(1, 1)$  at  $t = 0$  for the flow field  $u = x(1 + 2t)$ ,  $v = y$ ,  $w = 0$ .

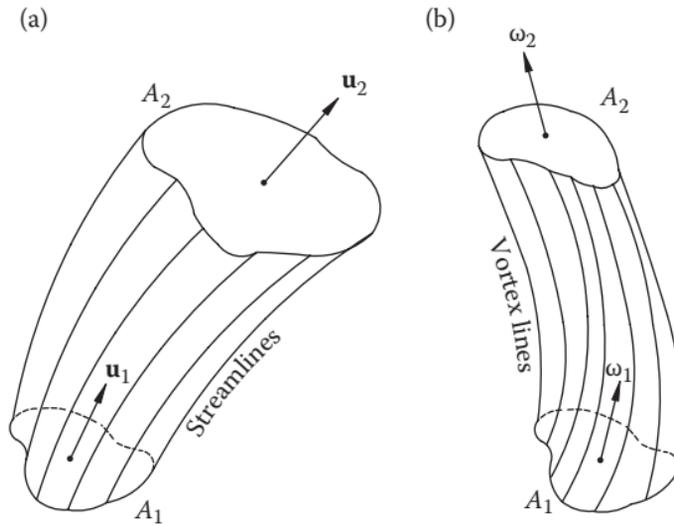


FIGURE 2.2

(a) Stream tube and (b) vortex tube subtended by a contour of area  $A_1$  in a flow field.