$m := 1000000$

$F := 1.41 \cdot 10^6$

$\rho := 1000$

$A := 94$

$cw := 0.3$

$T := 30$

Boat accelerating with a constant force from the propeller

$$m \cdot s'' = F - \frac{\rho \cdot A \cdot cw \cdot s'^2}{2}$$

Boat reaccelerates with the resistance of water at the force set the same as the streaming resistance from the Boat

$$m \cdot s'' + \frac{\rho \cdot A \cdot cw \cdot s'^2}{2} + F = 0$$

$$\frac{d^2}{dt^2} s(t) = \frac{F - \dfrac{\rho \cdot A \cdot cw \cdot \left(\dfrac{d}{dt} s(t)\right)^2}{2}}{m}$$

$s(0) = 0 \qquad\qquad s'(0) = 0$

$s := \mathbf{odesolve}\,(s(t), T)$

$v(t) := \dfrac{d}{dt} s(t)$ $\qquad$ $t := 0, .1 .. T$ $\qquad$ $v(T \cdot 0.99999) = 9.996$ $\qquad$ $s(T) = 250.856$