

CE 3305 Engineering Fluid Mechanics
Exercise Set 18
Summer 2018 – GERMANY

1. (Problem 14.15 pg 550) Figure 1 is a schematic of a pumping system to lift large volumes water a short vertical distance (like a hurricane dike). The pump used in the system has characteristics shown in Figure 2.
- (a) What discharge will occur for the conditions depicted in Figure 1?
- (b) How much power will be required?

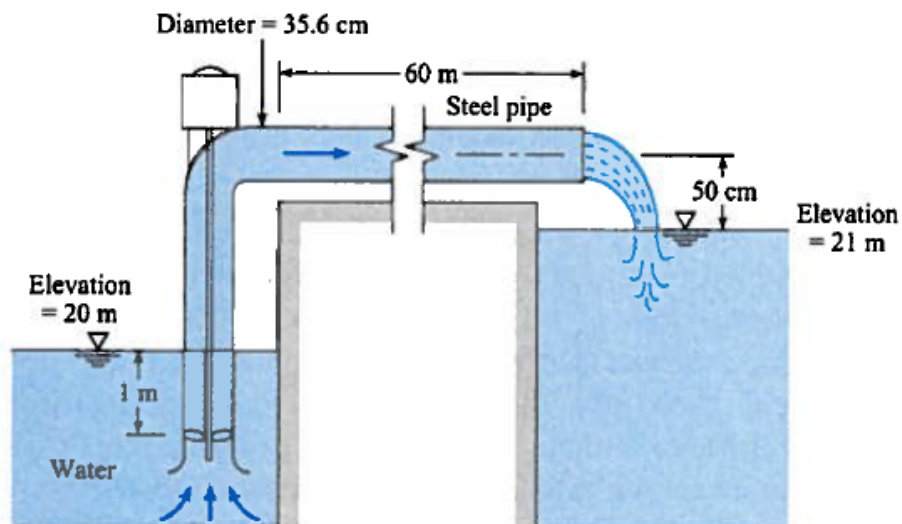


Figure 1: Hurricane barrier lift system.

(Problem 14.15 pg 550) (Continued)

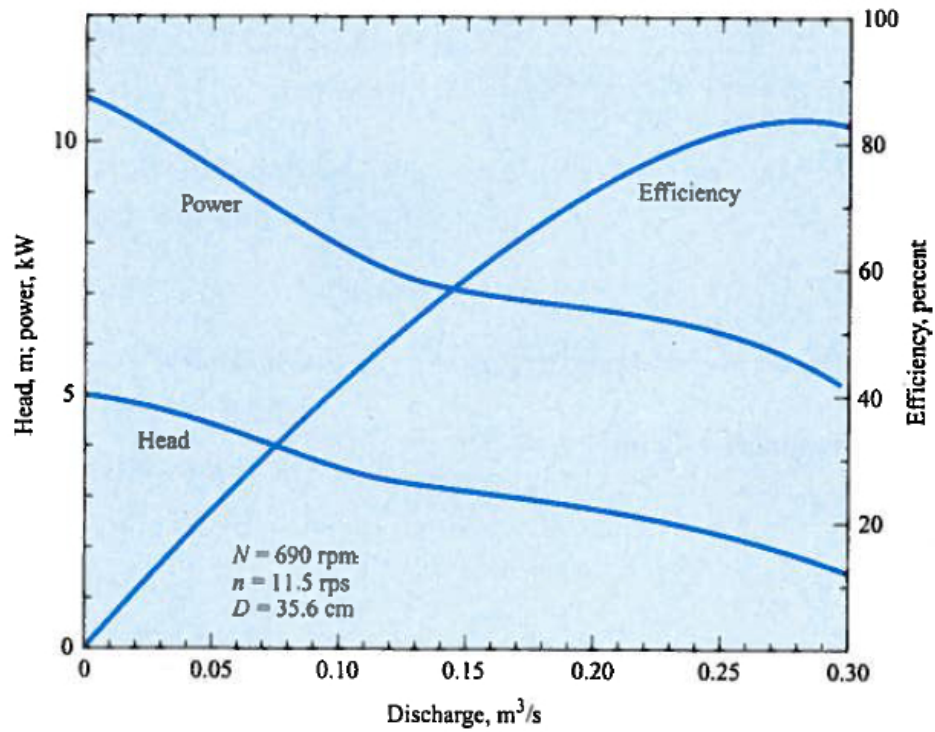


Figure 2: Pump performance curve for hurricane barrier lift system.

(Problem 14.15 pg 550) (Continued)