

Final lab fluid

1) radial flow vane with the following data

$$h_1 = 70 \text{ cm}, h_2 = 60, h_3 = 120 \text{ cm}, F = 1500 \text{ N}, R = 17.6 \text{ cm}, n = 150 \text{ r.p.m}$$

Find

1) Volumetric flow rate

2) mechanical power

3) efficiency

4) what is the maximum speed for the vane?

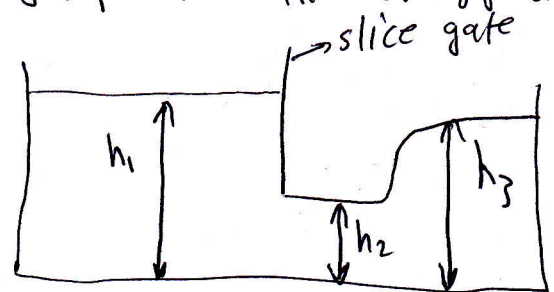
5) how we can reduce the volumetric flow rate (by what)?

6) what is the absolute pressure

2) what is the parts showing in the figure :
The parts of water jet device.

3) find the loss coefficient for expansion, Bend δ , Globe valve
note f , is given.

4) find the amplitude of hydraulic jump and the energy difference
 $h_1 = 3 \text{ m}, h_2 = 1.7 \text{ m}$, rectangle channel
width = 5m



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