

# MERENJA U HIDROTEHNICI

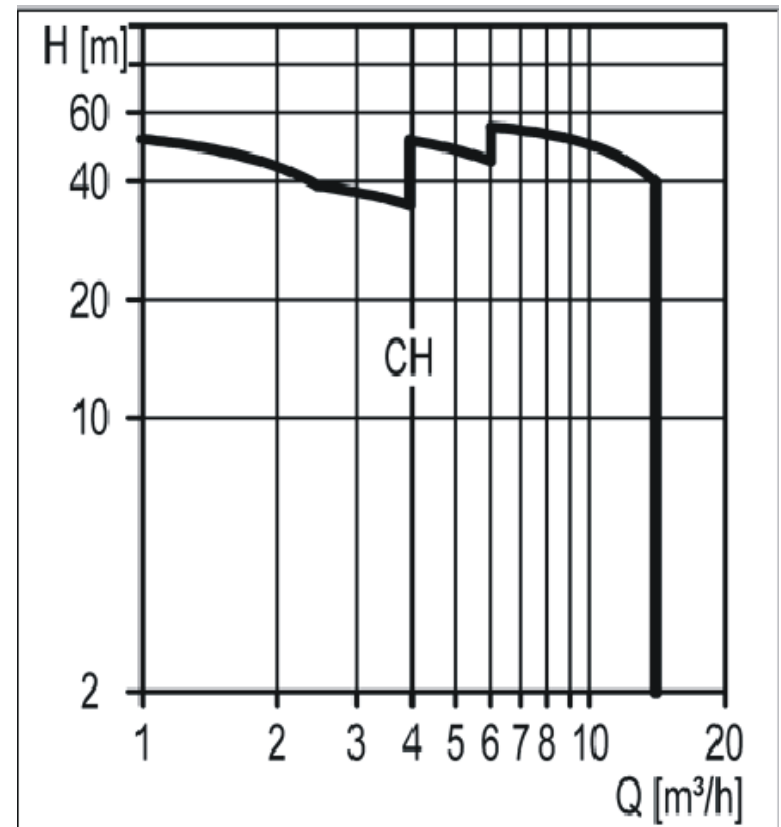
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## **Vežba br. 4** **Određivanje Q-H krive pumpe**

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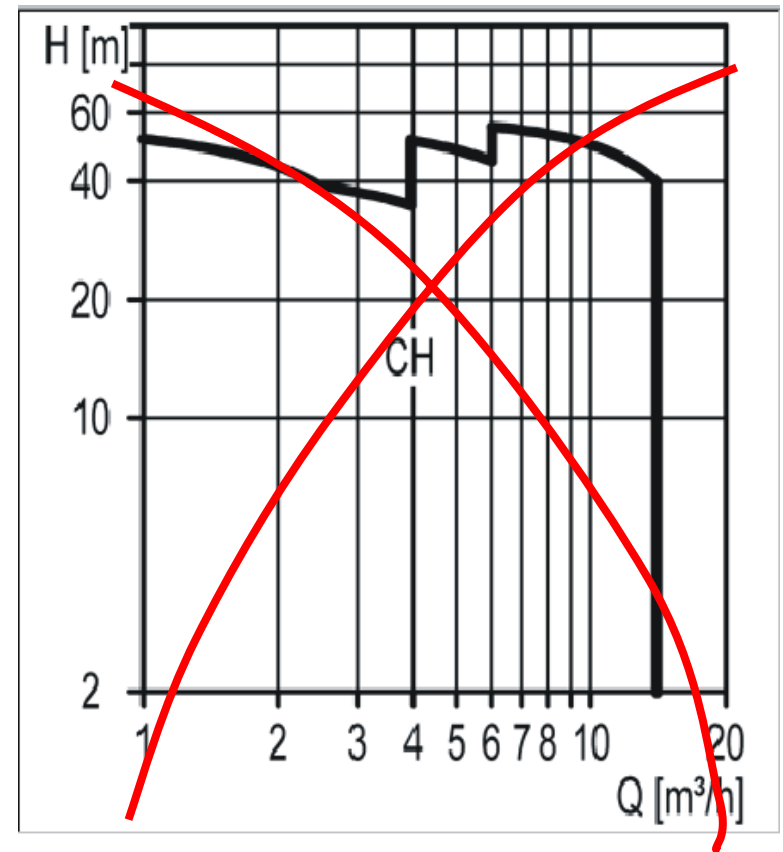
# Uvod

Kupili smo pumpu!



# Uvod

Pumpa je radila 10-ak godina!!



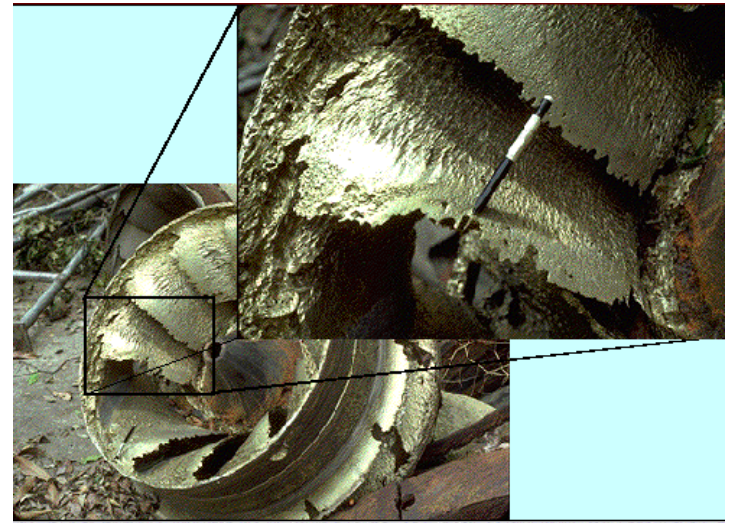
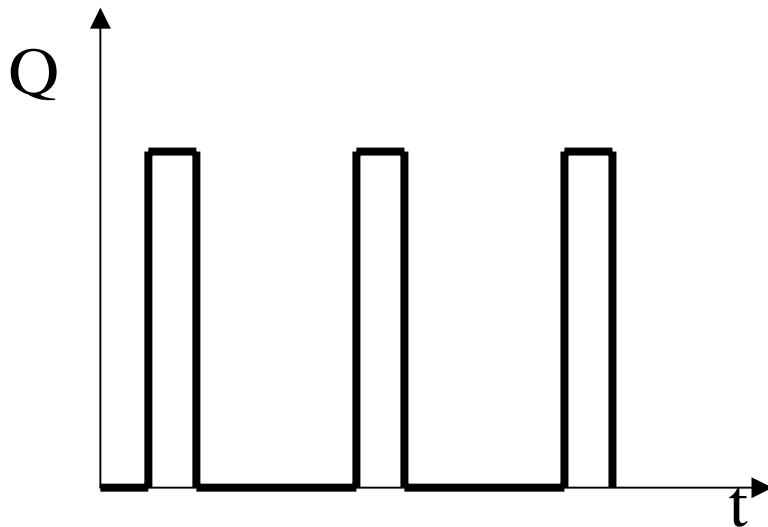
# Zašto Q-H kriva nije više ista?

Propadaju mašinski delovi pumpe: radno kolo, ležajevi, vratilo ...

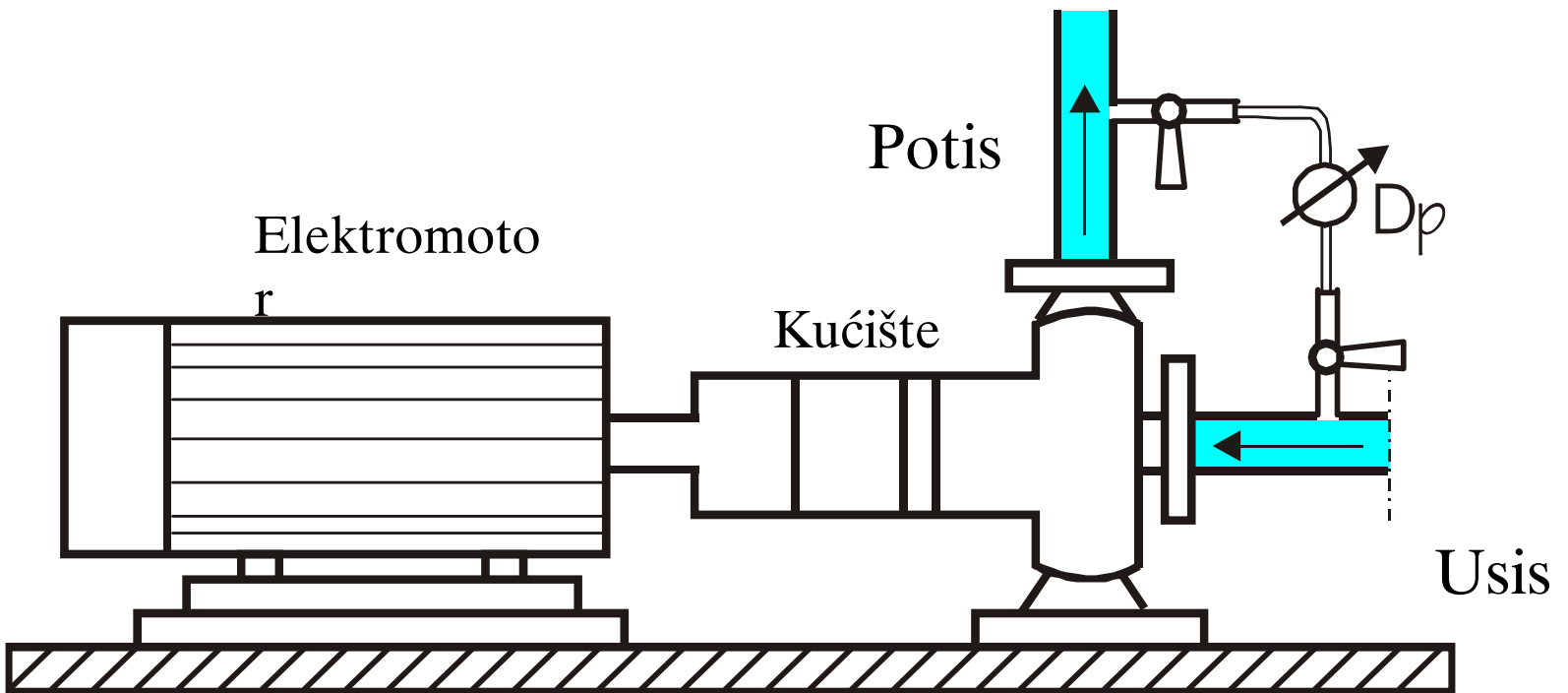
Usled: starosti pumpe,

rada pumpe u **kavitacionom režimu**,

Neadekvatno **upravljanje pumpom!**

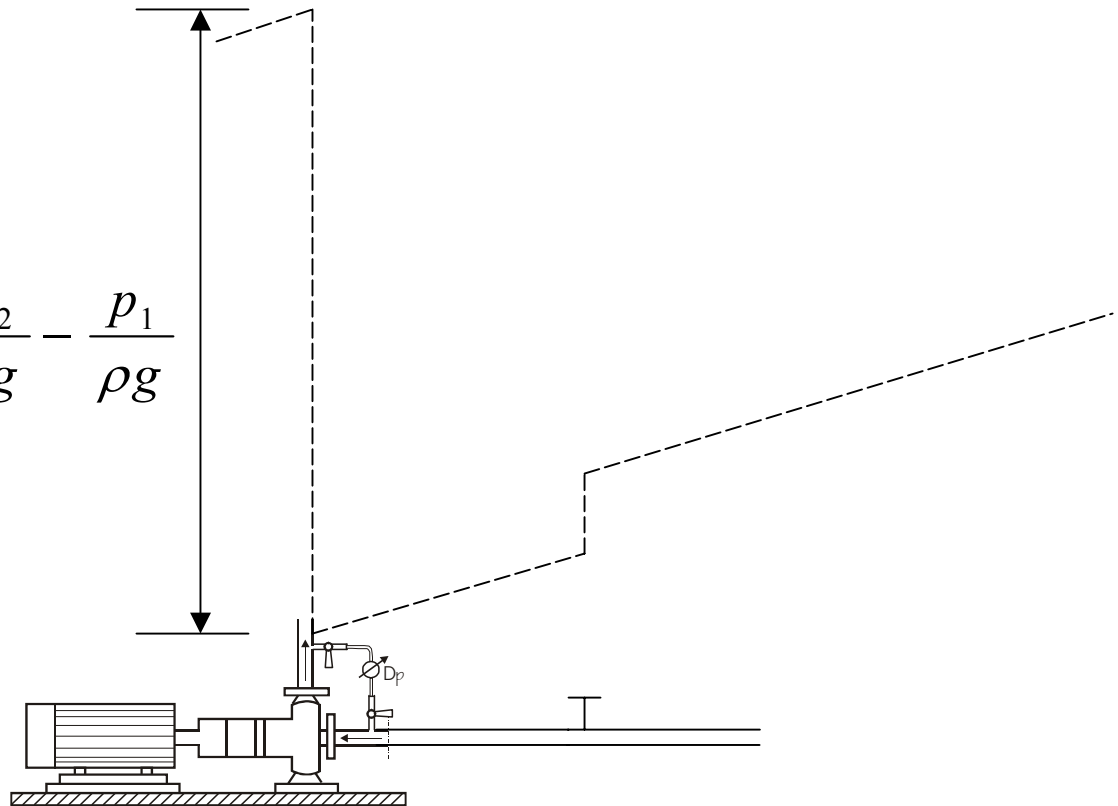


# Kako radi naša pumpa?

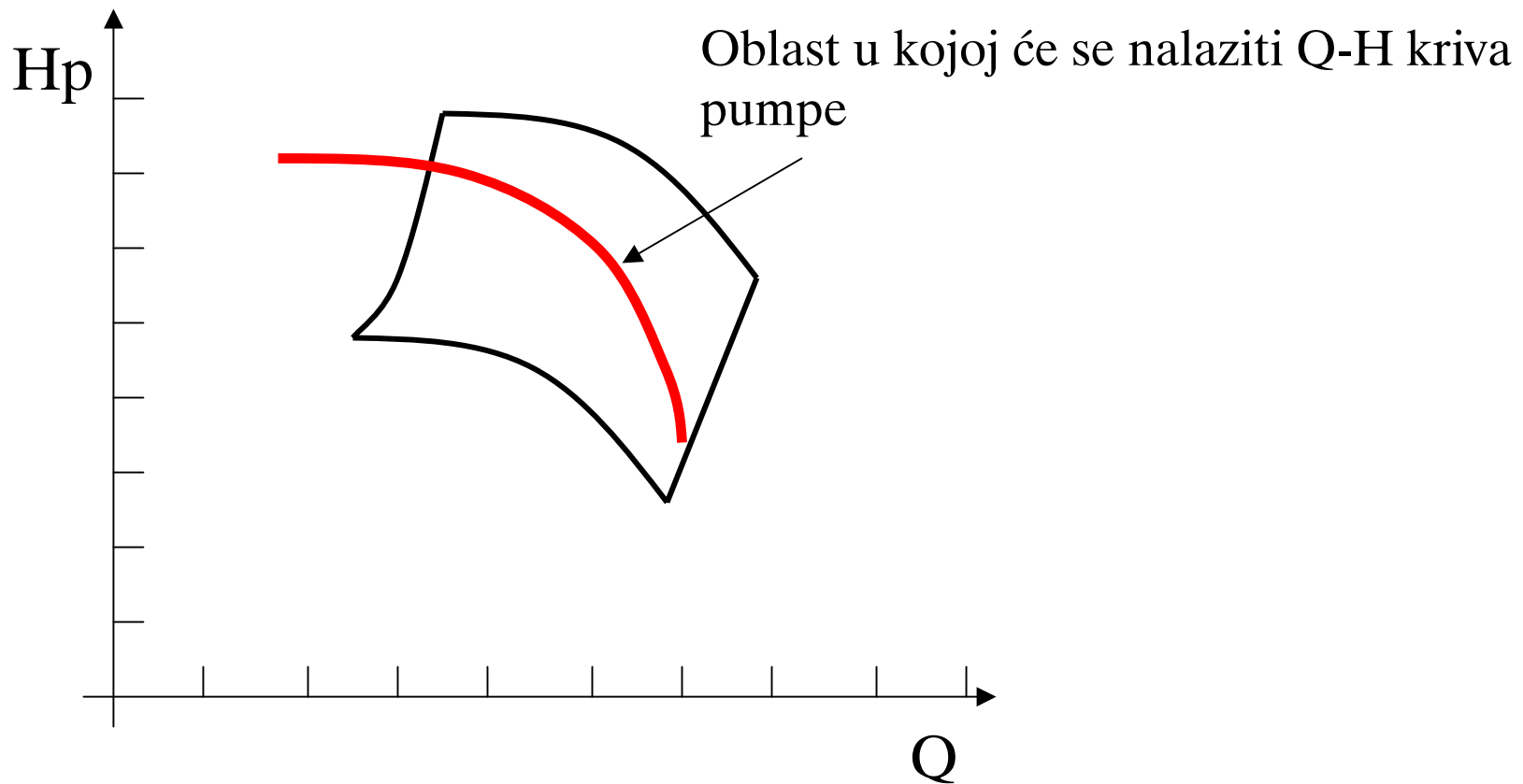


# Visina dizanja pumpe

$$H_p = \frac{p_2}{\rho g} - \frac{p_1}{\rho g}$$

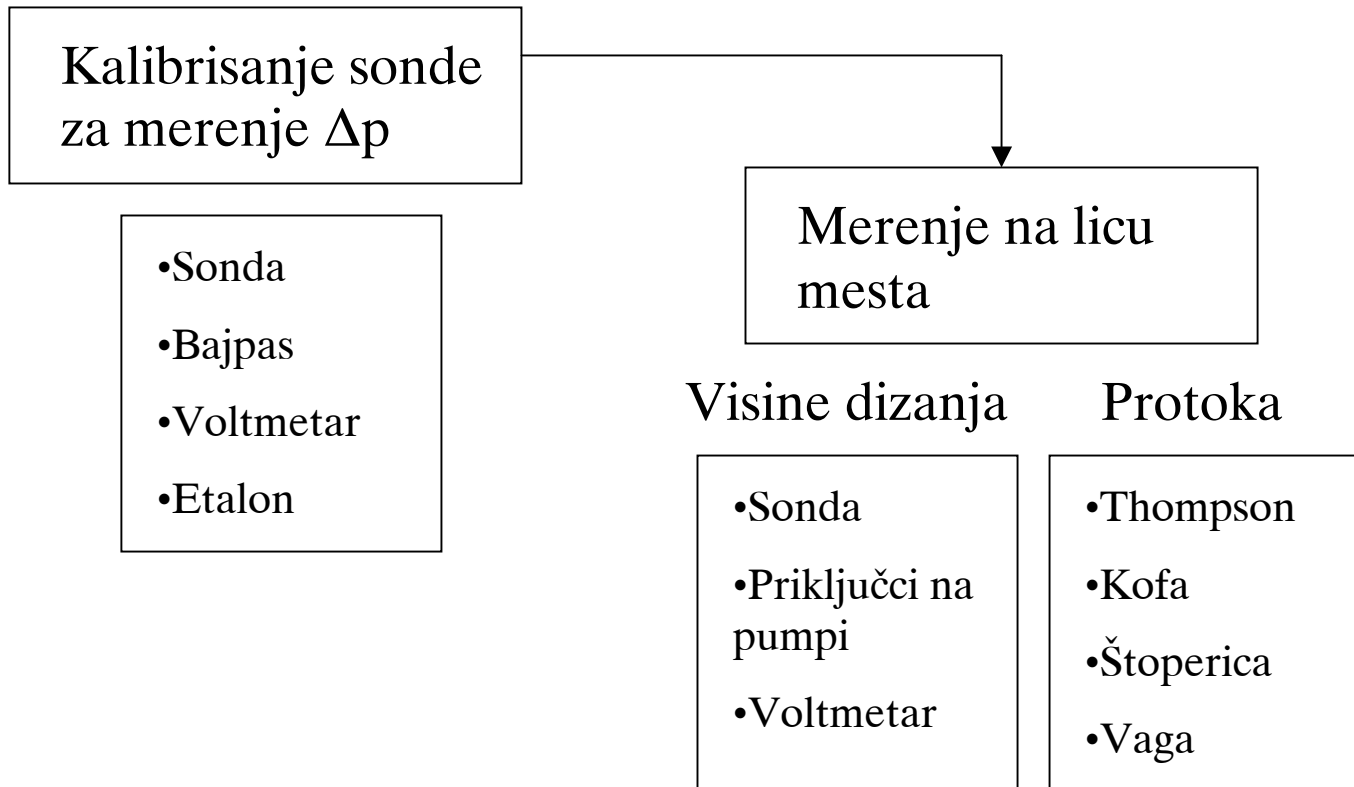


# Q-H kriva



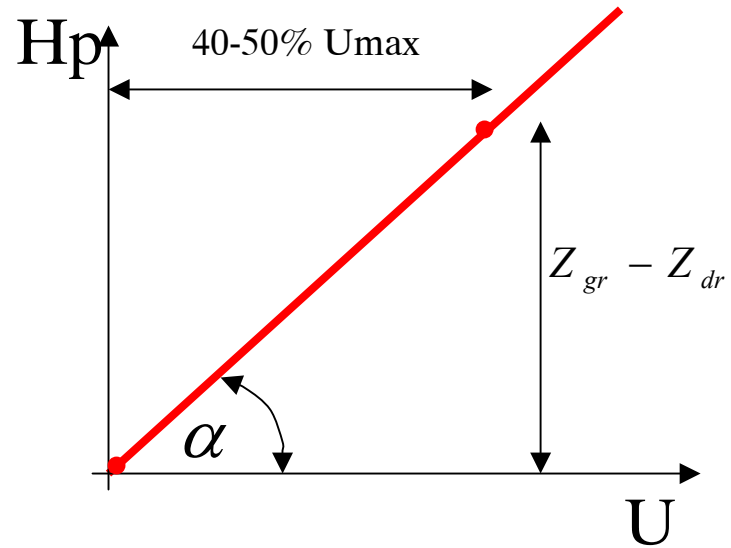
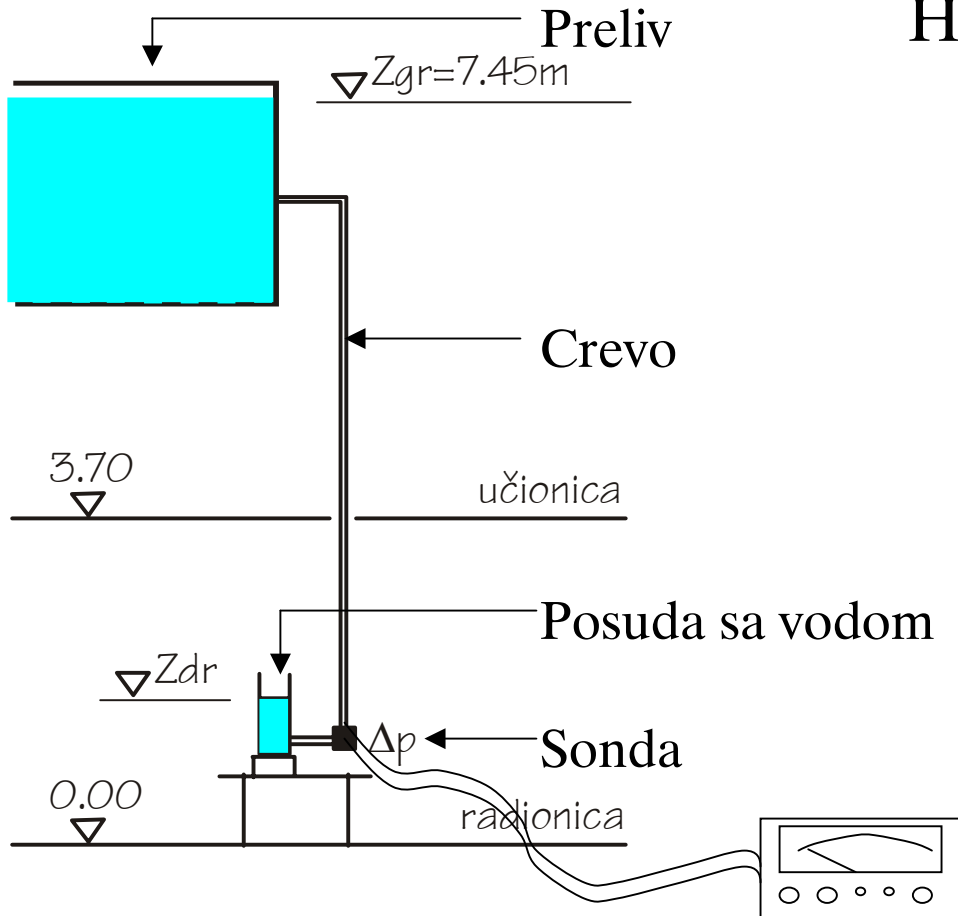
# Priprema i merenje na licu mesta

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# Kalibracija sonde za merenje $\Delta p$

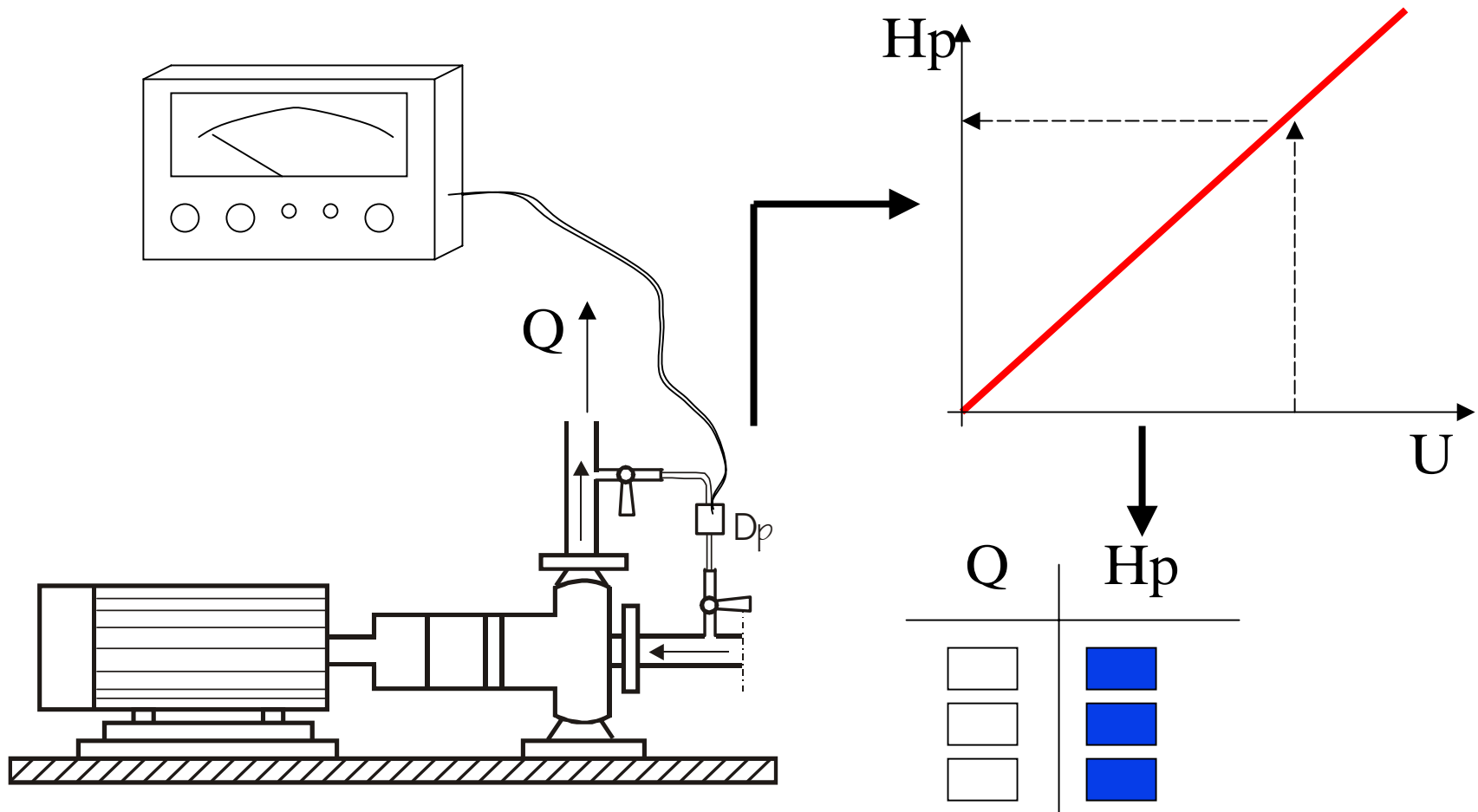


$$H_p = A \times U + B$$

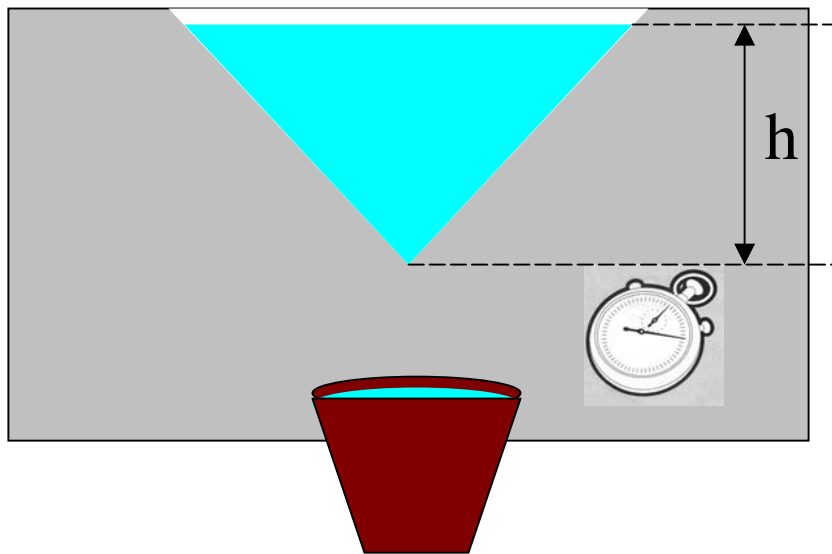
$$H_p = \frac{\Delta p}{\rho g} \quad A = \text{tg } \alpha$$

$$B = 0$$

# Merenje $H_p$ na licu mesta



# Merenje protoka kroz pumpu Q



$$Q_{MER} = C_Q \sqrt{2gh^5}$$

$$C_Q = \frac{5}{16}$$

Q	Hp
■	■
■	■
■	■

