

(Debug) In[52]:= (* Equação Universal - Cálculo do fluxo *)

(Debug) In[218]:= comprimentoAspersor = 200;
dimetroAspersor = .0234;
comprimentoTubalacao = 200;
dimetroRecalque = .075;
hgs = 10;
hgsrecalque = 24;
hgaspersor = 2;
hfsuccao = 1;
hfaspersor = 1;
cargaDePressao = 40;
f = .9;
$$\text{vazao} = \text{Solve}\left[1 = .08263 f q^2 \frac{\text{comprimentoAspersor}}{\text{dimetroAspersor}^5}, q\right];$$
$$\text{hf} = \frac{10.65 \text{ vazao}[[2, 1, 2]]^{1.852} \text{comprimentoTubalacao}}{150^{1.852} \text{dimetroRecalque}^{4.871}};$$
$$\text{hmt} = (-\text{hgs} + \text{hfsuccao}) + (-\text{hgsrecalque} + \text{hf}) + (\text{hgaspersor} + \text{hfaspersor}) + \text{cargaDePressao}$$

(Debug) Out[231]=
10.0001

(Debug) In[60]:=

(Debug) In[61]:=

(Debug) In[62]:=

(Debug) Out[63]= $10 + 6.92824 \times 10^{-7} \text{comprimentoTubulacao}$