

OP1

minimální sklon

Výpočet kapacity příkopu

$Q_N = 0.56 \text{ m}^3/\text{s}$

$$Q = S \cdot v$$

$$R = S/O$$

$$c = 1/n \cdot R^{1/6}$$

$$v = c \cdot (R \cdot I)^{1/2}$$

$$n = (O_1 \cdot n_1^{1.5} + \dots + O_i \cdot n_i^{1.5})^{2/3} / O^{2/3}$$

š.dno= 0.50 m

n= 0.033

I= 0.00500

sklony 1.50

d_e= 0.20000

I= 0.50 %

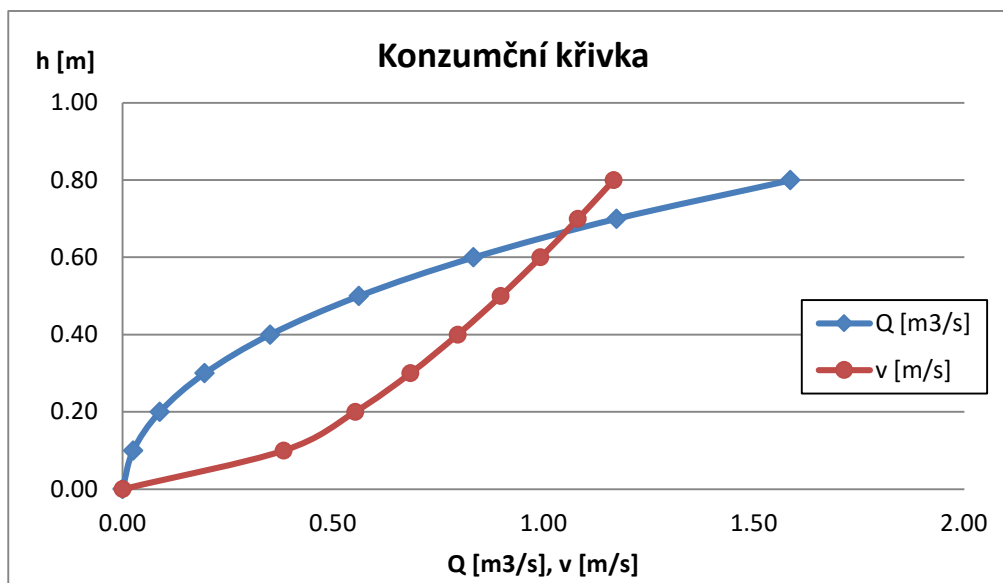
h	S	O	R	C	v	Q _{vyp}
(m)	(m ²)	(m)	(m)	-	(m/s)	(m ³ /s)
0.00	0.00	0.00	0.00	0.00	0.00	0.000
0.10	0.07	0.86	0.076	19.702	0.383	0.025
0.20	0.16	1.22	0.131	21.596	0.553	0.088
0.30	0.29	1.58	0.180	22.774	0.684	0.195
0.40	0.44	1.94	0.227	23.660	0.796	0.350
0.50	0.63	2.30	0.271	24.383	0.898	0.561
0.60	0.84	2.66	0.315	25.001	0.993	0.834
0.70	1.09	3.02	0.359	25.544	1.082	1.174
0.80	1.36	3.38	0.402	26.031	1.167	1.587
Q_{kap}	0.50	0.63	0.271	24.383	0.898	0.561

Výpočet stability příkopu

$$v_v = 5,556 \cdot h^{1/6} \cdot d_e^{1/3}$$

$$\tau_k = 0,7753 \cdot \rho \cdot d_e$$

h	R	v	v _v	τ	τ _k	posuzení stability (návrhový průtok)	
(m)	(m)	(m/s)	(m/s)	(Pa)	(Pa)		
0.20	0.131	0.553	2.485	6.427	155.060		
0.30	0.180	0.684	2.658	8.838	155.060		
0.40	0.227	0.796	2.789	11.112	155.060		
0.50	0.271	0.898	2.895	13.313	155.060		
0.60	0.315	0.993	2.984	15.470	155.060		
0.70	0.359	1.082	3.062	17.600	155.060		
0.80	0.402	1.167	3.131	19.710	155.060	v < v _v	τ < τ _k
0.500	0.271	0.898	2.895	13.313	155.060	OK	OK



OP1

maximální sklon

Výpočet kapacity příkopu

$Q_N = 0.56 \text{ m}^3/\text{s}$

$$Q = S \cdot v$$

$$R = S/O$$

$$c = 1/n \cdot R^{1/6}$$

$$v = c \cdot (R \cdot I)^{1/2}$$

$$n = (O_1 \cdot n_1^{1.5} + \dots + O_i \cdot n_i^{1.5})^{2/3} / O^{2/3}$$

š.dno= 0.50 m

n= 0.033

I= 0.02000

sklony 1.50

d_e= 0.20000

I= 2.00 %

h	S	O	R	C	v	Q _{vyp}
(m)	(m ²)	(m)	(m)	-	(m/s)	(m ³ /s)
0.00	0.00	0.00	0.00	0.00	0.00	0.000
0.10	0.07	0.86	0.076	19.702	0.766	0.050
0.20	0.16	1.22	0.131	21.596	1.106	0.177
0.30	0.29	1.58	0.180	22.774	1.367	0.390
0.40	0.44	1.94	0.227	23.660	1.593	0.701
0.50	0.63	2.30	0.271	24.383	1.796	1.123
0.60	0.84	2.66	0.315	25.001	1.986	1.668
0.70	1.09	3.02	0.359	25.544	2.164	2.348
0.80	1.36	3.38	0.402	26.031	2.334	3.174
Qkap	0.36	0.37	1.80	0.208	23.330	1.506

Výpočet stability příkopu

$$v_v = 5,556 \cdot h^{1/6} \cdot d_e^{1/3}$$

$$\tau_k = 0,7753 \cdot \rho \cdot d_e$$

h	R	v	v _v	τ	τ _k	posuzení stability (návrhový průtok)	
(m)	(m)	(m/s)	(m/s)	(Pa)	(Pa)		
0.20	0.131	1.106	2.485	25.708	155.060		
0.30	0.180	1.367	2.658	35.353	155.060		
0.40	0.227	1.593	2.789	44.448	155.060		
0.50	0.271	1.796	2.895	53.251	155.060		
0.60	0.315	1.986	2.984	61.880	155.060		
0.70	0.359	2.164	3.062	70.398	155.060		
0.80	0.402	2.334	3.131	78.841	155.060	v < v _v	τ < τ _k
0.360	0.208	1.506	2.740	40.855	155.060	OK	OK

