

OP2

vyústění do toku

Výpočet kapacity příkopu

$Q_N = 1.45 \text{ m}^3/\text{s}$

$$Q = S \cdot v$$

$$R = S/O$$

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

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

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

š.dno= 2.40 m

n= 0.033

I= 0.00500

sklony 0.00

d_e= 0.20000

I= 0.50 %

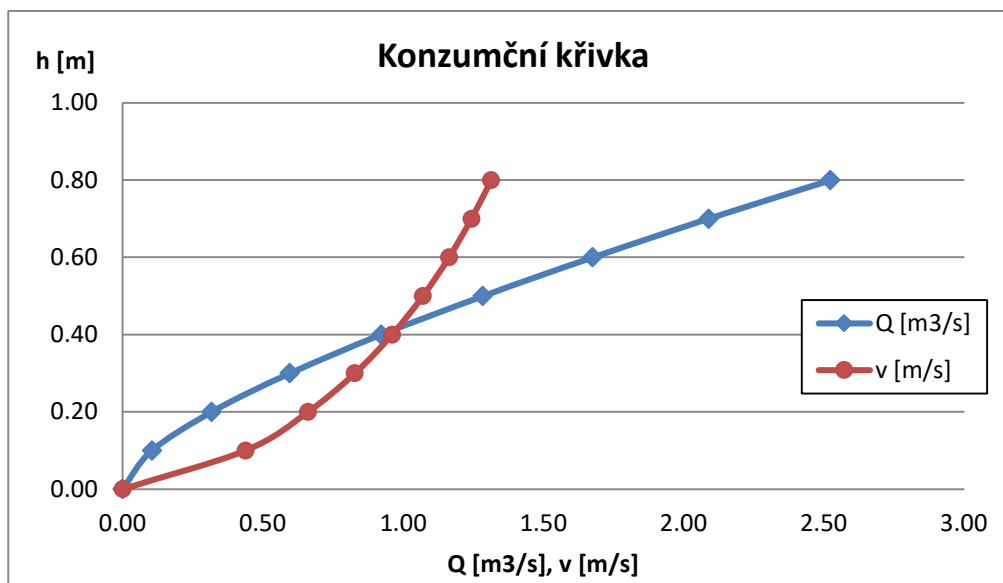
h	S	O	R	C	v	Q _{vyp}
(m)	(m ²)	(m)	(m)	-	(m/s)	(m ³ /s)
0.00	0.00	0.00	0.00	0.00	0.00	0.000
0.10	0.24	2.60	0.092	20.372	0.438	0.105
0.20	0.48	2.80	0.171	22.586	0.661	0.317
0.30	0.72	3.00	0.240	23.888	0.828	0.596
0.40	0.96	3.20	0.300	24.794	0.960	0.922
0.50	1.20	3.40	0.353	25.474	1.070	1.284
0.60	1.44	3.60	0.400	26.011	1.163	1.675
0.70	1.68	3.80	0.442	26.449	1.244	2.089
0.80	1.92	4.00	0.480	26.814	1.314	2.522
Qkap	0.38	0.91	3.16	0.289	24.634	0.936

Výpočet stability příkopu

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

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

Qkap	h	R	v	v _v	τ	τ _k	posuzení stability (návrhový průtok)	
	(m)	(m)	(m/s)	(m/s)	(Pa)	(Pa)		
	0.20	0.171	0.661	2.485	8.409	155.060		
	0.30	0.240	0.828	2.658	11.772	155.060		
	0.40	0.300	0.960	2.789	14.715	155.060		
	0.50	0.353	1.070	2.895	17.312	155.060		
	0.60	0.400	1.163	2.984	19.620	155.060		
	0.70	0.442	1.244	3.062	21.685	155.060		
	0.80	0.480	1.314	3.131	23.544	155.060	v < v _v	τ < τ _k
	0.380	0.289	0.936	2.765	14.156	155.060	OK	OK



OP2

pod propustkem P6 - minimální sklon

Výpočet kapacity příkopu

$Q_N = 1.45 \text{ m}^3/\text{s}$

$$Q = S \cdot v$$

$$R = S/O$$

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

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

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

š.dno= 0.50 m

n= 0.033

I= 0.01000

sklony 1.50

d_e= 0.20000

I= 1.00 %

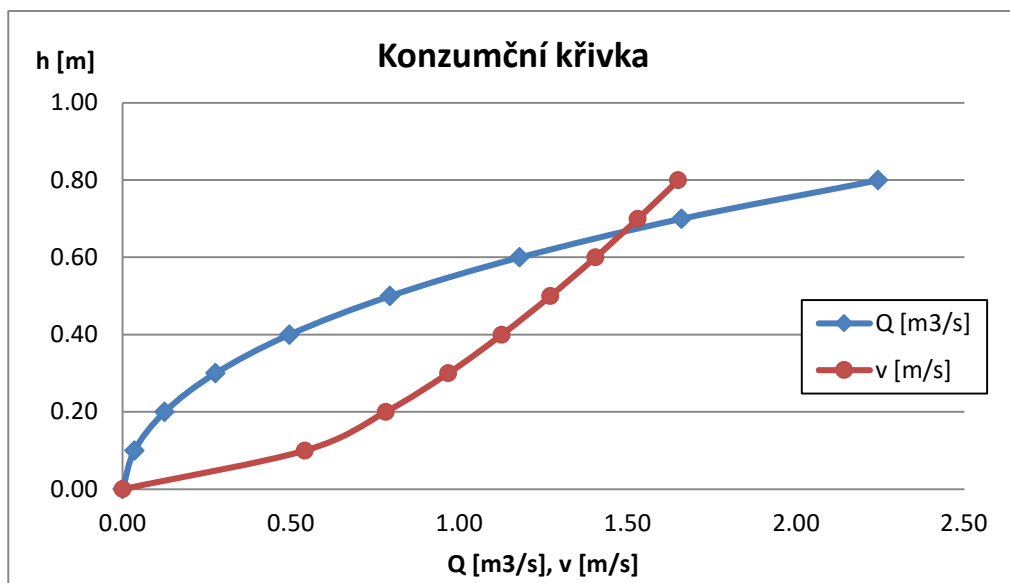
h	S	O	R	C	v	Q _{vyp}
(m)	(m ²)	(m)	(m)	-	(m/s)	(m ³ /s)
0.00	0.00	0.00	0.00	0.00	0.00	0.000
0.10	0.07	0.86	0.076	19.702	0.541	0.035
0.20	0.16	1.22	0.131	21.596	0.782	0.125
0.30	0.29	1.58	0.180	22.774	0.967	0.276
0.40	0.44	1.94	0.227	23.660	1.126	0.495
0.50	0.63	2.30	0.271	24.383	1.270	0.794
0.60	0.84	2.66	0.315	25.001	1.404	1.179
0.70	1.09	3.02	0.359	25.544	1.530	1.660
0.80	1.36	3.38	0.402	26.031	1.650	2.244
Qkap	0.66	0.98	2.88	0.341	25.335	1.481

Výpočet stability příkopu

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

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

Qkap	h	R	v	v _v	τ	τ _k	posuzení stability (návrhový průtok)	
	(m)	(m)	(m/s)	(m/s)	(Pa)	(Pa)		
	0.20	0.131	0.782	2.485	12.854	155.060		
	0.30	0.180	0.967	2.658	17.677	155.060		
	0.40	0.227	1.126	2.789	22.224	155.060		
	0.50	0.271	1.270	2.895	26.625	155.060		
	0.60	0.315	1.404	2.984	30.940	155.060		
	0.70	0.359	1.530	3.062	35.199	155.060		
	0.80	0.402	1.650	3.131	39.420	155.060	v < v _v	τ < τ _k
	0.660	0.341	1.481	3.032	33.501	155.060	OK	OK



OP2

pod propustkem P6 - maximální sklon

Výpočet kapacity příkopu

$Q_N = 1.45 \text{ m}^3/\text{s}$

$$Q = S \cdot v$$

$$R = S/O$$

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

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

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

š.dno= 0.50 m

n= 0.033

I= 0.10000

sklony 1.50

d_e= 0.45000

I= 10.00 %

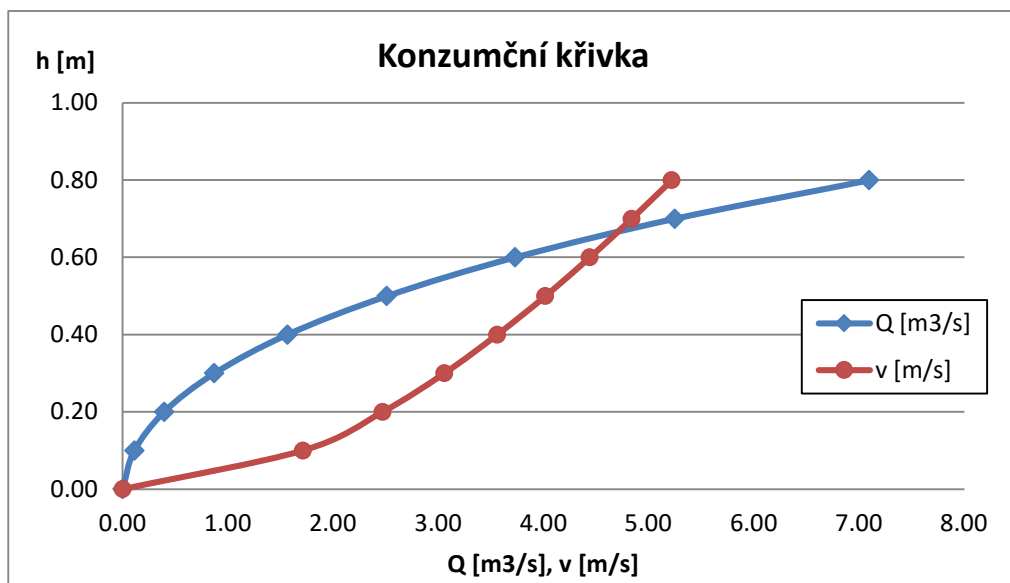
h	S	O	R	C	v	Q _{vyp}
(m)	(m ²)	(m)	(m)	-	(m/s)	(m ³ /s)
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.10	0.07	0.86	0.076	19.702	1.712	0.111
0.20	0.16	1.22	0.131	21.596	2.472	0.396
0.30	0.29	1.58	0.180	22.774	3.057	0.871
0.40	0.44	1.94	0.227	23.660	3.561	1.567
0.50	0.63	2.30	0.271	24.383	4.017	2.511
0.60	0.84	2.66	0.315	25.001	4.440	3.730
0.70	1.09	3.02	0.359	25.544	4.839	5.250
0.80	1.36	3.38	0.402	26.031	5.218	7.097
Qkap	0.39	0.42	1.91	0.222	23.580	3.513

Výpočet stability příkopu

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

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

Qkap	h	R	v	v _v	τ	τ _k	posuzení stability (návrhový průtok)	
	(m)	(m)	(m/s)	(m/s)	(Pa)	(Pa)		
	0.20	0.131	2.472	3.256	128.539	348.885		
	0.30	0.180	3.057	3.484	176.766	348.885		
	0.40	0.227	3.561	3.655	222.240	348.885		
	0.50	0.271	4.017	3.793	266.255	348.885		
	0.60	0.315	4.440	3.910	309.402	348.885		
	0.70	0.359	4.839	4.012	351.992	348.885		
	0.80	0.402	5.218	4.102	394.204	348.885	v < v _v	τ < τ _k
	0.390	0.222	3.513	3.639	217.772	348.885	OK	OK



OP2

nad propustkem P6 - minimální sklon

Výpočet kapacity příkopu

$Q_N = 1.03 \text{ m}^3/\text{s}$

$$Q = S \cdot v$$

$$R = S/O$$

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

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

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

š.dno= 0.50 m

n= 0.033

I= 0.01000

sklony 1.50

d_e= 0.20000

I= 1.00 %

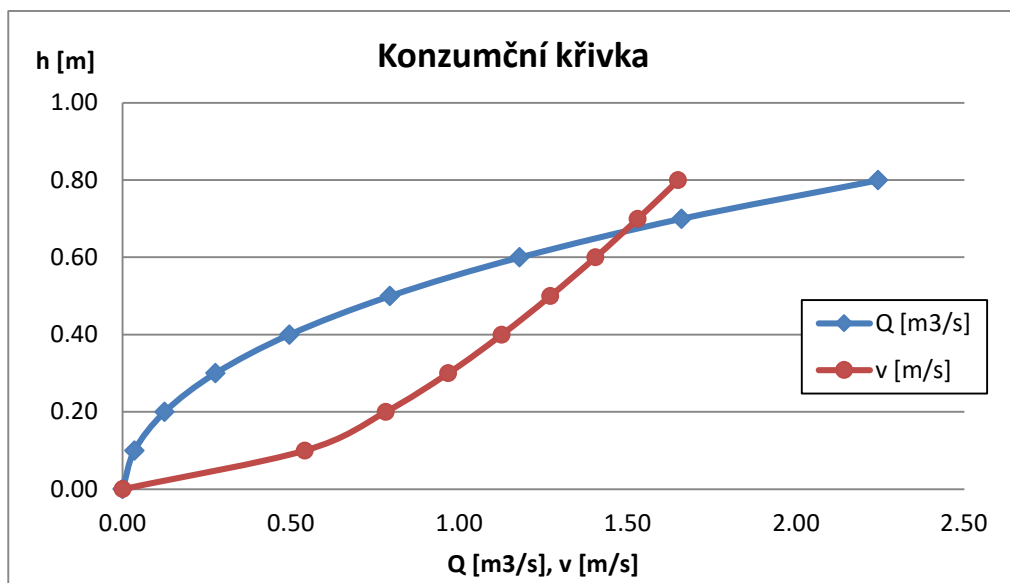
h	S	O	R	C	v	Q _{vyp}
(m)	(m ²)	(m)	(m)	-	(m/s)	(m ³ /s)
0.00	0.00	0.00	0.00	0.00	0.00	0.000
0.10	0.07	0.86	0.076	19.702	0.541	0.035
0.20	0.16	1.22	0.131	21.596	0.782	0.125
0.30	0.29	1.58	0.180	22.774	0.967	0.276
0.40	0.44	1.94	0.227	23.660	1.126	0.495
0.50	0.63	2.30	0.271	24.383	1.270	0.794
0.60	0.84	2.66	0.315	25.001	1.404	1.179
0.70	1.09	3.02	0.359	25.544	1.530	1.660
0.80	1.36	3.38	0.402	26.031	1.650	2.244
Qkap	0.57	0.77	2.56	0.302	24.825	1.365

Výpočet stability příkopu

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

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

Qkap	h	R	v	v _v	τ	τ _k	posuzení stability (návrhový průtok)	
	(m)	(m)	(m/s)	(m/s)	(Pa)	(Pa)		
	0.20	0.131	0.782	2.485	12.854	155.060		
	0.30	0.180	0.967	2.658	17.677	155.060		
	0.40	0.227	1.126	2.789	22.224	155.060		
	0.50	0.271	1.270	2.895	26.625	155.060		
	0.60	0.315	1.404	2.984	30.940	155.060		
	0.70	0.359	1.530	3.062	35.199	155.060		
	0.80	0.402	1.650	3.131	39.420	155.060	v < v _v	τ < τ _k
	0.570	0.302	1.365	2.959	29.653	155.060	OK	OK



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nad propustkem P6 - maximální sklon

Výpočet kapacity příkopu

$Q_N = 1.03 \text{ m}^3/\text{s}$

$$Q = S \cdot v$$

$$R = S/O$$

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

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

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

š.dno= 0.50 m

n= 0.033

I= 0.10000

sklony 1.50

d_e= 0.40000

I= 10.00 %

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	1.712	0.111
0.20	0.16	1.22	0.131	21.596	2.472	0.396
0.30	0.29	1.58	0.180	22.774	3.057	0.871
0.40	0.44	1.94	0.227	23.660	3.561	1.567
0.50	0.63	2.30	0.271	24.383	4.017	2.511
0.60	0.84	2.66	0.315	25.001	4.440	3.730
0.70	1.09	3.02	0.359	25.544	4.839	5.250
0.80	1.36	3.38	0.402	26.031	5.218	7.097
Qkap	0.33	1.69	0.194	23.062	3.215	1.056

Výpočet stability příkopu

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

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

Qkap	h	R	v	v _v	τ	τ _k	posuzení stability (návrhový průtok)	
	(m)	(m)	(m/s)	(m/s)	(Pa)	(Pa)		
	0.20	0.131	2.472	3.131	128.539	310.120		
	0.30	0.180	3.057	3.349	176.766	310.120		
	0.40	0.227	3.561	3.514	222.240	310.120		
	0.50	0.271	4.017	3.647	266.255	310.120		
	0.60	0.315	4.440	3.760	309.402	310.120		
	0.70	0.359	4.839	3.857	351.992	310.120		
	0.80	0.402	5.218	3.944	394.204	310.120	v < v _v	τ < τ _k
	0.330	0.194	3.215	3.403	190.617	310.120	OK	OK

