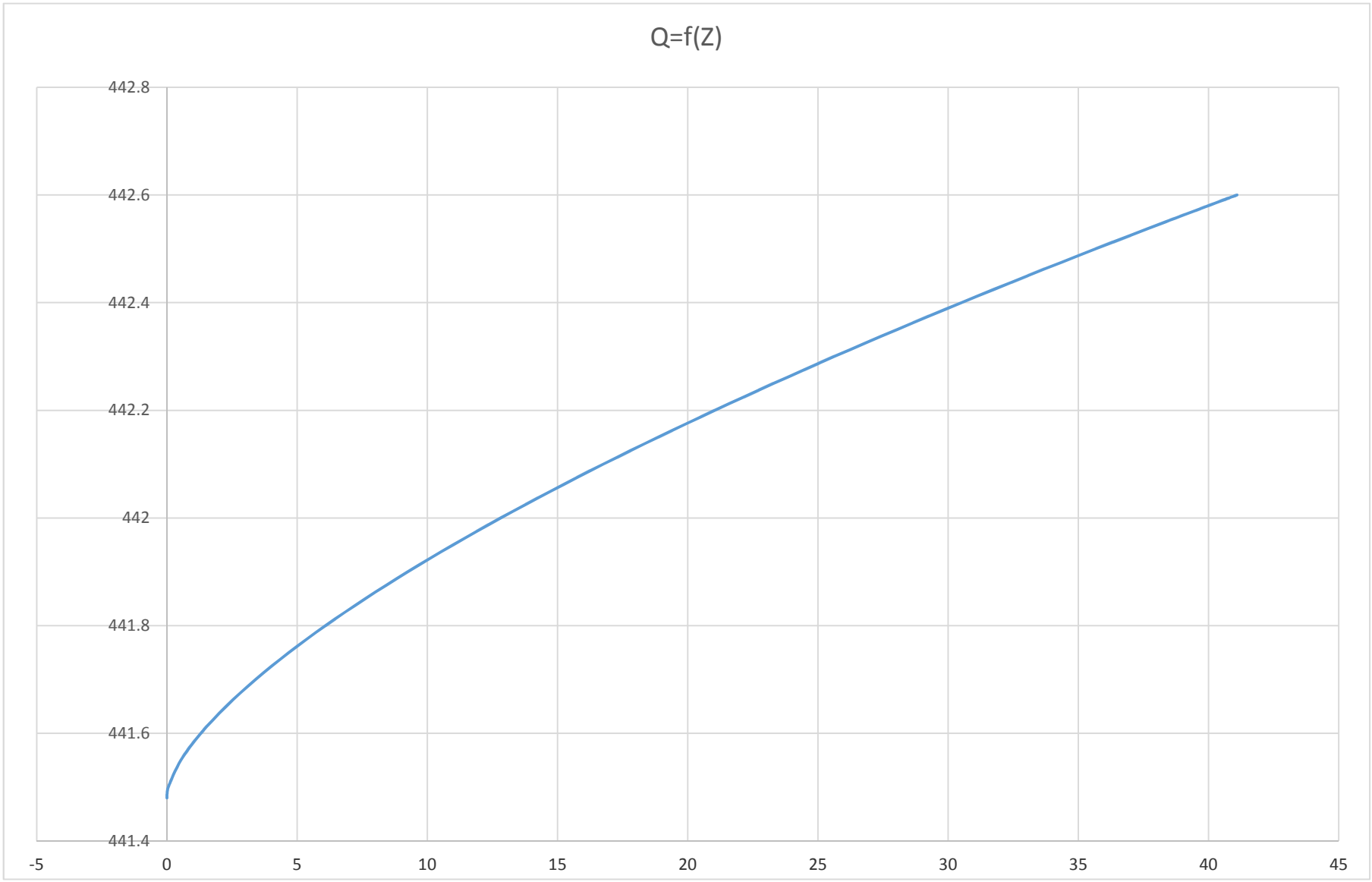
Popolni preliv
izračun hitrosti in pretoka
ALPESOV JEZ
NIZKE vode - zapornica v zgornji legi

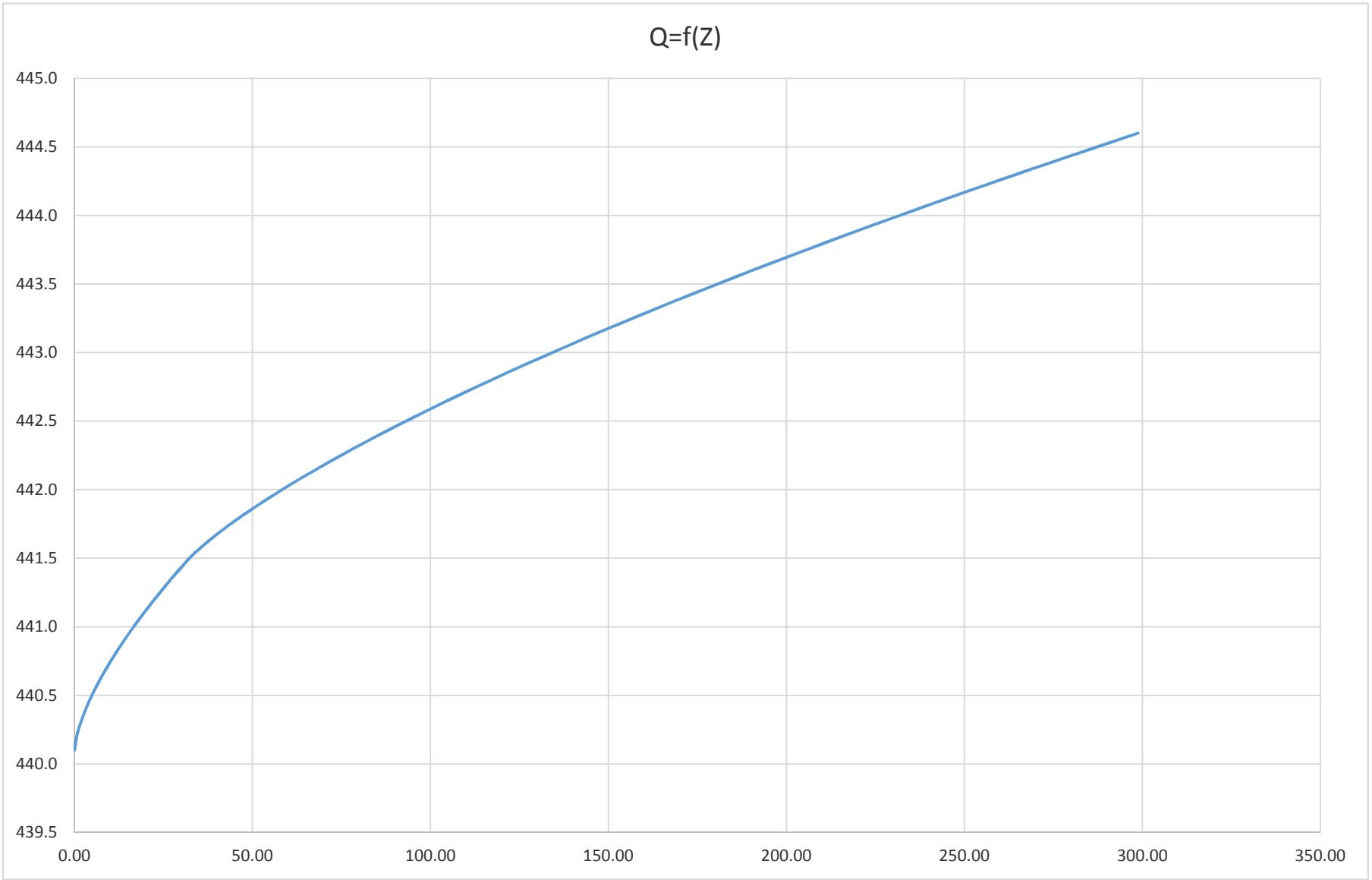
Kota preliva	Skupni pretok	Prelivno polje 1					Prelivno polje 2				
Zo		Zpreliva	mi= 0.66		široki prag - jez		Zpreliva	mi= 0.66		široki prag - jez	
440.1		441.5					441.48				
			b= 8		m		0.02	b= 10		m	
Z	Qskup	H	v	Q	v2/2g	H+v2/2g	H	v	Q	v2/2g	H+v2/2g
441.48	0.00	0					0	0.00	0.000	0.00	0.00
441.50	0.06	0	0.00	0.000	0.00	0.00	0.02	0.28	0.055	0.00	0.02
441.55	0.54	0.05	0.44	0.174	0.01	0.06	0.07	0.52	0.361	0.01	0.08
441.60	1.30	0.1	0.62	0.493	0.02	0.12	0.12	0.68	0.810	0.02	0.14
441.65	2.27	0.15	0.75	0.906	0.03	0.18	0.17	0.80	1.366	0.03	0.20
441.70	3.41	0.2	0.87	1.395	0.04	0.24	0.22	0.91	2.011	0.04	0.26
441.75	4.68	0.25	0.97	1.949	0.05	0.30	0.27	1.01	2.734	0.05	0.32
441.80	6.09	0.3	1.07	2.562	0.06	0.36	0.32	1.10	3.528	0.06	0.38
441.85	7.61	0.35	1.15	3.228	0.07	0.42	0.37	1.19	4.386	0.07	0.44
441.90	9.25	0.4	1.23	3.944	0.08	0.48	0.42	1.26	5.305	0.08	0.50
441.95	10.99	0.45	1.31	4.707	0.09	0.54	0.47	1.34	6.280	0.09	0.56
442.00	12.82	0.5	1.38	5.512	0.10	0.60	0.52	1.41	7.308	0.10	0.62
442.05	14.75	0.55	1.45	6.360	0.11	0.66	0.57	1.47	8.387	0.11	0.68
442.10	16.76	0.6	1.51	7.246	0.12	0.72	0.62	1.53	9.515	0.12	0.74
442.15	18.86	0.65	1.57	8.171	0.13	0.78	0.67	1.60	10.688	0.13	0.80
442.20	21.04	0.7	1.63	9.131	0.14	0.84	0.72	1.65	11.907	0.14	0.86
442.25	23.30	0.75	1.69	10.127	0.15	0.90	0.77	1.71	13.169	0.15	0.92
442.30	25.63	0.8	1.74	11.156	0.15	0.95	0.82	1.76	14.472	0.16	0.98
442.35	28.03	0.85	1.80	12.219	0.16	1.01	0.87	1.82	15.815	0.17	1.04
442.40	30.51	0.9	1.85	13.312	0.17	1.07	0.92	1.87	17.198	0.18	1.10
442.45	33.06	0.95	1.90	14.437	0.18	1.13	0.97	1.92	18.619	0.19	1.16
442.50	35.67	1	1.95	15.592	0.19	1.19	1.02	1.97	20.077	0.20	1.22
442.55	38.35	1.05	2.00	16.776	0.20	1.25	1.07	2.02	21.571	0.21	1.28
442.60	41.09	1.1	2.04	17.988	0.21	1.31	1.12	2.06	23.101	0.22	1.34


Q=f(Z)
442.8
442.6
442.4
442.2
442
441.8
441.6
441.4
-5
0
5
10
15
20
25
30
35
40
45

Popolni preliv
izračun hitrosti in pretoka
ALPESOV JEZ
Visoke vode - zapornica v spodnji legii legi

Kota preliva	Skupni pretok	Prelivno polje 1					Prelivno polje 2				
Zo		Zpreliva		mi= 0.66	široki prag - jez		Zpreliva		mi= 0.66	široki prag - jez	
440.1		441.54					440.1				
				b= 10.6	m		1.44		b= 10	m	
Z	Qskup	H	v	Q	v2/2g	H+v2/2g	H	v	Q	v2/2g	H+v2/2g
440.1	0.00						0	0.00	0.000	0.00	0.00
440.2	0.62						0.1	0.62	0.616	0.02	0.12
440.3	1.74						0.2	0.87	1.743	0.04	0.24
440.4	3.20						0.3	1.07	3.202	0.06	0.36
440.5	4.93						0.4	1.23	4.931	0.08	0.48
440.6	6.89						0.5	1.38	6.891	0.10	0.60
440.7	9.06						0.6	1.51	9.058	0.12	0.72
440.8	11.41						0.7	1.63	11.414	0.14	0.84
440.9	13.95						0.8	1.74	13.946	0.15	0.95
441.0	16.64						0.9	1.85	16.640	0.17	1.07
441.1	19.49						1	1.95	19.490	0.19	1.19
441.2	22.48						1.1	2.04	22.485	0.21	1.31
441.3	25.62						1.2	2.13	25.620	0.23	1.43
441.4	28.89						1.3	2.22	28.888	0.25	1.55
441.5	32.28	0	0.00	0.000	0.00	0.00	1.4	2.31	32.285	0.27	1.67
441.6	36.46	0.1	0.62	0.653	0.02	0.12	1.5	2.39	35.805	0.29	1.79
441.7	41.29	0.2	0.87	1.848	0.04	0.24	1.6	2.47	39.444	0.31	1.91
441.8	46.59	0.3	1.07	3.395	0.06	0.36	1.7	2.54	43.199	0.33	2.03
441.9	52.29	0.4	1.23	5.226	0.08	0.48	1.8	2.61	47.066	0.35	2.15
442.0	58.35	0.5	1.38	7.304	0.10	0.60	1.9	2.69	51.043	0.37	2.27
442.1	64.73	0.6	1.51	9.601	0.12	0.72	2	2.76	55.125	0.39	2.39
442.2	71.41	0.7	1.63	12.099	0.14	0.84	2.1	2.82	59.310	0.41	2.51
442.3	78.38	0.8	1.74	14.782	0.15	0.95	2.2	2.89	63.597	0.43	2.63
442.4	85.62	0.9	1.85	17.639	0.17	1.07	2.3	2.96	67.982	0.45	2.75
442.5	93.12	1	1.95	20.659	0.19	1.19	2.4	3.02	72.463	0.46	2.86
442.6	100.87	1.1	2.04	23.834	0.21	1.31	2.5	3.08	77.039	0.48	2.98
442.7	108.86	1.2	2.13	27.157	0.23	1.43	2.6	3.14	81.708	0.50	3.10
442.8	117.09	1.3	2.22	30.621	0.25	1.55	2.7	3.20	86.466	0.52	3.22

442.9	125.54	1.4	2.31	34.222	0.27	1.67	2.8	3.26	91.314	0.54	3.34
443.0	134.20	1.5	2.39	37.953	0.29	1.79	2.9	3.32	96.250	0.56	3.46
443.1	143.08	1.6	2.47	41.811	0.31	1.91	3	3.38	101.271	0.58	3.58
443.2	152.17	1.7	2.54	45.791	0.33	2.03	3.1	3.43	106.376	0.60	3.70
443.3	161.46	1.8	2.61	49.890	0.35	2.15	3.2	3.49	111.565	0.62	3.82
443.4	170.94	1.9	2.69	54.105	0.37	2.27	3.3	3.54	116.835	0.64	3.94
443.5	180.62	2	2.76	58.432	0.39	2.39	3.4	3.59	122.186	0.66	4.06
443.6	190.48	2.1	2.82	62.869	0.41	2.51	3.5	3.65	127.616	0.68	4.18
443.7	200.54	2.2	2.89	67.413	0.43	2.63	3.6	3.70	133.124	0.70	4.30
443.8	210.77	2.3	2.96	72.061	0.45	2.75	3.7	3.75	138.709	0.72	4.42
443.9	221.18	2.4	3.02	76.811	0.46	2.86	3.8	3.80	144.370	0.74	4.54
444.0	231.77	2.5	3.08	81.662	0.48	2.98	3.9	3.85	150.106	0.76	4.66
444.1	242.53	2.6	3.14	86.610	0.50	3.10	4	3.90	155.917	0.77	4.77
444.2	253.45	2.7	3.20	91.654	0.52	3.22	4.1	3.95	161.800	0.79	4.89
444.3	264.55	2.8	3.26	96.793	0.54	3.34	4.2	3.99	167.755	0.81	5.01
444.4	275.81	2.9	3.32	102.025	0.56	3.46	4.3	4.04	173.782	0.83	5.13
444.5	287.23	3	3.38	107.347	0.58	3.58	4.4	4.09	179.879	0.85	5.25
444.6	298.81	3.1	3.43	112.759	0.60	3.70	4.5	4.13	186.046	0.87	5.37


Q=f(Z)
445.0
444.5
444.0
443.5
443.0
442.5
442.0
441.5
441.0
440.5
440.0
439.5
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00

Hidravlični izračun ribje steze novi ALPLESOV JEZ

preliv:			bazen:			
b=	0.4	m	l=	1.5	m	ρ= 1000 kg/m3
$h_{p.min}$=	0.25	m	h_b=	0.8	m	
μ=	0.52	-	B=	1.5	m	
$h_{p,max}$=	0.3	m	Δh=	0.28	m	

---

pretočnost prelivov:

$$Q_p = \frac{2}{3} \cdot \mu \cdot b \cdot \sqrt{2 \cdot g} \cdot h_p^{3/2}$$

$Q_{p,min}$= **0.0768** m3/s minimalni pretok
76.78 l/s

$Q_{p,max}$= **0.1009** m3/s maximalni pretok
100.93 l/s

hitrosti na prelivu:

$$v_p = \frac{Q_p}{A_p} = \frac{Q_p}{b \cdot h_p}$$

$v_{p.min}$= **0.77** m/s

$v_{p,max}$= **0.84** m/s

Gostota disipacije energije:

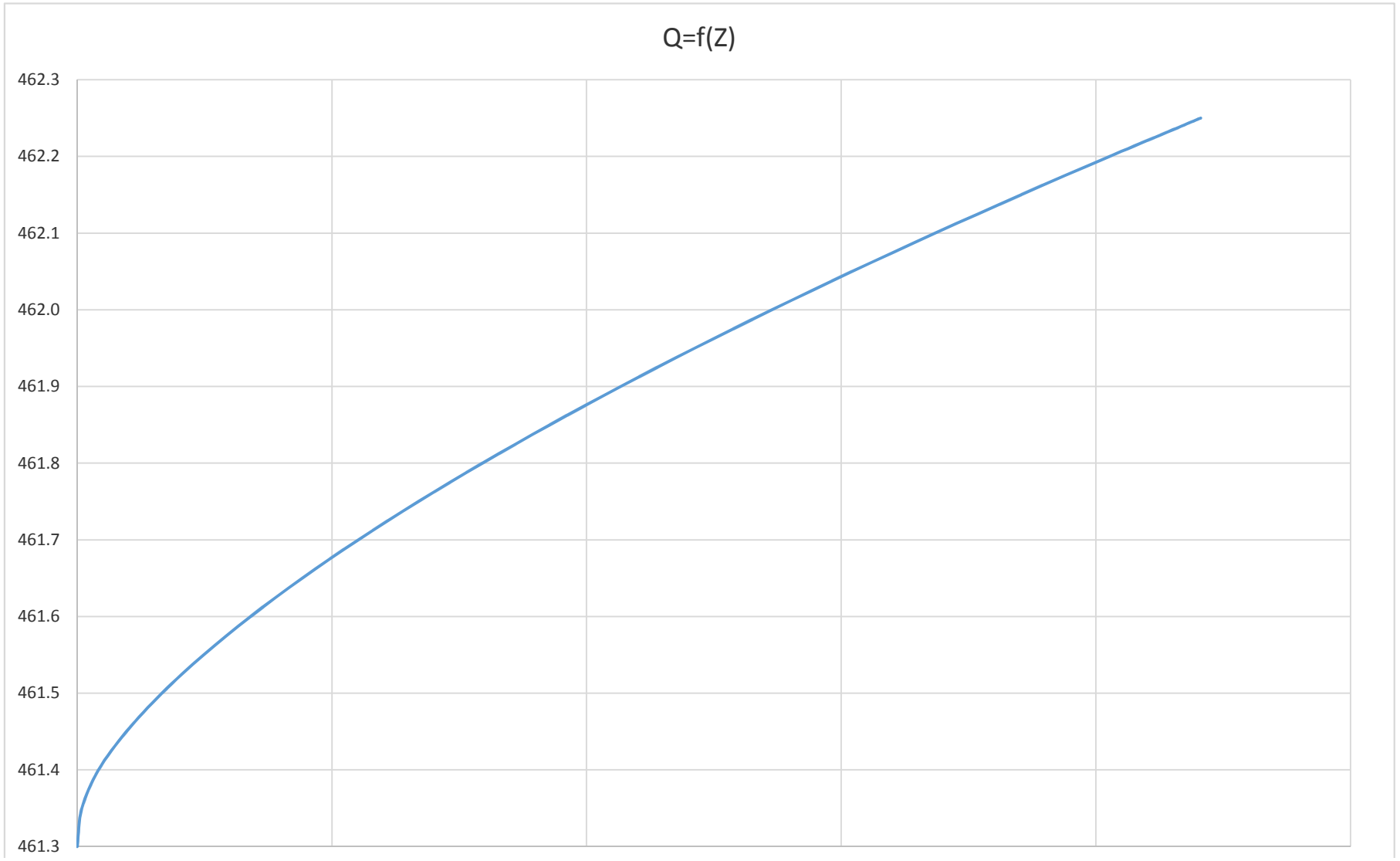
$$E = \frac{\rho \cdot g \cdot Q_{p,\max} \cdot \Delta h}{B \cdot h_b \cdot l}$$

E= **117.16** W/m3

E= **154.01** W/m3

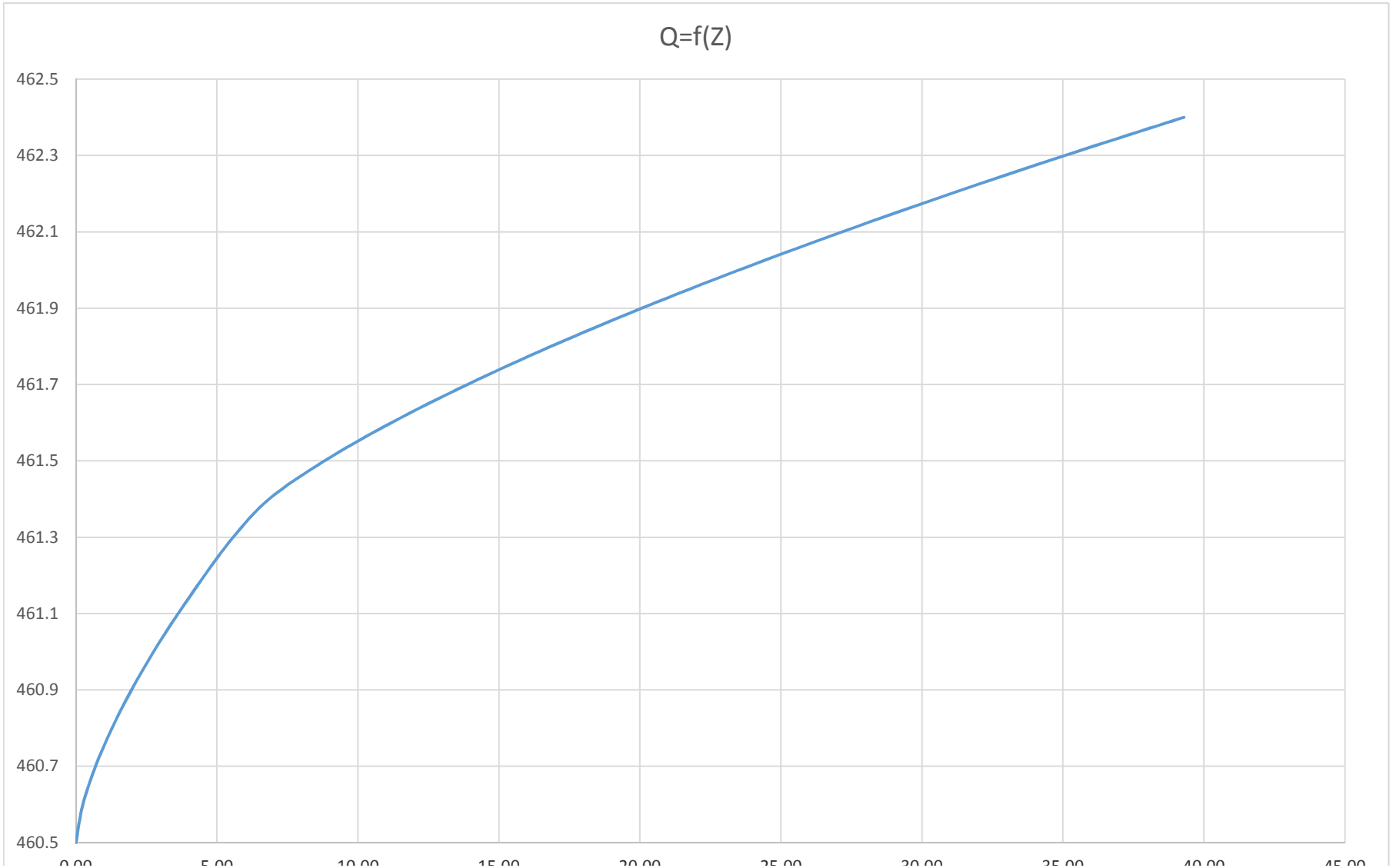
Popolni preliv
izračun hitrosti in pretoka
NOVI DERMOTOV JEZ
Nizke vode - zapornica v zgornji legi - račun do 1 m

Kota preliva	Skupni pretok	Prelivno polje 1					Prelivno polje 2				
Zo		Zpreliva	mi= 0.66		široki prag - jez		Zpreliva	mi= 0.66		široki prag - jez	
461.3		461.32					461.38				
			b= 9		m		-0.06	b= 4		m	
Z	Qskup	H	v	Q	v2/2g	H+v2/2g	H	v	Q	v2/2g	H+v2/2g
461.30	0.00	0	0.00	0.000	0.00	0.00	0	0.00	0.000	0.00	0.00
461.35	0.09	0.03	0.34	0.091	0.01	0.04	0	0.00	0.000	0.00	0.00
461.40	0.42	0.08	0.55	0.397	0.02	0.10	0.02	0.28	0.022	0.00	0.02
461.45	0.97	0.13	0.70	0.822	0.03	0.16	0.07	0.52	0.144	0.01	0.08
461.50	1.66	0.18	0.83	1.340	0.03	0.21	0.12	0.68	0.324	0.02	0.14
461.55	2.48	0.23	0.93	1.935	0.04	0.27	0.17	0.80	0.546	0.03	0.20
461.60	3.40	0.28	1.03	2.599	0.05	0.33	0.22	0.91	0.804	0.04	0.26
461.65	4.42	0.33	1.12	3.325	0.06	0.39	0.27	1.01	1.094	0.05	0.32
461.70	5.52	0.38	1.20	4.109	0.07	0.45	0.32	1.10	1.411	0.06	0.38
461.75	6.70	0.43	1.28	4.946	0.08	0.51	0.37	1.19	1.755	0.07	0.44
461.80	7.96	0.48	1.35	5.833	0.09	0.57	0.42	1.26	2.122	0.08	0.50
461.85	9.28	0.53	1.42	6.768	0.10	0.63	0.47	1.34	2.512	0.09	0.56
461.90	10.67	0.58	1.48	7.748	0.11	0.69	0.52	1.41	2.923	0.10	0.62
461.95	12.13	0.63	1.55	8.771	0.12	0.75	0.57	1.47	3.355	0.11	0.68
462.00	13.64	0.68	1.61	9.836	0.13	0.81	0.62	1.53	3.806	0.12	0.74
462.05	15.22	0.73	1.67	10.940	0.14	0.87	0.67	1.60	4.275	0.13	0.80
462.10	16.85	0.78	1.72	12.083	0.15	0.93	0.72	1.65	4.763	0.14	0.86
462.15	18.53	0.83	1.78	13.264	0.16	0.99	0.77	1.71	5.267	0.15	0.92
462.20	20.27	0.88	1.83	14.480	0.17	1.05	0.82	1.76	5.789	0.16	0.98
462.25	22.06	0.93	1.88	15.731	0.18	1.11	0.87	1.82	6.326	0.17	1.04


Q=f(Z)
462.3
462.2
462.1
462.0
461.9
461.8
461.7
461.6
461.5
461.4
461.3

Popolni preliv
izračun hitrosti in pretoka
NOVI DERMOTOV JEZ
Visoke vode - zapornica v spodnji legi legi - račun do 1 m

Kota preliva	Skupni pretok	Prelivno polje 1					Prelivno polje 2				
Zo		Zpreliva	mi= 0.66		široki prag - jez		Zpreliva	mi= 0.66		široki prag - jez	
460.5		461.35					460.5				
			b= 9		m		0.85	b= 4		m	
Z	Qskup	H	v	Q	v2/2g	H+v2/2g	H	v	Q	v2/2g	H+v2/2g
460.5	0.00						0	0.00	0.000	0.00	0.00
460.6	0.25						0.1	0.62	0.247	0.02	0.12
460.7	0.70						0.2	0.87	0.697	0.04	0.24
460.8	1.28						0.3	1.07	1.281	0.06	0.36
460.9	1.97						0.4	1.23	1.972	0.08	0.48
461.0	2.76						0.5	1.38	2.756	0.10	0.60
461.1	3.62						0.6	1.51	3.623	0.12	0.72
461.2	4.57						0.7	1.63	4.566	0.14	0.84
461.3	5.58						0.8	1.74	5.578	0.15	0.95
461.4	6.85	0.05	0.44	0.196	0.01	0.06	0.9	1.85	6.656	0.17	1.07
461.5	8.81	0.15	0.75	1.019	0.03	0.18	1	1.95	7.796	0.19	1.19
461.6	11.19	0.25	0.97	2.193	0.05	0.30	1.1	2.04	8.994	0.21	1.31
461.7	13.88	0.35	1.15	3.632	0.07	0.42	1.2	2.13	10.248	0.23	1.43
461.8	16.85	0.45	1.31	5.295	0.09	0.54	1.3	2.22	11.555	0.25	1.55
461.9	20.07	0.55	1.45	7.155	0.11	0.66	1.4	2.31	12.914	0.27	1.67
462.0	23.51	0.65	1.57	9.192	0.13	0.78	1.5	2.39	14.322	0.29	1.79
462.1	27.17	0.75	1.69	11.393	0.15	0.90	1.6	2.47	15.778	0.31	1.91
462.2	31.03	0.85	1.80	13.746	0.16	1.01	1.7	2.54	17.280	0.33	2.03
462.3	35.07	0.95	1.90	16.242	0.18	1.13	1.8	2.61	18.827	0.35	2.15
462.4	39.29	1.05	2.00	18.872	0.20	1.25	1.9	2.69	20.417	0.37	2.27


Q=f(Z)
462.5
462.3
462.1
461.9
461.7
461.5
461.3
461.1
460.9
460.7
460.5
0.00
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00

Hidravlični izračun ribje steze novi Dermotov jez

preliv:			bazen:			
b=	0.4 m		l=	2 m	ρ=	1000 kg/m3
$h_{p.min}$=	0.25 m		h_b=	0.7 m		
μ=	0.52 -		B=	2 m		
$h_{p,max}$=	0.35 m		Δh=	0.3 m		

---

pretočnost prelivov:

$$Q_p = \frac{2}{3} \cdot \mu \cdot b \cdot \sqrt{2 \cdot g} \cdot h_p^{3/2}$$

$Q_{p,min}$= **0.0768** m3/s minimalni pretok
76.78 l/s

$Q_{p,max}$= **0.1272** m3/s maximalni pretok
127.18 l/s

hitrosti na prelivu:

$$v_p = \frac{Q_p}{A_p} = \frac{Q_p}{b \cdot h_p}$$

$v_{p.min}$= **0.77** m/s

$v_{p,max}$= **0.91** m/s

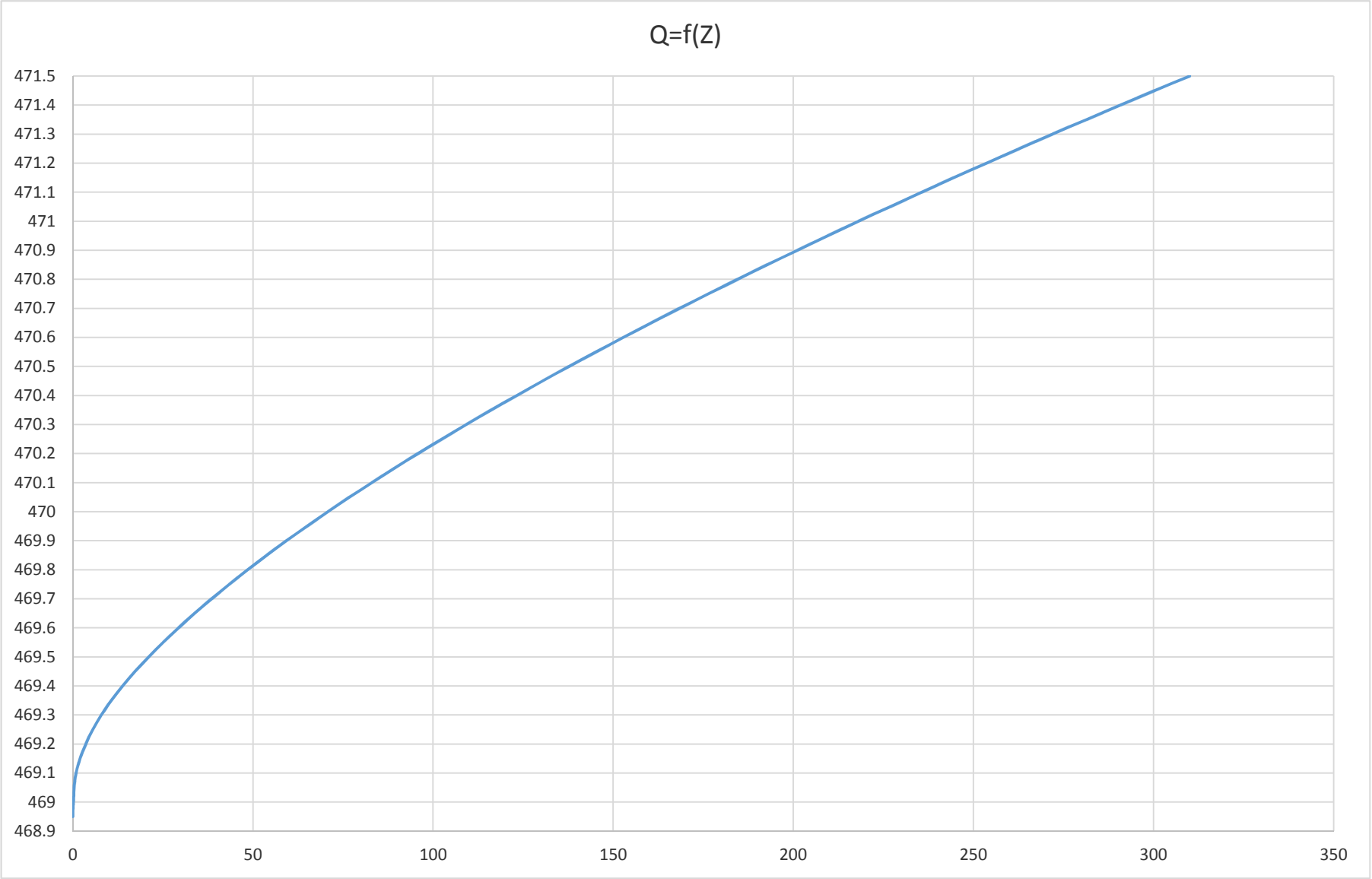
Gostota disipacije energije:

$$E = \frac{\rho \cdot g \cdot Q_{p,\max} \cdot \Delta h}{B \cdot h_b \cdot l}$$

E= **80.70** W/m3 min

Popolni preliv
izračun hitrosti in pretoka
DOLENČEV JEZ
Račun do globine 2,6 m

Kota preliva	Skupni pretok	Prelivno polje 1					Prelivno polje 2					Prelivno polje 3				
Zo		Zpreliva	mi= 0.66		široki prag - jez		Zpreliva	mi= 0.66		široki prag - jez		Zpreliva	mi= 0.66		široki prag - jez	
468.95		468.95					469.1					469.3				
			b= 8		m		-0.15	b= 27		m		-0.2	b= 8		m	
Z	Qskup	H	v	Q	v2/2g	H+v2/2g	H	v	Q	v2/2g	H+v2/2g	H	v	Q	v2/2g	H+v2/2g
468.95	0.00	0	0.00	0.000	0.00	0.00	0	0.00	0.000	0.00	0.00	0	0.00	0.000	0.00	0.00
469.00	0.17	0.05	0.44	0.174	0.01	0.06	0	0.00	0.000	0.00	0.00	0	0.00	0.000	0.00	0.00
469.10	0.91	0.15	0.75	0.906	0.03	0.18	0	0.00	0.000	0.00	0.00	0	0.00	0.000	0.00	0.00
469.20	3.61	0.25	0.97	1.949	0.05	0.30	0.1	0.62	1.664	0.02	0.12	0	0.00	0.000	0.00	0.00
469.30	7.94	0.35	1.15	3.228	0.07	0.42	0.2	0.87	4.707	0.04	0.24	0	0.00	0.000	0.00	0.00
469.40	13.85	0.45	1.31	4.707	0.09	0.54	0.3	1.07	8.647	0.06	0.36	0.1	0.62	0.493	0.02	0.12
469.50	21.07	0.55	1.45	6.360	0.11	0.66	0.4	1.23	13.312	0.08	0.48	0.2	0.87	1.395	0.04	0.24
469.60	29.34	0.65	1.57	8.171	0.13	0.78	0.5	1.38	18.605	0.10	0.60	0.3	1.07	2.562	0.06	0.36
469.70	38.53	0.75	1.69	10.127	0.15	0.90	0.6	1.51	24.456	0.12	0.72	0.4	1.23	3.944	0.08	0.48
469.80	48.55	0.85	1.80	12.219	0.16	1.01	0.7	1.63	30.819	0.14	0.84	0.5	1.38	5.512	0.10	0.60
469.90	59.34	0.95	1.90	14.437	0.18	1.13	0.8	1.74	37.653	0.15	0.95	0.6	1.51	7.246	0.12	0.72
470.00	70.84	1.05	2.00	16.776	0.20	1.25	0.9	1.85	44.929	0.17	1.07	0.7	1.63	9.131	0.14	0.84
470.10	83.01	1.15	2.09	19.228	0.22	1.37	1	1.95	52.622	0.19	1.19	0.8	1.74	11.156	0.15	0.95
470.20	95.81	1.25	2.18	21.790	0.24	1.49	1.1	2.04	60.709	0.21	1.31	0.9	1.85	13.312	0.17	1.07
470.30	109.22	1.35	2.26	24.456	0.26	1.61	1.2	2.13	69.173	0.23	1.43	1	1.95	15.592	0.19	1.19
470.40	123.21	1.45	2.35	27.224	0.28	1.73	1.3	2.22	77.998	0.25	1.55	1.1	2.04	17.988	0.21	1.31
470.50	137.75	1.55	2.43	30.088	0.30	1.85	1.4	2.31	87.168	0.27	1.67	1.2	2.13	20.496	0.23	1.43
470.60	152.83	1.65	2.50	33.046	0.32	1.97	1.5	2.39	96.672	0.29	1.79	1.3	2.22	23.110	0.25	1.55
470.70	168.42	1.75	2.58	36.095	0.34	2.09	1.6	2.47	106.499	0.31	1.91	1.4	2.31	25.828	0.27	1.67
470.80	184.51	1.85	2.65	39.233	0.36	2.21	1.7	2.54	116.638	0.33	2.03	1.5	2.39	28.644	0.29	1.79
470.90	201.09	1.95	2.72	42.456	0.38	2.33	1.8	2.61	127.079	0.35	2.15	1.6	2.47	31.555	0.31	1.91
471.00	218.14	2.05	2.79	45.764	0.40	2.45	1.9	2.69	137.815	0.37	2.27	1.7	2.54	34.559	0.33	2.03
471.10	235.64	2.15	2.86	49.153	0.42	2.57	2	2.76	148.837	0.39	2.39	1.8	2.61	37.653	0.35	2.15
471.20	253.59	2.25	2.92	52.622	0.44	2.69	2.1	2.82	160.138	0.41	2.51	1.9	2.69	40.834	0.37	2.27
471.30	271.98	2.35	2.99	56.169	0.45	2.80	2.2	2.89	171.712	0.43	2.63	2	2.76	44.100	0.39	2.39
471.40	290.79	2.45	3.05	59.792	0.47	2.92	2.3	2.96	183.551	0.45	2.75	2.1	2.82	47.448	0.41	2.51
471.50	310.02	2.55	3.11	63.490	0.49	3.04	2.4	3.02	195.651	0.46	2.86	2.2	2.89	50.878	0.43	2.63


Q=f(Z)
471.5
471.4
471.3
471.2
471.1
471
470.9
470.8
470.7
470.6
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470.4
470.3
470.2
470.1
470
469.9
469.8
469.7
469.6
469.5
469.4
469.3
469.2
469.1
469
468.9
0
50
100
150
200
250
300
350

Hidravlični izračun drče -novi DOLENČEV jez

preliv:			bazen:			
b=	0.5	m	l=	2.4	m	ρ= 1000 kg/m3
$h_{p,min}$=	0.3	m	h_b=	1	m	
μ=	0.52	-	B=	2	m	
$h_{p,max}$=	0.35	m	Δh=	0.3	m	

---

pretočnost prelivov:

$$Q_p = \frac{2}{3} \cdot \mu \cdot b \cdot \sqrt{2 \cdot g} \cdot h_p^{3/2}$$

$Q_{p,min}$= **0.1262** m3/s minimalni pretok
126.16 l/s

$Q_{p,max}$= **0.1590** m3/s maximalni pretok
158.98 l/s

hitrosti na prelivu:

$$v_p = \frac{Q_p}{A_p} = \frac{Q_p}{b \cdot h_p}$$

$v_{p.min}$= **0.84** m/s

$v_{p,max}$= **0.91** m/s

Gostota disipacije energije:

$$E = \frac{\rho \cdot g \cdot Q_{p,\max} \cdot \Delta h}{B \cdot h_b \cdot l}$$

E= **97.47** W/m3