Załącznik nr 2

Wyniki obliczeń hydraulicznych kanałów deszczowych w zlewni nr I dla aktualnego stanu zagospodarowania zlewni Kanału Obrzębińskiego odcinek 4+350 do 2+750 – sprawdzenie pracy sieci dla c = 2

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Program - KANDES - 1996.04.15 Wersja 2.21 Nr 057

OBLICZENIA WYKONANO W "PROJSAN" W BYDGOSZCZY

Miejscowosc : TUREK Data : 2014-10-30
Temat : KANALIZACJA DESZCZOWA Wariant : ZLEWNIA I

****

WYNIKI OBLICZEN DLA KANALOW - SPRAWDZENIE SIECI DLA c= 2 1/a

kan	wezel		dlug.	zlewn. zred.	c	tk	przepl.	spad.	sred	predk	wyp	Rzedne dna	
	poc	kon										pocz	konc
-	-	-	m	ha	1/a	min	dm3/s	%.	m	m/s	cm	mnpm	mnpm
1	1	61	250.0	15.00	1	5	346.9	1.3	1.20	1.03	41	113.06	112.74
2	2	1	270.0	13.60	1	5	314.6	0.6	1.10	0.73	50	113.21	113.06
3	3	2	150.0	10.24	1	5	236.9	1.0	0.70	0.61	cis	113.36	113.21
4	4	3	210.0	9.87	1	5	228.3	0.8	0.70	0.59	cis	113.52	113.36
5	5	4	100.0	9.75	1	5	225.5	3.1	0.60	0.80	cis	113.83	113.52
6	6	5	335.0	8.36	1	5	193.4	4.4	0.50	1.40	33	115.30	113.83
7	7	6	40.0	7.66	1	5	177.2	15.0	0.50	2.20	22	115.90	115.30
8	8	7	290.0	7.53	1	5	174.2	4.3	0.50	1.35	31	117.14	115.90
9	9	8	215.0	6.02	1	5	139.2	4.0	0.40	1.18	35	118.01	117.14
10	10	9	180.0	1.19	1	5	27.5	8.4	0.30	1.07	11	119.52	118.01
11	20	10	120.0	0.35	1	5	8.1	25.3	0.30	1.07	4	122.56	119.52
12	11	8	70.0	1.03	1	5	23.8	11.0	0.30	1.12	9	119.37	118.60
13	12	11	90.0	0.20	1	5	4.6	3.0	0.25	0.46	6	120.00	119.73
14	14	12	80.0	0.10	1	5	2.3	17.4	0.20	0.68	3	121.05	119.66
15	26	11	170.0	0.77	1	5	17.8	18.5	0.30	1.30	8	123.04	119.90
16	27	26	50.0	0.31	1	5	7.2	26.0	0.25	1.18	5	124.50	123.20
17	25	26	120.0	0.23	1	5	5.3	3.0	0.25	0.46	6	123.40	123.04
18	28	27	120.0	0.23	1	5	5.3	5.0	0.25	0.60	6	125.10	124.50
19	15	9	80.0	4.49	1	5	103.9	4.4	0.40	1.20	26	119.25	118.90
20	16	15	85.0	0.18	1	5	4.2	9.2	0.25	0.70	5	119.56	118.78
21	17	15	150.0	0.30	1	5	6.9	12.0	0.25	0.80	5	121.30	119.50
22	18	15	100.0	3.91	1	5	90.4	17.5	0.40	1.98	16	120.53	118.78
23	13	18	100.0	0.28	1	5	6.5	5.0	0.25	0.60	6	121.50	121.00
24	19	18	125.0	0.33	1	5	7.6	12.5	0.25	0.95	6	122.39	120.83
25	22	18	100.0	3.17	1	5	73.3	7.6	0.30	1.33	21	121.25	120.49
26	24	22	100.0	0.25	1	5	5.8	12.0	0.25	0.80	5	123.50	122.30
27	23	22	170.0	0.52	1	5	12.0	6.5	0.25	0.83	9	123.40	122.30
28	21	10	190.0	0.53	1	5	12.3	15.3	0.25	1.05	6	123.40	120.50
29	44	7	60.0	0.08	1	5	1.9	16.7	0.30	0.63	3	119.00	118.00
30	43	46	130.0	0.66	1	5	15.3	13.6	0.30	1.12	8	120.00	118.23
31	42	43	150.0	0.23	1	5	5.3	4.7	0.25	0.58	6	120.60	119.90
32	41	43	170.0	0.23	1	5	5.3	13.5	0.25	0.85	5	122.20	119.90
33	47	5	50.0	0.25	1	5	5.8	6.0	0.30	0.64	6	114.40	114.10
34	46	48	340.0	1.89	1	5	43.7	13.5	0.25	1.49	15	119.00	114.40
36	48	51	230.0	2.09	1	5	48.3	3.0	0.40	0.87	19	114.69	114.01
37	52	53	90.0	2.89	1	5	66.8	1.1	0.50	0.34	cis	113.39	113.29
38	51	52	260.0	2.64	1	5	61.1	2.4	0.50	0.85	20	114.01	113.39
45	30	22	100.0	2.20	1	5	50.9	13.5	0.40	1.55	13	122.60	121.25
46	31	30	160.0	1.75	1	5	40.5	13.1	0.30	1.44	13	125.30	123.20
47	29	30	110.0	0.15	1	5	3.5	16.4	0.25	0.76	4	125.00	123.20
48	39	46	90.0	0.68	1	5	15.7	2.9	0.40	0.12	cis	118.49	118.23
49	38	39	80.0	0.68	1	5	15.7	22.5	0.25	1.42	8	120.70	118.90
50	36	38	220.0	0.33	1	5	7.6	12.7	0.25	0.96	6	123.50	120.70
51	37	38	200.0	0.25	1	5	5.8	10.0	0.25	0.73	5	122.70	120.70
52	45	6	200.0	0.25	1	5	5.8	3.0	0.25	0.52	8	115.90	115.30
53	53	2	75.0	3.04	1	5	70.3	0.9	0.70	0.18	cis	113.28	113.21

kan	wezel		dlug.	zlewn. zred.	c	tk	przepl.	spad.	sred	predk	wyp	Rzedne dna	
	poc	kon										pocz	konc
-	-	-	m	ha	1/a	min	dm3/s	%.	m	m/s	cm	mnpm	mnpm
54	54	1	270.0	1.40	1	5	32.4	4.1	0.40	0.87	14	114.55	113.45
54A	199	54	210.0	0.70	1	5	16.2	5.2	0.40	0.76	8	115.65	114.55
55	139	61	230.0	5.57	1	5	538.8	2.2	1.20	1.40	45	113.60	113.10
56	59	59A	220.0	34.80	1	5	1214.9	4.2	1.20	2.19	58	112.50	111.58
57	59A	60	170.0	35.10	1	5	1221.8	2.1	1.20	1.70	73	111.58	111.22
58	60	62	295.0	44.19	1	5	1432.1	2.2	1.20	1.79	80	111.22	110.57
59	62	63	290.0	45.96	1	5	1473.1	3.7	1.20	2.20	68	110.57	109.50
59A	63A	63	260.0	2.08	1	5	191.1	4.2	0.60	1.40	30	110.60	109.50
60	63	64	175.0	48.74	1	5	1680.4	2.9	1.20	2.05	82	109.50	109.00
61	64	65	145.0	51.02	1	5	1733.2	0.3	1.20	0.77	cis	109.00	108.96
								0.3	1.20	0.77	cis		
62	65	142	210.0	67.67	1	5	2118.2	0.8	1.20	1.08	98	108.96	108.80
								0.8	1.20	1.08	98		
63	142	143	200.0	74.92	1	5	2286.0	1.2	1.20	1.33	84	108.80	108.56
								1.2	1.20	1.33	84		
64	67	68	220.0	0.45	1	5	10.4	8.4	0.25	0.87	8	118.30	116.45
65	68	69	145.0	0.60	1	5	13.9	3.4	0.40	0.66	10	116.45	115.95
66	69	70	140.0	1.80	1	5	41.6	1.8	0.40	0.69	20	115.95	115.70
67	84	69	175.0	0.85	1	5	19.7	12.5	0.20	1.19	11	118.14	115.95
68	83	70	150.0	0.70	1	5	16.2	4.2	0.30	0.76	11	116.63	116.00
69	70	71	60.0	2.65	1	5	61.3	5.2	0.60	1.06	14	115.70	115.39
70	71	72	90.0	2.95	1	5	68.2	1.8	0.60	0.77	21	115.39	115.23
71	72	73	65.0	3.35	1	5	77.5	3.5	0.50	1.04	20	115.23	115.00
72	73	139	190.0	5.35	1	5	123.7	1.0	0.80	0.72	30	114.07	113.88
73	75	74	130.0	1.20	1	5	27.8	1.4	0.60	0.55	14	114.93	114.75
74	74	73	200.0	2.00	1	5	46.3	3.8	0.60	0.90	14	114.75	114.00
75	133	80	235.0	1.20	1	5	27.8	7.1	0.40	1.01	11	115.12	113.46
76	80	81	130.0	2.55	1	5	59.0	4.5	0.40	1.06	19	113.46	112.88
77	81	82	130.0	3.55	1	5	82.1	1.8	0.50	0.83	25	112.88	112.64
78	82	59	20.0	12.43	1	5	287.6	7.0	0.80	1.83	28	112.64	112.50
79	76	77	50.0	0.15	1	5	3.5	2.0	0.20	0.37	6	115.99	115.89
80	77	78	110.0	0.45	1	5	10.4	10.5	0.30	0.85	6	115.89	114.73
81	78	79	100.0	0.85	1	5	19.7	4.7	0.40	0.77	10	114.73	114.26
82	79	80	100.0	1.15	1	5	26.6	8.0	0.30	1.05	11	114.26	113.46
83	134	81	150.0	0.90	1	5	20.8	7.3	0.30	1.00	11	113.98	112.88
84	135	136	170.0	0.20	1	5	4.7	10.7	0.20	0.76	5	116.07	114.25
85	136	59	95.0	0.50	1	5	11.7	18.4	0.25	1.15	6	114.25	112.50
86	137	60	260.0	1.10	1	5	25.4	6.5	0.30	0.98	12	113.68	112.00
87	138	62	275.0	0.90	1	5	20.8	3.3	0.40	0.71	11	111.49	110.57
88	85	86	245.0	1.05	1	5	24.3	8.8	0.30	1.10	11	118.71	116.55
89	86	87	135.0	1.65	1	5	38.2	5.5	0.40	1.03	14	116.55	115.81
90	90	87	240.0	1.10	1	5	25.4	10.7	0.20	1.18	13	118.39	115.81
91	87	88	135.0	2.88	1	5	66.5	12.5	0.50	1.56	13	115.81	114.12
92	88	89	135.0	4.27	1	5	98.7	8.2	0.60	1.51	18	114.12	113.01
93	91	88	245.0	0.90	1	5	20.7	6.4	0.30	0.94	11	115.70	114.12
94	92	93	205.0	1.20	1	5	27.8	4.7	0.30	0.89	14	117.80	116.83
95	93	94	40.0	1.80	1	5	41.6	11.2	0.40	1.34	12	116.83	116.38
96	94	95	85.0	2.20	1	5	50.9	2.8	0.40	0.86	19	116.38	116.14
97	95	96	50.0	3.00	1	5	69.4	3.2	0.50	0.97	20	116.14	115.98
98	96	89	275.0	4.22	1	5	97.5	7.2	0.50	1.43	19	115.98	113.99
99	97	98	110.0	0.50	1	5	11.6	12.6	0.30	0.93	6	118.38	116.99
100	98	95	45.0	0.60	1	5	13.9	7.8	0.40	0.85	7	116.99	116.64
101	89	82	180.0	8.88	1	5	205.5	2.1	0.80	1.07	32	113.01	112.64
102	99	100	145.0	0.30	1	5	7.0	8.3	0.30	0.76	6	113.77	112.56
103	100	101	100.0	0.75	1	5	17.4	6.8	0.40	0.86	8	112.56	111.88
104	106	107	75.0	0.10	1	5	2.3	10.7	0.40	0.55	3	114.03	113.23
105	107	108	200.0	1.40	1	5	32.4	4.7	0.60	0.86	11	113.23	112.29
106	112	107	355.0	1.30	1	5	30.1	10.8	0.40	1.17	10	117.08	113.23
107	108	110	40.0	4.05	1	5	93.7	2.0	0.60	0.88	25	112.29	112.21
108	111	110	180.0	0.45	1	5	10.4	1.4	0.20	0.43	14	112.46	112.21
109	113	114	80.0	0.16	1	5	3.6	7.4	0.40	0.56	4	118.39	117.80
110	114	115	230.0	1.11	1	5	25.6	12.6	0.50	1.13	8	117.80	114.91
111	115	116	90.0	1.31	1	5	30.2	10.1	0.50	1.12	9	114.91	114.00
112	123	116	140.0	0.63	1	5	14.5	4.4	0.40	0.70	8	112.99	112.37
113	122	123	190.0	0.47	1	5	10.8	5.7	0.30	0.72	8	114.07	112.99

kan	wezel		dlug.	zlewn. zred.	c	tk	przepl.	spad.	sred	predk	wyp	Rzedne dna	
	poc	kon										pocz	konc
-	-	-	m	ha	1/a	min	dm3/s	%.	m	m/s	cm	mnpm	mnpm
114	116	117	40.0	3.20	1	5	74.1	3.3	0.60	1.00	19	112.37	112.24
115	117	118	240.0	4.88	1	5	112.9	4.3	0.60	1.20	21	112.24	111.20
116	118	119	225.0	12.34	1	5	285.4	2.7	0.80	1.29	36	111.20	110.60
117	119	120	70.0	12.58	1	5	290.9	2.7	0.80	1.31	37	110.60	110.41
118	120	121	200.0	14.31	1	5	330.9	4.0	0.80	1.57	35	110.41	109.61
119	121	65	215.0	16.65	1	5	385.0	3.0	0.80	1.46	42	109.61	108.96
120	103	104	200.0	0.50	1	5	11.6	13.9	0.30	0.98	6	115.95	113.17
121	104	105	45.0	0.75	1	5	17.3	2.0	0.40	0.57	12	113.17	113.08
122	102	105	160.0	0.60	1	5	13.9	2.4	0.30	0.58	11	113.47	113.08
123	105	109	150.0	2.15	1	5	49.7	4.8	0.60	1.02	14	113.08	112.36
124	109	108	35.0	2.65	1	5	61.3	2.0	0.60	0.78	19	112.36	112.29
125	101	60	40.0	5.81	1	5	134.3	16.5	0.60	2.02	16	111.88	111.22
126	110	101	120.0	5.00	1	5	115.7	2.7	0.60	1.03	25	112.21	111.88
127	124	125	130.0	1.90	1	5	43.9	4.6	0.40	0.32	cis	112.30	111.70
128	128	125	220.0	0.80	1	5	18.5	6.1	0.30	0.24	cis	113.04	111.70
129	125	126	120.0	3.90	1	5	90.1	1.9	0.30	1.18	cis	111.70	111.47
130	127	126	150.0	0.90	1	5	20.8	8.0	0.30	0.27	cis	112.67	111.47
131	126	118	105.0	6.50	1	5	150.3	2.6	0.30	1.96	cis	111.47	111.20
132	129	130	275.0	0.47	1	5	10.8	3.3	0.30	0.61	9	112.95	112.05
133	130	131	115.0	0.62	1	5	14.3	3.2	0.50	0.63	9	112.05	111.68
134	131	132	70.0	1.42	1	5	32.8	7.9	0.50	1.08	11	111.68	111.13
135	132	120	55.0	1.57	1	5	36.3	3.3	0.50	0.80	13	111.13	110.95
136	140	141	160.0	0.47	1	5	10.8	5.1	0.30	0.69	8	115.37	114.55
137	141	116	175.0	1.27	1	5	29.3	3.0	0.35	0.76	15	114.55	114.03
138	61	59	240.0	21.61	1	5	909.8	2.5	1.20	1.70	58	113.10	112.50
141	354	349	120.0	0.70	1	5	16.2	3.0	0.30	0.64	11	109.59	109.23
143	350	349	78.0	3.84	1	5	88.7	2.1	0.40	0.70	cis	109.38	109.22
144	349	142	280.0	6.34	1	5	146.5	1.5	0.60	0.89	35	109.22	108.80
147	143	WI	50.0	74.92	1	5	2286.0	3.0	1.20	1.91	62	108.38	108.23
								3.0	1.20	1.91	62		
202	352	350	180.0	2.79	1	5	64.4	2.5	0.40	0.87	23	109.83	109.38
203	357	352	102.0	0.38	1	5	8.7	2.9	0.30	0.52	8	110.13	109.83
204	351	352	88.0	1.06	1	5	24.5	3.0	0.30	0.72	14	110.09	109.83
205	358	351	80.0	0.40	1	5	9.3	3.0	0.30	0.56	8	110.33	110.09
223	200	75	110.0	0.50	1	5	11.6	5.7	0.60	0.65	6	115.56	114.93

TABELA WYNIKOW DLA WEZLOW - SPRAWDZENIE c= 2

Wezel	Rzedne		doplyw	zagl	czas dopl
	terenu	zwierc			
-	mnpm	mnpm	dm3/s	m	min
1	117.80	113.96	0.0	4.74	-
2	116.13	114.19	0.0	2.92	-
3	117.00	114.29	0.0	3.64	-
4	116.12	114.41	0.0	2.60	-
5	116.40	114.55	0.0	2.57	-
6	119.27	115.63	0.0	3.97	-
7	119.78	116.12	0.0	3.88	-
8	120.45	117.45	0.0	3.31	-
9	120.72	118.36	0.0	2.71	-
10	122.10	119.63	0.0	2.58	-
11	121.52	119.46	0.0	2.15	-
12	121.39	120.06	0.0	1.39	-
13	123.35	121.56	0.0	1.85	-
14	122.83	121.08	0.0	1.78	-
15	121.10	119.51	0.0	1.85	-
16	121.51	119.61	0.0	1.95	-
17	122.90	121.35	0.0	1.60	-
18	122.66	120.69	0.0	2.13	-
19	124.03	122.45	0.0	1.64	-
20	123.80	122.60	0.0	1.24	-
21	125.00	123.46	0.0	1.60	-
22	123.90	121.46	0.0	2.65	-
23	125.00	123.49	0.0	1.60	-
24	125.10	123.55	0.0	1.60	-
25	125.00	123.46	0.0	1.60	-
26	124.80	123.12	0.0	1.76	-
27	126.10	124.55	0.0	1.60	-
28	126.70	125.16	0.0	1.60	-
29	126.60	125.04	0.0	1.60	-
30	124.80	122.73	0.0	2.20	-
31	126.90	125.43	0.0	1.60	-
36	125.10	123.56	0.0	1.60	-
37	124.30	122.75	0.0	1.60	-
38	122.30	120.78	0.0	1.60	-
39	120.50	119.15	0.0	2.01	-
41	123.80	122.25	0.0	1.60	-
42	122.20	120.66	0.0	1.60	-
43	121.50	120.08	0.0	1.50	-
44	121.20	119.03	0.0	2.20	-
45	117.50	115.98	0.0	1.60	-
46	120.90	119.15	0.0	1.90	-
47	116.00	114.55	0.0	1.60	-
48	117.30	114.88	0.0	2.61	-
51	115.80	114.29	0.0	1.79	-
52	115.68	114.22	0.0	2.29	-
53	116.27	114.19	0.0	2.99	-
54	117.01	114.69	0.0	2.46	-
59	115.10	113.08	0.0	2.60	-
59A	113.88	112.31	0.0	2.30	-
60	113.20	112.02	0.0	1.98	-
62	112.48	111.25	0.0	1.91	-
61	114.10	113.68	0.0	1.00	-
63	111.75	110.55	0.0	2.25	-
63A	112.24	110.90	143.0	1.64	-
64	110.70	110.23	0.0	1.70	-
65	111.00	109.94	0.0	2.04	-
67	120.15	118.38	0.0	1.85	-
68	118.28	116.55	0.0	1.83	-
69	118.00	116.15	0.0	2.05	-
70	118.75	115.84	0.0	3.05	-
71	118.49	115.60	0.0	3.10	-
72	117.08	115.43	0.0	1.85	-
73	116.30	114.37	0.0	2.23	-
74	116.02	114.89	0.0	1.27	-

Wezel	Rzedne		doplyw	zagl	czas dopl
	terenu	zwierc			
-	mnpm	mnpm	dm3/s	m	min
75	116.62	115.07	0.0	1.69	-
76	117.59	116.05	0.0	1.60	-
77	117.89	115.95	0.0	2.00	-
78	117.00	114.83	0.0	2.27	-
79	116.68	114.37	0.0	2.42	-
80	115.26	113.65	0.0	1.80	-
81	114.88	113.37	0.0	2.00	-
82	115.14	113.31	0.0	2.50	-
83	119.18	116.74	0.0	2.55	-
84	119.29	118.25	0.0	1.15	-
85	120.16	118.82	0.0	1.45	-
86	119.15	116.69	0.0	2.60	-
87	118.02	115.94	0.0	2.21	-
88	116.31	114.30	0.0	2.19	-
89	115.26	113.48	0.0	2.25	-
90	120.46	118.52	0.0	2.07	-
91	118.04	115.81	0.0	2.34	-
92	120.60	117.94	0.0	2.80	-
93	118.60	116.95	0.0	1.77	-
94	118.03	116.57	0.0	1.65	-
95	117.82	116.34	0.0	1.68	-
96	117.78	116.17	0.0	1.80	-
97	120.33	118.44	0.0	1.95	-
98	118.54	117.06	0.0	1.55	-
99	115.56	113.83	0.0	1.79	-
100	114.21	112.64	0.0	1.65	-
101	113.45	112.04	0.0	1.57	-
102	115.57	113.58	0.0	2.10	-
103	117.17	116.01	0.0	1.22	-
104	115.82	113.29	0.0	2.65	-
105	115.65	113.22	0.0	2.57	-
106	115.38	114.06	0.0	1.35	-
107	114.91	113.34	0.0	1.68	-
108	113.94	112.54	0.0	1.65	-
109	114.03	112.55	0.0	1.67	-
110	113.81	112.46	0.0	1.60	-
111	113.99	112.63	0.0	1.53	-
112	118.90	117.18	0.0	1.82	-
113	120.96	118.43	0.0	2.57	-
114	120.66	117.88	0.0	2.86	-
115	116.52	115.00	0.0	1.61	-
116	115.39	112.56	0.0	3.02	-
117	115.27	112.45	0.0	3.03	-
118	114.50	111.56	0.0	3.30	-
119	113.52	110.97	0.0	2.92	-
120	113.01	110.76	0.0	2.60	-
121	111.96	110.12	0.0	2.35	-
122	116.52	114.15	0.0	2.45	-
123	115.99	113.07	0.0	3.00	-
124	**114.46**	**114.61**	0.0	2.16	-
125	**114.18**	**114.57**	0.0	2.48	-
126	114.18	113.69	0.0	2.71	-
127	114.62	113.74	0.0	1.95	-
128	115.36	114.63	0.0	2.32	-
129	114.12	113.04	0.0	1.17	-
130	112.90	112.14	0.0	0.85	-
131	112.84	111.79	0.0	1.16	-
132	116.85	111.26	0.0	5.72	-
133	117.00	115.23	0.0	1.88	-
134	116.35	114.09	0.0	2.37	-
135	118.12	116.12	0.0	2.05	-
136	115.95	114.31	0.0	1.70	-
137	115.41	113.80	0.0	1.73	-
138	112.47	111.60	0.0	0.98	-
139	116.00	114.05	410.0	2.40	-

Wezel	Rzedne		doplyw	zagl	czas dopl
	terenu	zwierc			
-	mnpm	mnpm	dm3/s	m	min
140	116.37	115.45	0.0	1.00	-
141	116.06	114.70	0.0	1.51	-
349	110.55	109.80	0.0	1.33	-
354	111.00	109.84	0.0	1.41	-
350	110.88	109.94	0.0	1.50	-
351	112.16	110.23	0.0	2.07	-
WI	110.50	108.85	0.0	2.27	57.2
142	110.25	109.64	0.0	1.45	-
143	109.90	109.00	0.0	1.52	-
199	116.96	115.73	0.0	1.31	-
200	116.76	115.62	0.0	1.20	-
352	112.23	110.11	0.0	2.40	-
357	111.80	110.21	0.0	1.67	-
358	112.00	110.41	0.0	1.67	-