Załącznik nr 1

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 = 5

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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

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WYNIKI OBLICZEN DLA KANALOW - SPRAWDZENIE SIECI DLA c= 5 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	461.3	1.3	1.10	1.11	50	113.06	112.74
2	2	1	270.0	13.60	1	5	418.3	0.6	1.10	0.79	60	113.21	113.06
3	3	2	150.0	10.24	1	5	314.9	1.0	0.70	0.82	cis	113.36	113.21
4	4	3	210.0	9.87	1	5	303.5	0.8	0.70	0.79	cis	113.52	113.36
5	5	4	100.0	9.75	1	5	299.9	3.1	0.60	1.06	cis	113.83	113.52
6	6	5	335.0	8.36	1	5	257.1	4.4	0.50	1.31	cis	115.30	113.83
7	7	6	40.0	7.66	1	5	235.6	15.0	0.50	1.20	cis	115.90	115.30
8	8	7	290.0	7.53	1	5	231.6	4.3	0.50	1.42	39	117.14	115.90
9	9	8	215.0	6.02	1	5	185.1	4.0	0.40	1.47	cis	118.01	117.14
10	10	9	180.0	1.19	1	5	36.6	8.4	0.30	1.19	14	119.52	118.01
11	20	10	120.0	0.35	1	5	10.8	25.3	0.30	1.32	6	122.56	119.52
12	11	8	70.0	1.03	1	5	31.7	11.0	0.30	1.23	11	119.37	118.60
13	12	11	90.0	0.20	1	5	6.2	3.0	0.25	0.52	8	120.00	119.73
14	14	12	80.0	0.10	1	5	3.1	17.4	0.20	0.83	4	121.05	119.66
15	26	11	170.0	0.77	1	5	23.7	18.5	0.30	1.46	9	123.04	119.90
16	27	26	50.0	0.31	1	5	9.5	26.0	0.25	1.18	5	124.50	123.20
17	25	26	120.0	0.23	1	5	7.1	3.0	0.25	0.52	8	123.40	123.04
18	28	27	120.0	0.23	1	5	7.1	5.0	0.25	0.60	6	125.10	124.50
19	15	9	80.0	4.49	1	5	138.1	4.4	0.40	1.10	cis	119.25	118.90
20	16	15	85.0	0.18	1	5	5.5	9.2	0.25	0.70	5	119.56	118.78
21	17	15	150.0	0.30	1	5	9.2	12.0	0.25	0.93	6	121.30	119.50
22	18	15	100.0	3.91	1	5	120.3	17.5	0.40	2.11	19	120.53	118.78
23	13	18	100.0	0.28	1	5	8.6	5.0	0.25	0.67	8	121.50	121.00
24	19	18	125.0	0.33	1	5	10.1	12.5	0.25	0.95	6	122.39	120.83
25	22	18	100.0	3.17	1	5	97.5	7.6	0.30	1.38	cis	121.25	120.49
26	24	22	100.0	0.25	1	5	7.7	12.0	0.25	0.93	6	123.50	122.30
27	23	22	170.0	0.52	1	5	16.0	6.5	0.25	0.89	11	123.40	122.30
28	21	10	190.0	0.53	1	5	16.3	15.3	0.25	1.17	8	123.40	120.50
29	44	7	60.0	0.08	1	5	2.5	16.7	0.30	0.63	3	119.00	118.00
30	43	46	130.0	0.66	1	5	20.3	13.6	0.30	1.25	9	120.00	118.23
31	42	43	150.0	0.23	1	5	7.1	4.7	0.25	0.61	7	120.60	119.90
32	41	43	170.0	0.23	1	5	7.1	13.5	0.25	0.85	5	122.20	119.90
33	47	5	50.0	0.25	1	5	7.7	6.0	0.30	0.11	cis	114.40	114.10
34	46	48	340.0	1.89	1	5	58.1	13.5	0.25	1.57	18	119.00	114.40
36	48	51	230.0	2.09	1	5	64.3	3.0	0.40	0.93	22	114.69	114.01
37	52	53	90.0	2.89	1	5	88.9	1.1	0.50	0.45	cis	113.39	113.29
38	51	52	260.0	2.64	1	5	81.2	2.4	0.50	0.90	23	114.01	113.39
45	30	22	100.0	2.20	1	5	67.7	13.5	0.40	1.62	14	122.60	121.25
46	31	30	160.0	1.75	1	5	53.8	13.1	0.30	1.53	14	125.30	123.20
47	29	30	110.0	0.15	1	5	4.6	16.4	0.25	0.76	4	125.00	123.20
48	39	46	90.0	0.68	1	5	20.9	2.9	0.40	0.17	cis	118.49	118.23
49	38	39	80.0	0.68	1	5	20.9	22.5	0.25	1.42	8	120.70	118.90
50	36	38	220.0	0.33	1	5	10.1	12.7	0.25	0.96	6	123.50	120.70
51	37	38	200.0	0.25	1	5	7.7	10.0	0.25	0.85	6	122.70	120.70
52	45	6	200.0	0.25	1	5	7.7	3.0	0.25	0.16	cis	115.90	115.30
53	53	2	75.0	3.04	1	5	93.5	0.9	0.70	0.24	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	43.1	4.1	0.40	0.94	16	114.55	113.45
54A	199	54	210.0	0.70	1	5	21.5	5.2	0.40	0.87	11	115.65	114.55
55	139	61	230.0	5.57	1	5	581.3	2.2	1.20	1.42	46	113.60	113.10
56	59	59A	220.0	34.80	1	5	1480.2	4.2	1.20	2.32	67	112.50	111.58
57	59A	60	170.0	35.10	1	5	1489.4	2.1	1.20	1.77	84	111.58	111.22
58	60	62	295.0	44.19	1	5	1769.0	2.2	1.20	1.84	95	111.22	110.57
59	62	63	290.0	45.96	1	5	1823.6	3.7	1.20	2.31	79	110.57	109.50
59A	63A	63	260.0	2.08	1	5	207.0	4.2	0.60	1.43	31	110.60	109.50
60	63	64	175.0	48.74	1	5	2052.1	2.9	1.20	1.81	cis	109.50	109.00
61	64	65	145.0	51.02	1	5	2122.2	0.3	1.20	0.94	cis	109.00	108.96
								0.3	1.20	0.94	cis		
62	65	142	210.0	67.67	1	5	2634.1	0.8	1.20	1.16	cis	108.96	108.80
								0.8	1.20	1.16	cis		
63	142	143	200.0	74.92	1	5	2857.2	1.2	1.20	1.34	106	108.80	108.56
								1.2	1.20	1.34	106		
64	67	68	220.0	0.45	1	5	13.8	8.4	0.25	0.95	9	118.30	116.45
65	68	69	145.0	0.60	1	5	18.5	3.4	0.40	0.70	11	116.45	115.95
66	69	70	140.0	1.80	1	5	55.4	1.8	0.40	0.74	23	115.95	115.70
67	84	69	175.0	0.85	1	5	26.1	12.5	0.20	1.27	13	118.14	115.95
68	83	70	150.0	0.70	1	5	21.5	4.2	0.30	0.81	13	116.63	116.00
69	70	71	60.0	2.65	1	5	81.5	5.2	0.60	1.19	18	115.70	115.39
70	71	72	90.0	2.95	1	5	90.7	1.8	0.60	0.83	25	115.39	115.23
71	72	73	65.0	3.35	1	5	103.0	3.5	0.50	1.12	24	115.23	115.00
72	73	139	190.0	5.35	1	5	164.5	1.0	0.80	0.78	35	114.07	113.88
73	75	74	130.0	1.20	1	5	36.9	1.4	0.60	0.59	16	114.93	114.75
74	74	73	200.0	2.00	1	5	61.5	3.8	0.60	0.96	16	114.75	114.00
75	133	80	235.0	1.20	1	5	36.9	7.1	0.40	1.12	13	115.12	113.46
76	80	81	130.0	2.55	1	5	78.5	4.5	0.40	1.14	22	113.46	112.88
77	81	82	130.0	3.55	1	5	109.2	1.8	0.50	0.55	cis	112.88	112.64
78	82	59	20.0	12.43	1	5	382.4	7.0	0.80	1.98	32	112.64	112.50
79	76	77	50.0	0.15	1	5	4.6	2.0	0.20	0.40	7	115.99	115.89
80	77	78	110.0	0.45	1	5	13.8	10.5	0.30	0.98	8	115.89	114.73
81	78	79	100.0	0.85	1	5	26.1	4.7	0.40	0.87	12	114.73	114.26
82	79	80	100.0	1.15	1	5	35.4	8.0	0.30	1.12	13	114.26	113.46
83	134	81	150.0	0.90	1	5	27.7	7.3	0.30	1.08	13	113.98	112.88
84	135	136	170.0	0.20	1	5	6.3	10.7	0.20	0.85	6	116.07	114.25
85	136	59	95.0	0.50	1	5	15.5	18.4	0.25	1.29	8	114.25	112.50
86	137	60	260.0	1.10	1	5	33.8	6.5	0.30	1.07	14	113.68	112.00
87	138	62	275.0	0.90	1	5	27.7	3.3	0.40	0.77	13	111.49	110.57
88	85	86	245.0	1.05	1	5	32.3	8.8	0.30	1.18	13	118.71	116.55
89	86	87	135.0	1.65	1	5	50.7	5.5	0.40	1.11	16	116.55	115.81
90	90	87	240.0	1.10	1	5	33.8	10.7	0.20	1.22	16	118.39	115.81
91	87	88	135.0	2.88	1	5	88.4	12.5	0.50	1.73	16	115.81	114.12
92	88	89	135.0	4.27	1	5	131.2	8.2	0.60	1.58	19	114.12	113.01
93	91	88	245.0	0.90	1	5	27.6	6.4	0.30	1.01	13	115.70	114.12
94	92	93	205.0	1.20	1	5	36.9	4.7	0.30	0.96	16	117.80	116.83
95	93	94	40.0	1.80	1	5	55.4	11.2	0.40	1.48	14	116.83	116.38
96	94	95	85.0	2.20	1	5	67.7	2.8	0.40	0.93	23	116.38	116.14
97	95	96	50.0	3.00	1	5	92.3	3.2	0.50	1.05	23	116.14	115.98
98	96	89	275.0	4.22	1	5	129.7	7.2	0.50	1.53	22	115.98	113.99
99	97	98	110.0	0.50	1	5	15.4	12.6	0.30	1.08	8	118.38	116.99
100	98	95	45.0	0.60	1	5	18.5	7.8	0.40	0.92	8	116.99	116.64
101	89	82	180.0	8.88	1	5	273.2	2.1	0.80	1.16	38	113.01	112.64
102	99	100	145.0	0.30	1	5	9.3	8.3	0.30	0.76	6	113.77	112.56
103	100	101	100.0	0.75	1	5	23.2	6.8	0.40	0.93	10	112.56	111.88
104	106	107	75.0	0.10	1	5	3.1	10.7	0.40	0.55	3	114.03	113.23
105	107	108	200.0	1.40	1	5	43.1	4.7	0.60	0.94	13	113.23	112.29
106	112	107	355.0	1.30	1	5	40.0	10.8	0.40	1.32	12	117.08	113.23
107	108	110	40.0	4.05	1	5	124.6	2.0	0.60	0.94	28	112.29	112.21
108	111	110	180.0	0.45	1	5	13.8	1.4	0.20	0.44	cis	112.46	112.21
109	113	114	80.0	0.16	1	5	4.8	7.4	0.40	0.61	5	118.39	117.80
110	114	115	230.0	1.11	1	5	34.0	12.6	0.50	1.25	9	117.80	114.91
111	115	116	90.0	1.31	1	5	40.2	10.1	0.50	1.22	11	114.91	114.00
112	123	116	140.0	0.63	1	5	19.3	4.4	0.40	0.77	10	112.99	112.37
113	122	123	190.0	0.47	1	5	14.4	5.7	0.30	0.81	9	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	98.5	3.3	0.60	1.04	21	112.37	112.24
115	117	118	240.0	4.88	1	5	150.1	4.3	0.60	1.32	25	112.24	111.20
116	118	119	225.0	12.34	1	5	379.4	2.7	0.80	1.39	43	111.20	110.60
117	119	120	70.0	12.58	1	5	386.8	2.7	0.80	1.41	43	110.60	110.41
118	120	121	200.0	14.31	1	5	440.0	4.0	0.80	1.68	41	110.41	109.61
119	121	65	215.0	16.65	1	5	511.9	3.0	0.80	1.02	cis	109.61	108.96
120	103	104	200.0	0.50	1	5	15.4	13.9	0.30	1.13	8	115.95	113.17
121	104	105	45.0	0.75	1	5	23.1	2.0	0.40	0.61	14	113.17	113.08
122	102	105	160.0	0.60	1	5	18.5	2.4	0.30	0.62	13	113.47	113.08
123	105	109	150.0	2.15	1	5	66.1	4.8	0.60	1.09	16	113.08	112.36
124	109	108	35.0	2.65	1	5	81.5	2.0	0.60	0.85	23	112.36	112.29
125	101	60	40.0	5.81	1	5	178.6	16.5	0.60	2.24	19	111.88	111.22
126	110	101	120.0	5.00	1	5	153.9	2.7	0.60	1.13	30	112.21	111.88
127	124	125	130.0	1.90	1	5	58.4	4.6	0.40	0.46	cis	112.30	111.70
128	128	125	220.0	0.80	1	5	24.6	6.1	0.30	0.35	cis	113.04	111.70
129	125	126	120.0	3.90	1	5	119.8	1.9	0.30	1.69	cis	111.70	111.47
130	127	126	150.0	0.90	1	5	27.7	8.0	0.30	0.39	cis	112.67	111.47
131	126	118	105.0	6.50	1	5	199.8	2.6	0.30	2.83	cis	111.47	111.20
132	129	130	275.0	0.47	1	5	14.4	3.3	0.30	0.67	11	112.95	112.05
133	130	131	115.0	0.62	1	5	19.0	3.2	0.50	0.69	11	112.05	111.68
134	131	132	70.0	1.42	1	5	43.6	7.9	0.50	1.16	12	111.68	111.13
135	132	120	55.0	1.57	1	5	48.2	3.3	0.50	0.88	16	111.13	110.95
136	140	141	160.0	0.47	1	5	14.4	5.1	0.30	0.77	9	115.37	114.55
137	141	116	175.0	1.27	1	5	39.0	3.0	0.35	0.81	17	114.55	114.03
138	61	59	240.0	21.61	1	5	1074.6	2.5	1.20	1.76	63	113.10	112.50
141	354	349	120.0	0.70	1	5	21.5	3.0	0.30	0.30	cis	109.59	109.23
143	350	349	78.0	3.84	1	5	117.9	2.1	0.40	0.94	cis	109.38	109.22
144	349	142	280.0	6.34	1	5	194.8	1.5	0.60	0.69	cis	109.22	108.80
147	143	WI	50.0	74.92	1	5	2857.2	3.0	1.20	2.02	72	108.38	108.23
								3.0	1.20	2.02	72		
202	352	350	180.0	2.79	1	5	85.7	2.5	0.40	0.68	cis	109.83	109.38
203	357	352	102.0	0.38	1	5	11.5	2.9	0.30	0.16	cis	110.13	109.83
204	351	352	88.0	1.06	1	5	32.6	3.0	0.30	0.46	cis	110.09	109.83
205	358	351	80.0	0.40	1	5	12.3	3.0	0.30	0.17	cis	110.33	110.09
223	200	75	110.0	0.50	1	5	15.4	5.7	0.60	0.76	8	115.56	114.93

TABELA WYNIKOW DLA WEZLOW - SPRAWDZENIE c= 5

Wezel	Rzedne		doplyw	zagl	czas dopl
	terenu	zwierc			
-	mnpm	mnpm	dm3/s	m	min
1	117.80	113.90	0.0	4.74	-
2	116.13	114.21	0.0	2.92	-
3	117.00	114.38	0.0	3.64	-
4	116.12	114.61	0.0	2.60	-
5	116.40	114.84	0.0	2.57	-
6	119.27	116.38	0.0	3.97	-
7	119.78	116.54	0.0	3.88	-
8	120.45	117.62	0.0	3.31	-
9	120.72	119.30	0.0	2.71	-
10	122.10	119.66	0.0	2.58	-
11	121.52	119.48	0.0	2.15	-
12	121.39	120.08	0.0	1.39	-
13	123.35	121.58	0.0	1.85	-
14	122.83	121.09	0.0	1.78	-
15	121.10	119.65	0.0	1.85	-
16	121.51	119.66	0.0	1.95	-
17	122.90	121.36	0.0	1.60	-
18	122.66	120.72	0.0	2.13	-
19	124.03	122.45	0.0	1.64	-
20	123.80	122.62	0.0	1.24	-
21	125.00	123.48	0.0	1.60	-
22	123.90	121.80	0.0	2.65	-
23	125.00	123.51	0.0	1.60	-
24	125.10	123.56	0.0	1.60	-
25	125.00	123.48	0.0	1.60	-
26	124.80	123.13	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	122.74	0.0	2.20	-
31	126.90	125.44	0.0	1.60	-
36	125.10	123.56	0.0	1.60	-
37	124.30	122.76	0.0	1.60	-
38	122.30	120.78	0.0	1.60	-
39	120.50	119.18	0.0	2.01	-
41	123.80	122.25	0.0	1.60	-
42	122.20	120.67	0.0	1.60	-
43	121.50	120.09	0.0	1.50	-
44	121.20	119.03	0.0	2.20	-
45	117.50	116.42	0.0	1.60	-
46	120.90	119.18	0.0	1.90	-
47	116.00	114.85	0.0	1.60	-
48	117.30	114.91	0.0	2.61	-
51	115.80	114.39	0.0	1.79	-
52	115.68	114.27	0.0	2.29	-
53	116.27	114.22	0.0	2.99	-
54	117.01	114.71	0.0	2.46	-
59	115.10	113.17	0.0	2.60	-
59A	113.88	112.67	0.0	2.30	-
60	113.20	112.17	0.0	1.98	-
62	112.48	111.46	0.0	1.91	-
61	114.10	113.73	0.0	1.00	-
63	111.75	110.83	0.0	2.25	-
63A	112.24	111.12	143.0	1.64	-
64	110.70	110.35	0.0	1.70	-
65	111.00	110.24	0.0	2.04	-
67	120.15	118.39	0.0	1.85	-
68	118.28	116.56	0.0	1.83	-
69	118.00	116.18	0.0	2.05	-
70	118.75	115.88	0.0	3.05	-
71	118.49	115.64	0.0	3.10	-
72	117.08	115.47	0.0	1.85	-
73	116.30	114.42	0.0	2.23	-
74	116.02	114.91	0.0	1.27	-

Wezel	Rzedne		doplyw	zagl	czas dopl
	terenu	zwierc			
-	mnpm	mnpm	dm3/s	m	min
75	116.62	115.09	0.0	1.69	-
76	117.59	116.06	0.0	1.60	-
77	117.89	115.97	0.0	2.00	-
78	117.00	114.85	0.0	2.27	-
79	116.68	114.39	0.0	2.42	-
80	115.26	113.68	0.0	1.80	-
81	114.88	113.42	0.0	2.00	-
82	115.14	113.32	0.0	2.50	-
83	119.18	116.76	0.0	2.55	-
84	119.29	118.27	0.0	1.15	-
85	120.16	118.84	0.0	1.45	-
86	119.15	116.71	0.0	2.60	-
87	118.02	115.97	0.0	2.21	-
88	116.31	114.31	0.0	2.19	-
89	115.26	113.52	0.0	2.25	-
90	120.46	118.55	0.0	2.07	-
91	118.04	115.83	0.0	2.34	-
92	120.60	117.96	0.0	2.80	-
93	118.60	116.97	0.0	1.77	-
94	118.03	116.61	0.0	1.65	-
95	117.82	116.37	0.0	1.68	-
96	117.78	116.20	0.0	1.80	-
97	120.33	118.46	0.0	1.95	-
98	118.54	117.07	0.0	1.55	-
99	115.56	113.83	0.0	1.79	-
100	114.21	112.66	0.0	1.65	-
101	113.45	112.21	0.0	1.57	-
102	115.57	113.60	0.0	2.10	-
103	117.17	116.03	0.0	1.22	-
104	115.82	113.31	0.0	2.65	-
105	115.65	113.24	0.0	2.57	-
106	115.38	114.06	0.0	1.35	-
107	114.91	113.36	0.0	1.68	-
108	113.94	112.57	0.0	1.65	-
109	114.03	112.59	0.0	1.67	-
110	113.81	112.51	0.0	1.60	-
111	113.99	112.82	0.0	1.53	-
112	118.90	117.20	0.0	1.82	-
113	120.96	118.44	0.0	2.57	-
114	120.66	117.89	0.0	2.86	-
115	116.52	115.02	0.0	1.61	-
116	115.39	112.58	0.0	3.02	-
117	115.27	112.49	0.0	3.03	-
118	114.50	111.63	0.0	3.30	-
119	113.52	111.03	0.0	2.92	-
120	113.01	110.82	0.0	2.60	-
121	111.96	110.56	0.0	2.35	-
122	116.52	114.16	0.0	2.45	-
123	115.99	113.09	0.0	3.00	-
124	**114.46**	**117.99**	0.0	2.16	-
125	**114.18**	**117.89**	0.0	2.48	-
126	**114.18**	**116.07**	0.0	2.71	-
127	**114.62**	**116.19**	0.0	1.95	-
128	**115.36**	**118.03**	0.0	2.32	-
129	114.12	113.06	0.0	1.17	-
130	112.90	112.16	0.0	0.85	-
131	112.84	111.80	0.0	1.16	-
132	116.85	111.29	0.0	5.72	-
133	117.00	115.25	0.0	1.88	-
134	116.35	114.11	0.0	2.37	-
135	118.12	116.13	0.0	2.05	-
136	115.95	114.33	0.0	1.70	-
137	115.41	113.82	0.0	1.73	-
138	112.47	111.62	0.0	0.98	-
139	116.00	114.06	410.0	2.40	-

Wezel	Rzedne		doplyw	zagl	czas dopl
	terenu	zwierc			
-	mnpm	mnpm	dm3/s	m	min
140	116.37	115.46	0.0	1.00	-
141	116.06	114.72	0.0	1.51	-
349	110.55	110.14	0.0	1.33	-
354	111.00	110.20	0.0	1.41	-
350	110.88	110.39	0.0	1.50	-
351	112.16	110.79	0.0	2.07	-
WI	110.50	108.95	0.0	2.27	53.2
142	110.25	109.86	0.0	1.45	-
143	109.90	109.10	0.0	1.52	-
199	116.96	115.76	0.0	1.31	-
200	116.76	115.64	0.0	1.20	-
352	112.23	110.69	0.0	2.40	-
357	111.80	110.71	0.0	1.67	-
358	112.00	110.80	0.0	1.67	-