

APPENDIX A STABILITY CURVES FOR CLAY

Minimum pipe weight required to limit maximum relative displacement Y to $10 \cdot \tau / 1000$ on clay, can be calculated by Equation (3.37) with the coefficients listed below. The value of K should not be taken less than 5. Linear interpolation can be applied in the region $0.003 < N < 0.006$.

Table A-1 Parameters for calculating minimum weight, $L_{10}/(2 + M)^2$, for pipe on clay, $G_c = 0.0556$

$G_c = 0.0556$								
M	$N \leq 0.003$				$0.006 \leq N \leq 0.024$			
	C_1	C_2	C_3	K_b	C_1	C_2	C_3	K_b
≤ 0.2	0	9	0.6	10	0.2	5	0.5	15
0.4	0	8	0.6	10	0.2	5	0.5	15
0.5	0.1	7	0.6	10	0.4	4	0.5	15
0.6	0.1	7	0.6	10	0.4	4	0.5	15
0.8	0.1	7	0.6	10	0.7	3	0.5	15
1.0	0.4	5	0.6	5	0.7	3	0.5	15
1.5	0.4	5	0.6	5	1.1	2	0.5	15
2.0	0.7	3	0.6	5	1.6	0	0.5	15
≥ 4.0	1.4	1	0.6	5	1.9	0	0.5	15

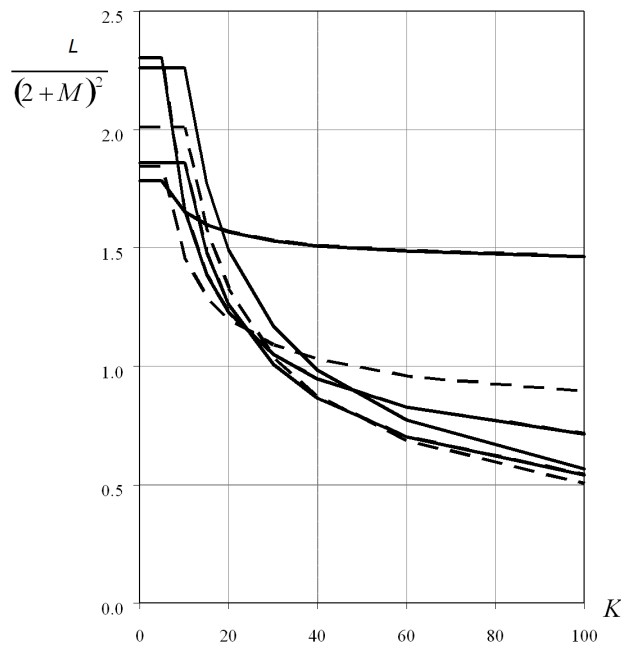


Figure A-1 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1\ 000$, $N \leq 0.003$, $G_c = 0.0556$

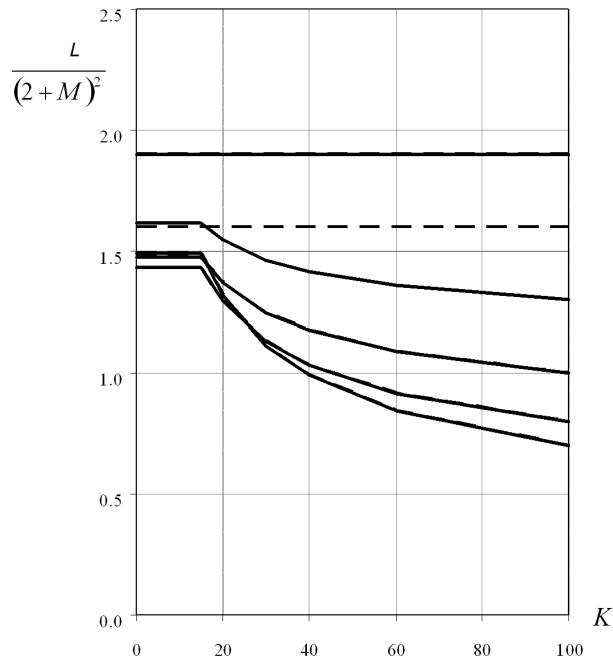


Figure A-2 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1\,000$, $0.006 \leq N \leq 0.024$, $G_c = 0.0556$

Table A-2 Parameters for calculating minimum weight, $L_{10}/(2+M)^2$, for pipe on clay, $G_c = 0.111$

$G_c = 0.111$								
M	$N \leq 0.003$				$0.006 \leq N \leq 0.024$			
	C_1	C_2	C_3	K_b	C_1	C_2	C_3	K_b
≤ 0.2	0.1	9	0.6	10	0.1	7	0.6	10
0.4	0.1	8	0.6	10	0.1	7	0.6	10
0.5	0.1	8	0.6	10	0.1	7	0.6	10
0.6	0.2	8	0.6	10	0.2	6	0.6	10
0.8	0.4	7	0.6	5	0.3	6	0.6	10
1.0	0.4	7	0.6	5	0.4	6	0.6	10
1.5	0.4	5	0.6	5	0.8	4	0.6	10
2.0	0.7	3	0.6	5	1.5	0	0.6	10
≥ 4.0	1.4	1	0.6	5	1.5	0	0.6	10

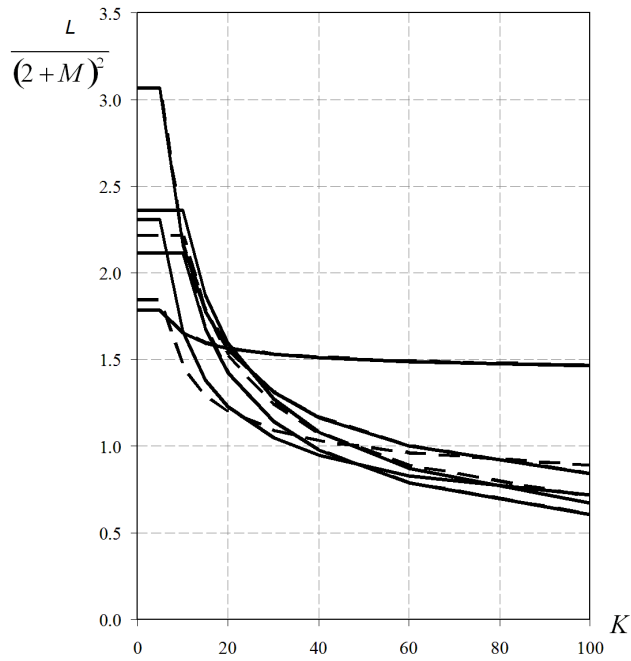


Figure A-3 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1\,000$, $N \leq 0.003$, $G_c = 0.111$

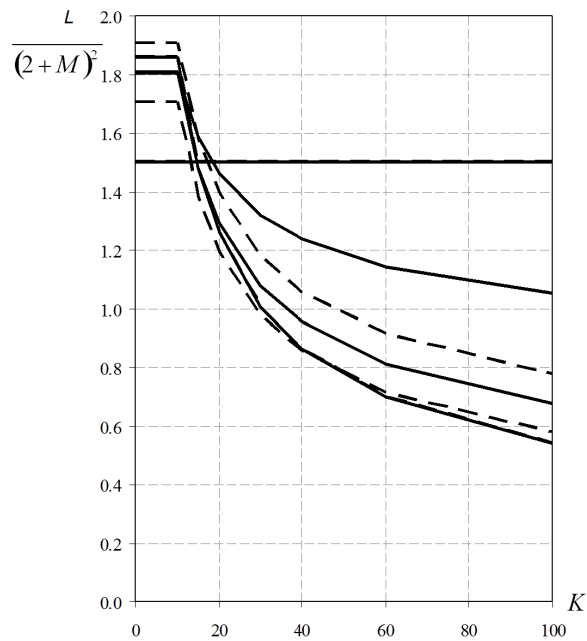


Figure A-4 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1000$, $0.006 \leq N \leq 0.024$, $G_c = 0.111$

Table A-3 Parameters for calculating minimum weight, $L_{10}/(2 + M)^2$, for pipe on clay, $G_c = 0.222$

$G_c = 0.222$								
M	$N \leq 0.003$				$0.006 \leq N \leq 0.024$			
	C_1	C_2	C_3	K_b	C_1	C_2	C_3	K_b
≤ 0.2	0.1	8	0.5	15	0.1	8	0.5	10
0.4	0.1	7	0.5	10	-0.3	8	0.5	10
0.5	0.1	7	0.5	10	-0.1	7	0.5	10
0.6	0.1	7	0.5	10	0.0	7	0.5	10
0.8	0.1	7	0.5	5	0.1	6	0.5	5
1.0	0.1	7	0.5	5	0.1	6	0.5	5
1.5	0.1	7	0.5	5	0.5	3	0.5	5
2.0	0.1	7	0.5	5	0.9	2	0.5	5
4.0	0.1	7	0.5	5	1.7	0	0.5	5
≥ 10	0.1	7	0.5	5	1.7	0	0.5	5

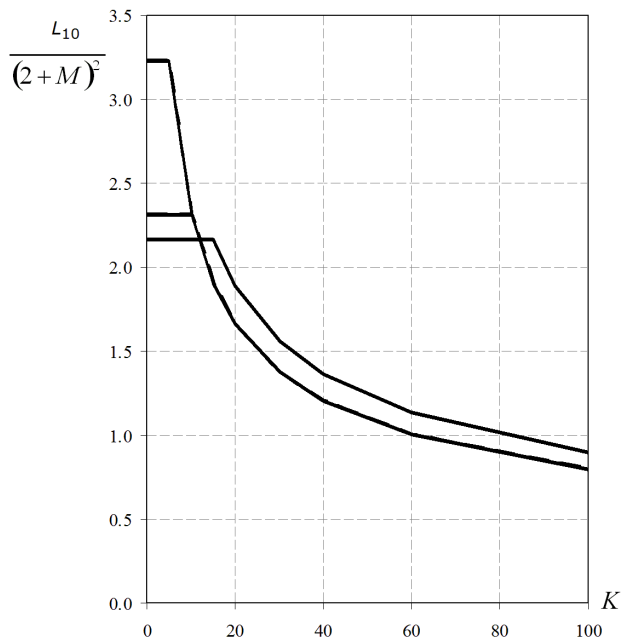


Figure A-5 Minimum weight for a pipe on clay, $Y = 10\tau/1000$, $N \leq 0.003$, $G_c = 0.222$

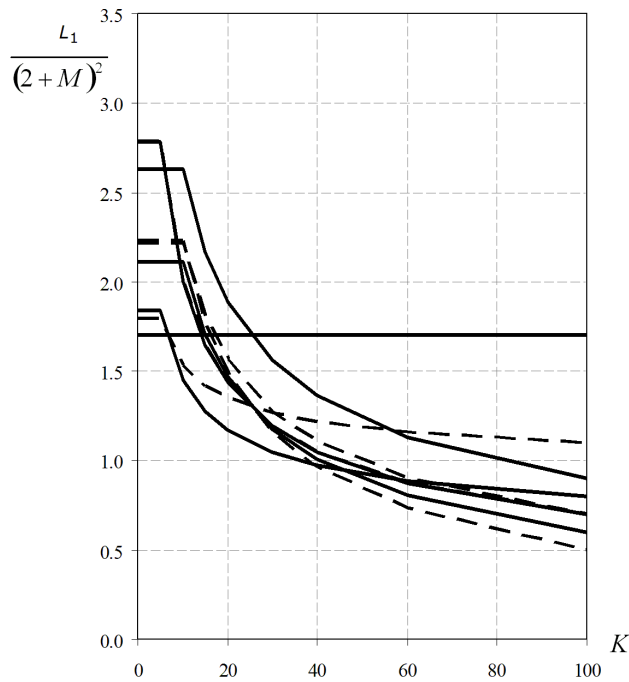


Figure A-6 Minimum weight for a pipe on clay, $Y= 10 \cdot \tau / 1\ 000$, $0.006 \leq N \leq 0.024$, $G_c = 0.222$

Table A-4 Parameters for calculating minimum weight, $L_{10}/(2 + M)^2$, for pipe on clay, $G_c = 0.556$

$G_c = 0.556$								
M	$N \leq 0.003$				$0.006 \leq N \leq 0.024$			
	C_1	C_2	C_3	K_b	C_1	C_2	C_3	K_b
≤ 0.2	1.4	3	0.5	15	0.0	8	0.5	10
0.4	0.5	6	0.5	5	0.3	6	0.5	5
0.5	0.5	6	0.5	5	0.3	6	0.5	5
0.6	0.5	6	0.5	5	0.3	6	0.5	5
0.8	1.1	4	0.5	5	0.4	7	0.5	5
1.0	1.3	4	0.5	10	0.4	7	0.5	5
1.5	1.2	7	0.5	10	0.8	6	0.5	10
2.0	1.2	7	0.5	10	0.8	6	0.5	10
4.0	1.2	7	0.5	10	0.8	6	0.5	10
≥ 10	1.4	6	0.5	10	0.8	6	0.5	10

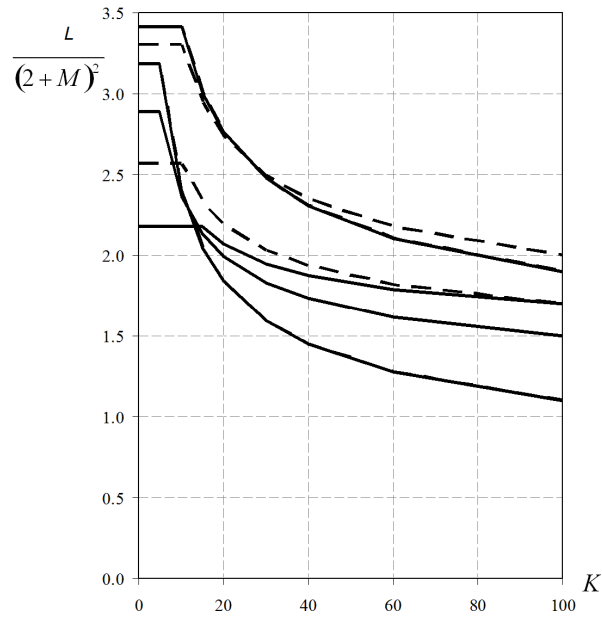


Figure A-7 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1\ 000$, $N \leq 0.003$, $G_c = 0.556$

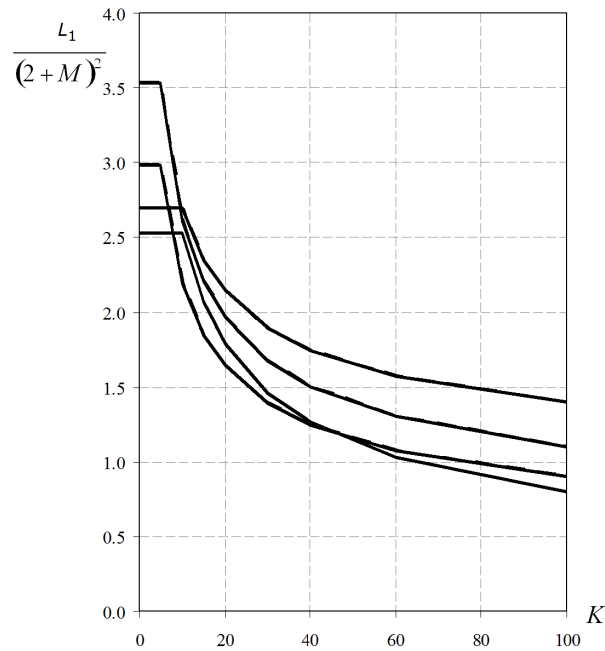


Figure A-8 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1\ 000$, $0.006 \leq N \leq 0.024$, $G_c = 0.556$

Table A-5 Parameters for calculating minimum weight, $L_{10}/(2 + M)^2$, for pipe on clay, $G_c = 1.11$

$G_c = 1.11$								
M	$N \leq 0.003$				$0.006 \leq N \leq 0.024$			
	C_1	C_2	C_3	K_b	C_1	C_2	C_3	K_b
≤ 0.2	2.1	1	0.5	15	1.4	4	0.5	15
0.4	2.4	2	0.5	15	1.1	7	0.5	15
0.5	2.4	2	0.5	15	1.5	5	0.5	15
0.6	1.9	6	0.5	15	1.6	5	0.5	15
0.8	2.2	8	0.5	15	1.9	6	0.5	15
1.0	2.2	8	0.5	15	2.2	6	0.5	15
≥ 1.5	2.4	8	0.5	15	2.0	8	0.5	15

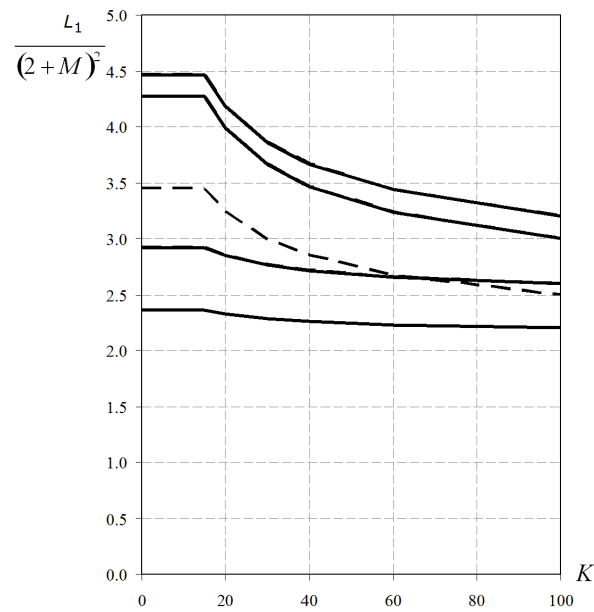


Figure A-9 Minimum weight for a pipe on clay, $Y = 10\tau/1\ 000$, $N \leq 0.003$, $G_c = 1.11$

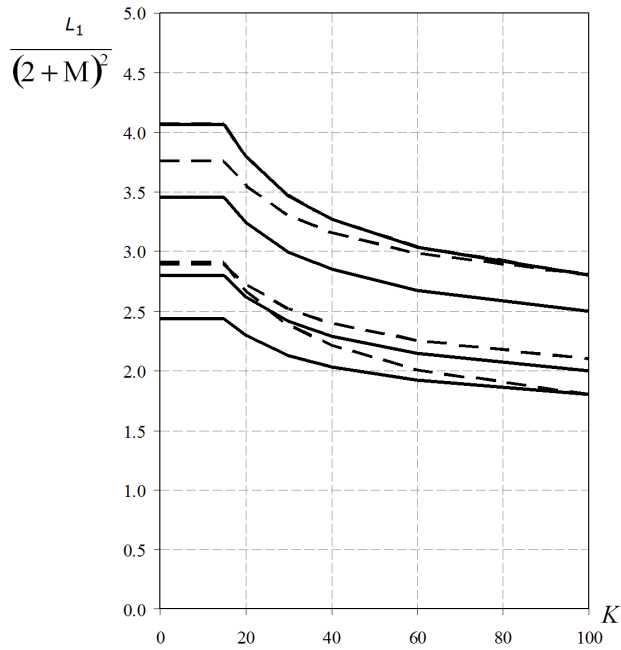


Figure A-10 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1000$, $0.006 \leq N \leq 0.024$, $G_c = 1.11$

Table A-6 Parameters for calculating minimum weight, $L_{10} / (2 + M)^2$, for pipe on clay, $G_c = 2.78$

$G_c = 2.78$								
M	$N \leq 0.003$				$0.006 \leq N \leq 0.024$			
	C_1	C_2	C_3	K_b	C_1	C_2	C_3	K_b
≤ 0.2	3.4	1	0.5	20	2.7	3	0.5	20
0.4	3.4	1	0.5	20	2.4	4	0.5	20
0.5	3.0	4	0.5	20	2.2	7	0.5	20
0.6	3.2	6	0.5	15	1.9	9	0.5	15
0.8	2.4	12	0.5	15	1.9	12	0.5	15
1.0	2.3	12	0.5	15	1.5	14	0.5	15
1.5	2.3	12	0.5	15	1.5	14	0.5	15
2.0	2.3	12	0.5	15	1.5	14	0.5	15
4.0	2.3	12	0.5	15	1.5	14	0.5	15
≥ 4.0	2.3	12	0.5	15	1.5	14	0.5	15

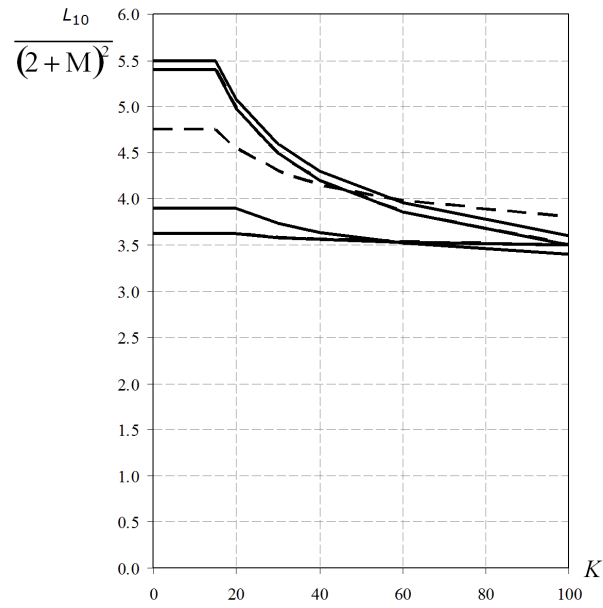


Figure A-11 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1000$, $N \leq 0.003$, $G_c = 2.78$

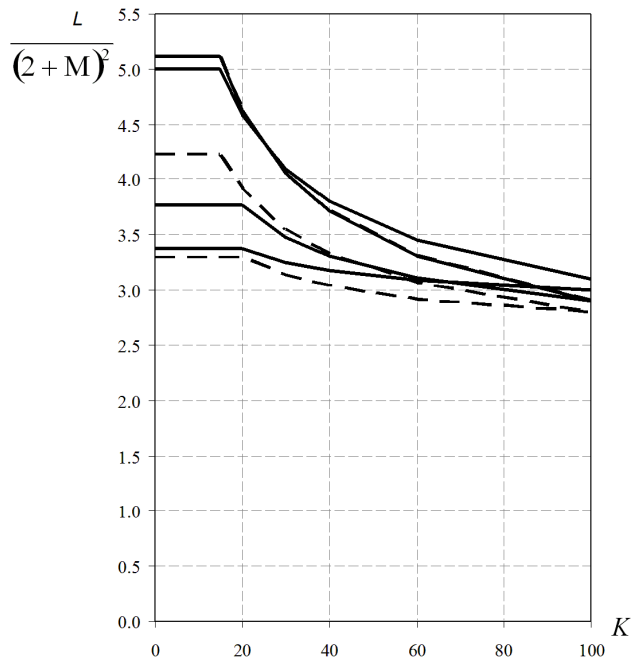


Figure A-12 Minimum weight for a pipe on clay, $Y = 10 \cdot \tau / 1000$, $0.006 \leq N \leq 0.024$, $G_c = 2.78$