ТИПОВЫЕ СТРОИТЕЛЬНЫЕ КОНСТРУКЦИИ, ИЗДЕЛИЯ И УЗЛЫ

СЕРИЯ 1.020-1/87

КОНСТРУКЦИИ КАРКАСА МЕЖВИДОВОГО ПРИМЕНЕНИЯ ДЛЯ МНОГОЭТАЖНЫХ ОБЩЕСТВЕННЫХ ЗДАНИЙ, ПРОИЗВОДСТВЕННЫХ И ВСПОМОГАТЕЛЬНЫХ ЗДАНИЙ ПРОМЫШЛЕННЫХ ПРЕДПРИЯТИЙ

ВЫПУСК 0-6

ГРАФИКИ НЕСУЩИХ СПОСОБНОСТЕЙ КОЛОНН
ДЛЯ ЗДАНИЙ С ВЫСОТАМИ ЭТАЖЕЙ
4,8; 6,0 И 7,2 М

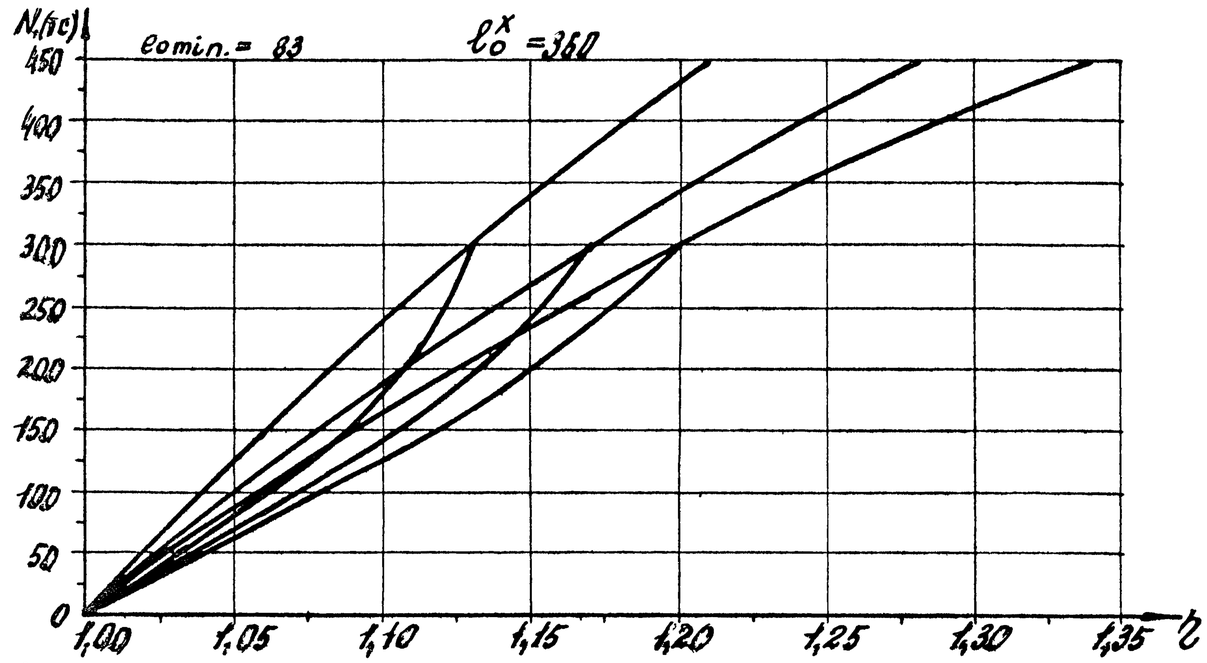
ЧАСТЬ 2
(СТР. 101... 200)

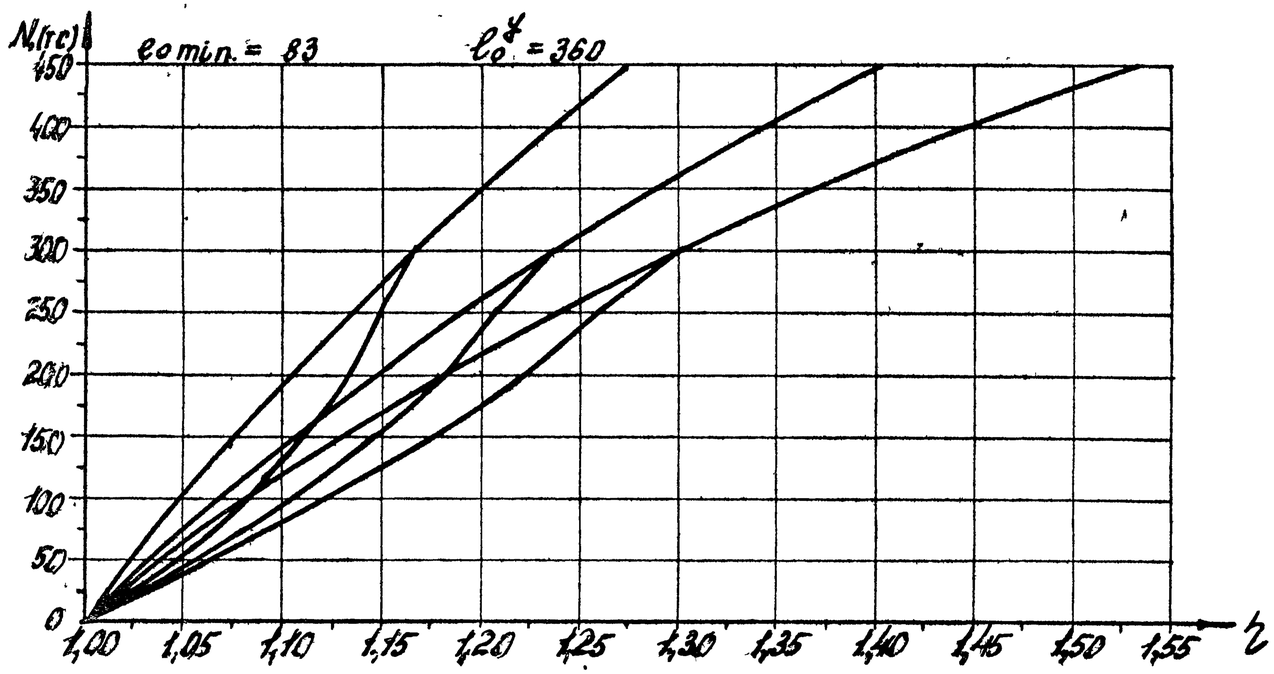
24788-02

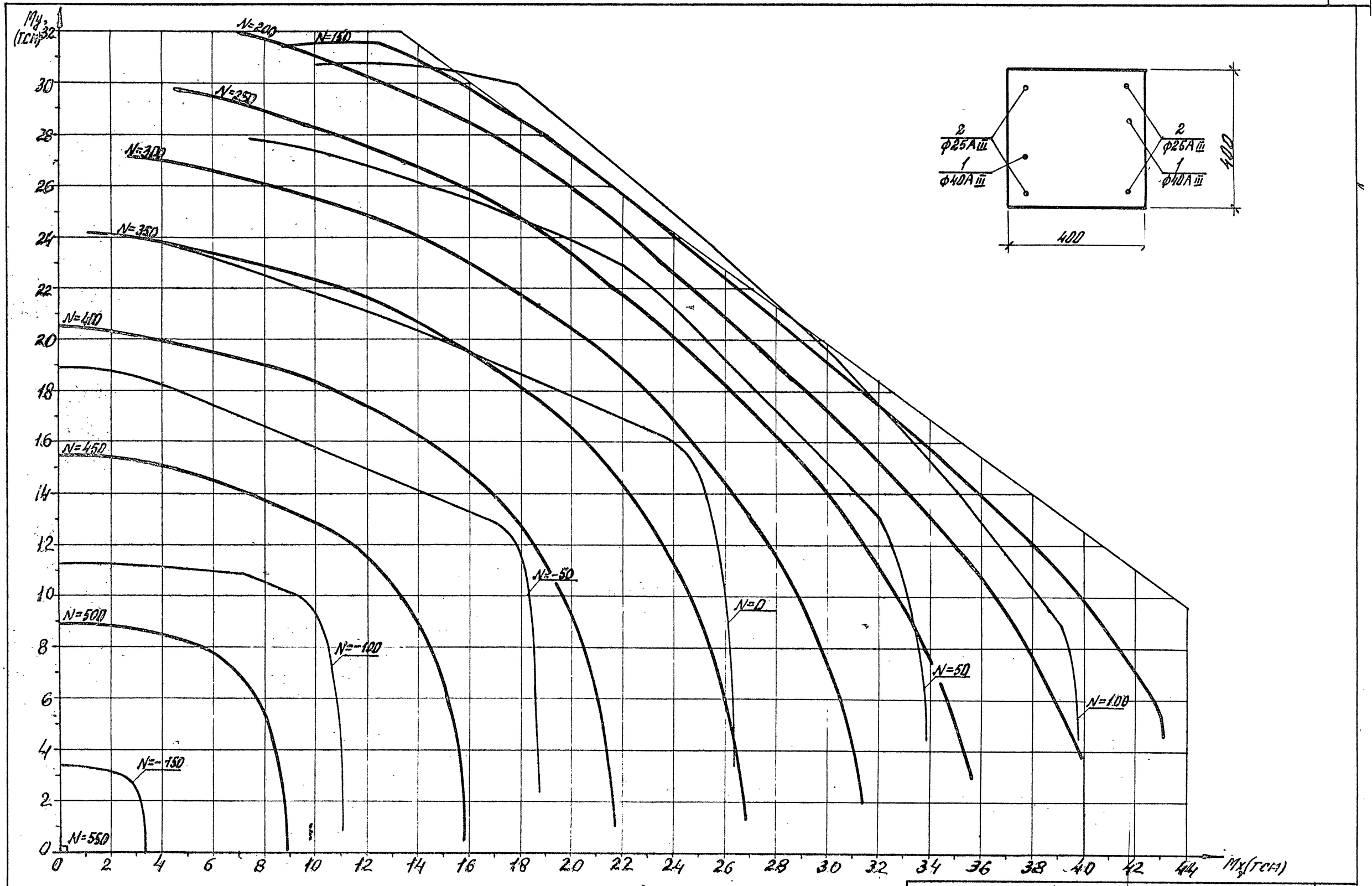
Отпускная цена
на момент реализации
указана в счет-накладной

Пров. 1.10.92

Кон.


N,(tc)
eomin.= 83
l_o^x =360
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
h


N,(tc)
eomin.= 83
l_o^y =360
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
h

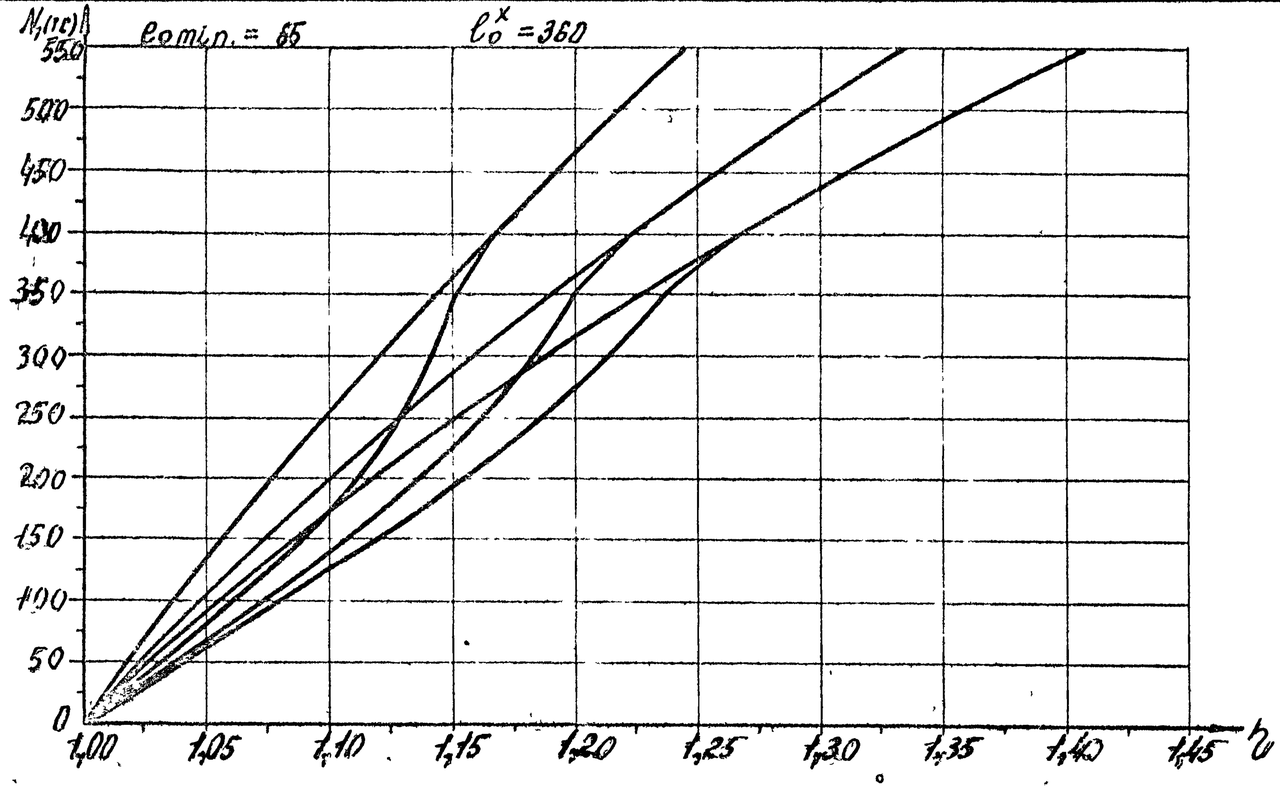


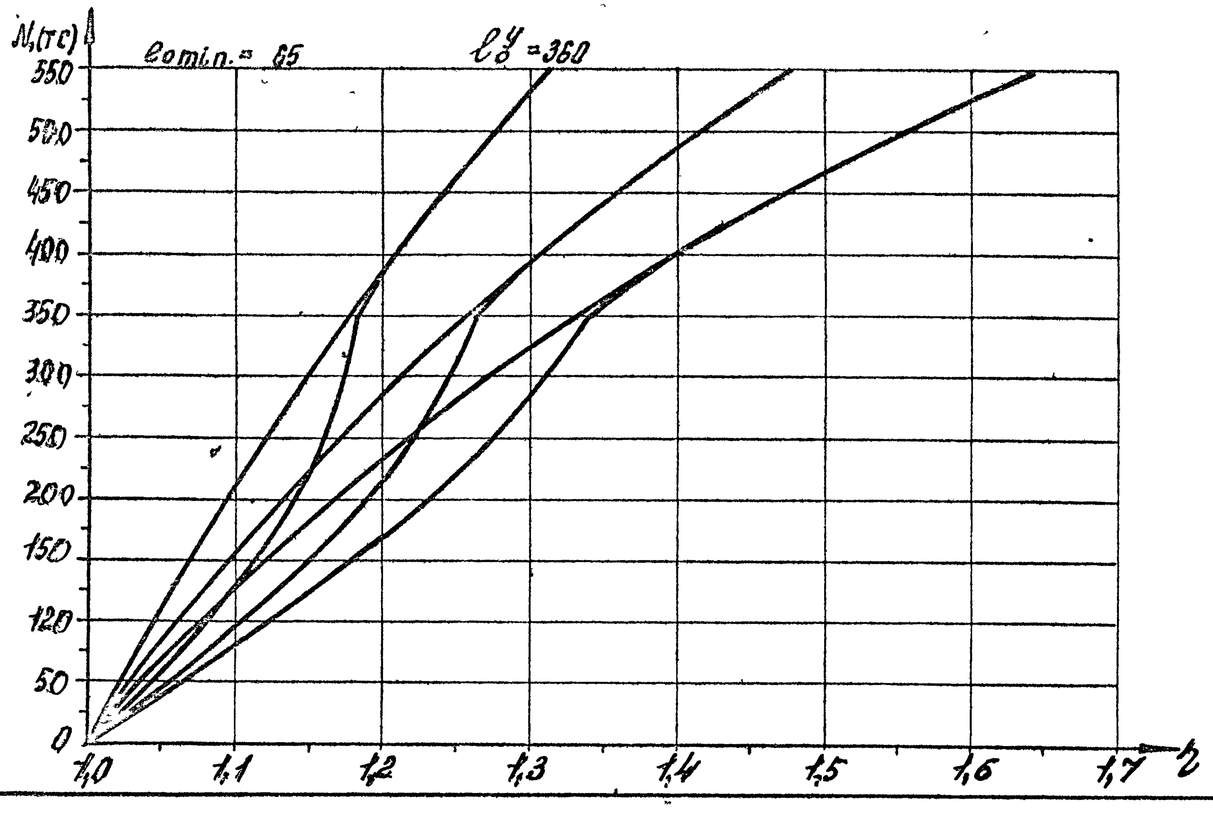
Класс бетона В40 (R_b^8=246,4 кгс/см^2 при учете γ_{b2}=1,10)

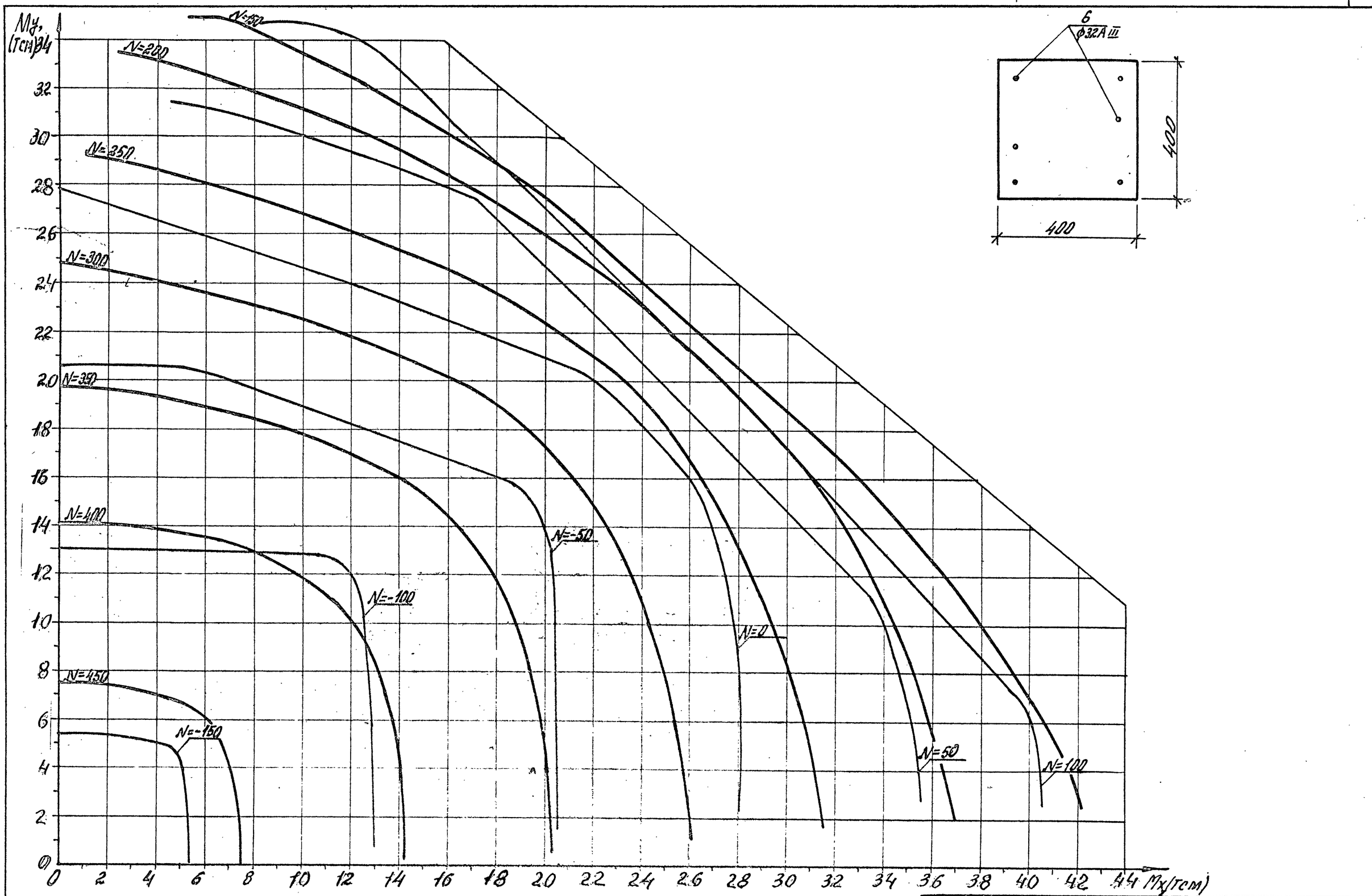
1.020-1/87. 0-6-3 ПЗ

Лист 97

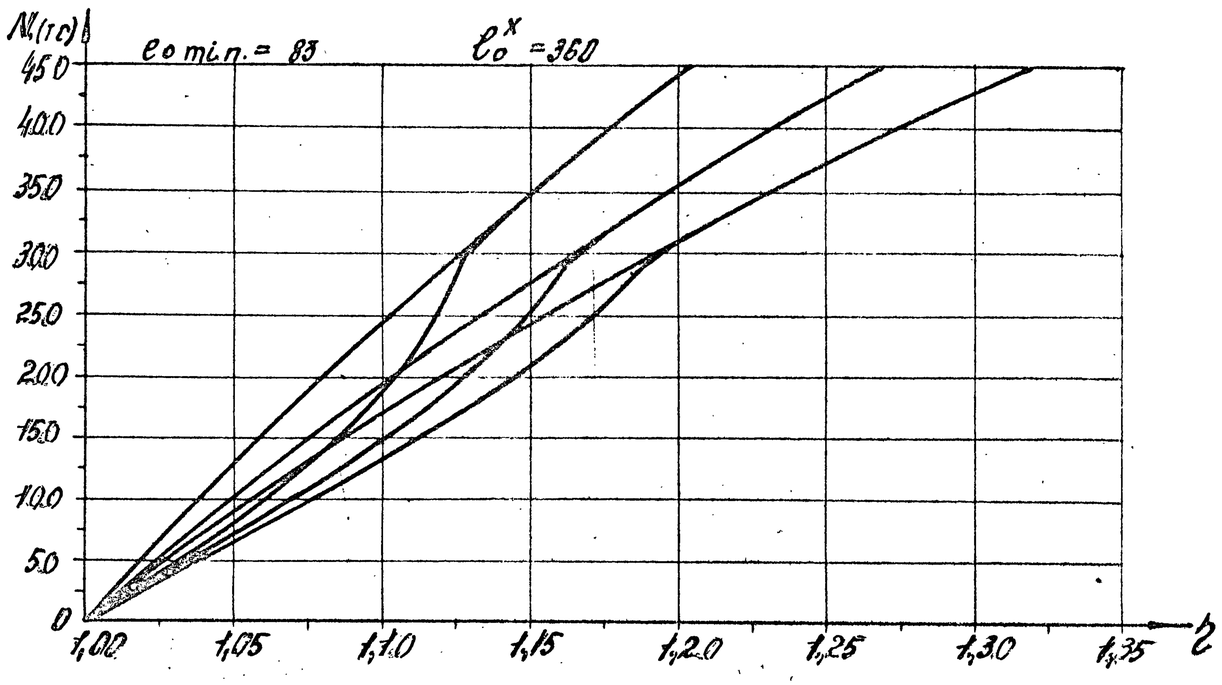
24788-02 3

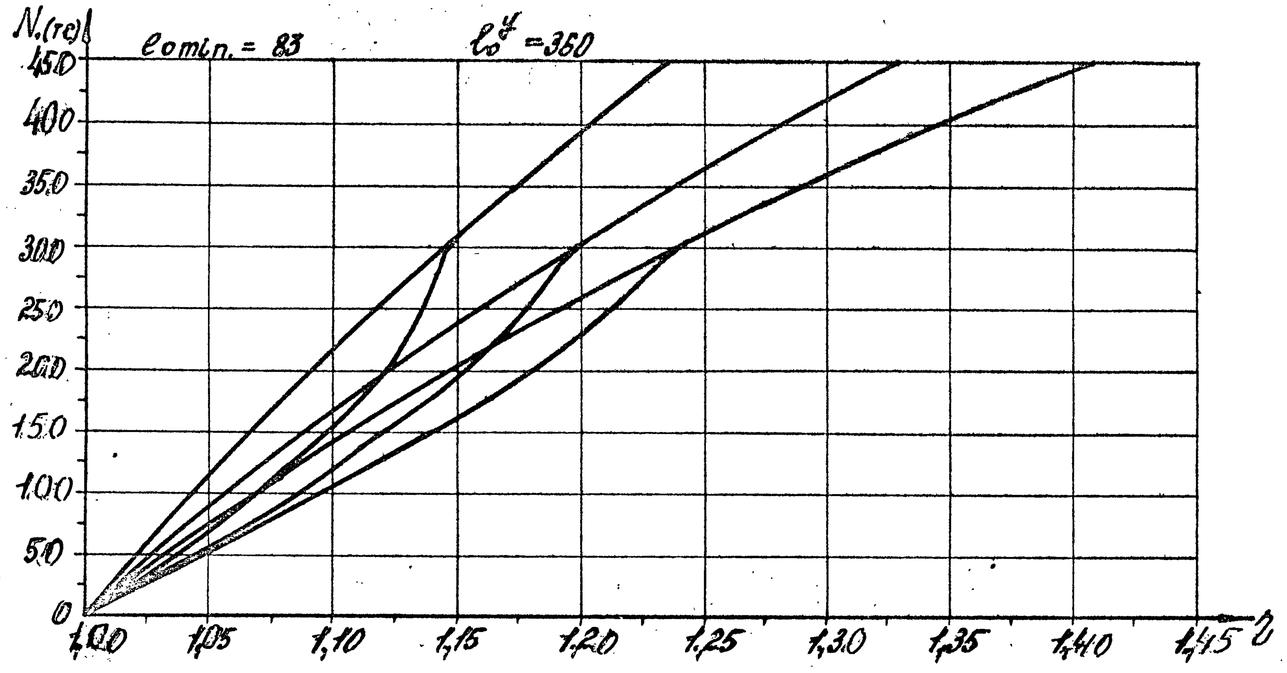

N,(тс)
550
500
450
400
350
300
250
200
150
100
50
0
e0min.= 65
l0x=360
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
η

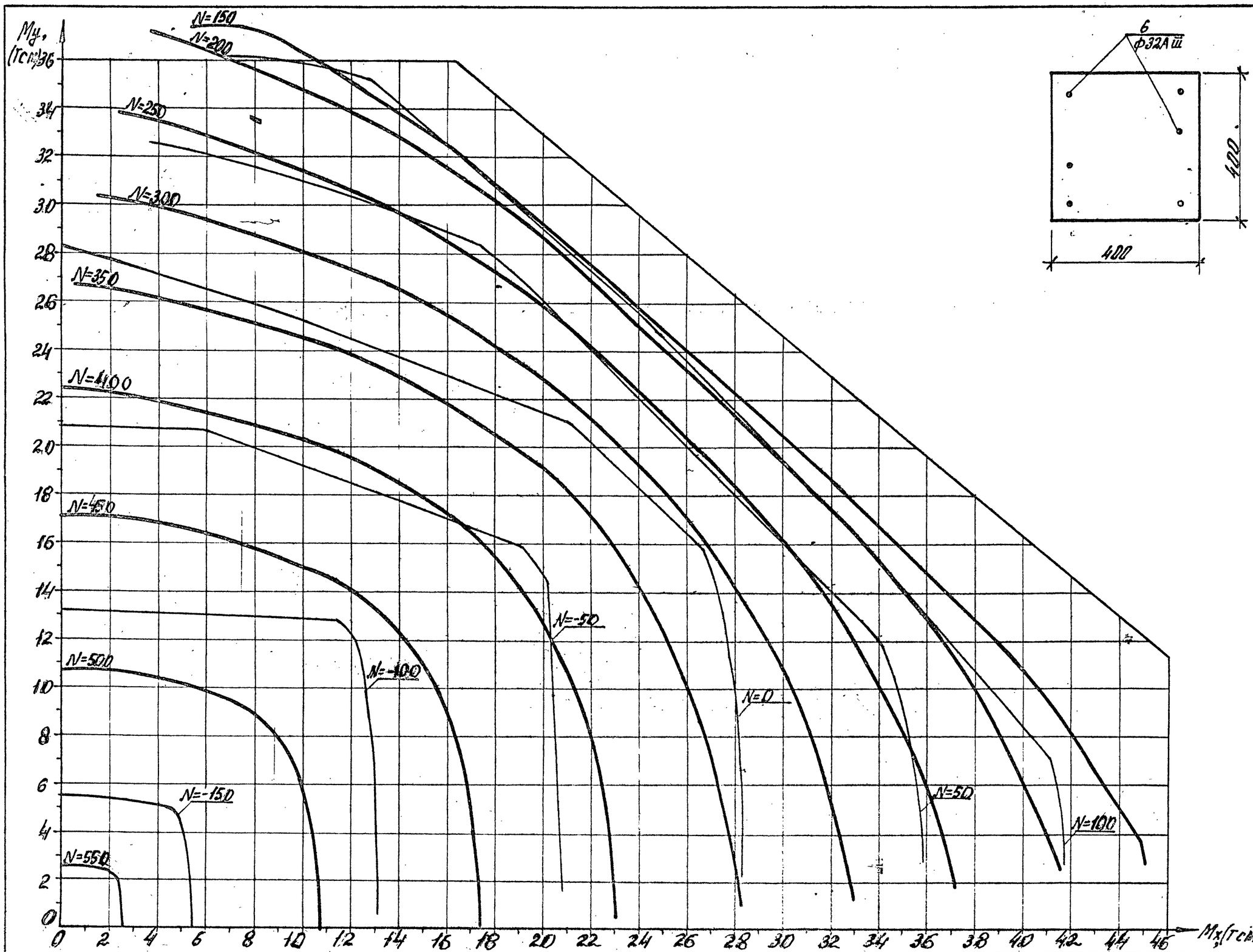

N,(тс)
550
500
450
400
350
300
250
200
150
120
50
0
e0min.= 65
l0y=360
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
η



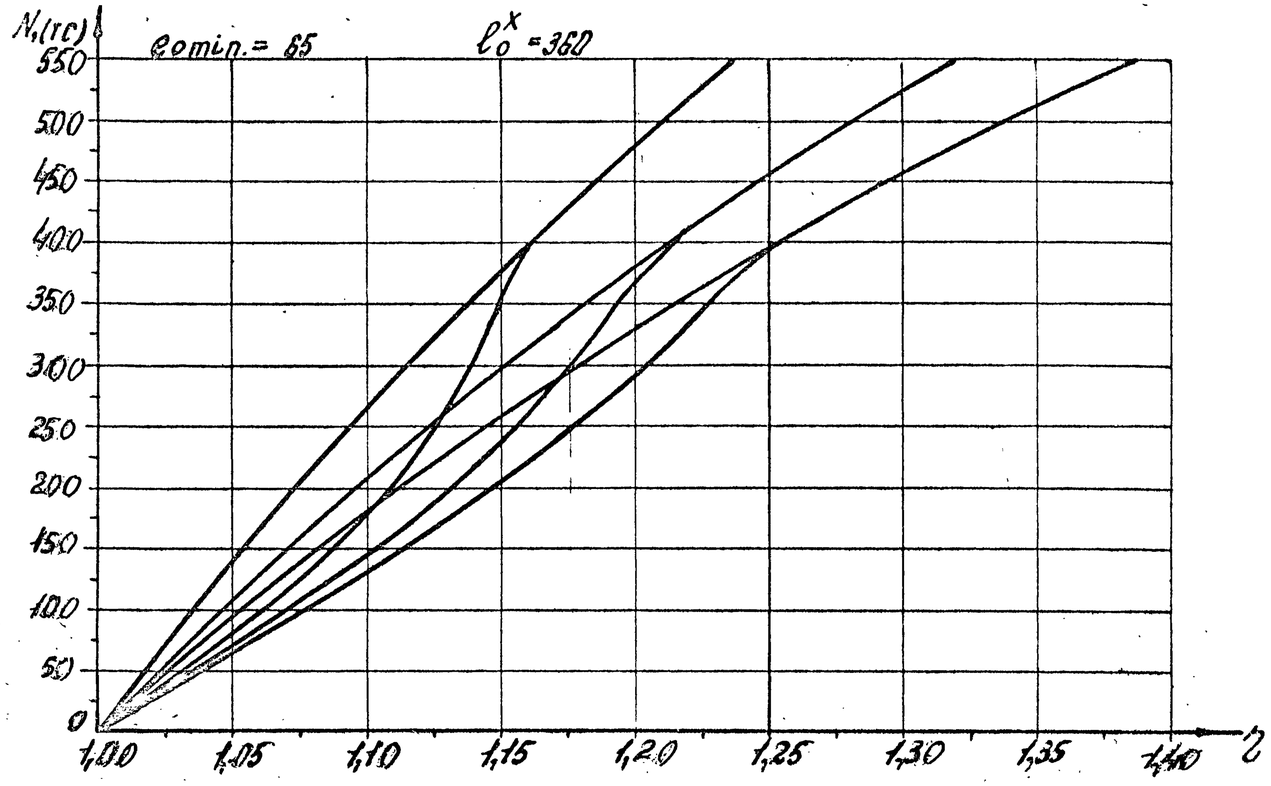
Класс бетона В40 (R_b=20,6 кгс/см² при учете γ_{b2}=0,9)

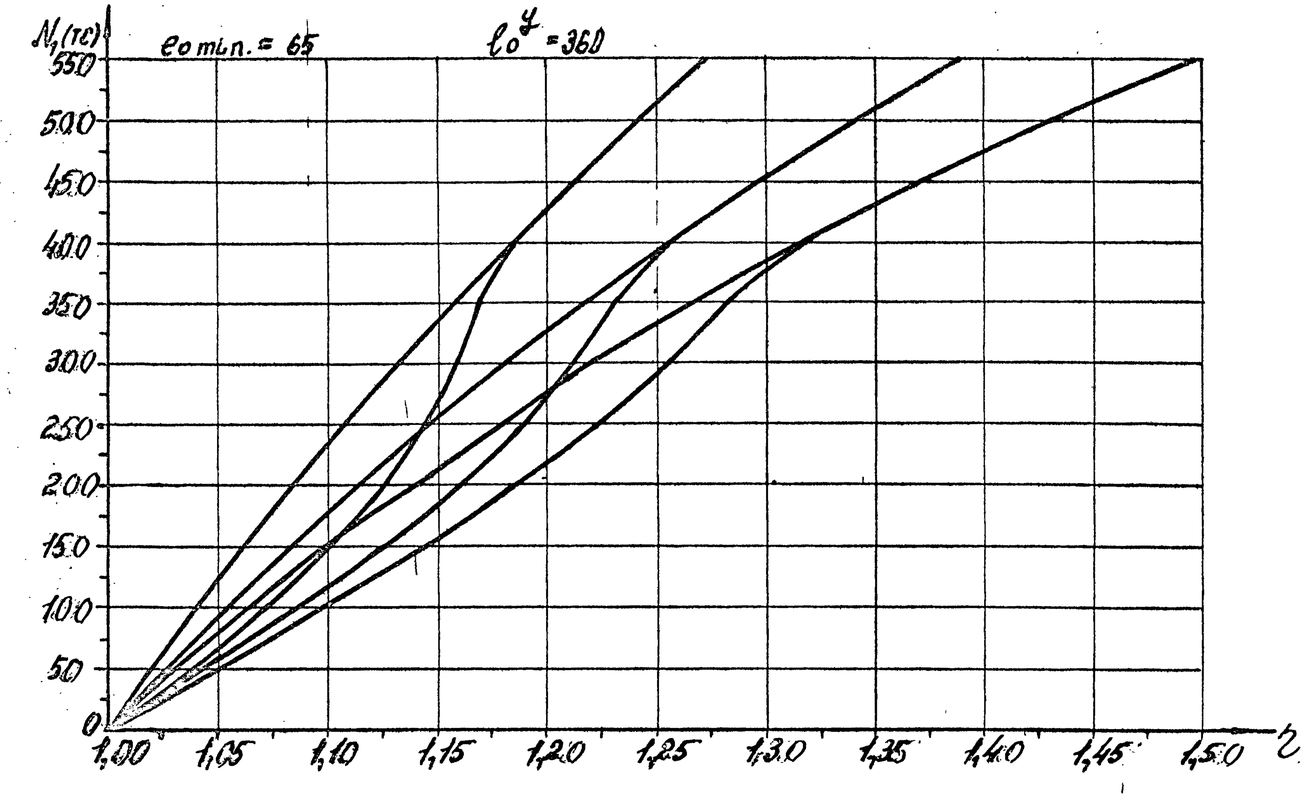

N(тс)
e0 min. = 83
l0x = 360
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
b

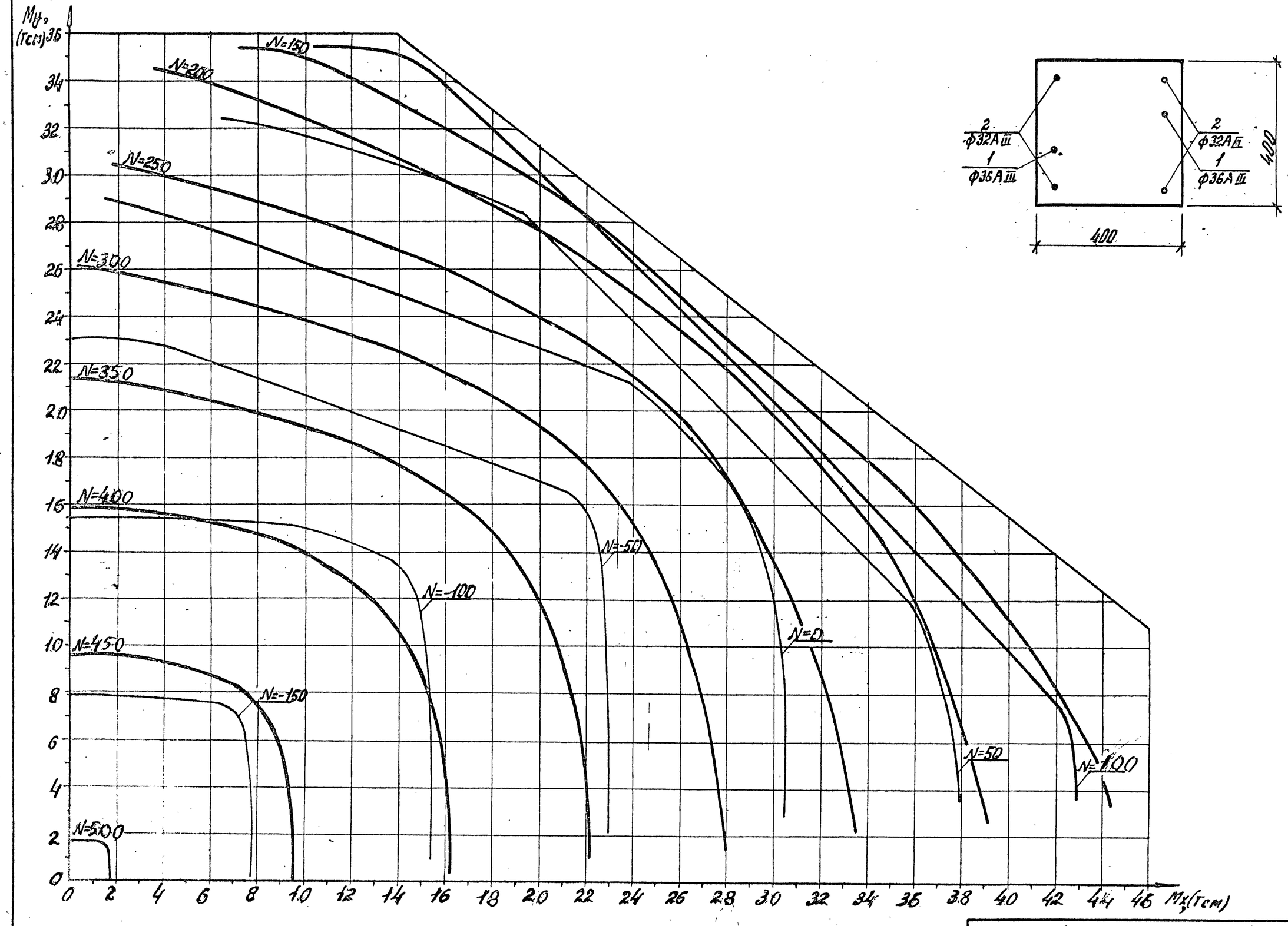

N.(тс)
e0 min. = 83
l0y = 350
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
b



класс бетона В40 ($R_б$=246,4 кгс/см^2 при учете $\gamma_{б2}$=1.10)

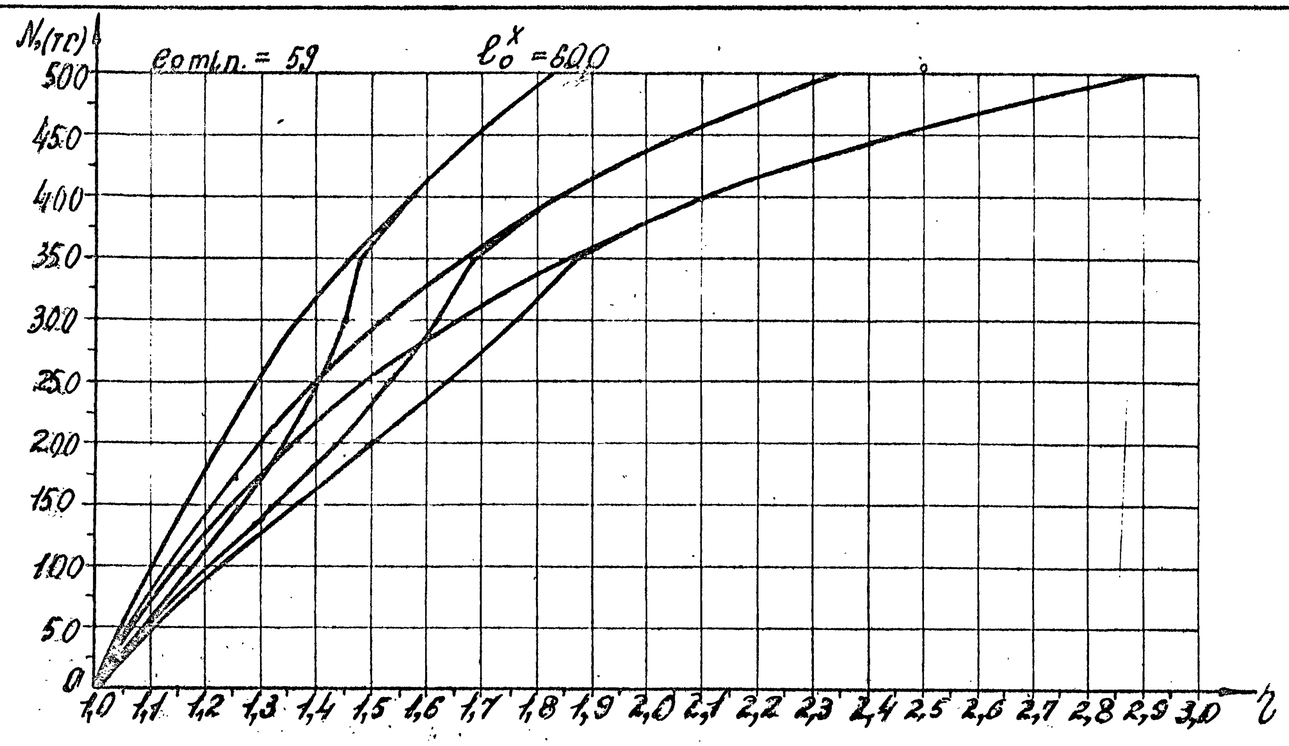

N,(тс)
e0min.= 65
l_0^x =360
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
λ

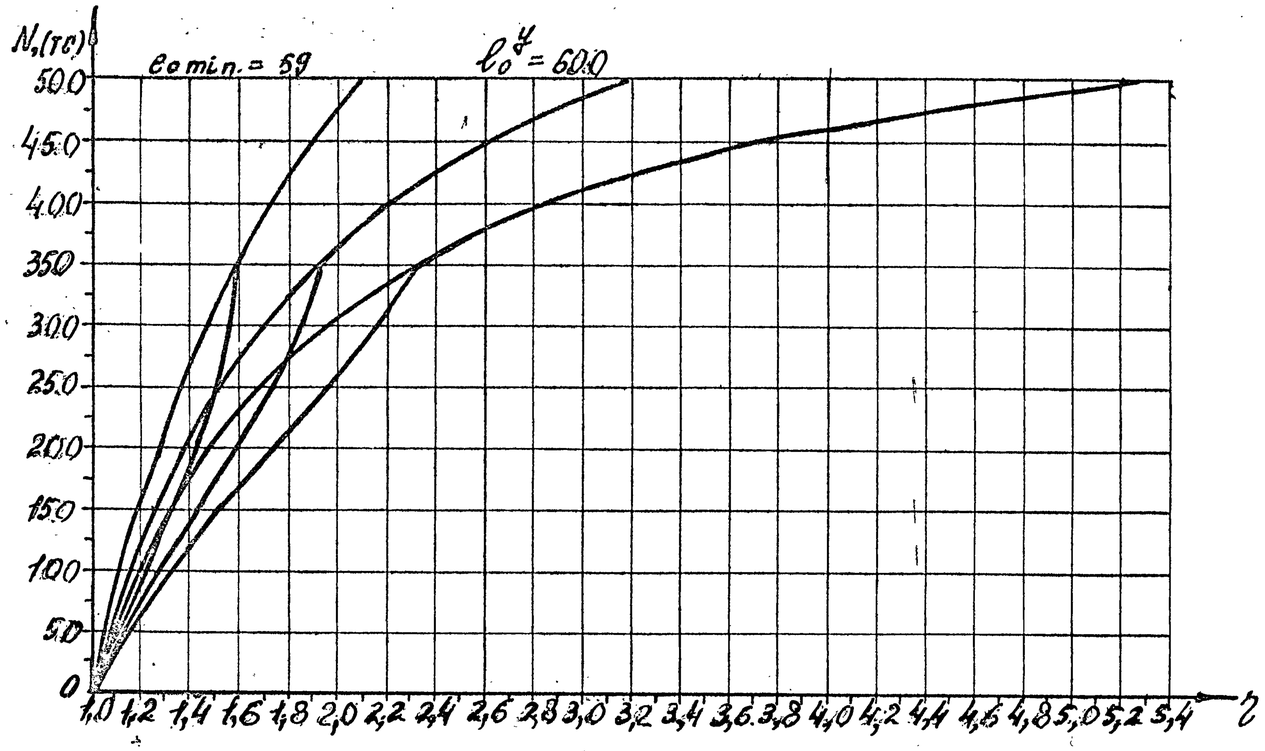

N,(тс)
e0min.= 65
l_0^y =360
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
λ

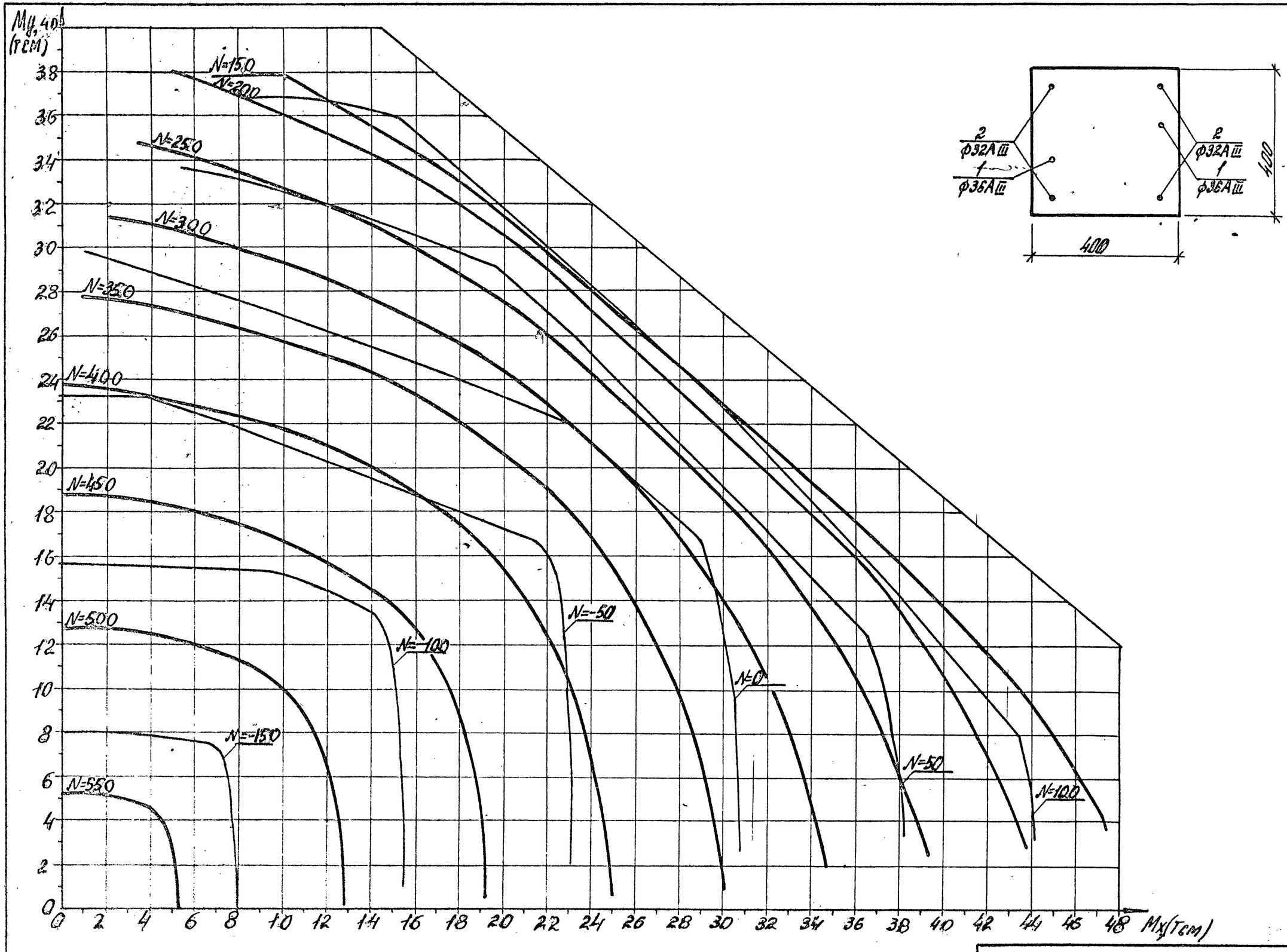


класс бетона В40 (R_B = 201,6 кгс/см^2 при учете γ_{b2} = 0,9)

1.020-1/87. 0-6-3ПЗ	Лист 103


N,(тс)
e₀ min. = 5,9
l_0^x = 600
500
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9 3,0
h


N,(тс)
e₀ min. = 5,9
l_0^y = 600
500
450
400
350
300
250
200
150
100
50
0
1,0 1,2 1,4 1,6 1,8 2,0 2,2 2,4 2,6 2,8 3,0 3,2 3,4 3,6 3,8 4,0 4,2 4,4 4,6 4,8 5,0 5,2 5,4
h

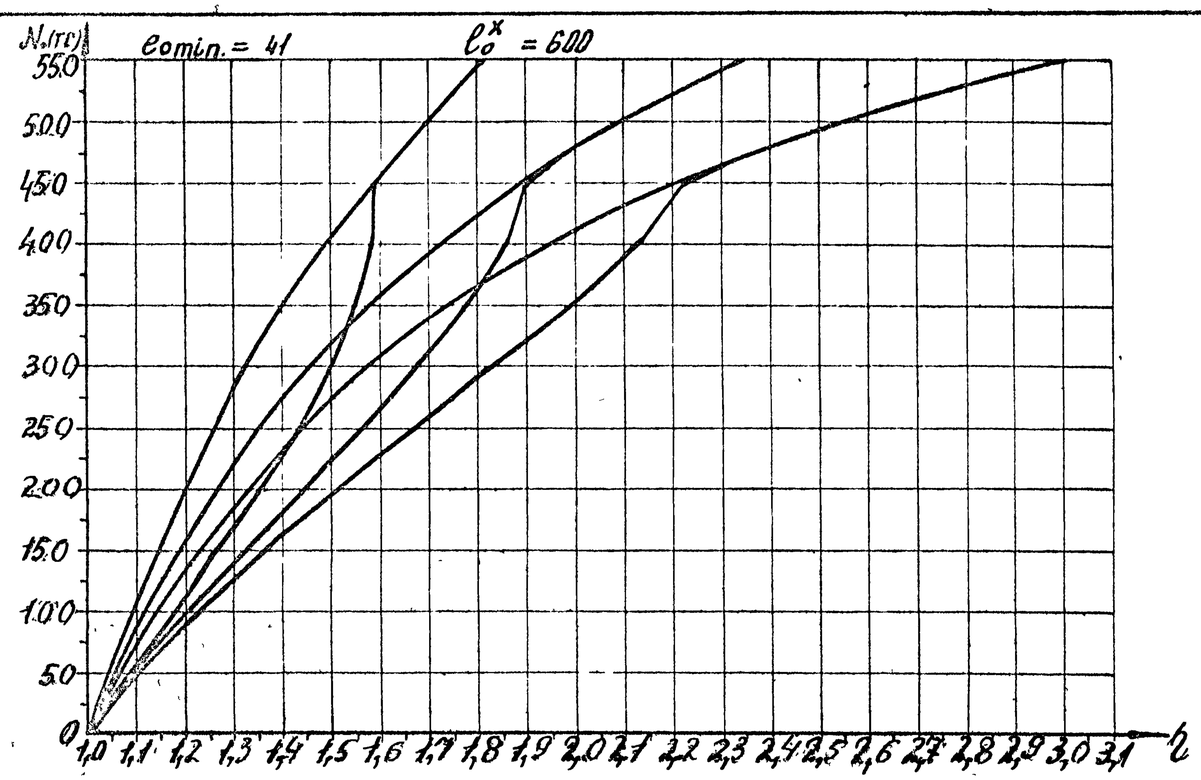


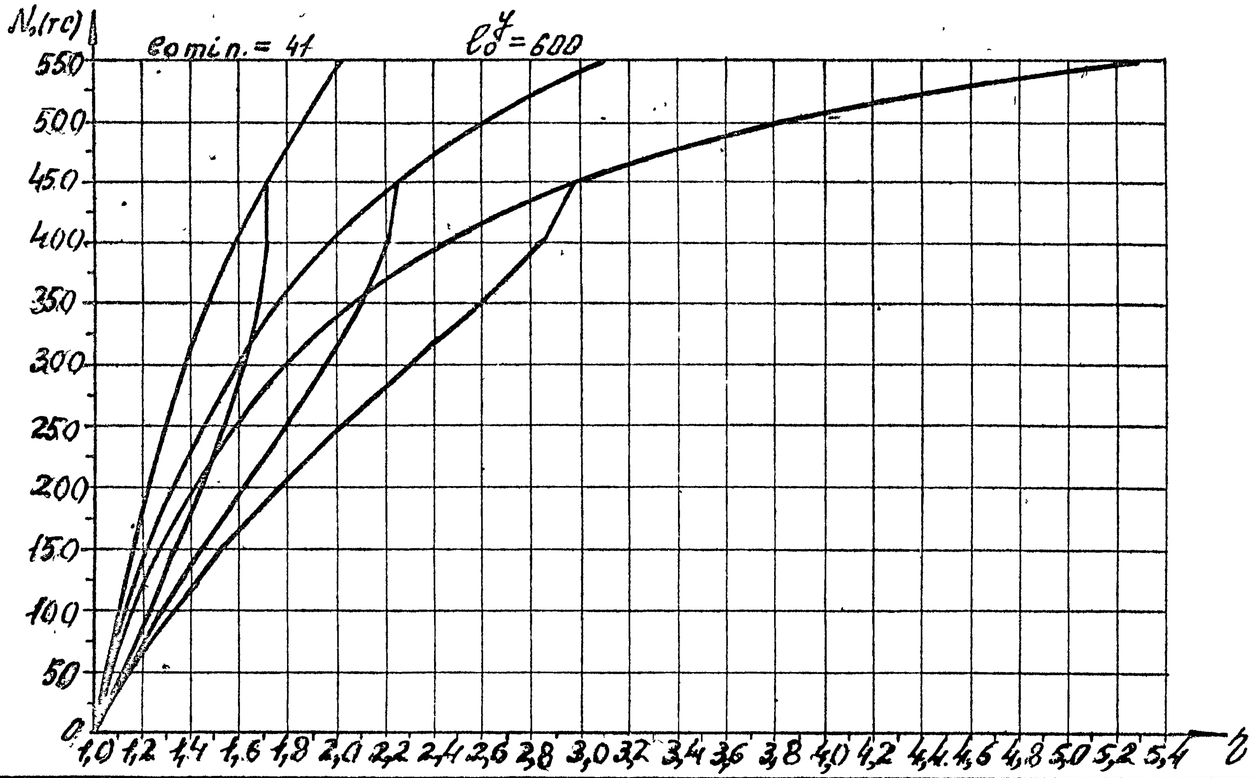
класс бетона В40 ($R_б$=246,4кгс/см² при учете $\gamma_{б2}$=1,10)

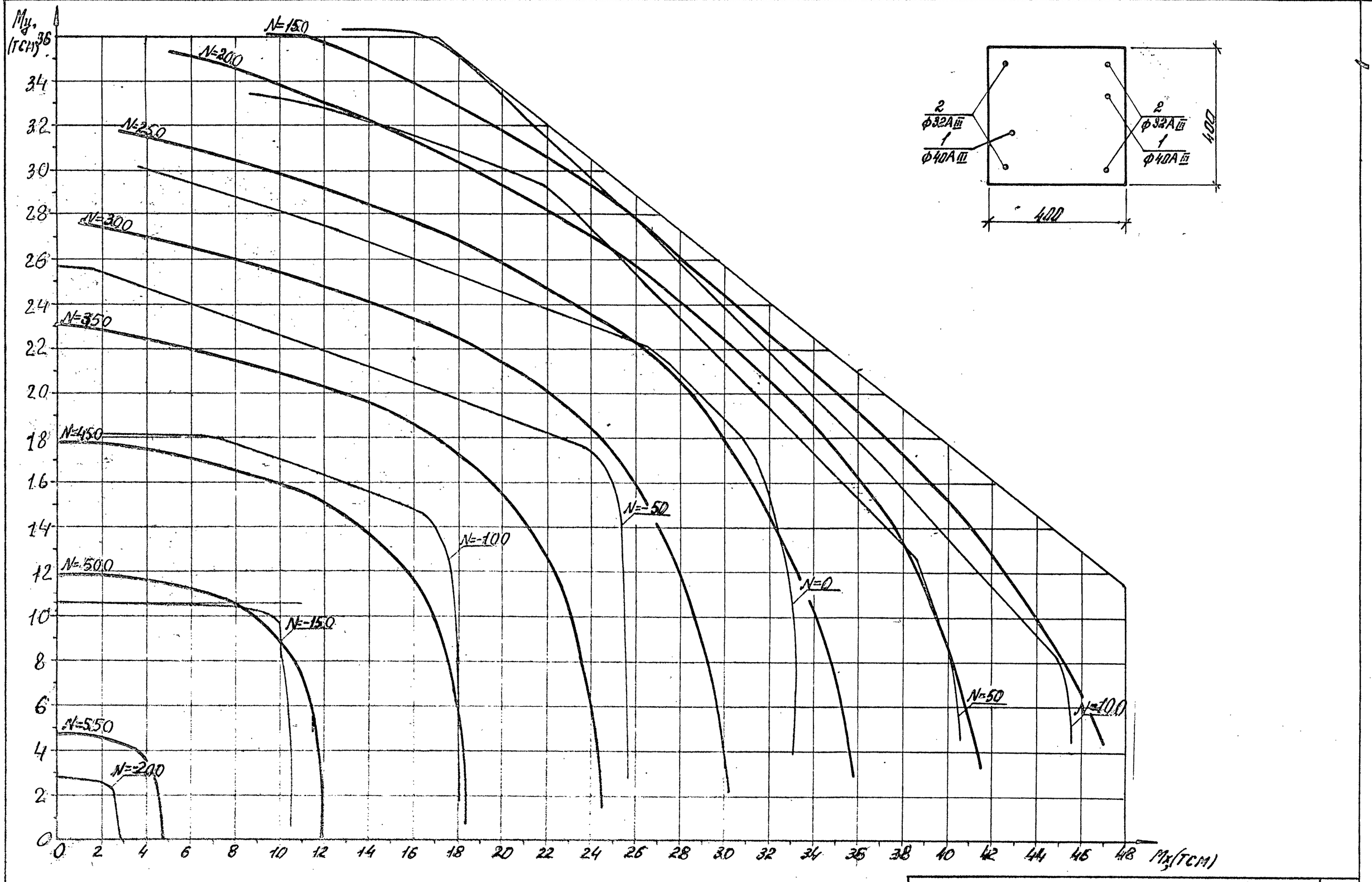
1.020-1/87. 0-6- 3 ПЗ

Лист 105

24788-02 11


N,(тс)
e₀min.= 41
l_0^x = 600
550
500
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9 3,0 3,1
b

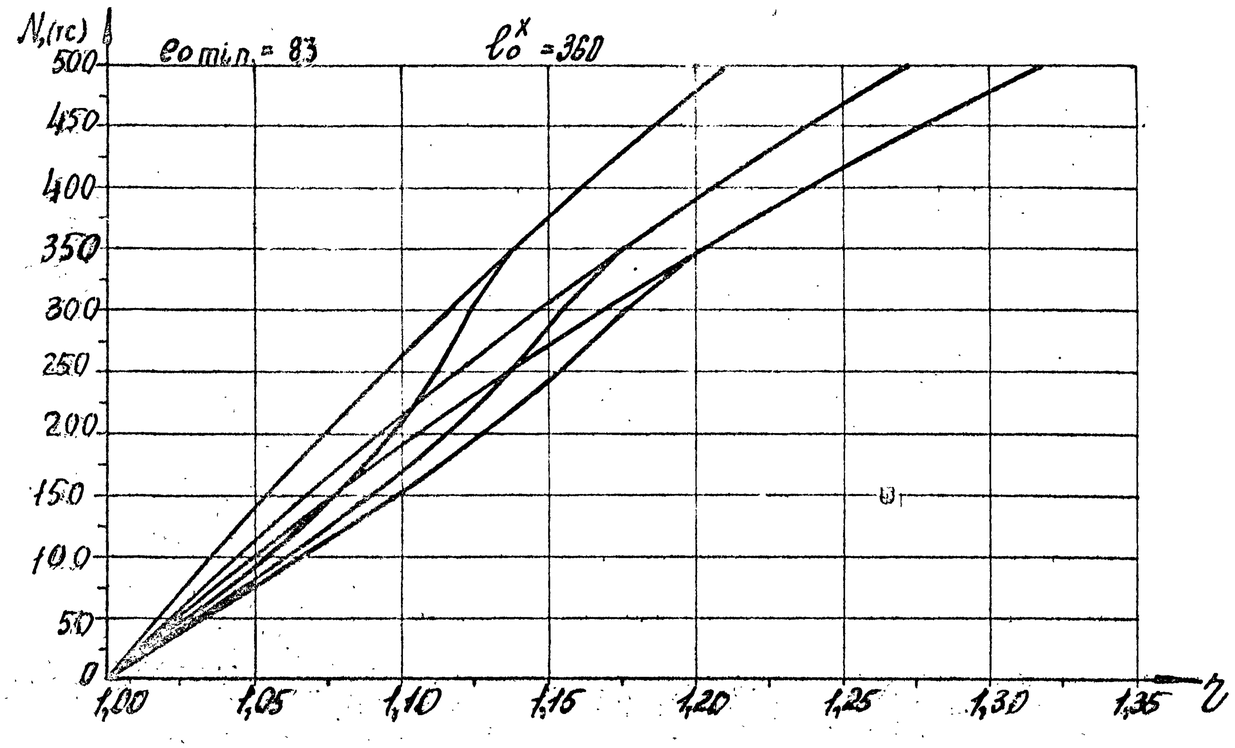

N,(тс)
e₀min.= 41
l_0^y = 600
550
500
450
400
350
300
250
200
150
100
50
0
1,0 1,2 1,4 1,6 1,8 2,0 2,2 2,4 2,6 2,8 3,0 3,2 3,4 3,6 3,8 4,0 4,2 4,4 4,6 4,8 5,0 5,2 5,4
b

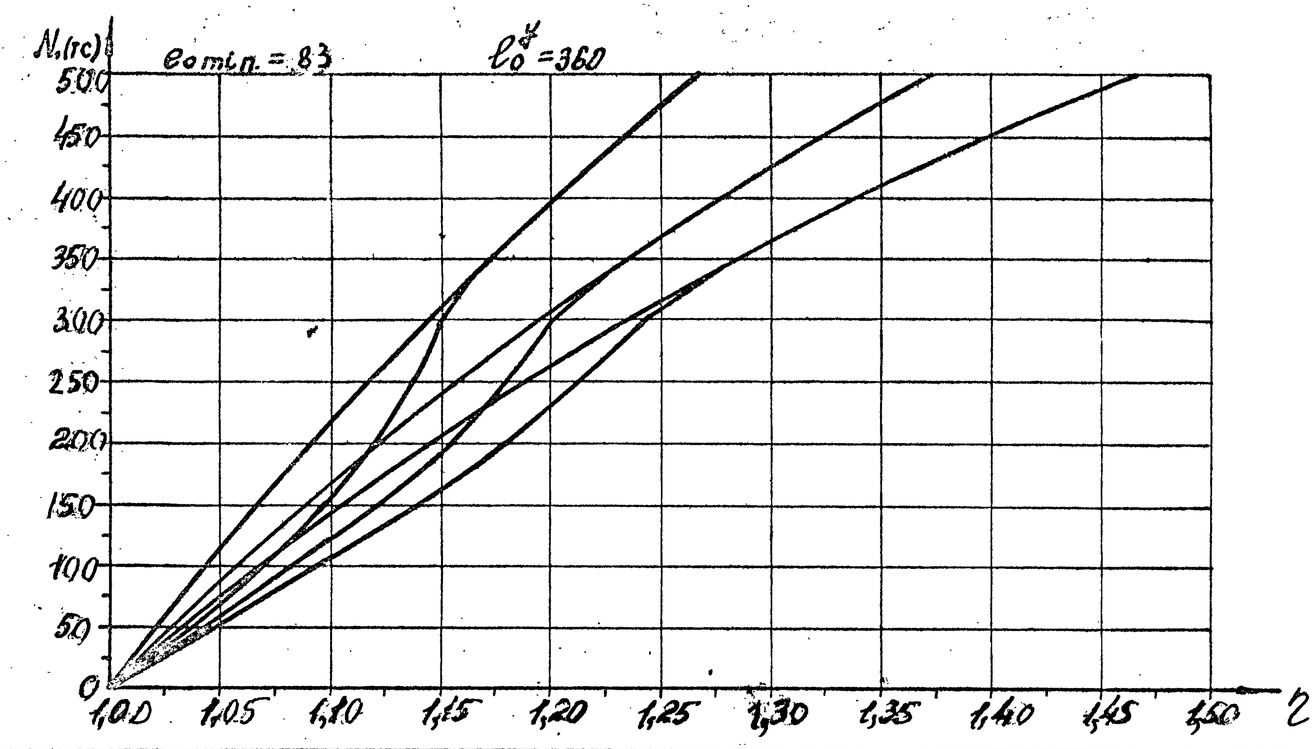


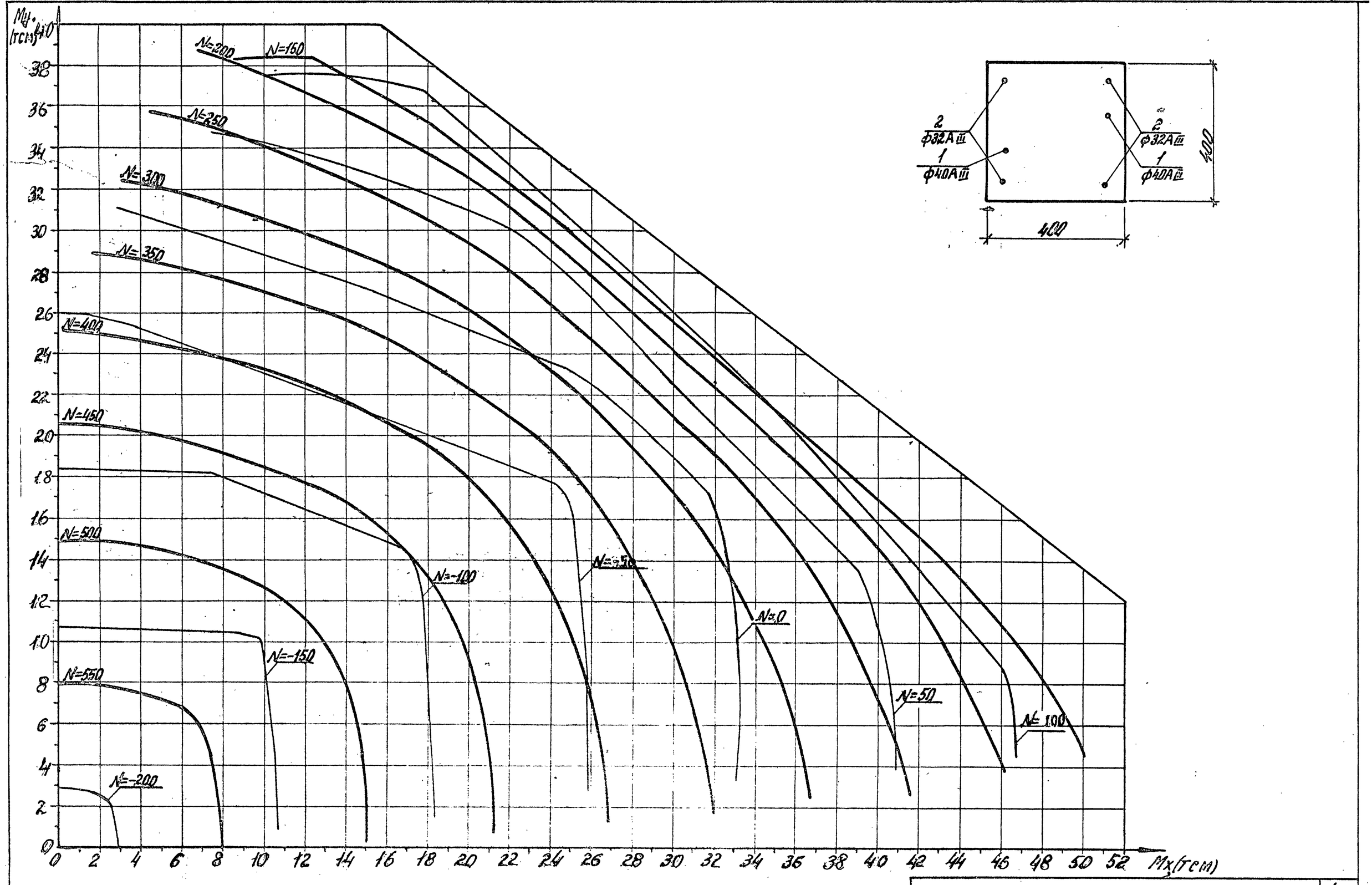
Класс бетона В40 (Rв=201,6 кгс/см² при учете γв2=0,9)

1.020-1/87. 0-6÷3 ПЗ

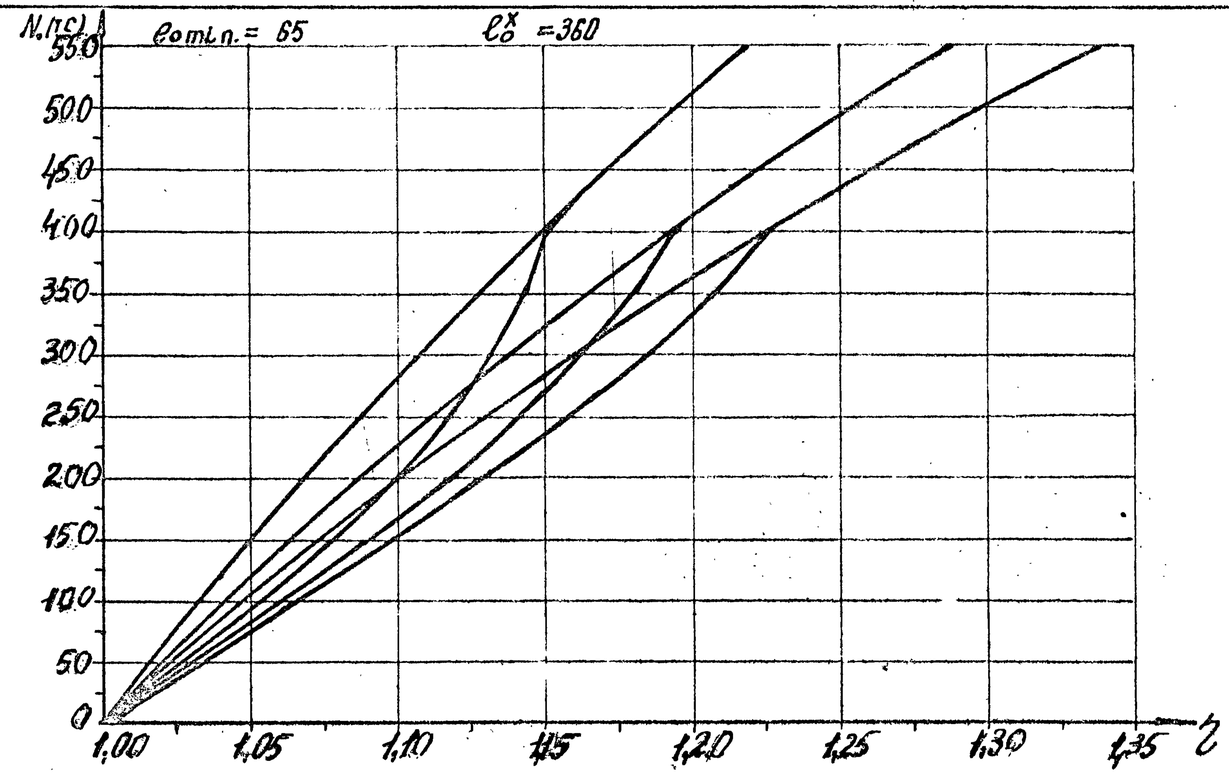
Лист 107

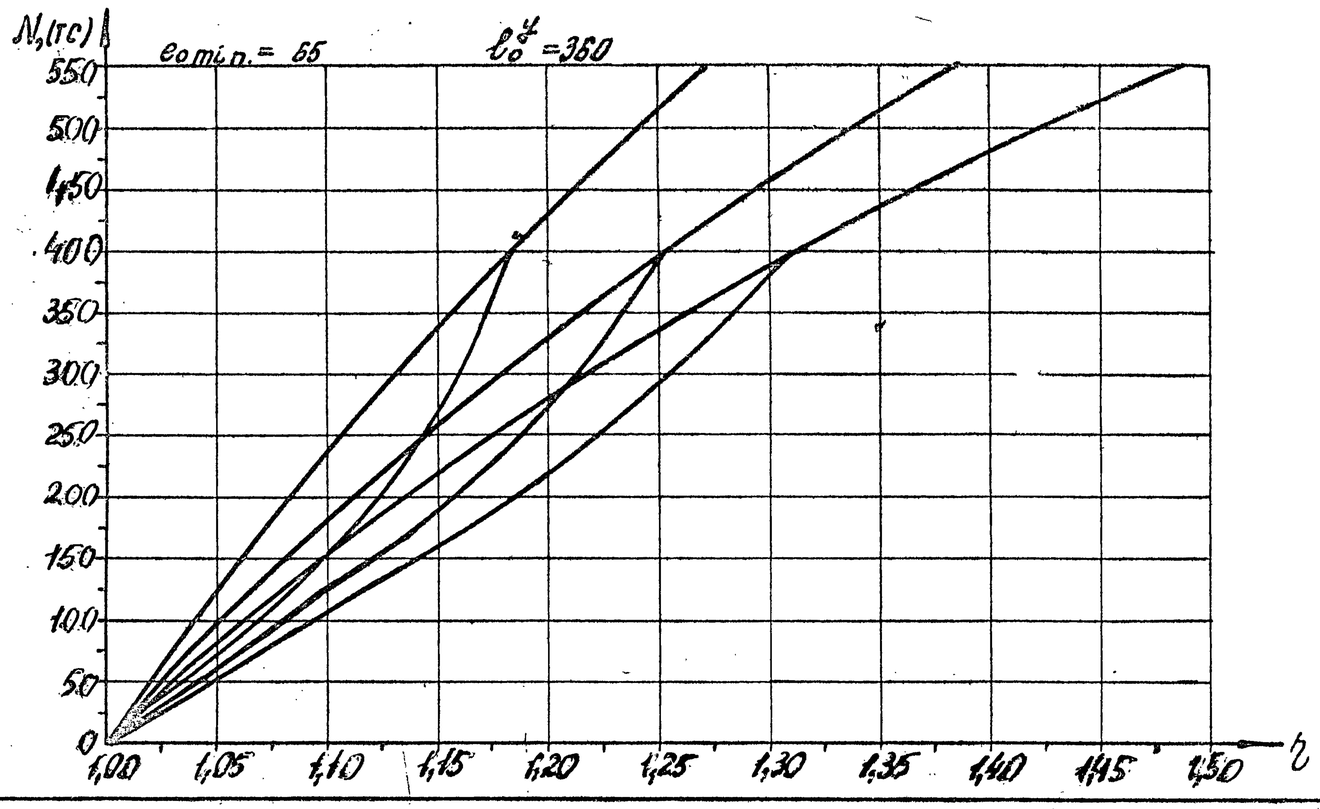

N,(rc)
e0 min. = 83
l0x = 360
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
ν

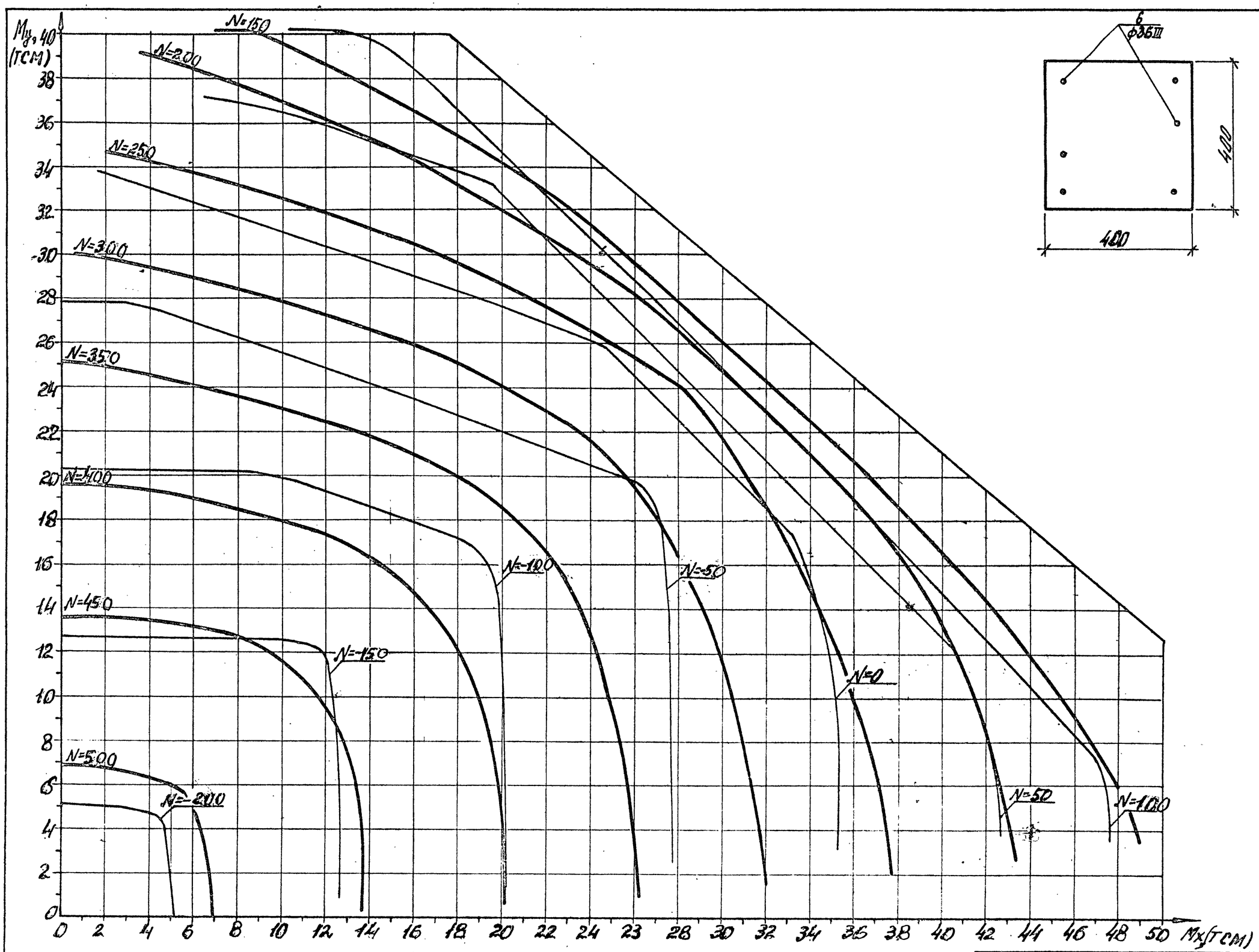

N,(rc)
e0 min. = 83
l0x = 360
500
450
400
350
300
250
200
150
100
50
0
1,00
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1,40
1,45
1,50
ν



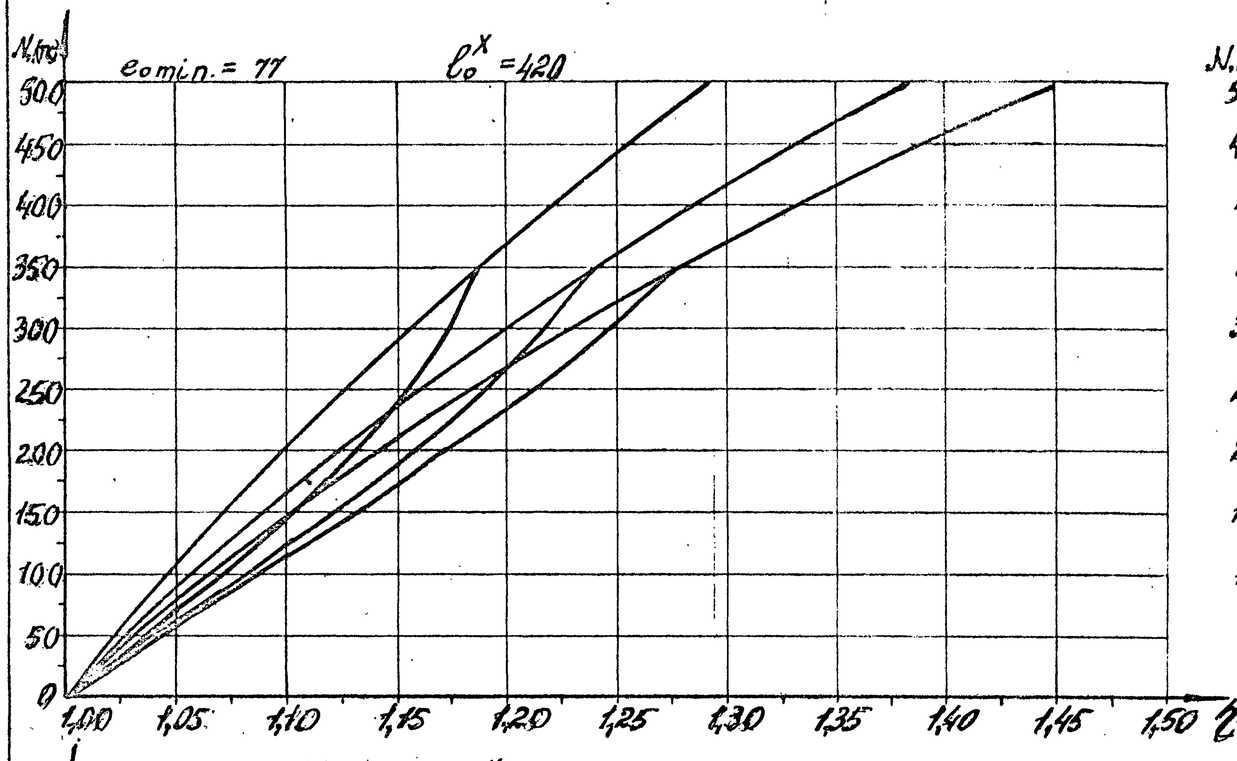
Класс бетона В40 ($R_в$=246,4 кгс/см² при учете $\gamma_{в2}$=1,10)

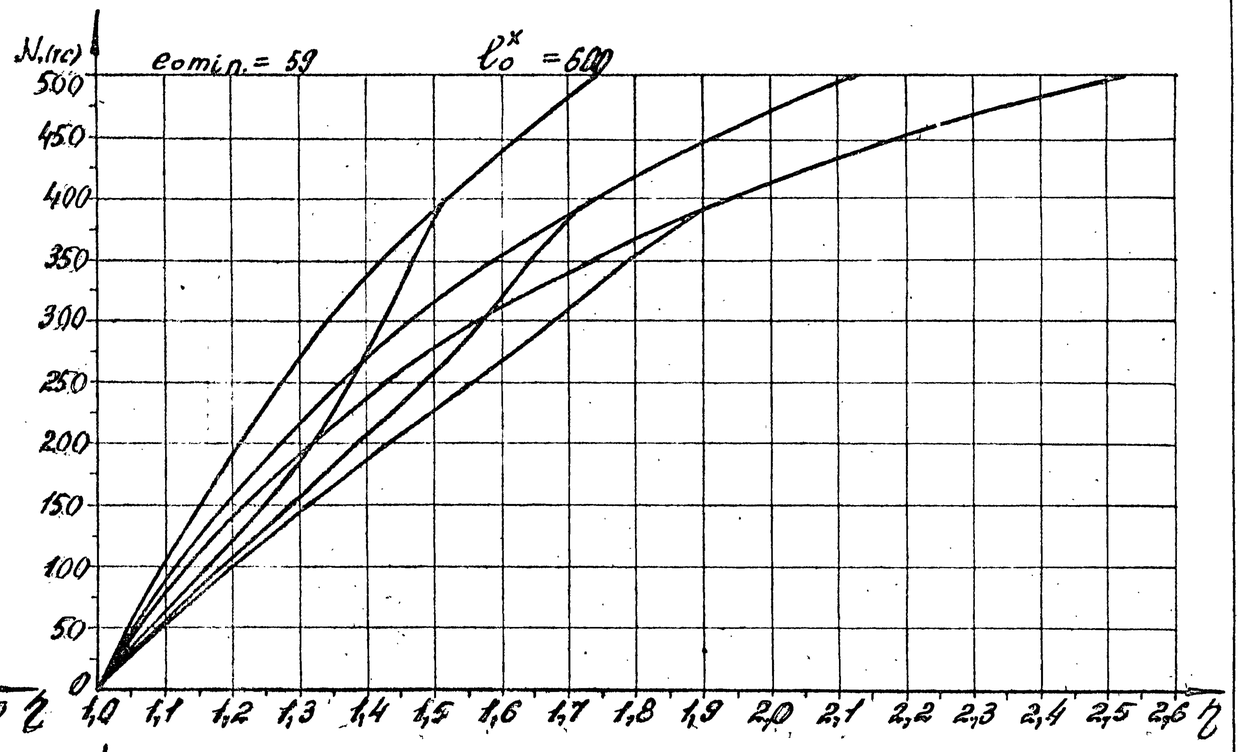

N,(тс)
e0min.= 65
e0x =360
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
l

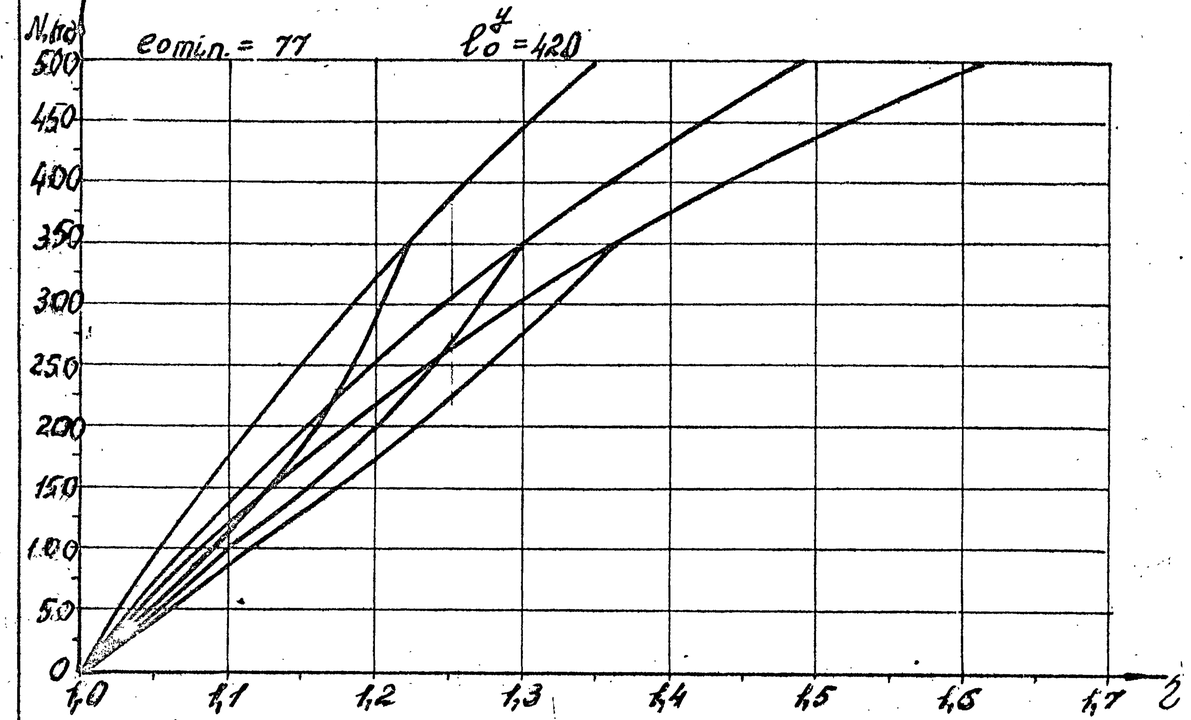

N,(тс)
e0min.= 65
e0y =360
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
l

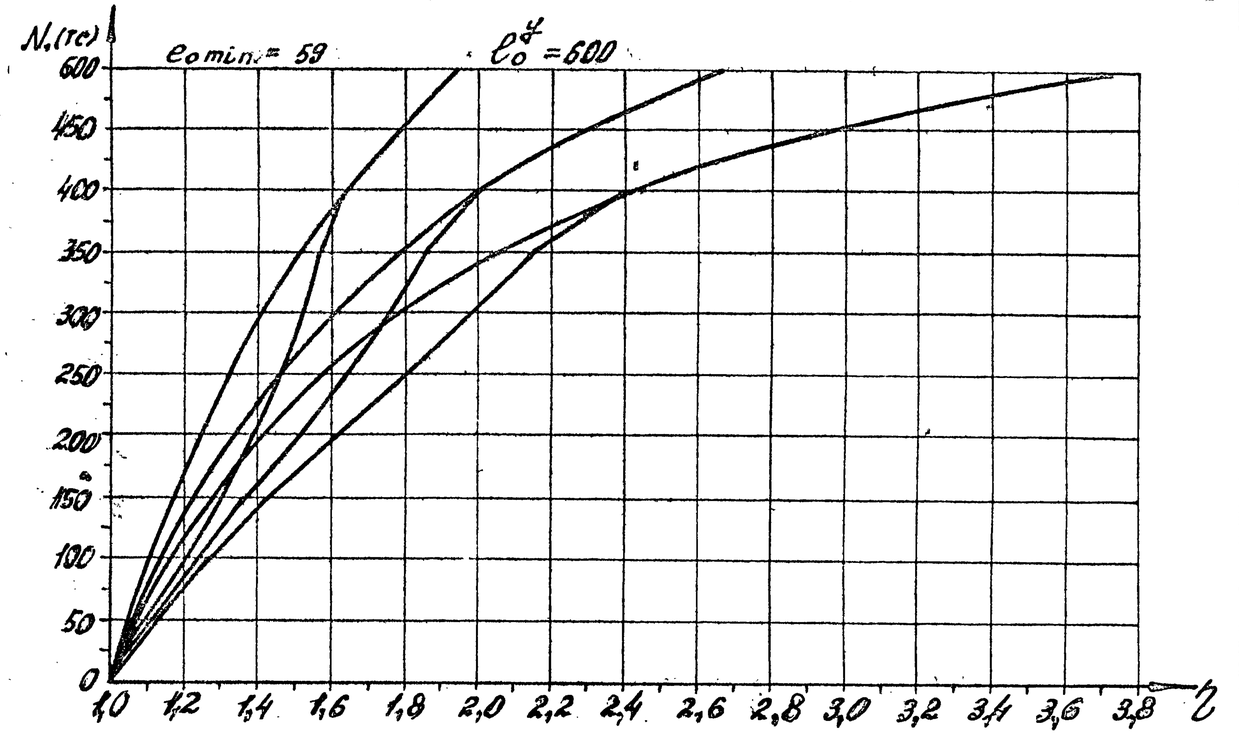


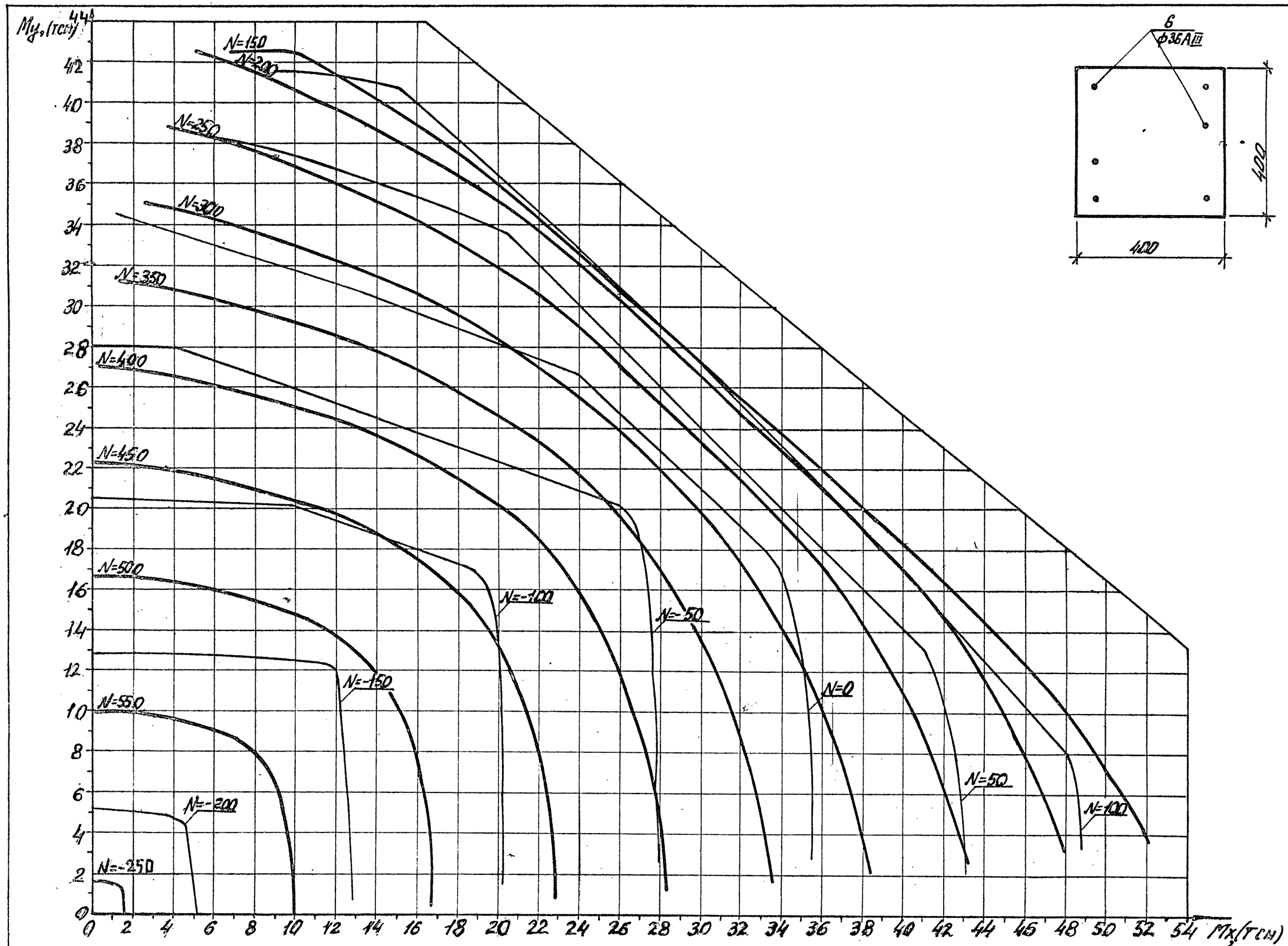
класс бетона В40 (R_b=201,6 кгс/см² при учете γ_{b2}=0,9)


N,(тс)
e₀min.= 77
ℓ_0^x =420
500
450
400
350
300
250
200
150
100
50
0
1,00 1,05 1,10 1,15 1,20 1,25 1,30 1,35 1,40 1,45 1,50
ℓ


N,(тс)
e₀min.= 59
ℓ_0^x =600
500
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6
ℓ


N,(тс)
e₀min.= 77
ℓ_0^y =420
500
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7
ℓ

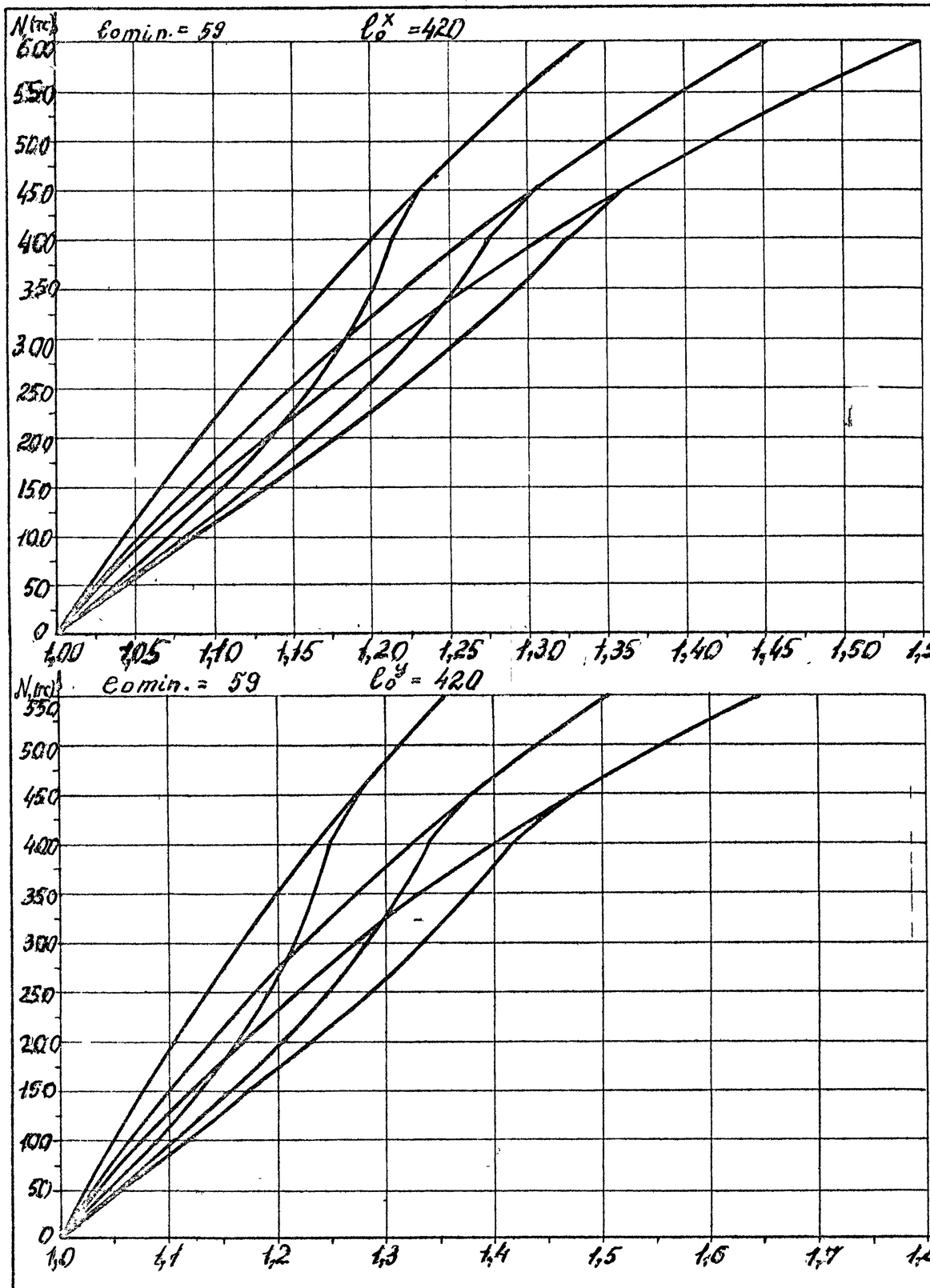

N,(тс)
e₀min.= 59
ℓ_0^y =600
600
450
400
350
300
250
200
150
100
50
0
1,0 1,2 1,4 1,6 1,8 2,0 2,2 2,4 2,6 2,8 3,0 3,2 3,4 3,6 3,8
ℓ

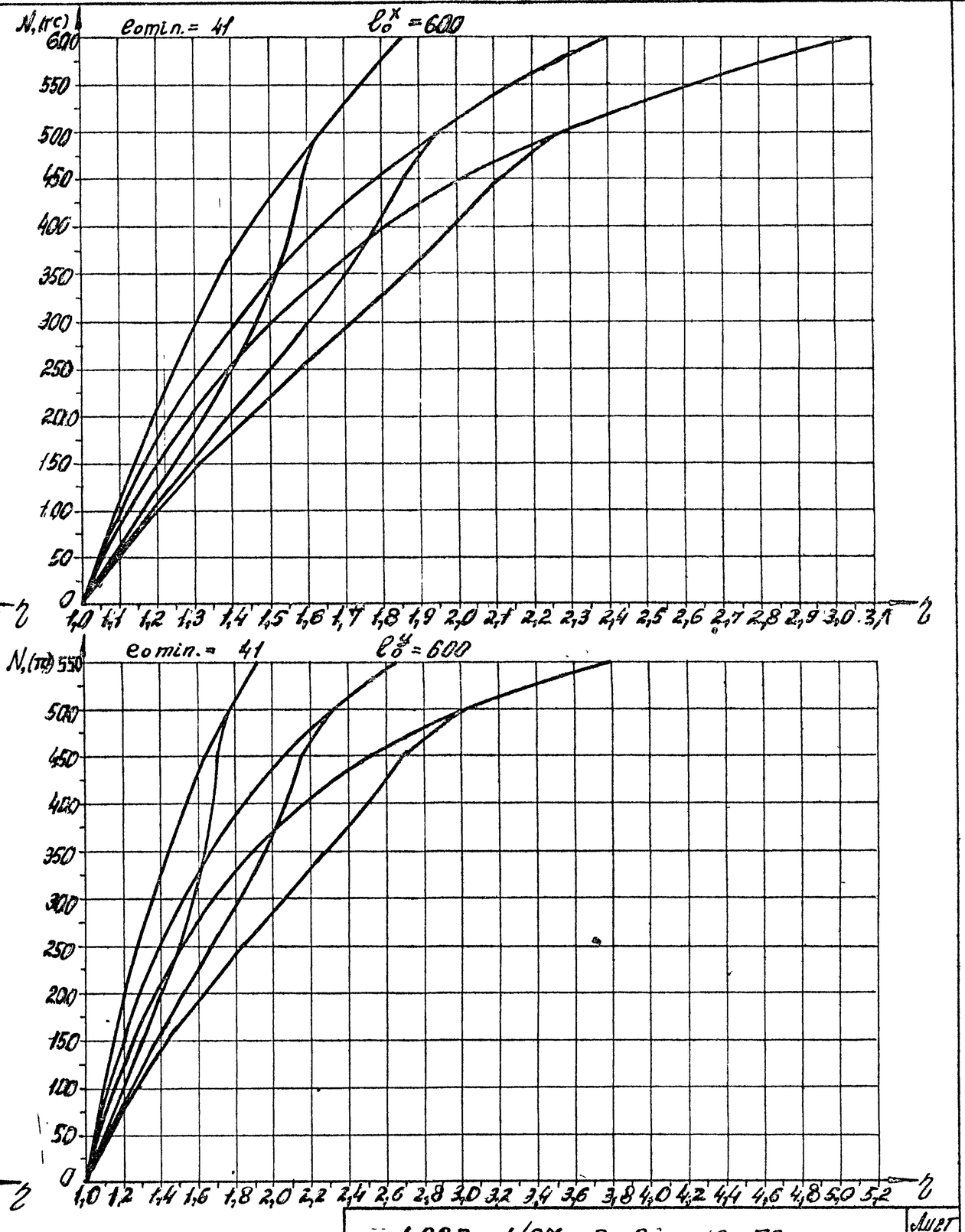


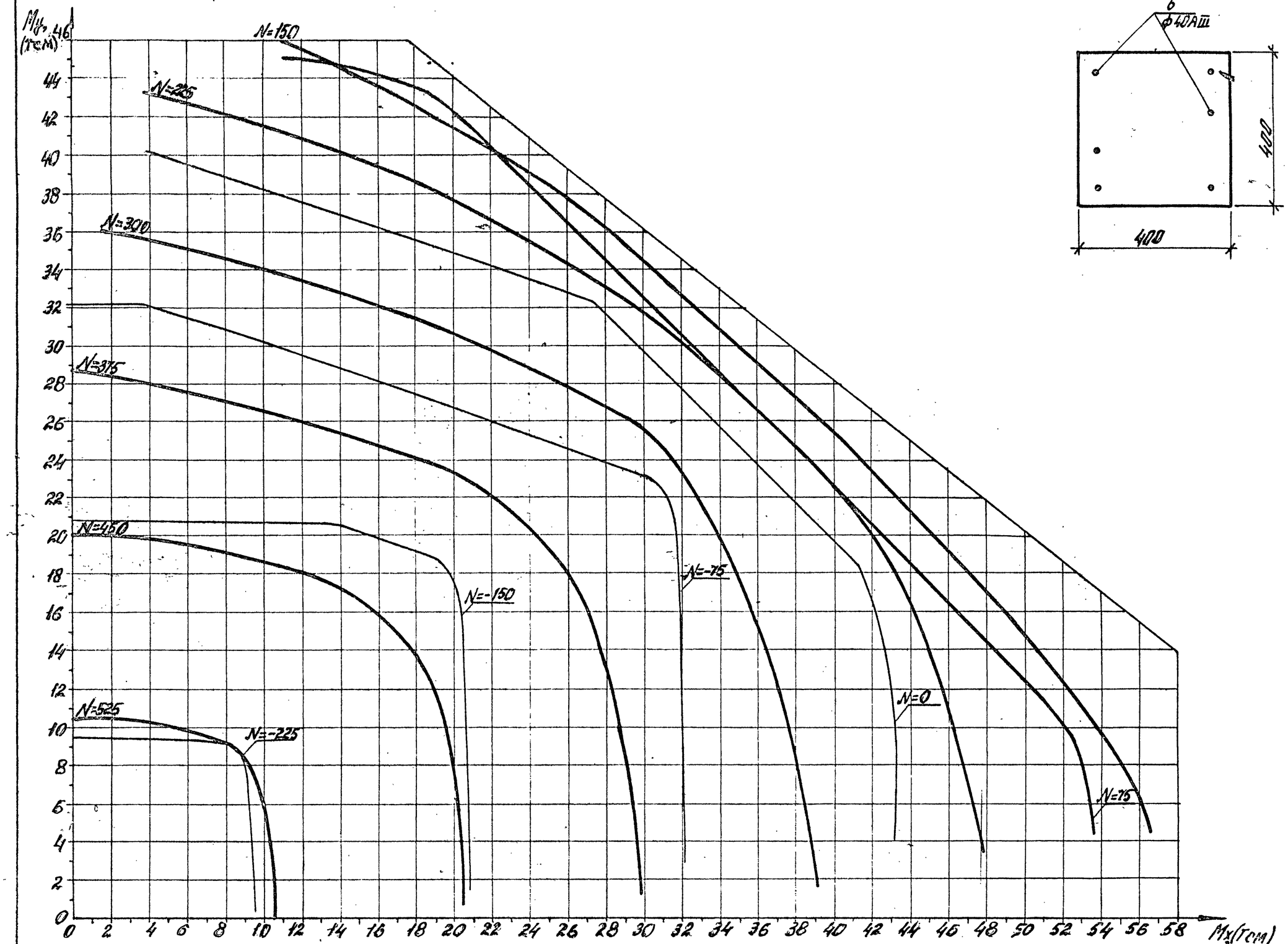
Класс бетона В40 (R_b^{β}=246,4кгс/см² при учете γ_{b2}=1,10)

1.020-1/87. 0-6-3 ПЗ

Лист 113


N(тс)
e₀min.= 59
l_0^x =420
600
550
500
450
400
350
300
250
200
150
100
50
0
1,00 1,05 1,10 1,15 1,20 1,25 1,30 1,35 1,40 1,45 1,50 1,55 l
N(тс)
e₀min.= 59
l_0^y = 420
550
500
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 l


N,(тс)
e₀min.= 41
l_0^x =600
600
550
500
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9 3,0 3,1 l
N(тс)
e₀min.= 41
l_0^y = 600
550
500
450
400
350
300
250
200
150
100
50
0
1,0 1,2 1,4 1,6 1,8 2,0 2,2 2,4 2,6 2,8 3,0 3,2 3,4 3,6 3,8 4,0 4,2 4,4 4,6 4,8 5,0 5,2 l

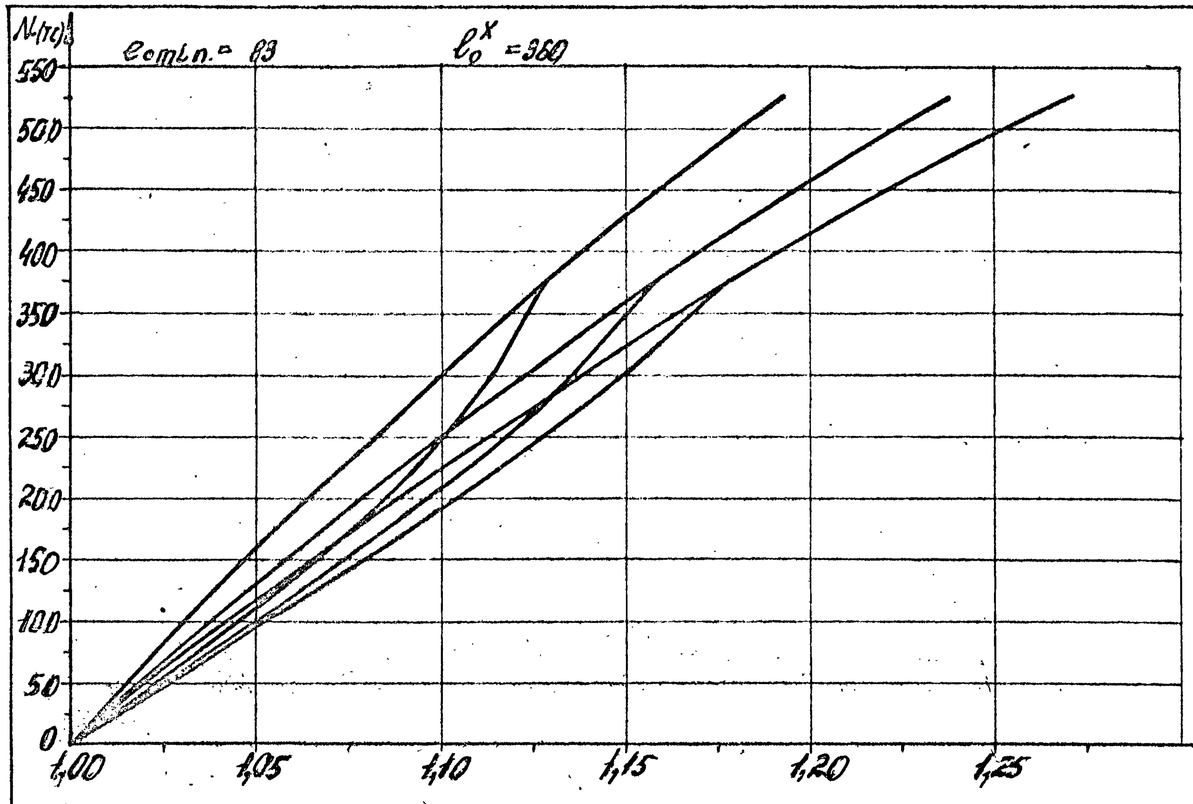


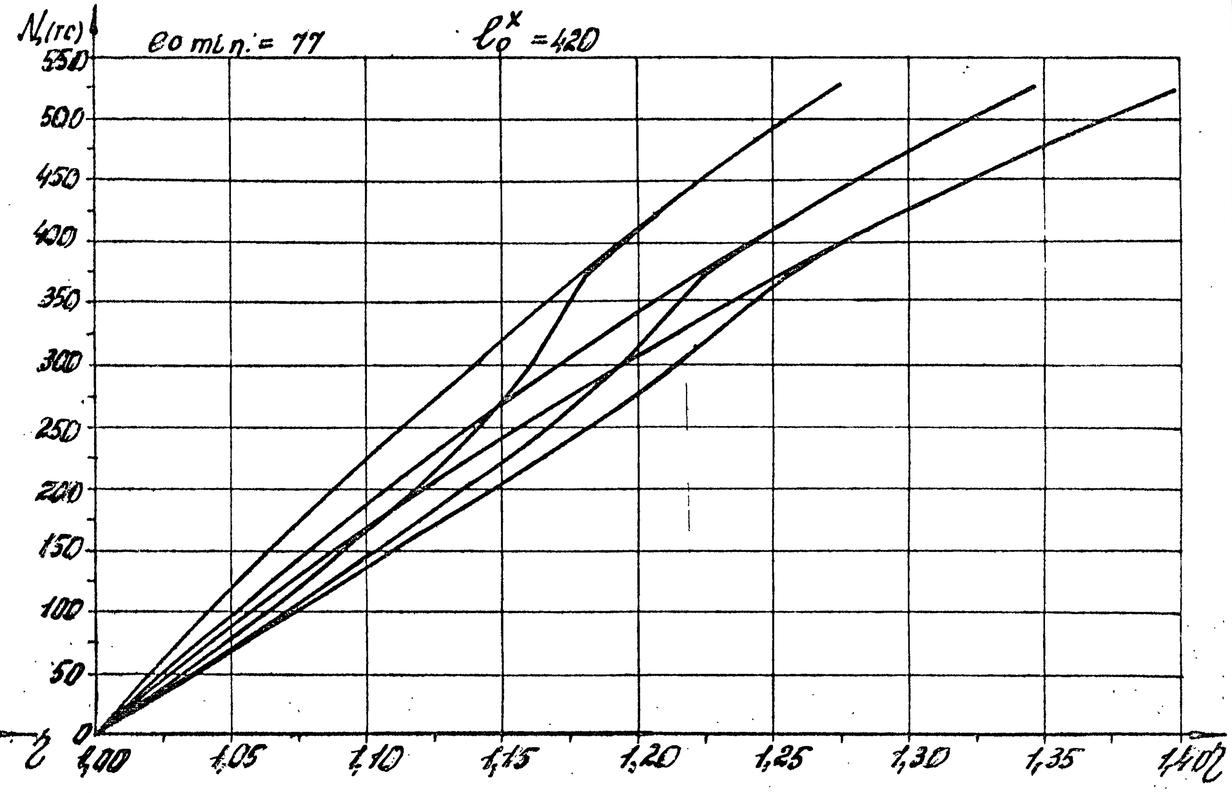
класс бетона В40 ($R_б$=204,6 кгс/см^2 при учете $\gamma_{б2}$=0,9)

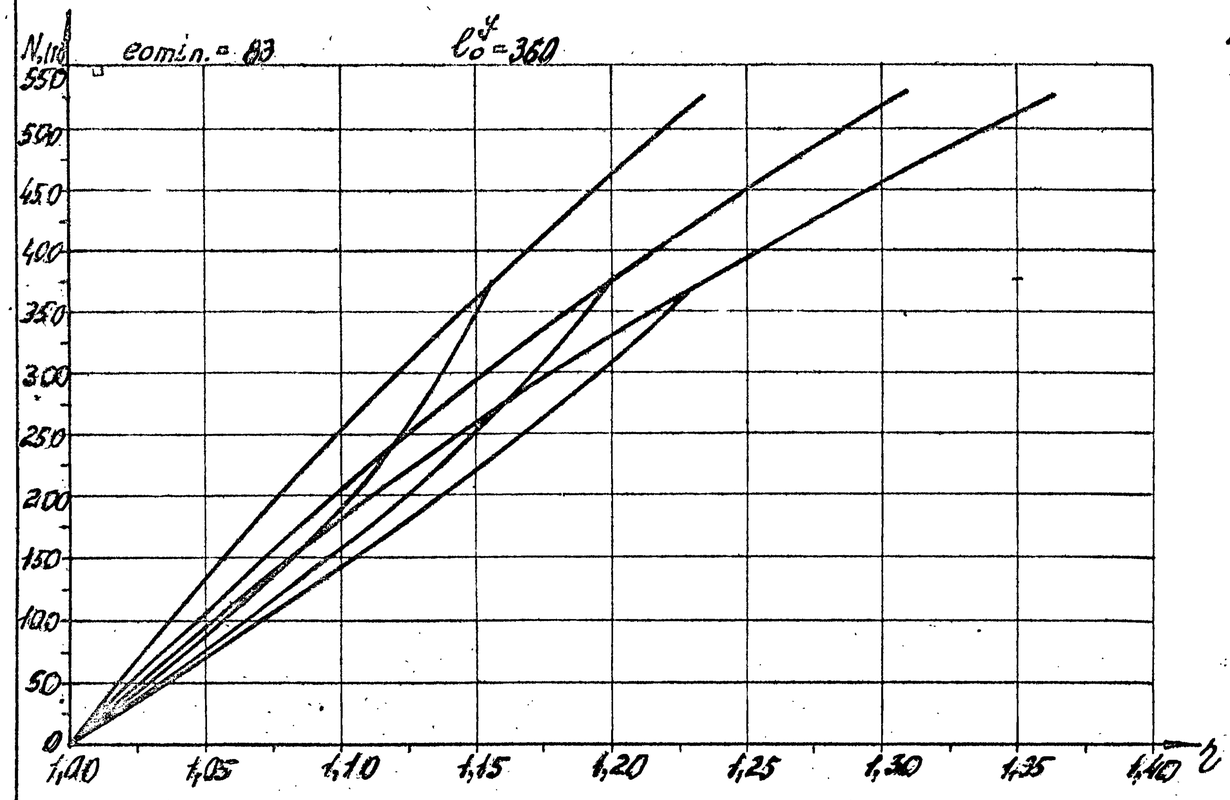
1.020-1/87. 0-6-3 ПЗ

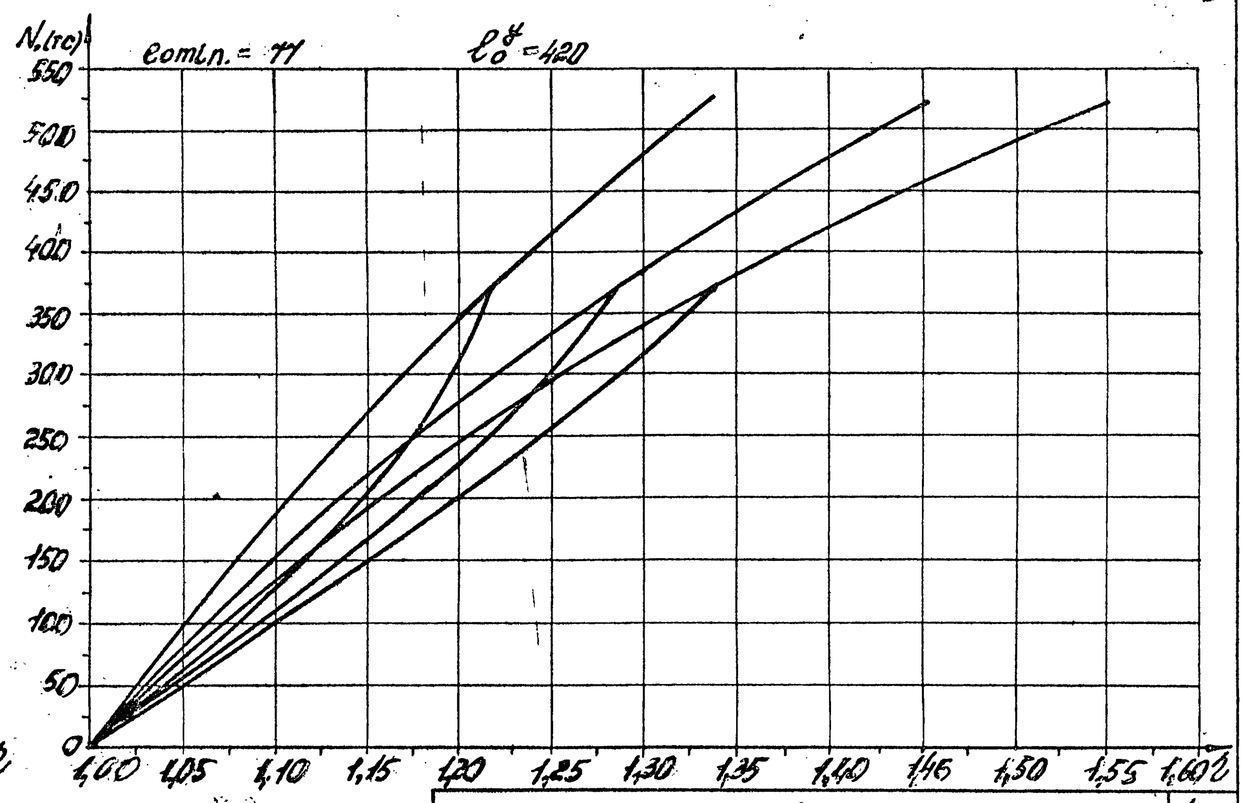
Лист 115

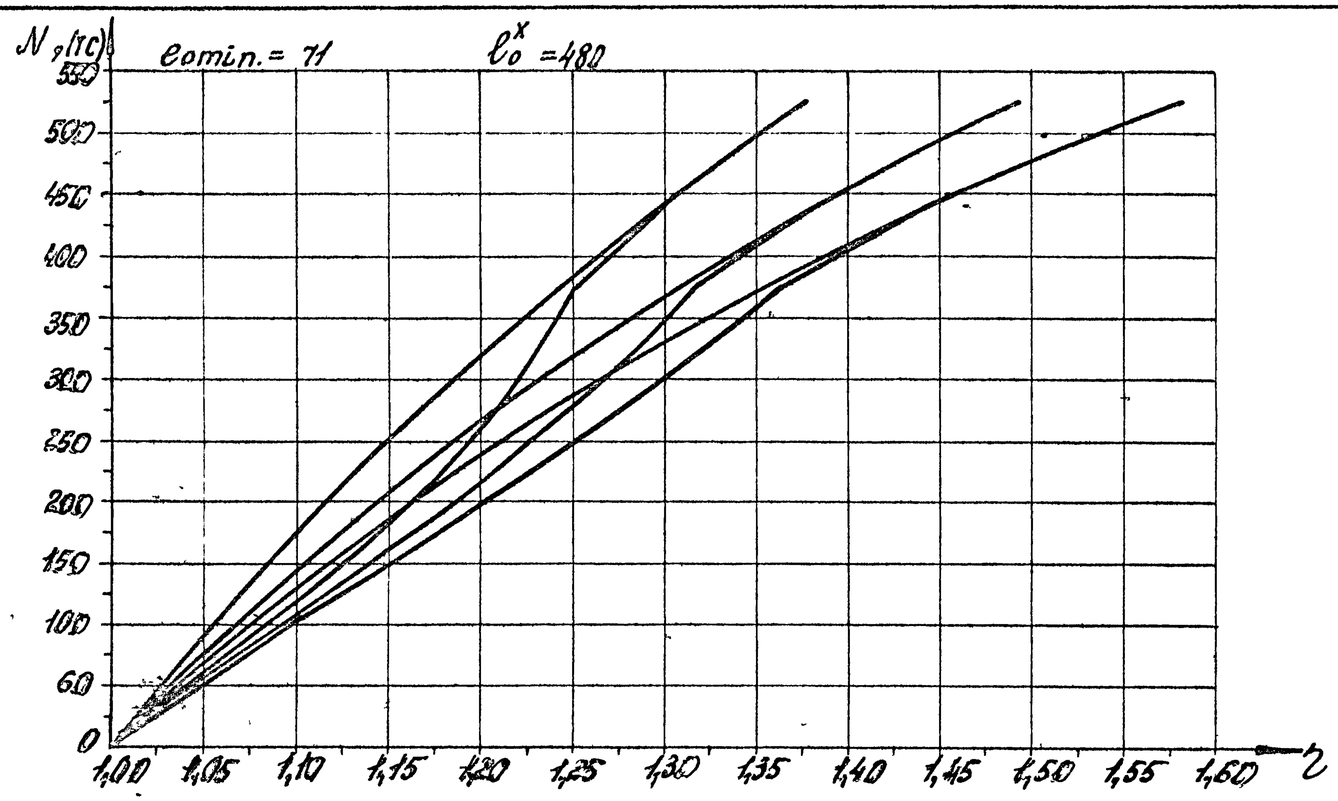
24788-02 21

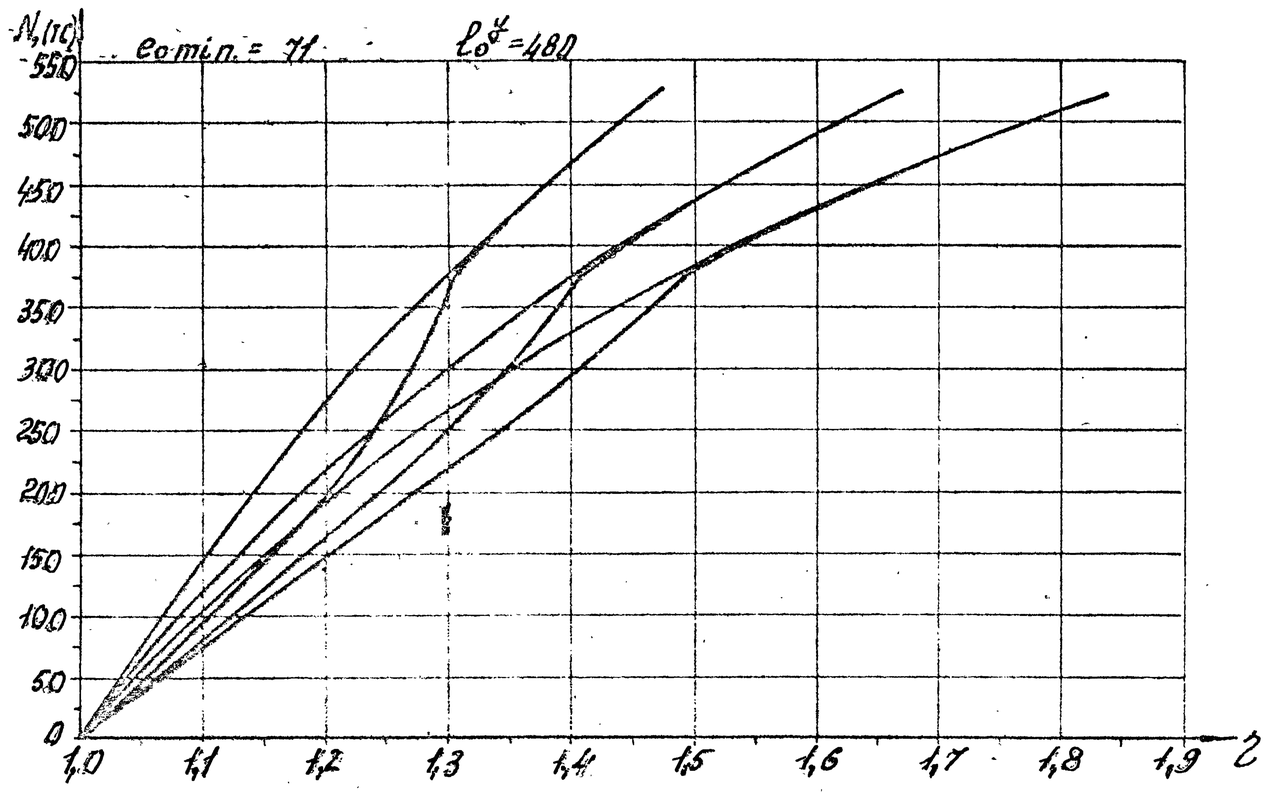

N,(тс)
e₀mi n.= 83
ℓ_0^x =360
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
ℓ

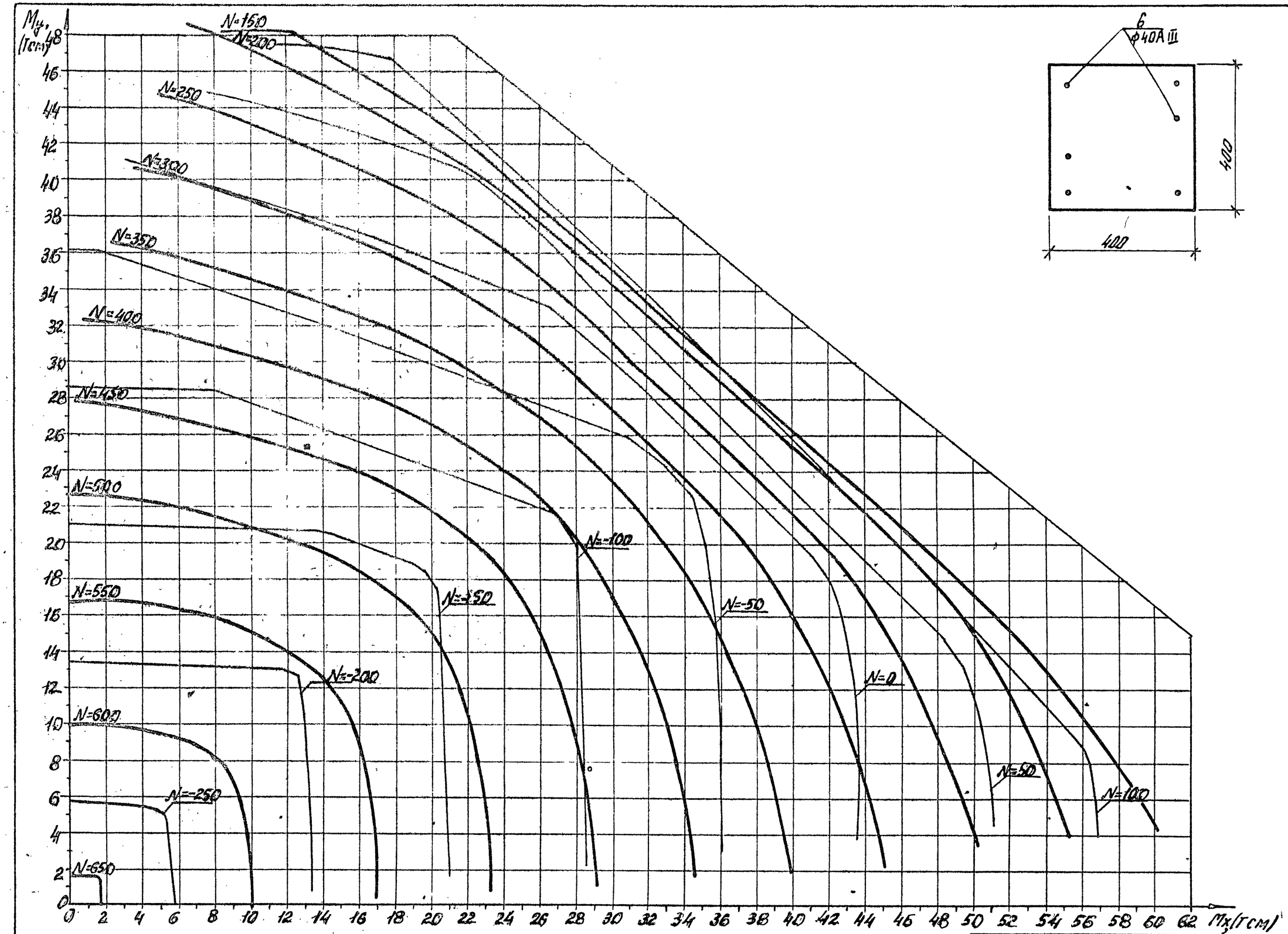

N,(тс)
e₀mi n.= 77
ℓ_0^x =420
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
ℓ


N,(тс)
e₀mi n.= 83
ℓ_0^y =360
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
ℓ

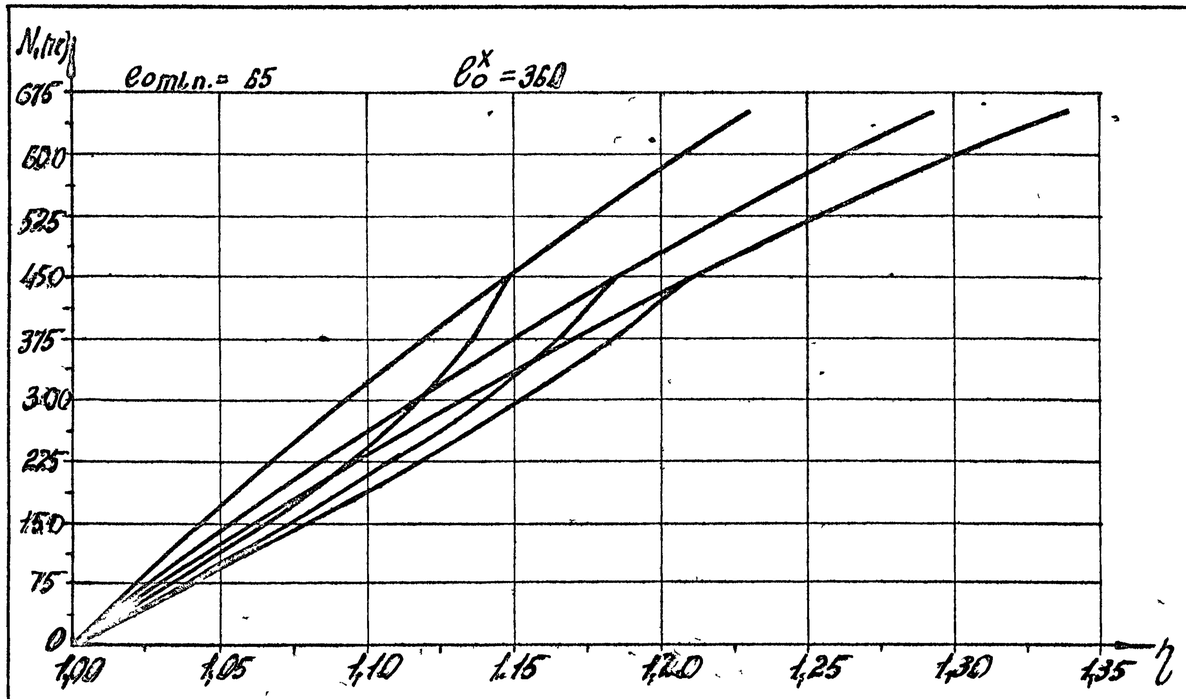

N,(тс)
e₀mi n.= 77
ℓ_0^y =420
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,46
1,50
1,55
1,60
ℓ

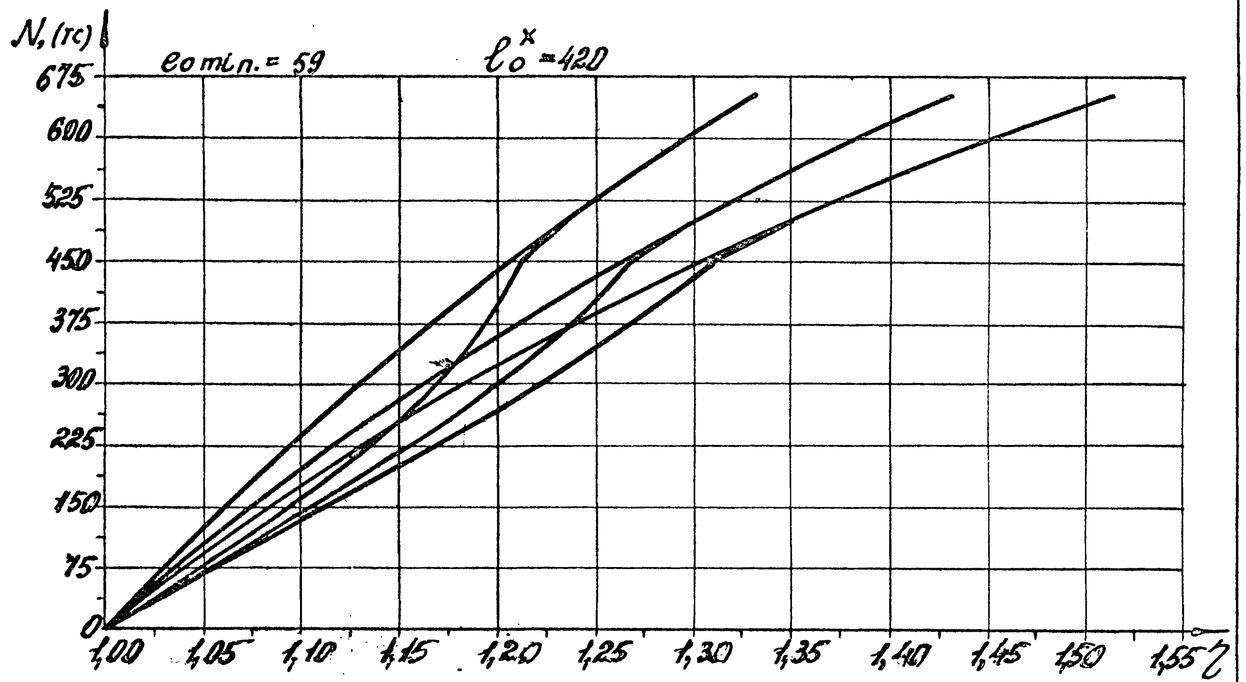

N_g(тс)
$e_{0min.}$ = 71
l_0^x = 480
550
500
450
400
350
300
250
200
150
100
60
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
1,60
λ

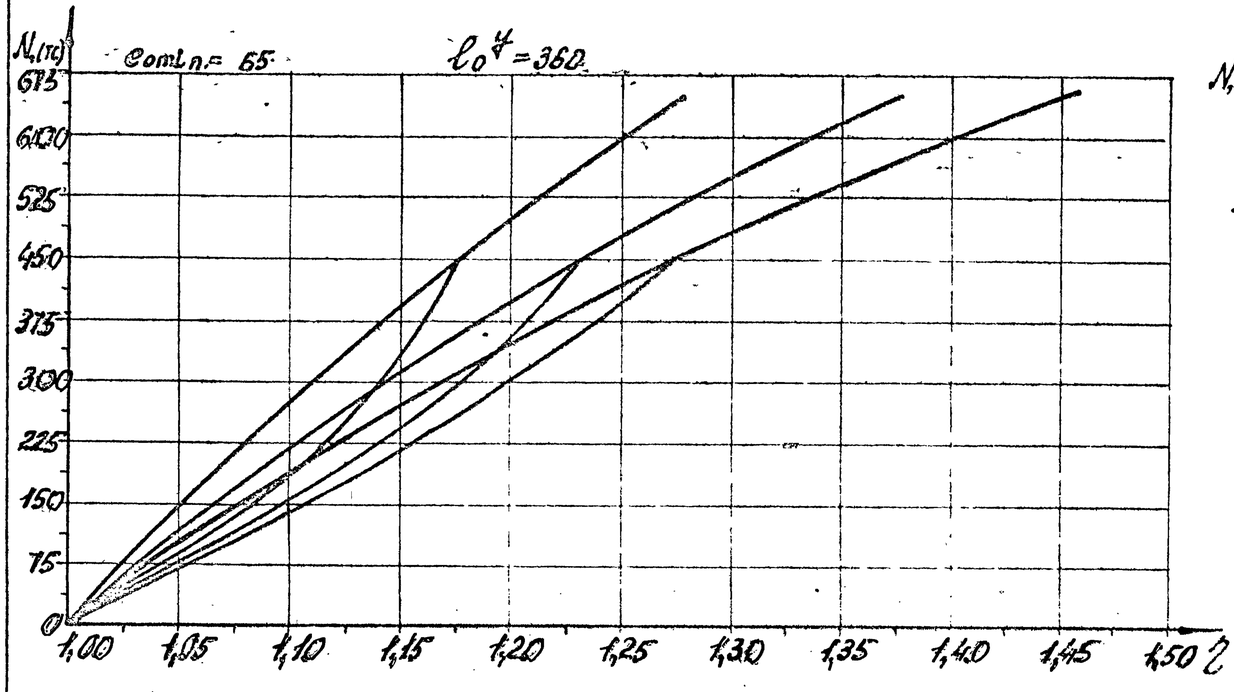

N_g(тс)
$e_{0min.}$ = 71
l_0^y = 480
550
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
λ

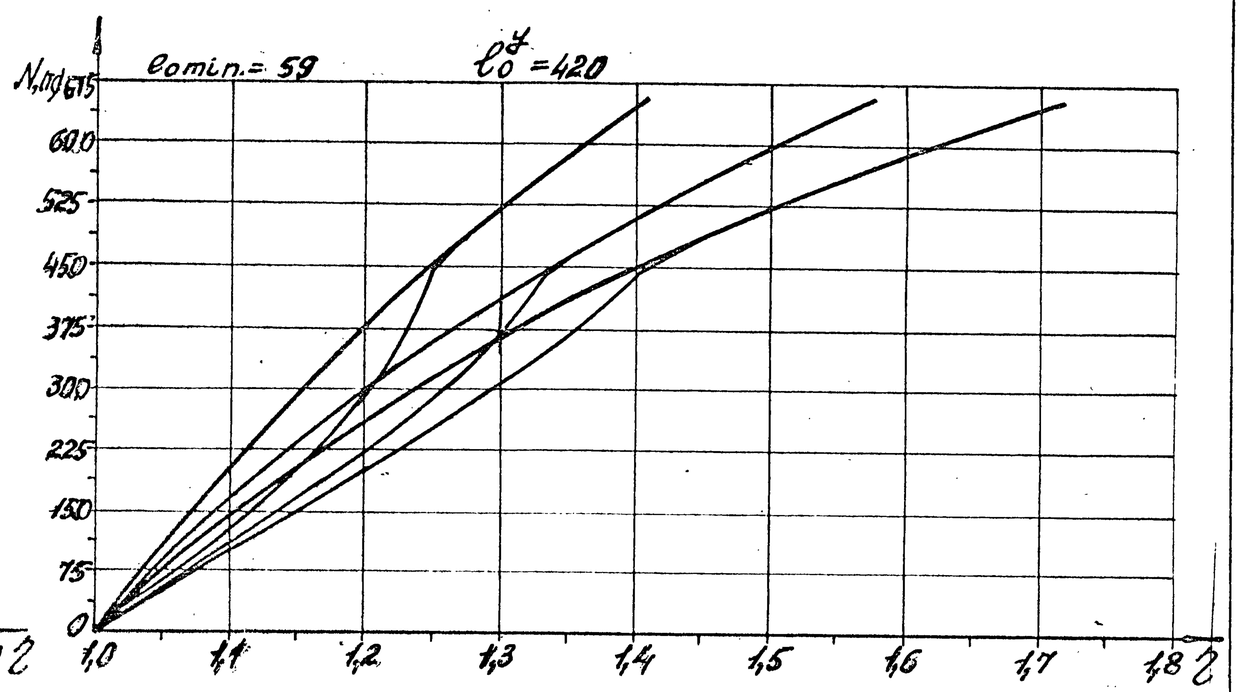


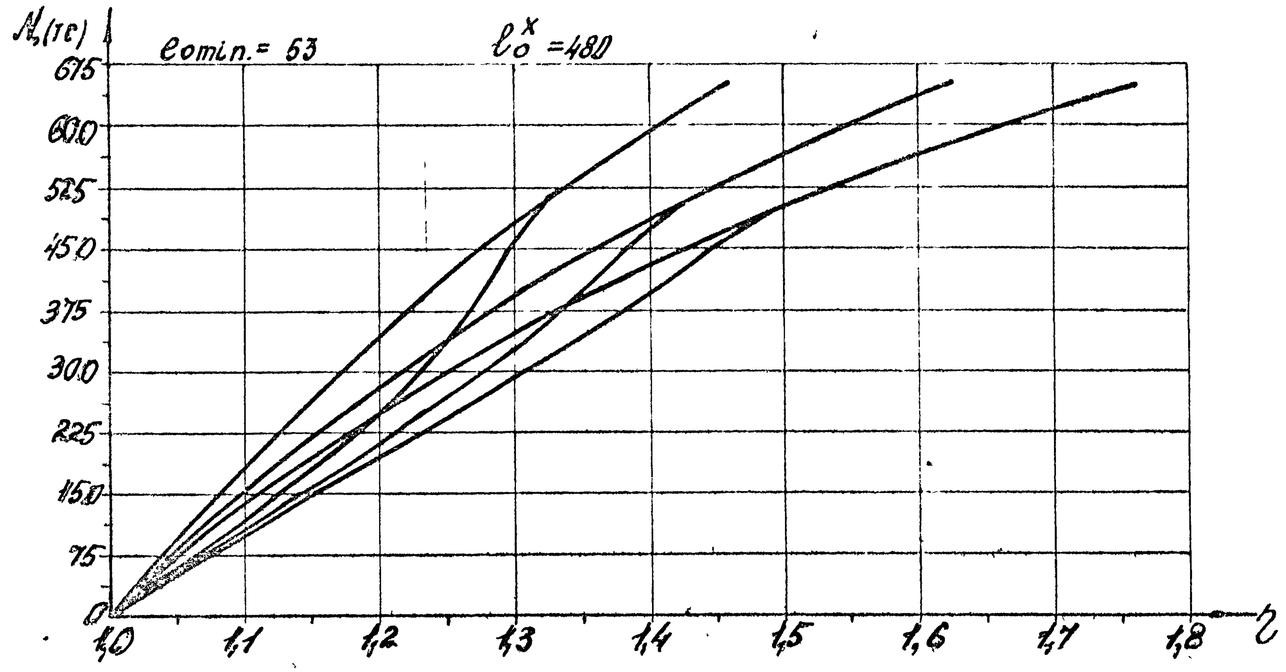
Класс бетона В40 (R_b=246,4кгс/см^2 при учете γ_{b2}=1,10)

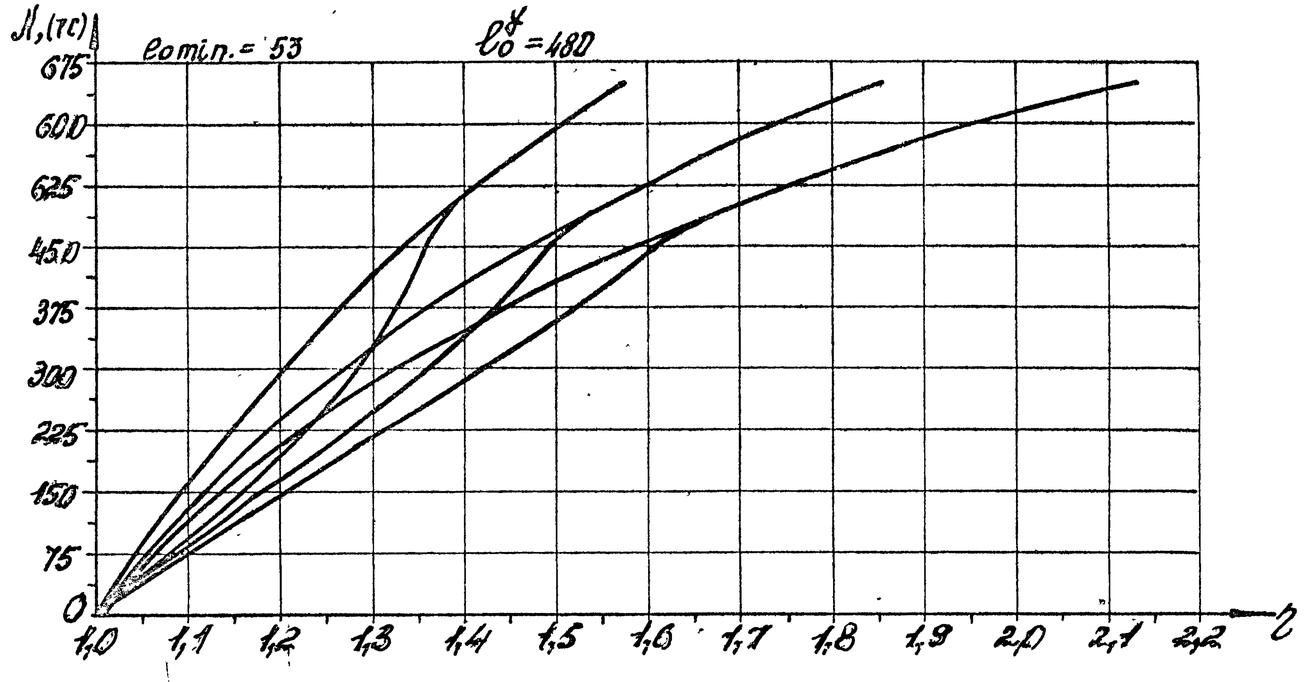

N,(тс)
e_o min.= 65
e_o^x = 360
675
600
525
450
375
300
225
150
75
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
η

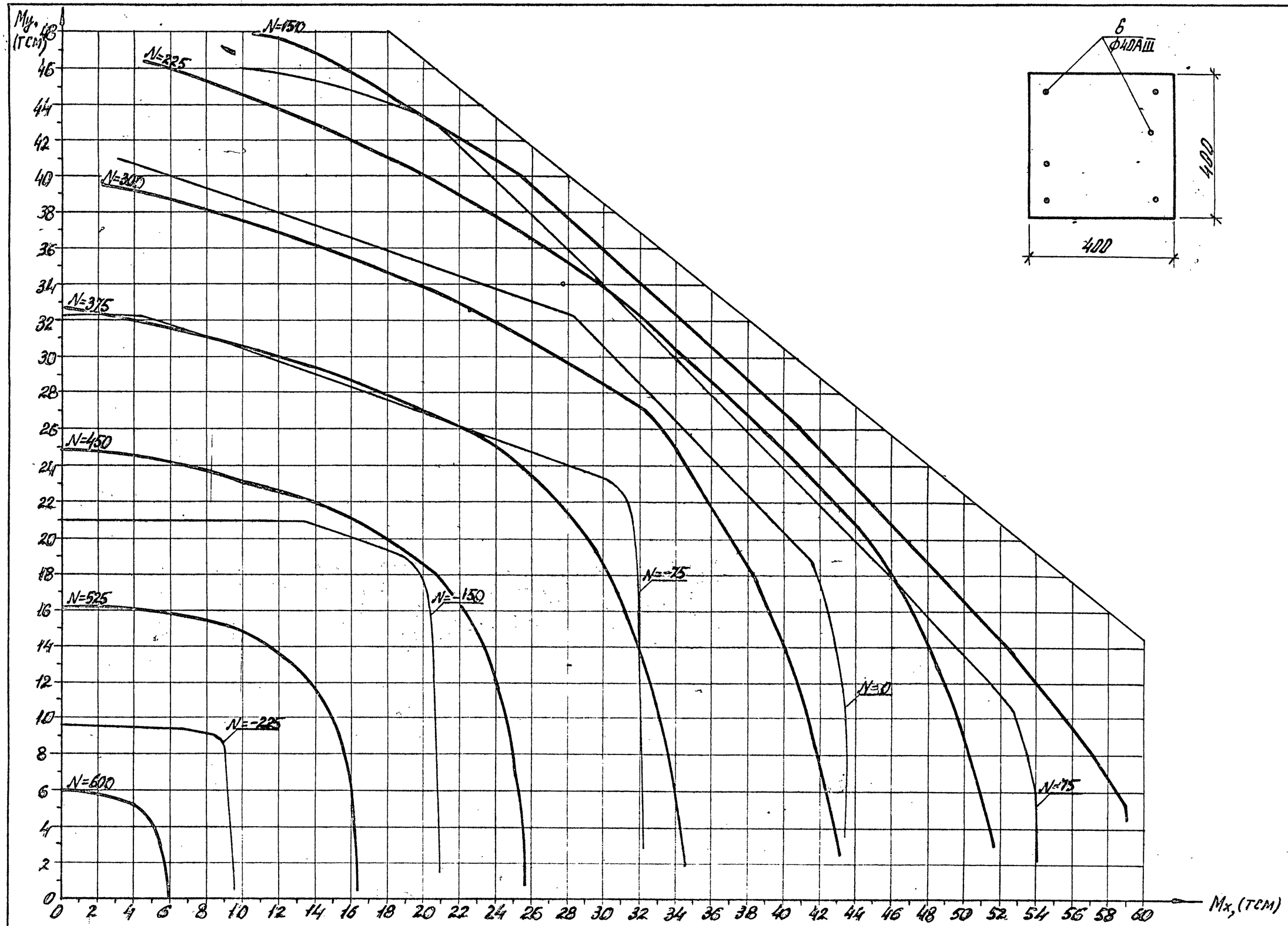

N,(тс)
e_o min.= 59
e_o^x = 420
675
600
525
450
375
300
225
150
75
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
η


N,(тс)
e_o min.= 65
e_o^y = 360
675
600
525
450
375
300
225
150
75
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
ζ


N,(тс)
e_o min.= 59
e_o^y = 420
675
600
525
450
375
300
225
150
75
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
ζ


N,(тс)
e0min.= 53
l_0^x =480
675
600
525
450
375
300
225
150
75
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
η

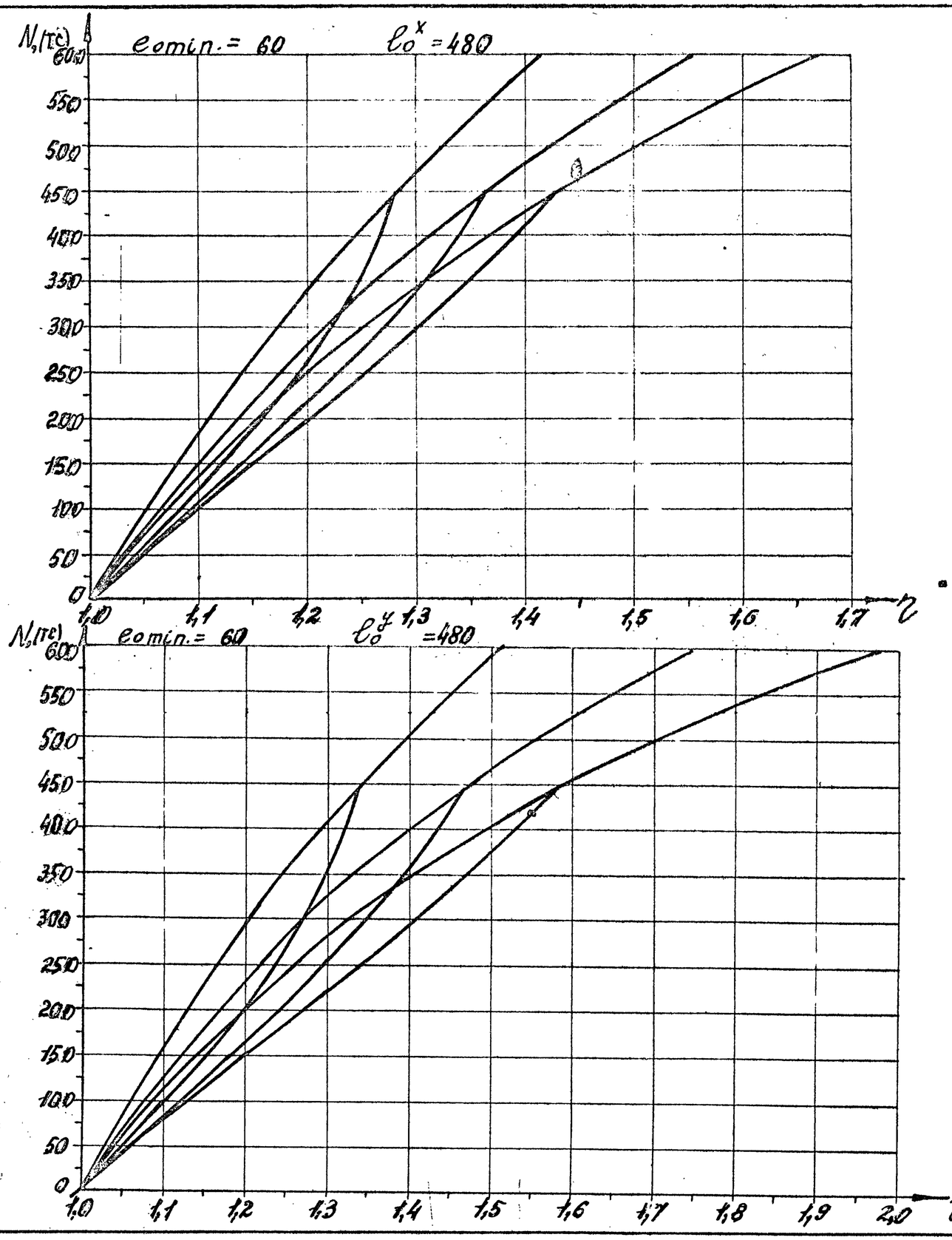

N,(тс)
e0min.= 53
l_0^y =480
675
600
525
450
375
300
225
150
75
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
η

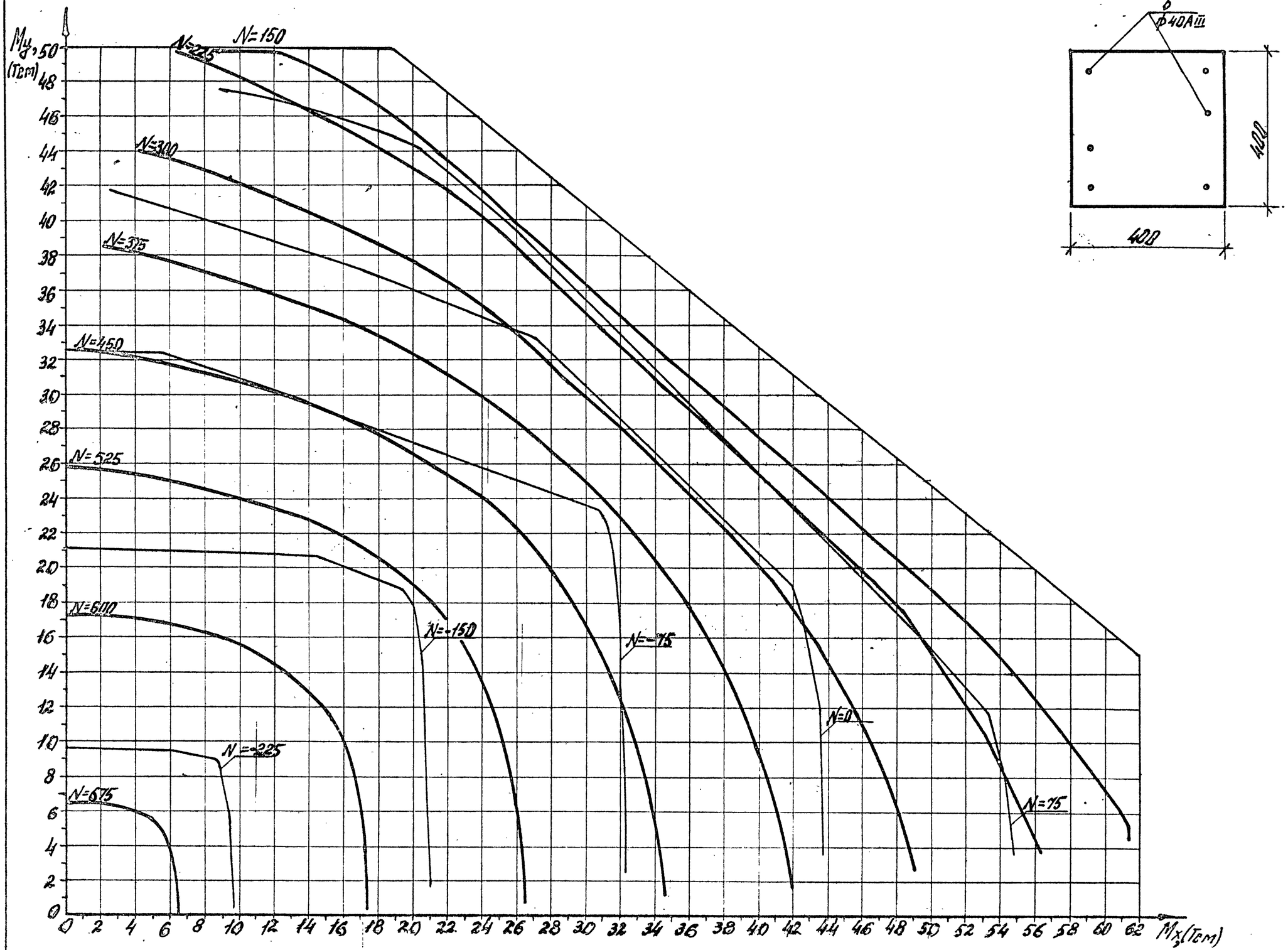


Классе бетона В45 ($R_б$=229,5 кгс/см^2 при учете $\gamma_{б2}$=0,9)

1.020 – 1/87. 0 – 6 – 3 ПЗ

Лист 121


N,(тс)
e0min.= 60
ℓ_0^x =480
600
550
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
r
N,(тс)
e0min.= 60
ℓ_0^y =480
600
550
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
r

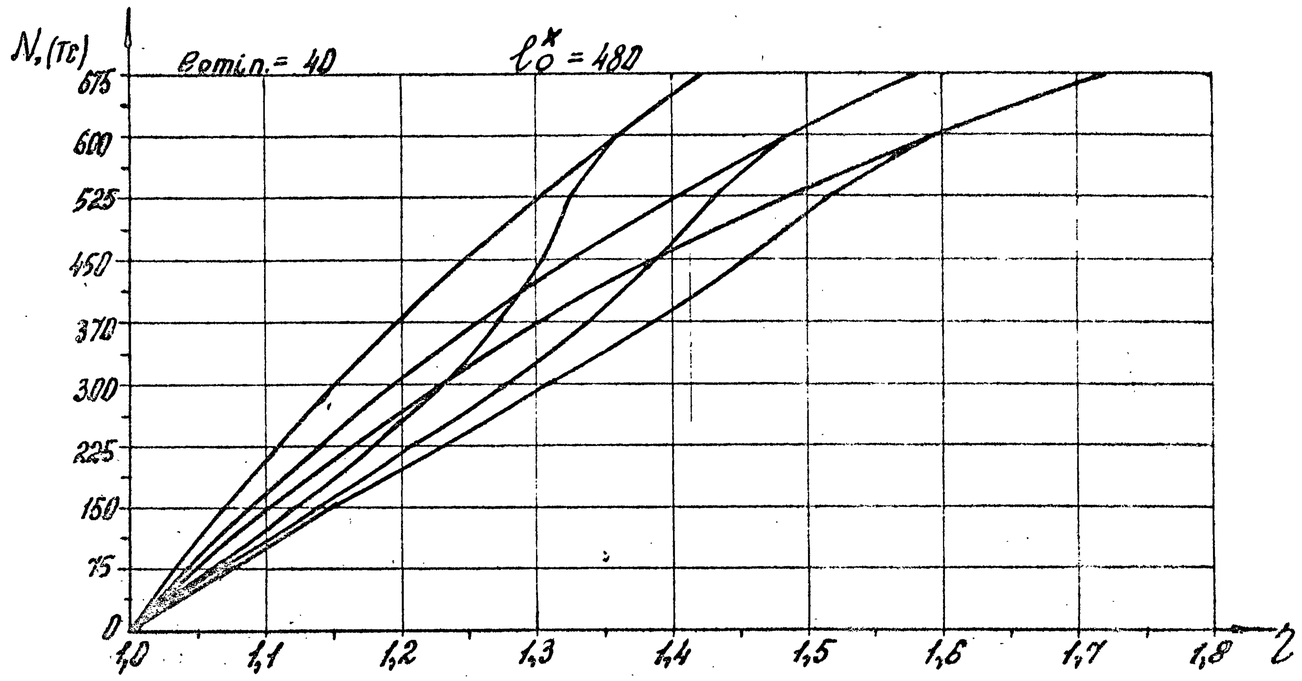


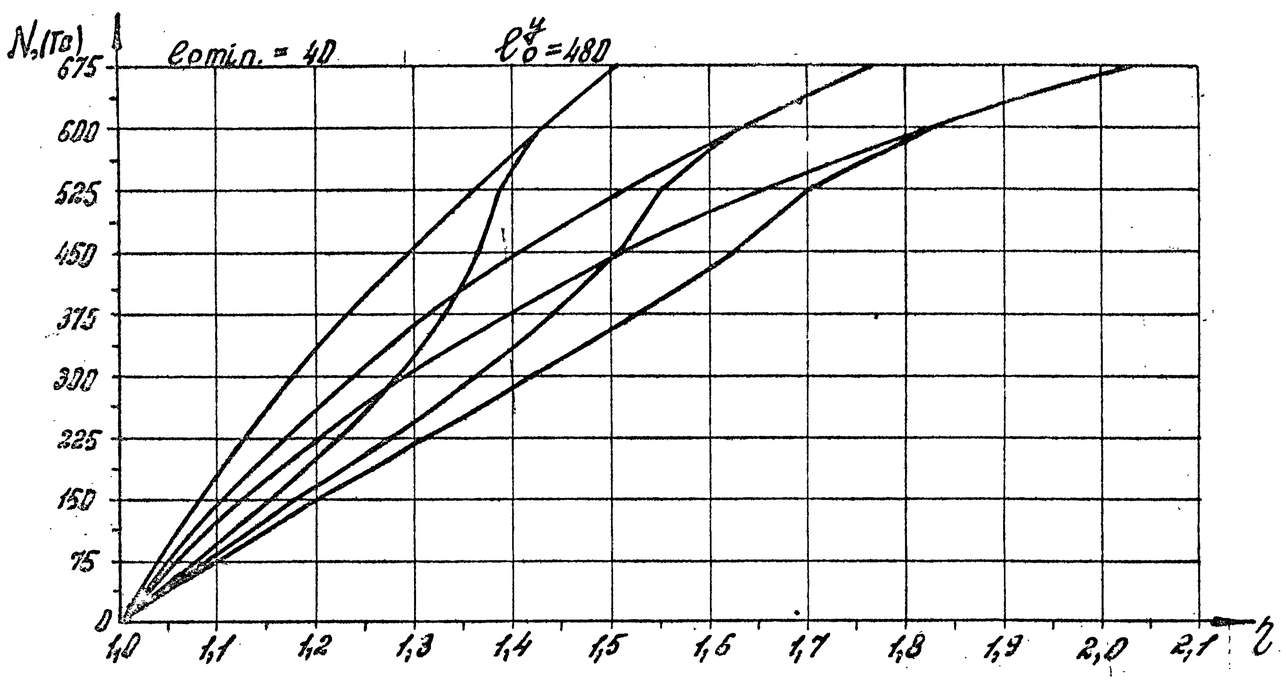
класса бетона В45 ($R_б$=280,5 кгс/см² при учете $\gamma_{б2}$=1,10)

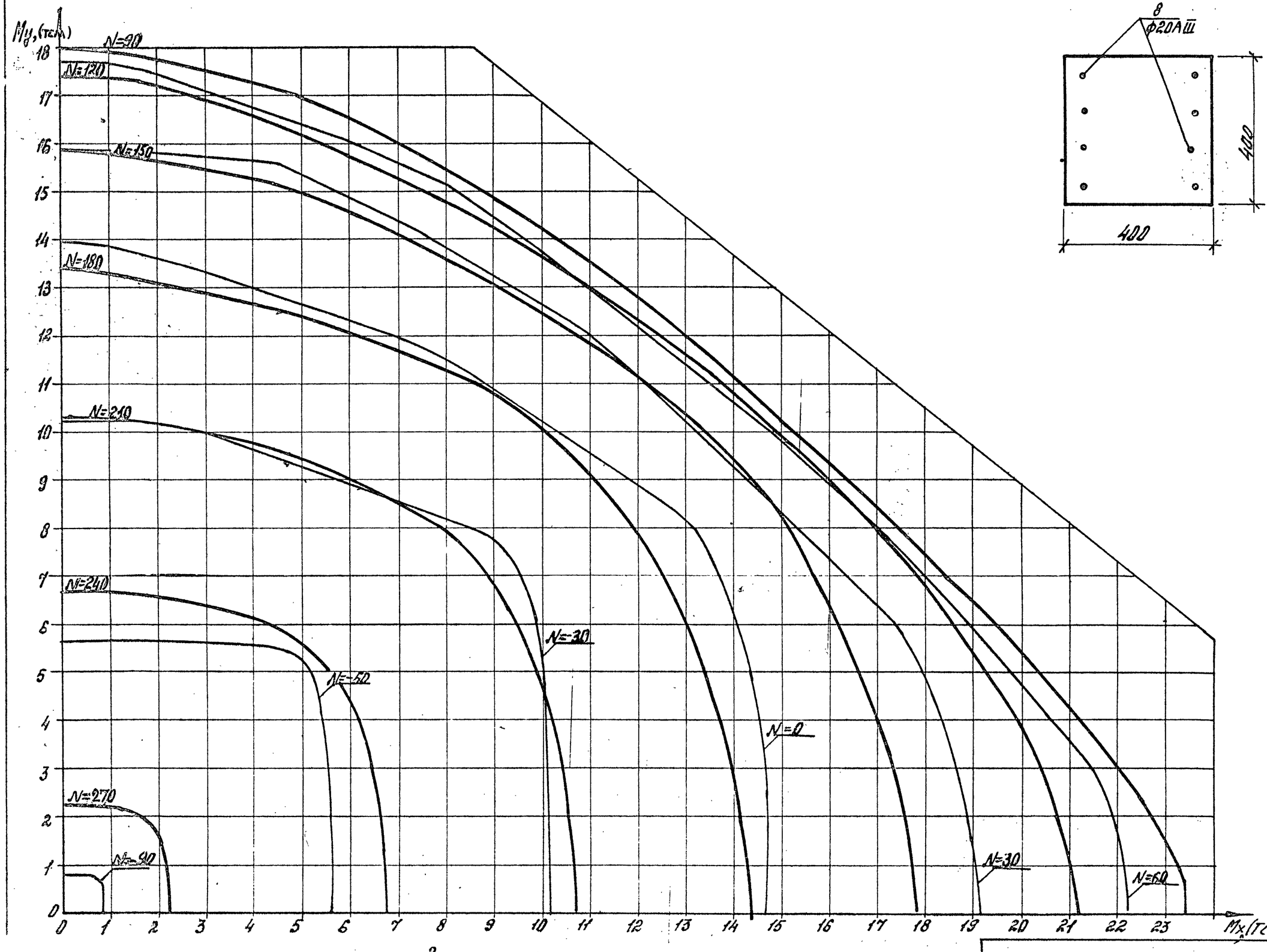
1.020-1/87. 0-6-3ПЗ

Лист 123

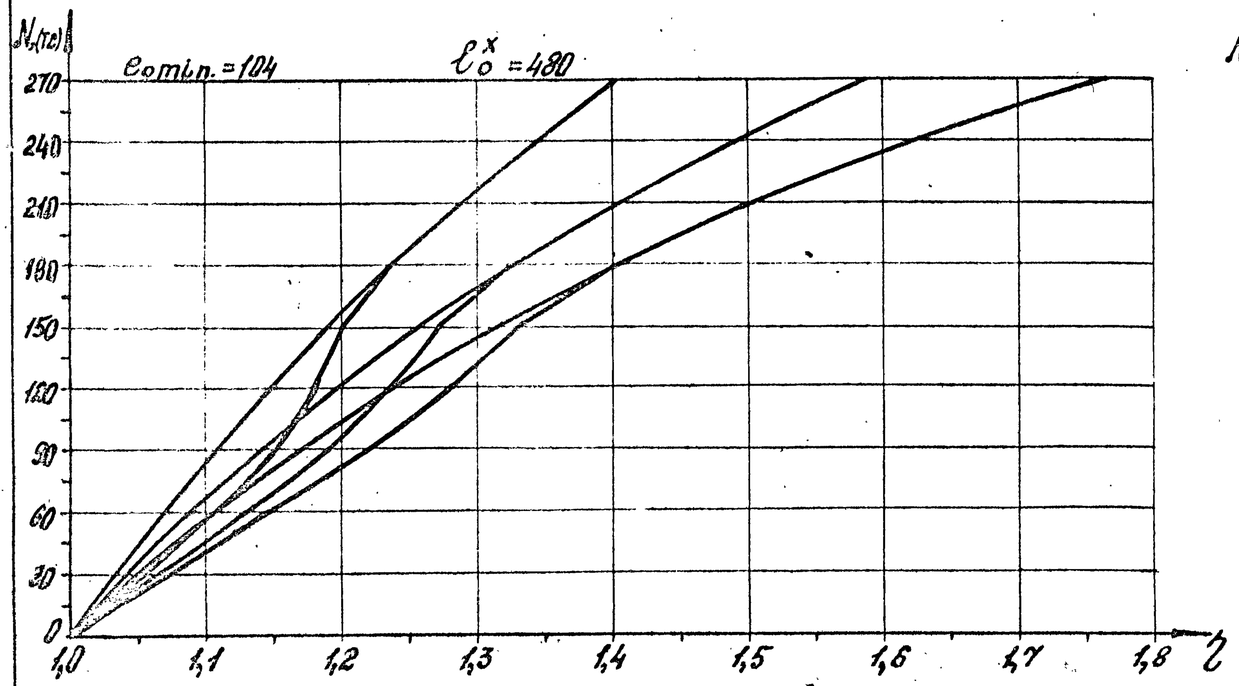
24786-02. 29

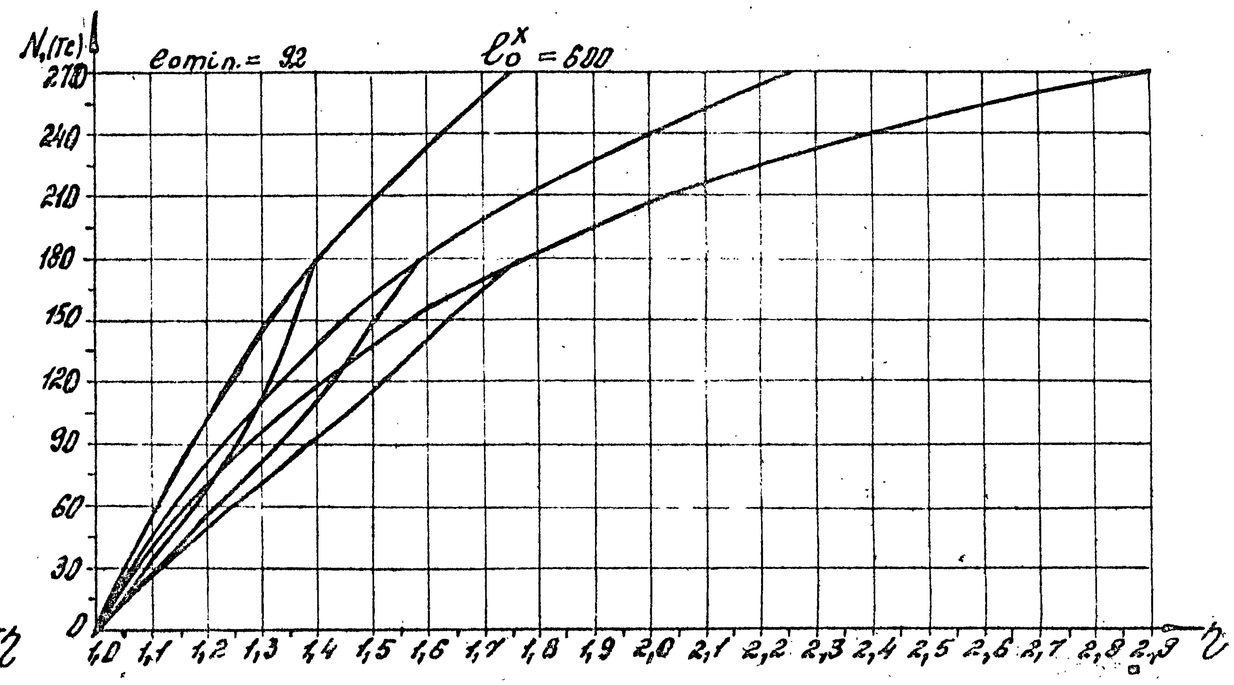

N, (Тс)
e omin. = 40
l_0^x = 480
675
600
525
450
375
300
225
150
75
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
λ

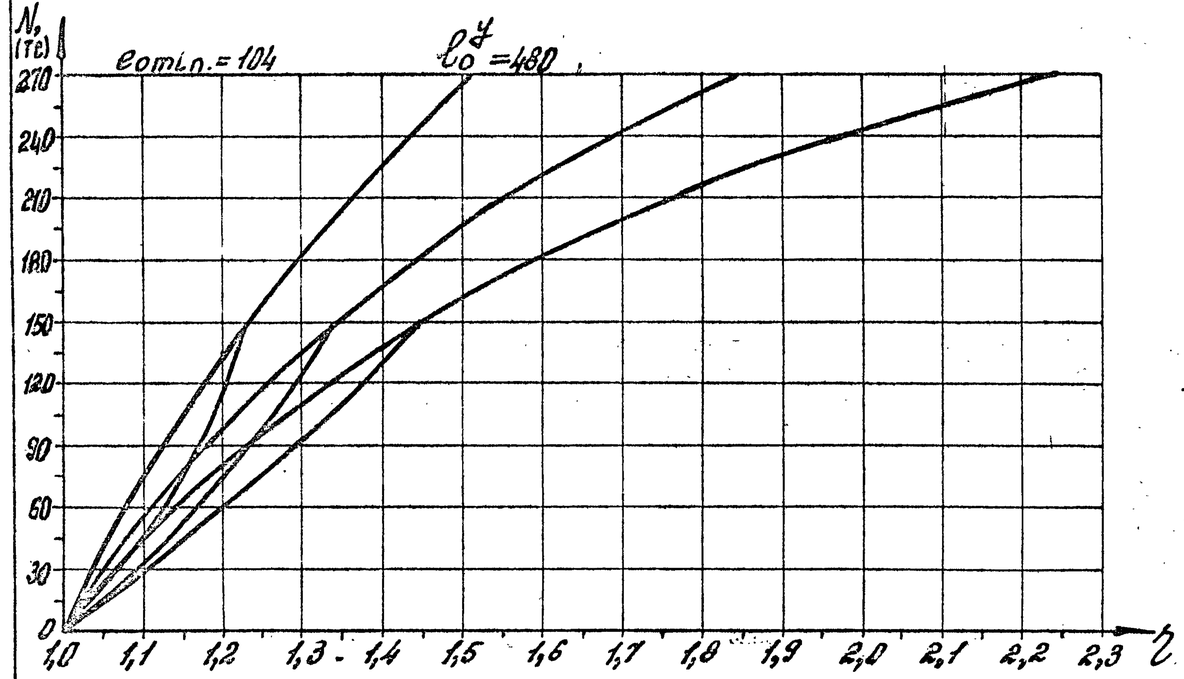

N, (Тс)
e omin. = 40
l_0^y = 480
675
600
525
450
375
300
225
150
75
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
λ

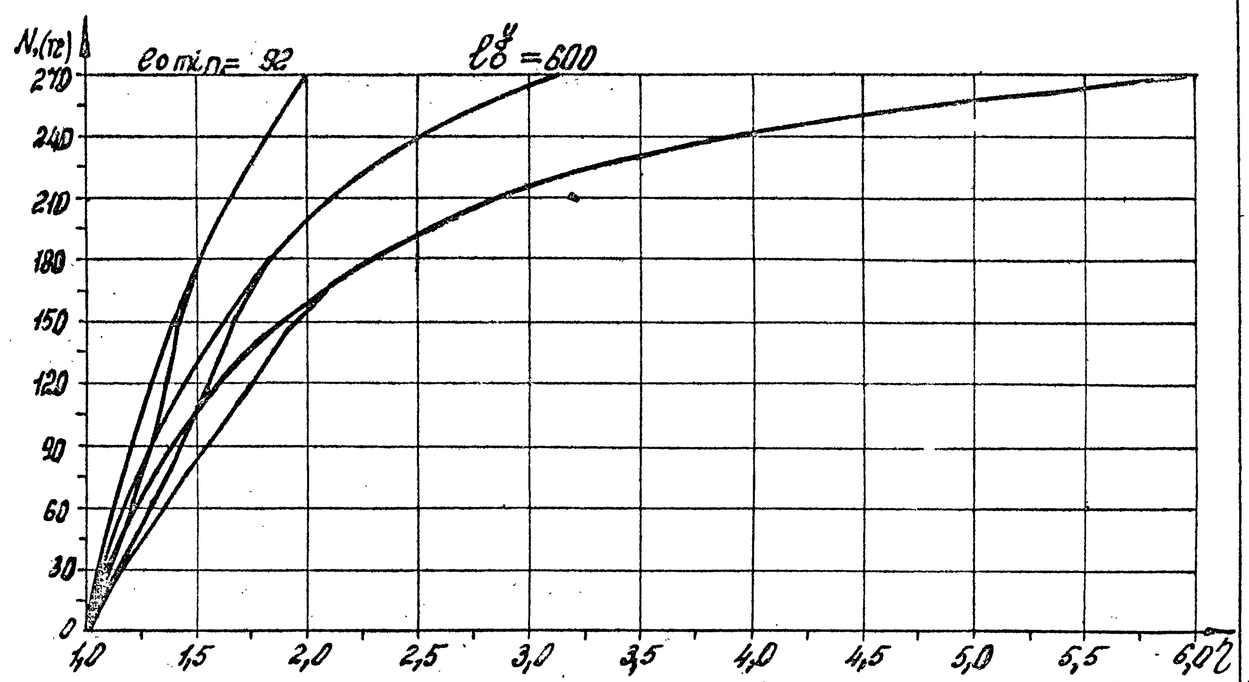


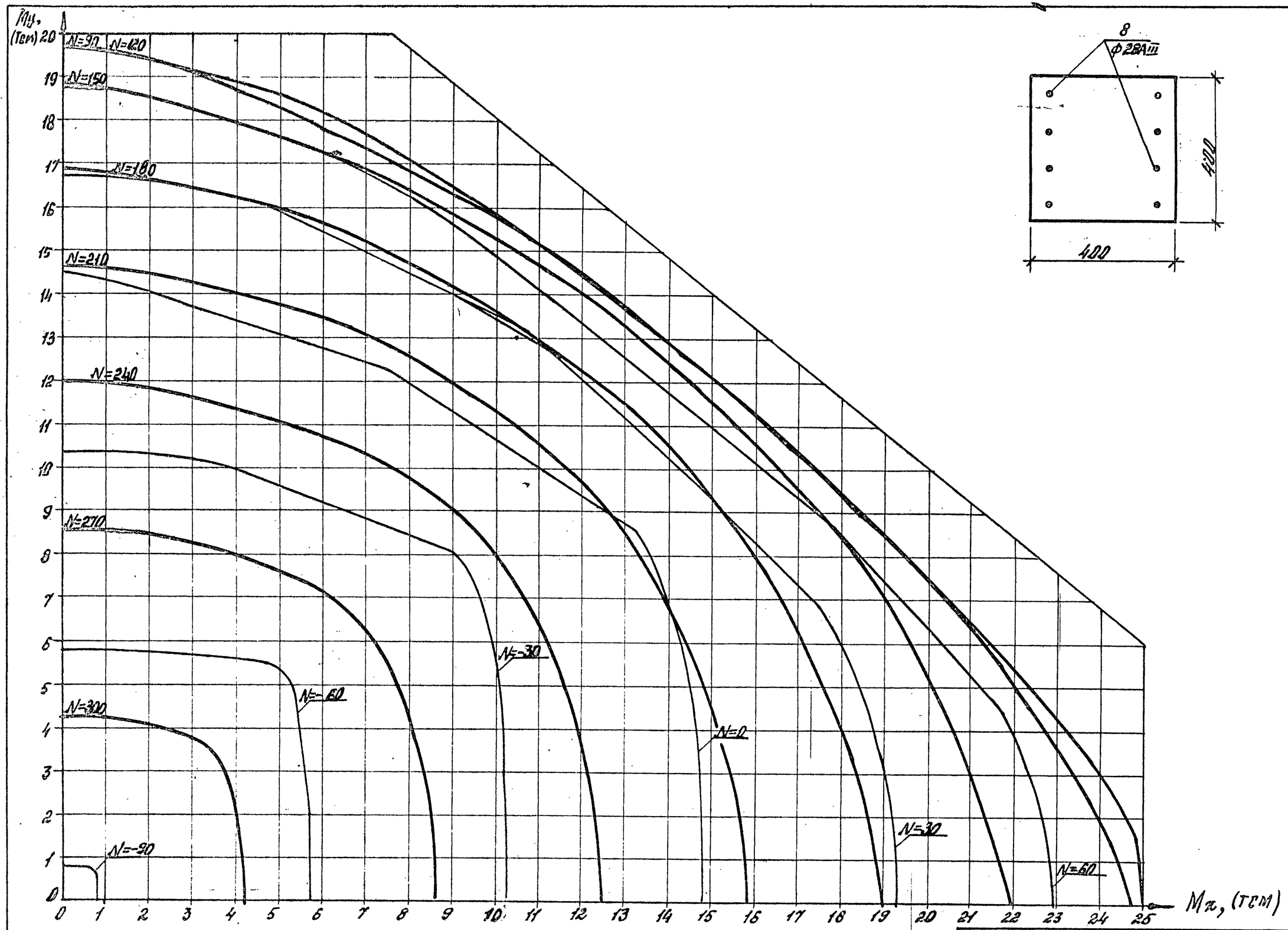
Класс бетона В22,5 (R_b = 19,2 кгс/см^2 при учете γ_{b2} = 0,9)


N,(тс)
e₀min.=104
l₀ˣ=480
270
240
210
180
150
120
90
60
30
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8
l


N,(тс)
e₀min.= 92
l₀ˣ=600
270
240
210
180
150
120
90
60
30
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9
l


N,
(тс)
e₀min.=104
l₀ʸ=480
270
240
210
180
150
120
90
60
30
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3
l

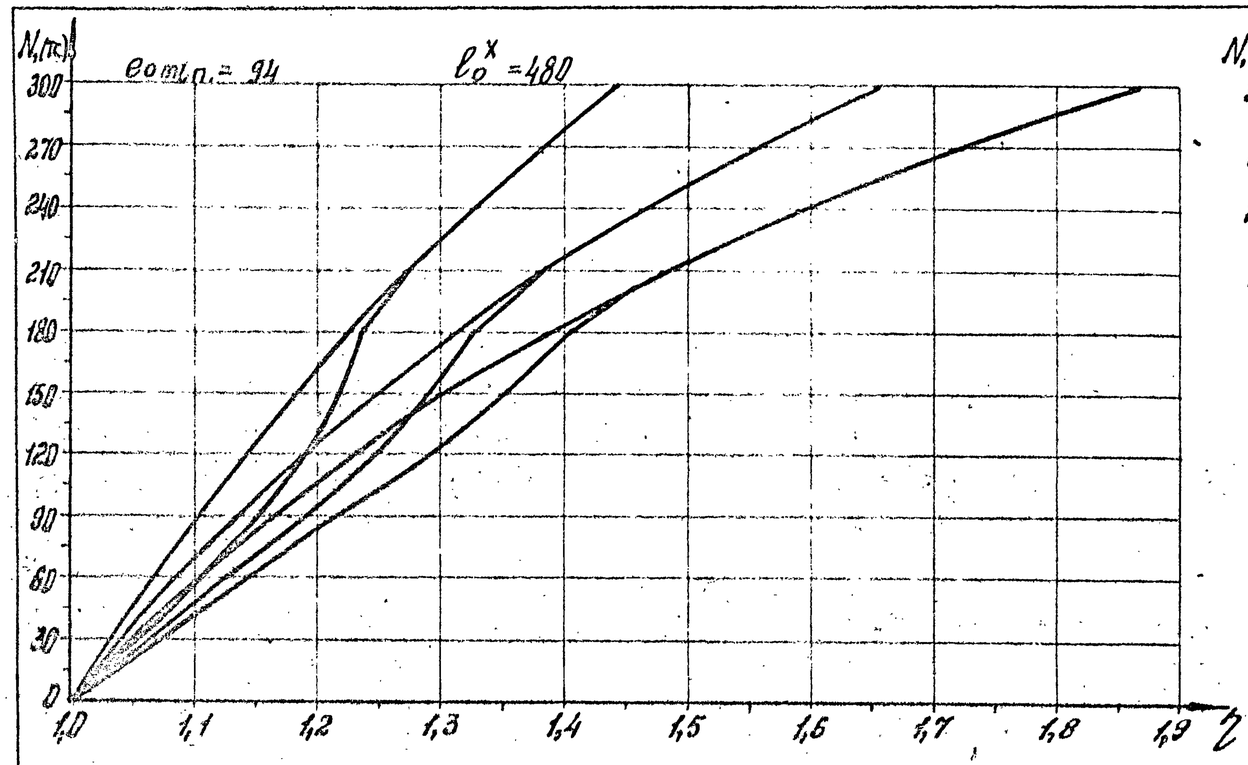

N,(тс)
e₀min.= 92
l₀ʸ=600
270
240
210
180
150
120
90
60
30
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0
l

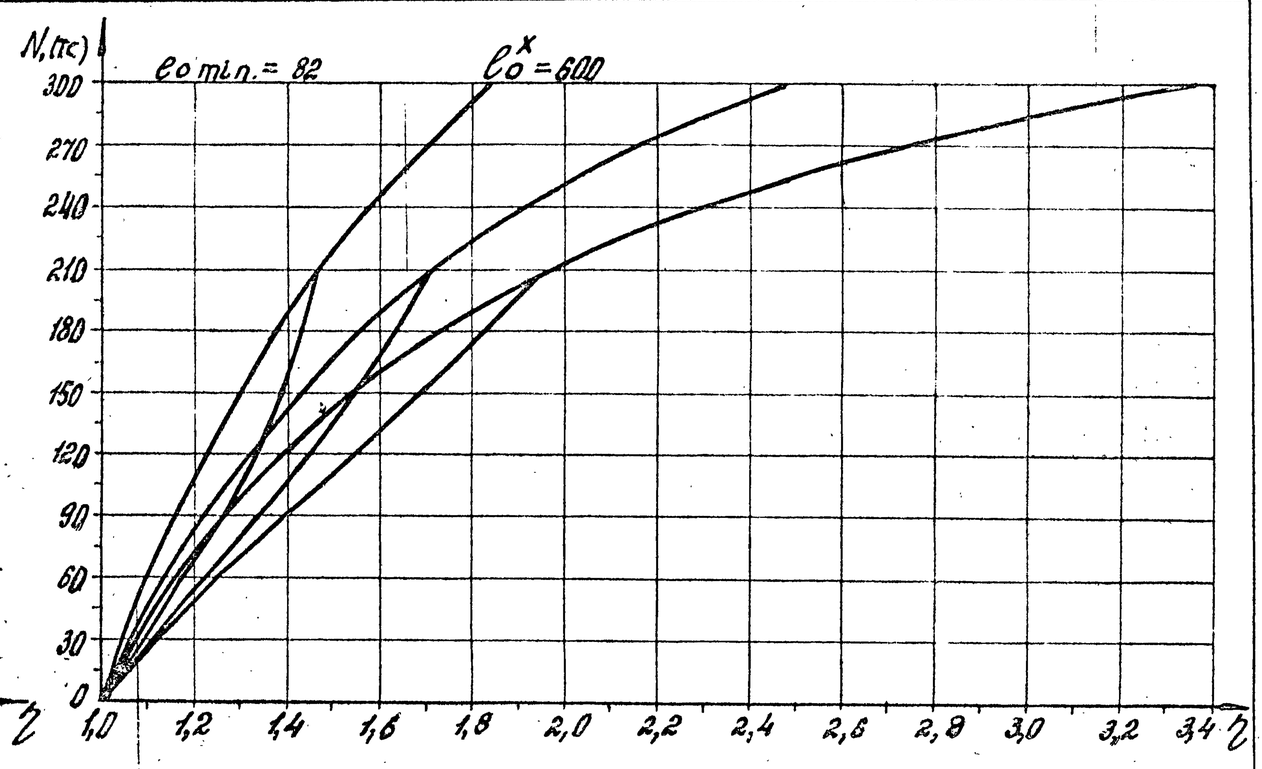


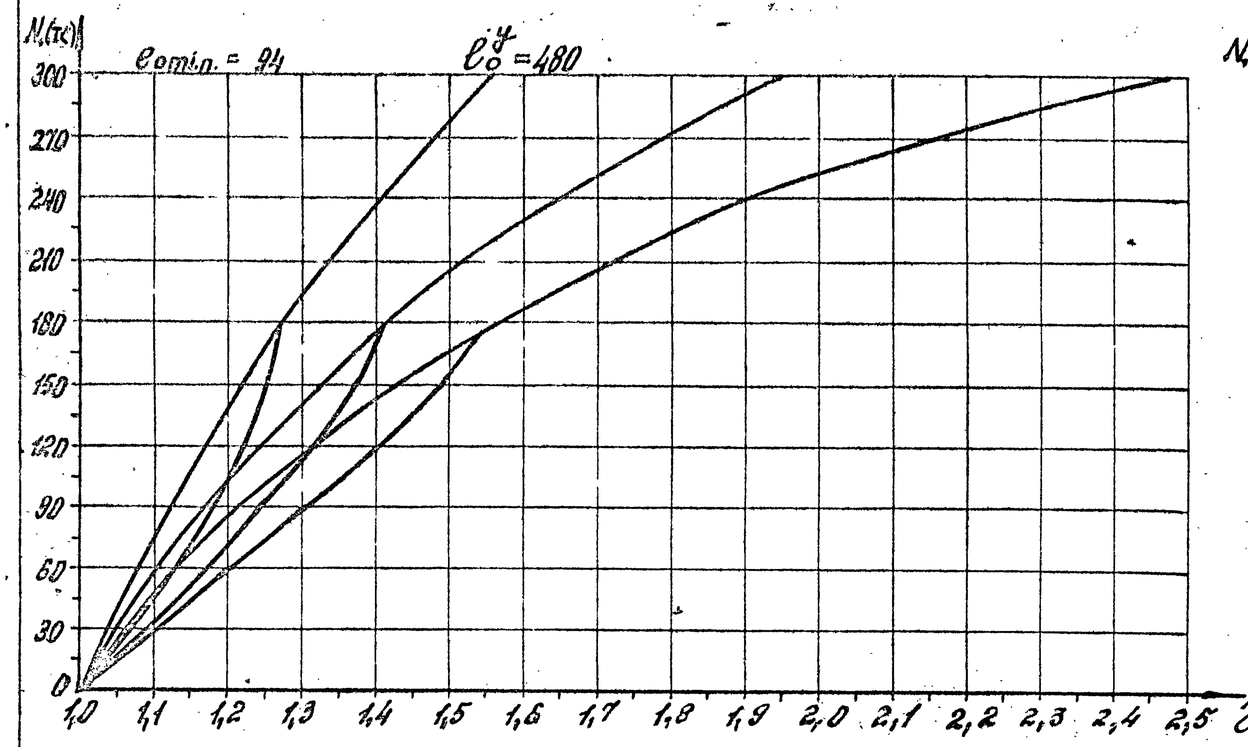
Класс бетона B22,5 (R_b=145, 7кгс/см^2 при учете γ_{b2}=1.10)

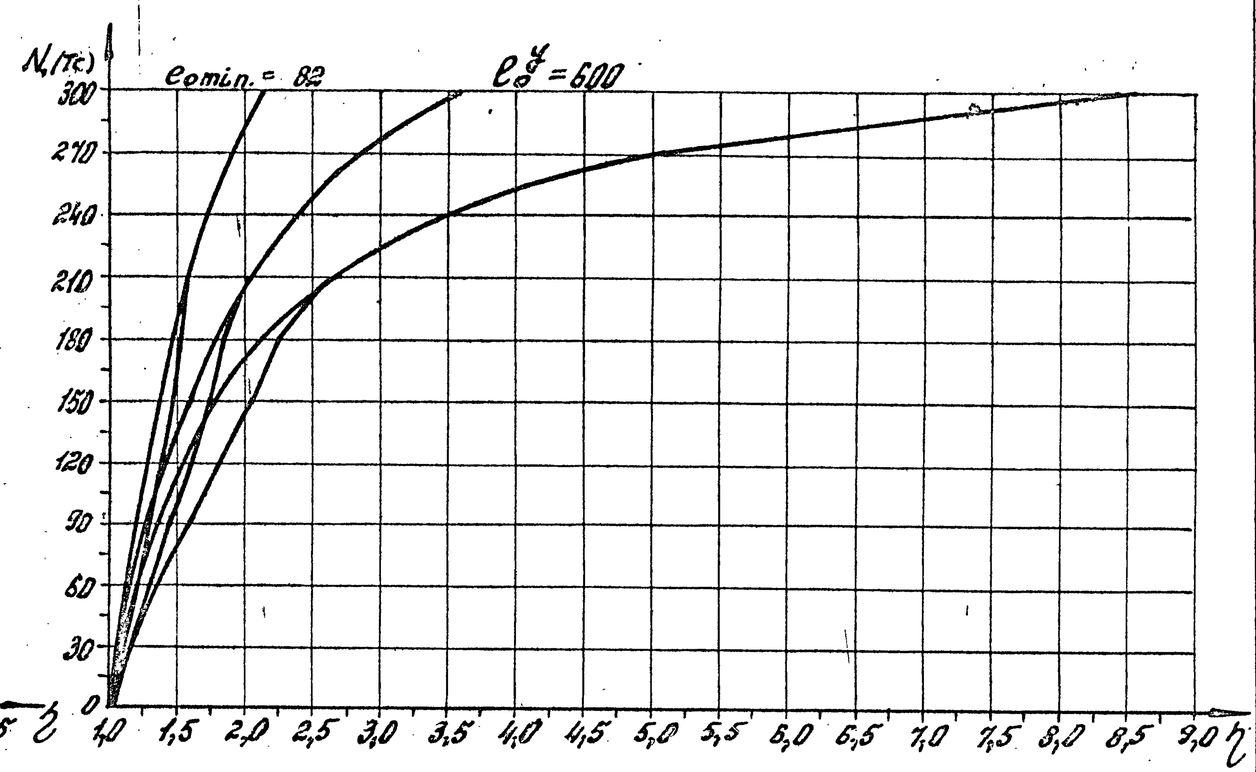
1.020-1/87. 0-6-3ПЗ

Лист 127

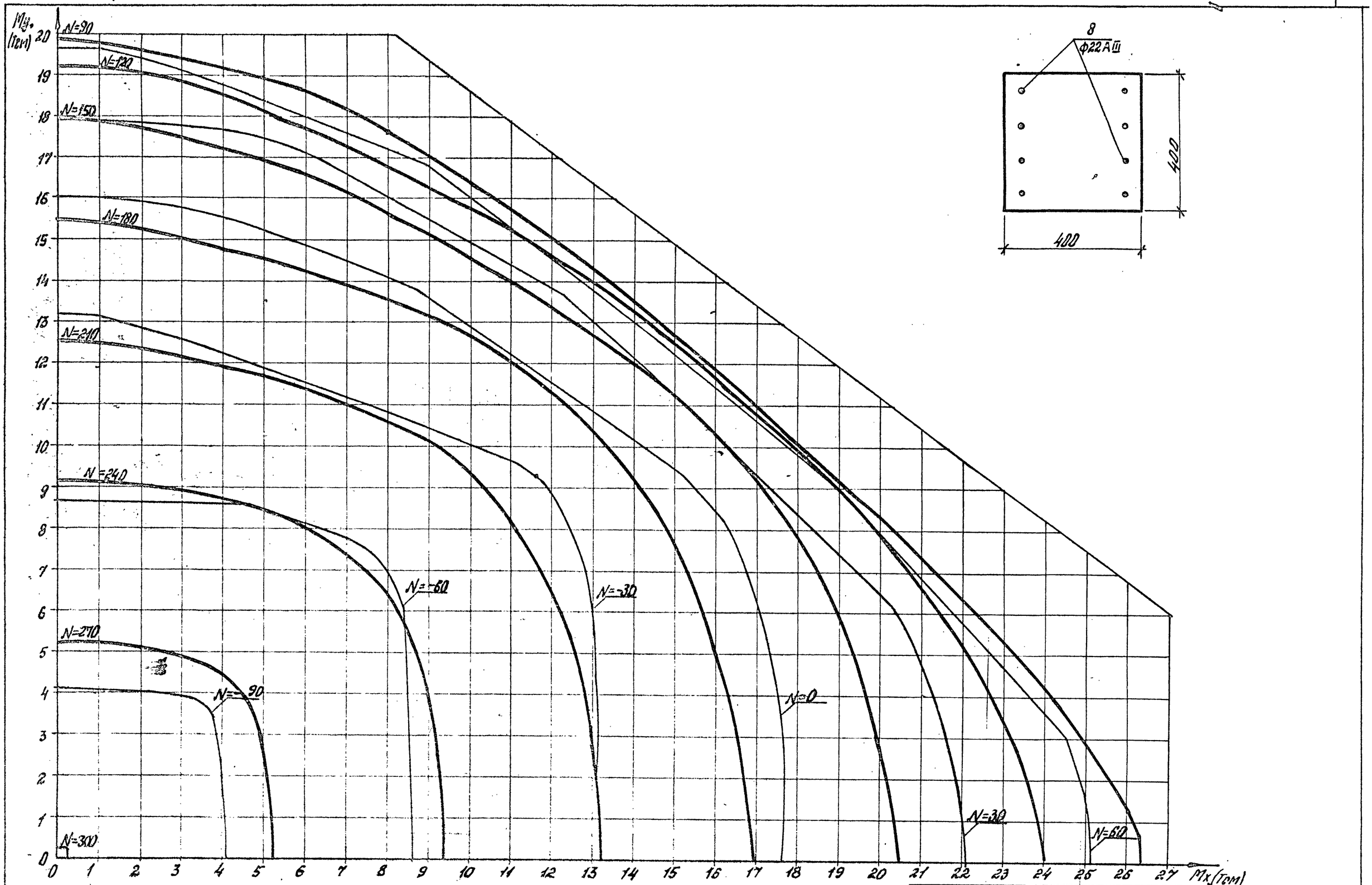








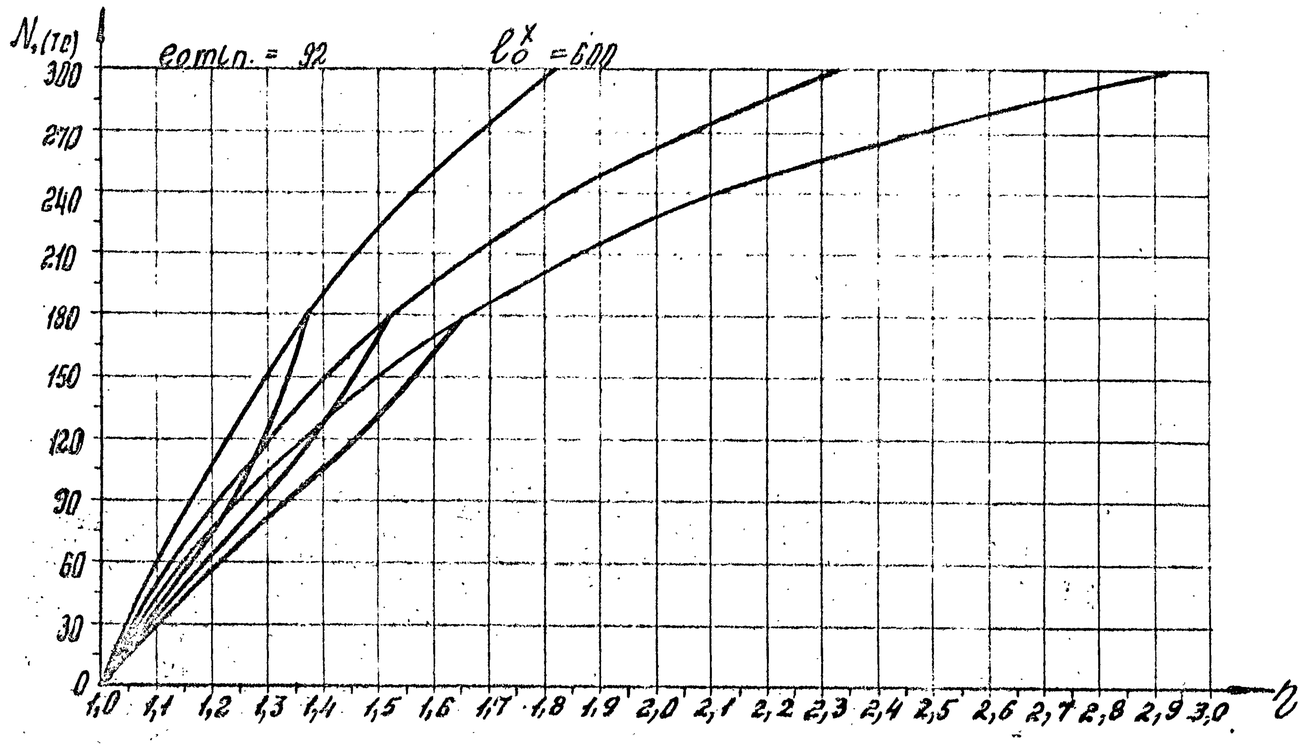
1.020-1/87.0-6-ЗПЗ	Лист 128

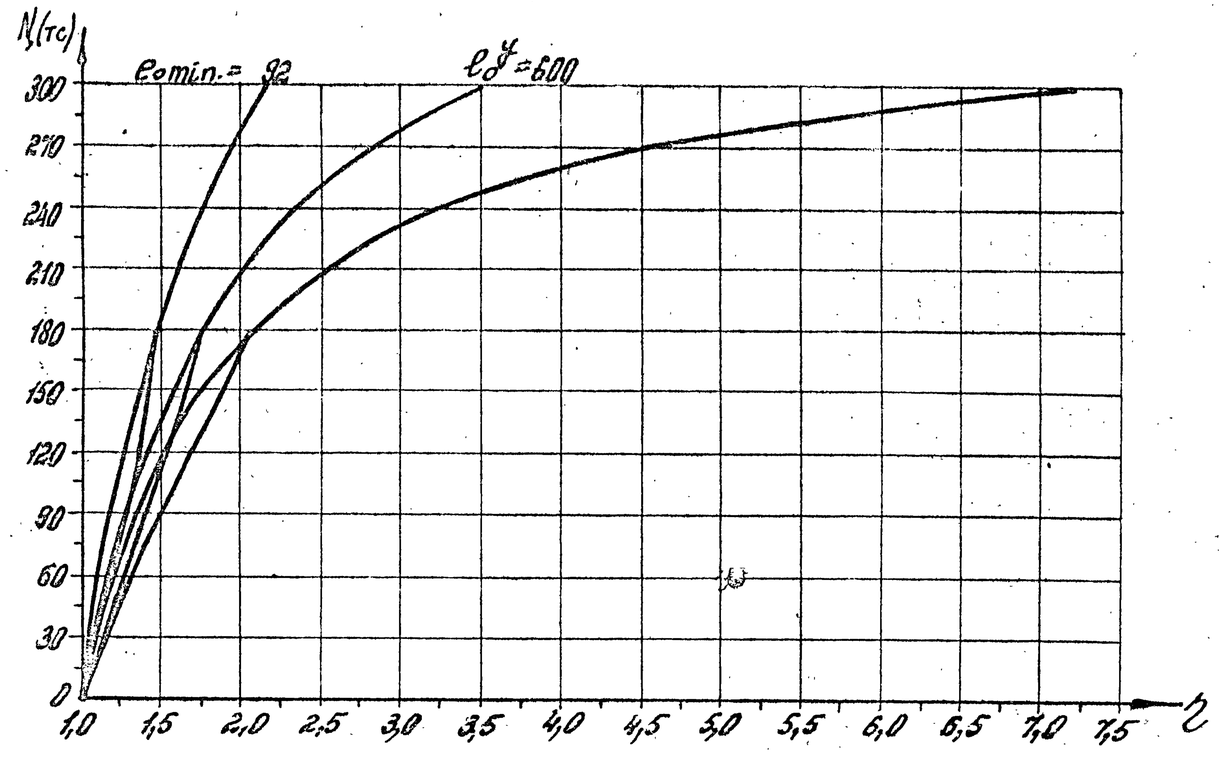


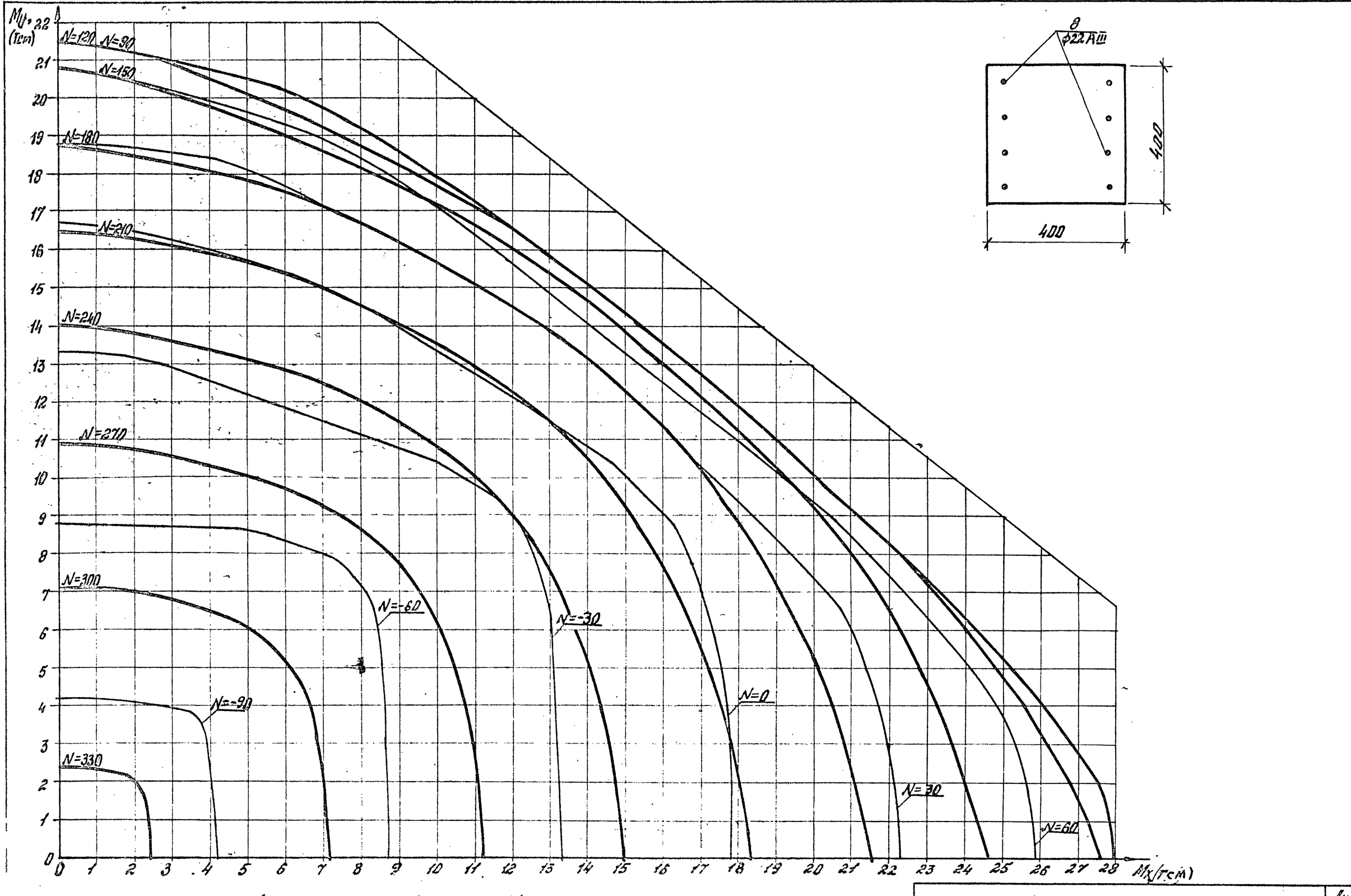
Класс бетона В22,5 ($R_б$=119,2 кгс/см² при учете $\gamma_{б2}$=0,9)

1.020-1/87.0-6-ЗПЗ

Лист 129

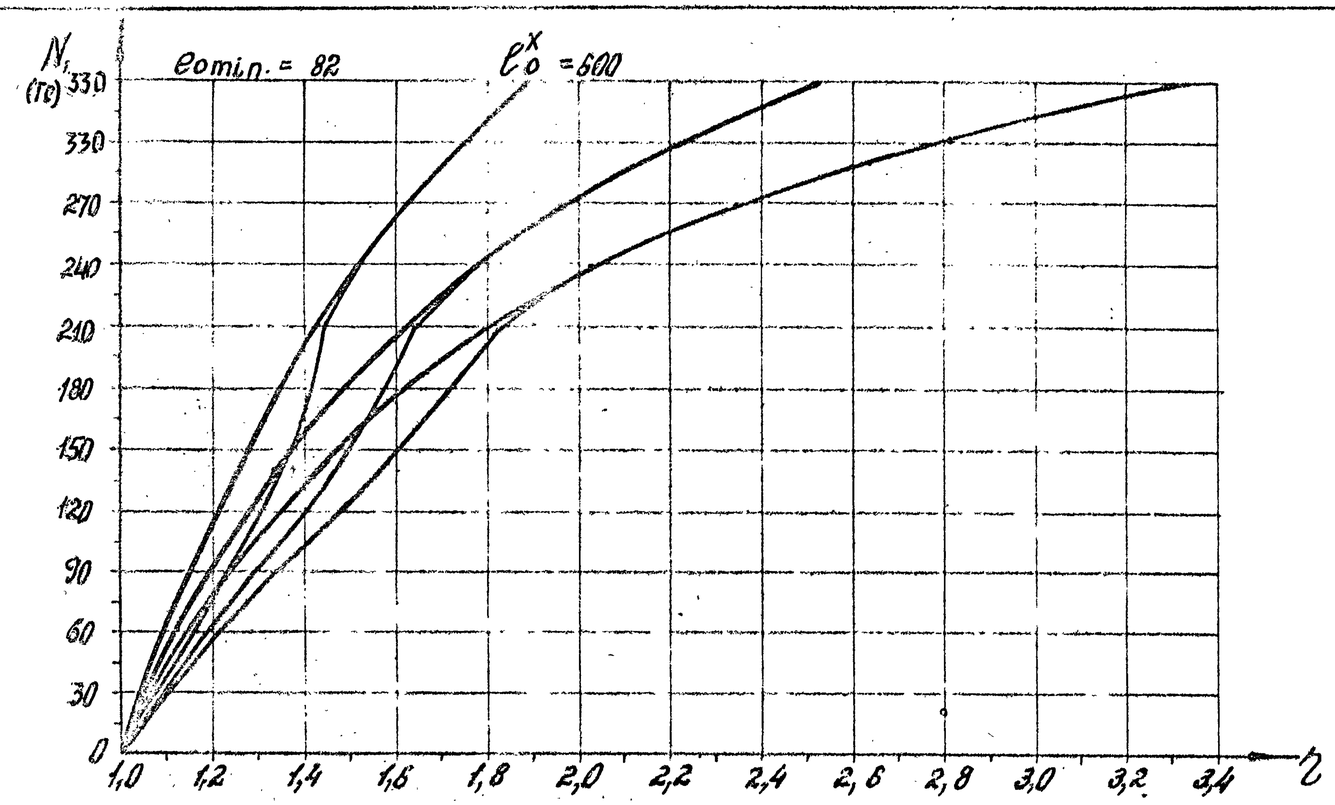

N,(тс)
e₀min. = 92
l₀ˣ = 600
300
270
240
210
180
150
120
90
60
30
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9 3,0
b

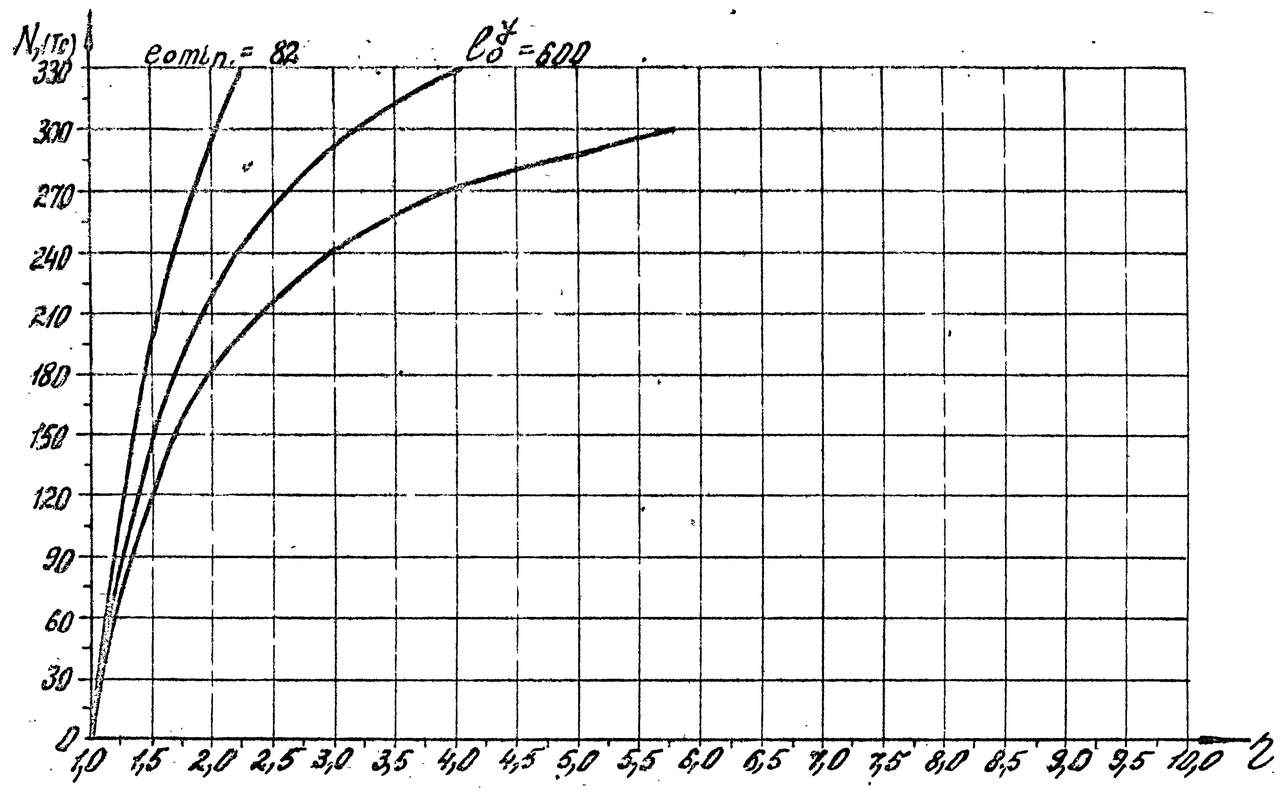

N(тс)
e₀min. = 92
l₀ʸ = 600
300
270
240
210
180
150
120
90
60
30
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5
b

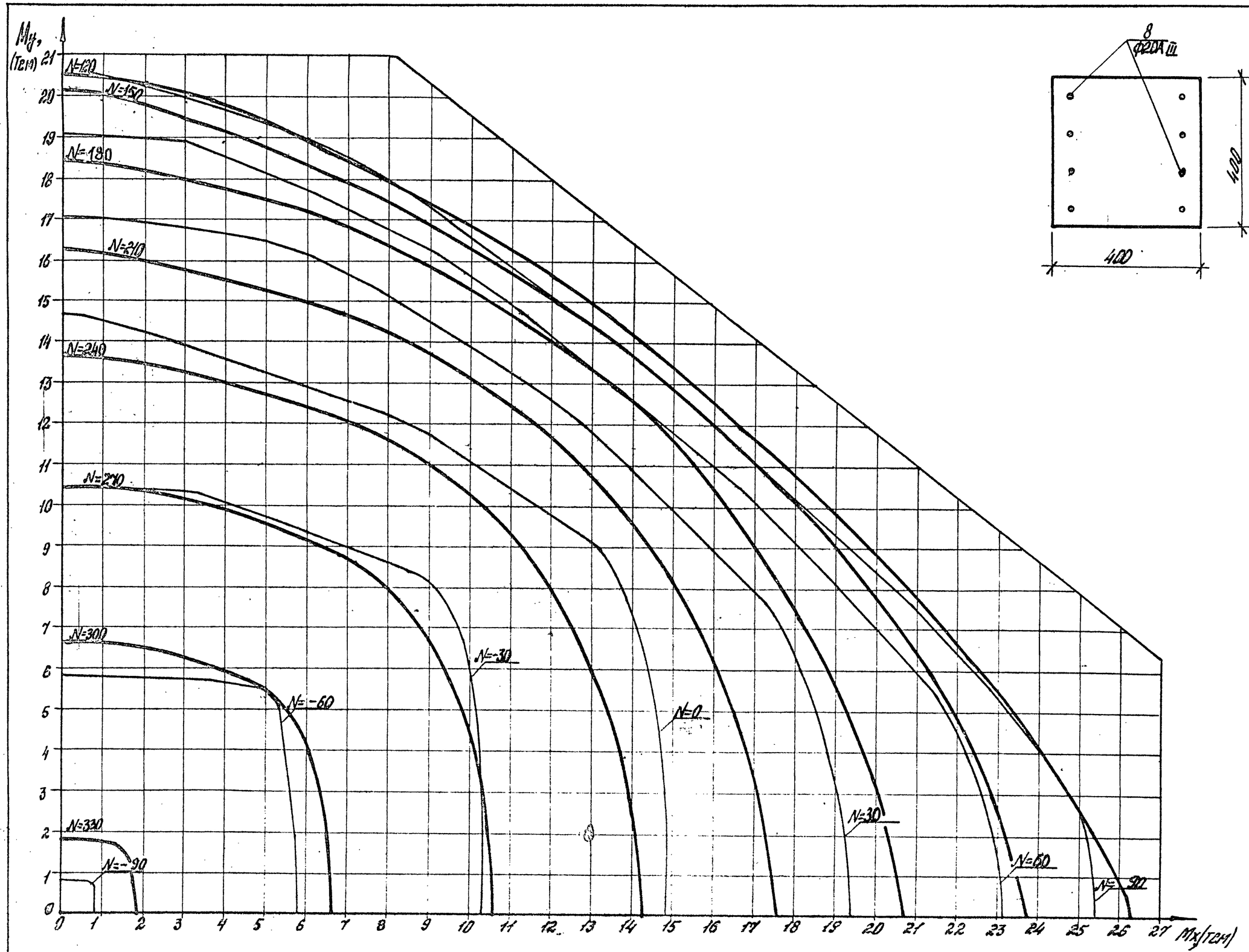


класс бетона В22,5 (R_B=145,7кгс/см² при учете γ_{B_2}=1,10)

1.020-1/87.0-6-ЗП3 Лист 131


N, (тс)
e0 min. = 82
e0 = 600
330
270
240
210
180
150
120
90
60
30
0
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
l

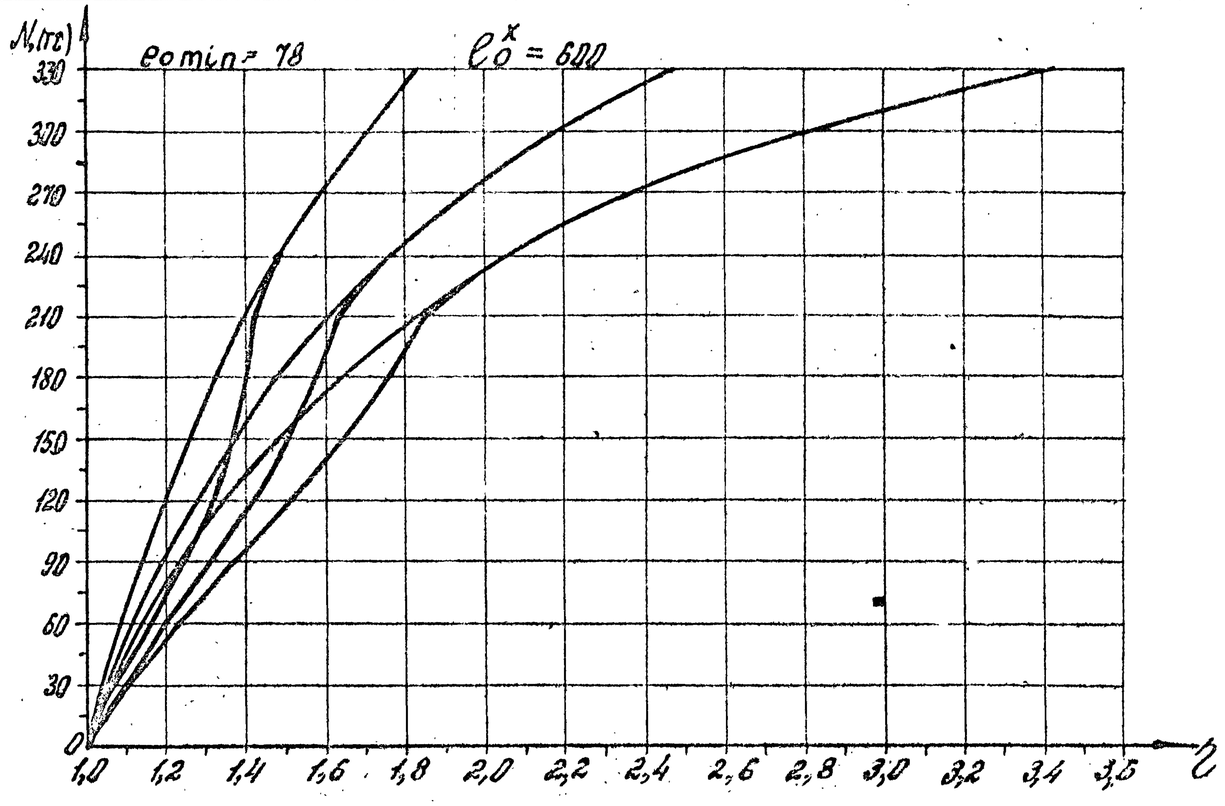

N, (тс)
e0 min. = 82
e0 = 600
330
300
270
240
210
180
150
120
90
60
30
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
6,5
7,0
7,5
8,0
8,5
9,0
9,5
10,0
l

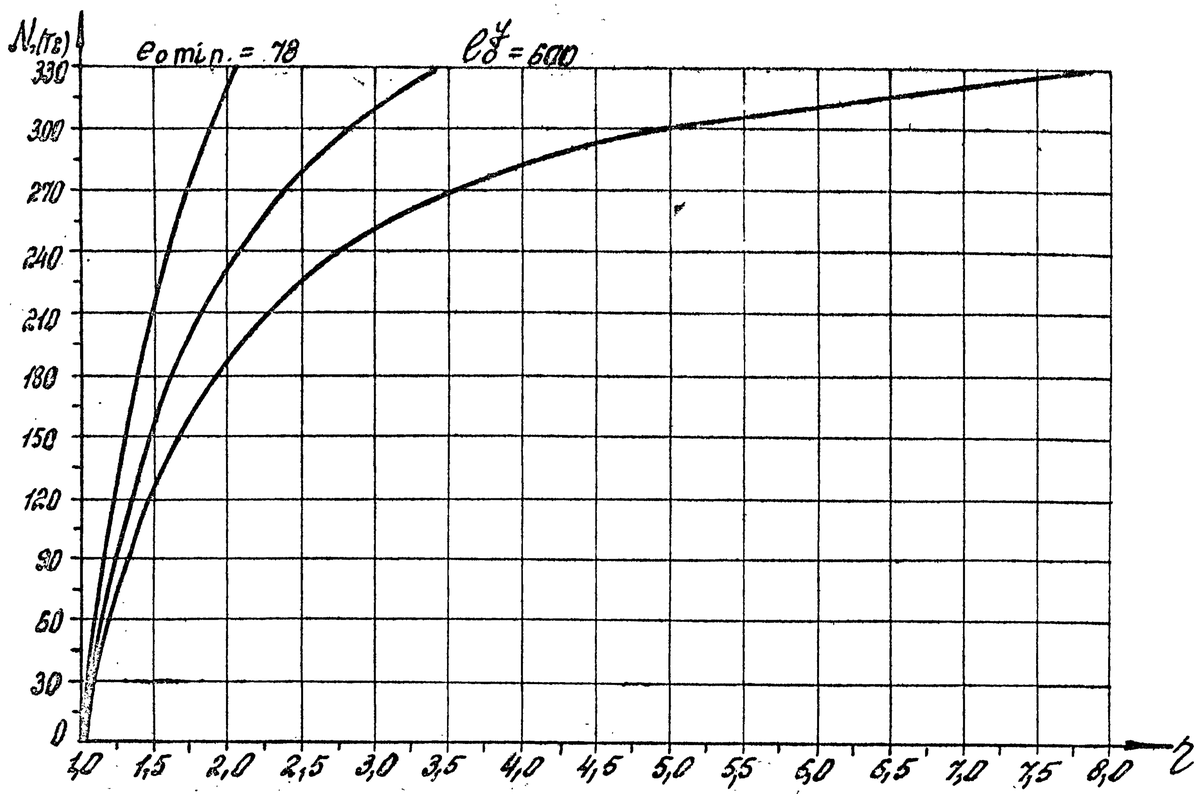


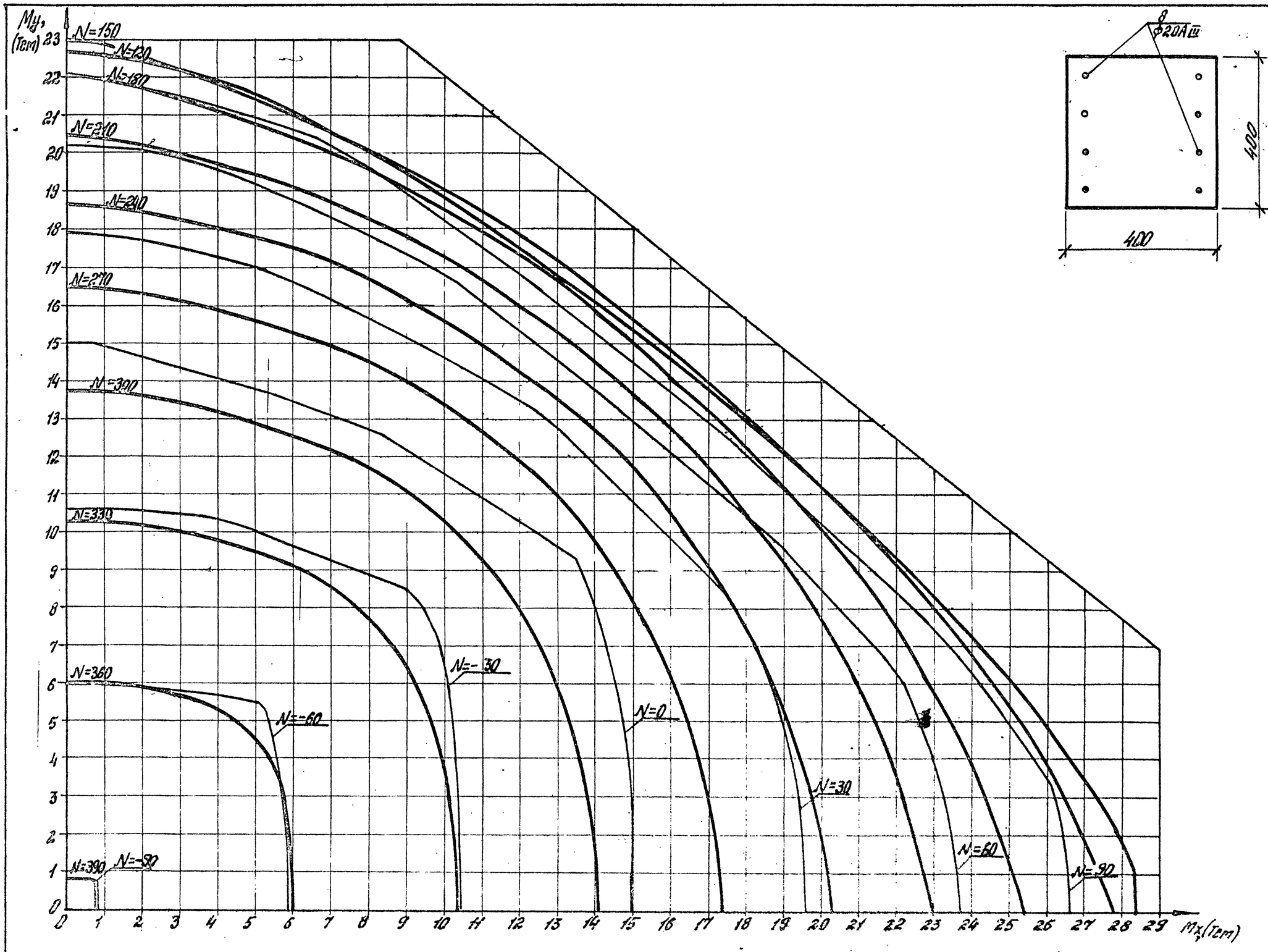
класса бетона В30 (R_b = 155,7 кгс/см² при учете γ_{b2} = 0,9)

1.020-1/87. 0-6- ЗПЗ

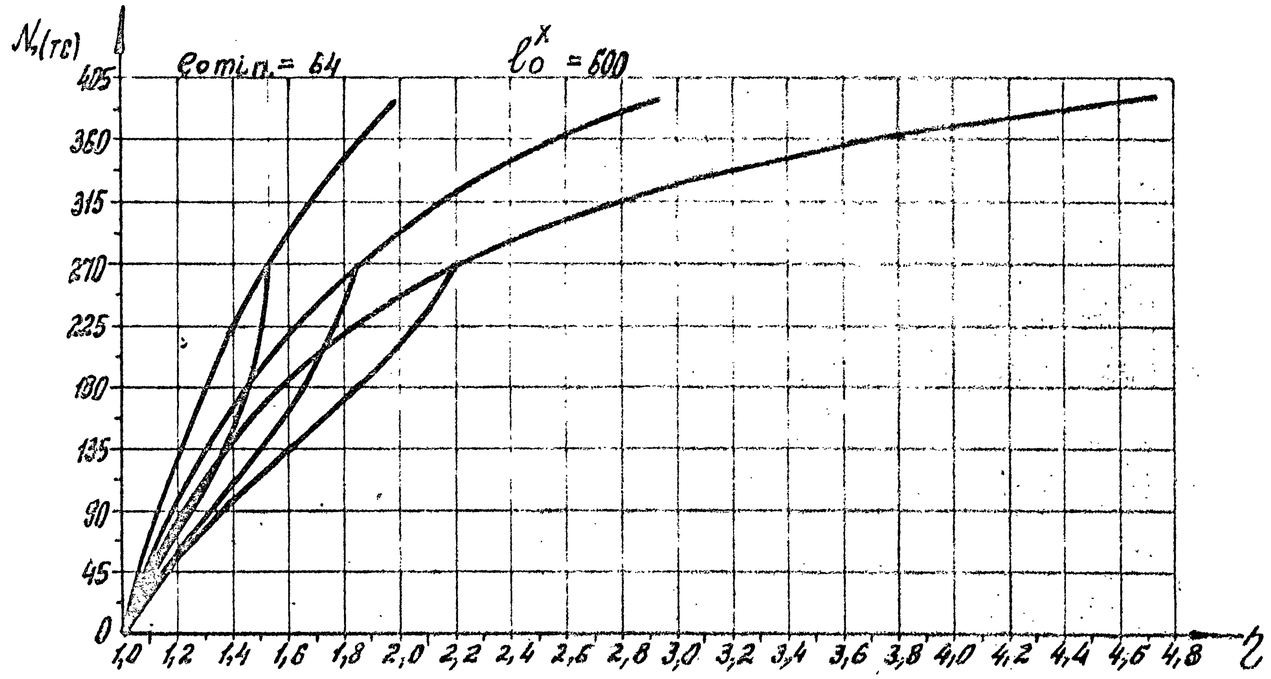
Лист 133

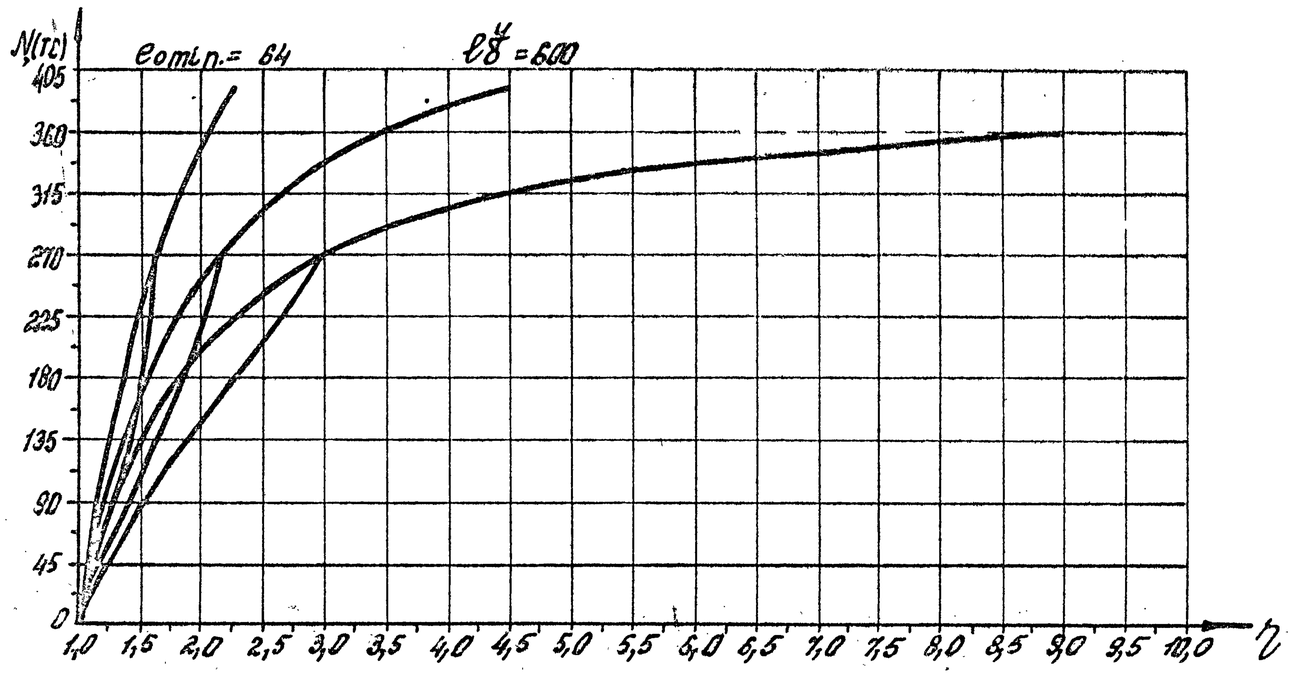

N,(тс)
e₀min = 78
e₀ˣ = 600
330
300
270
240
210
180
150
120
90
60
30
0
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
3,6
l

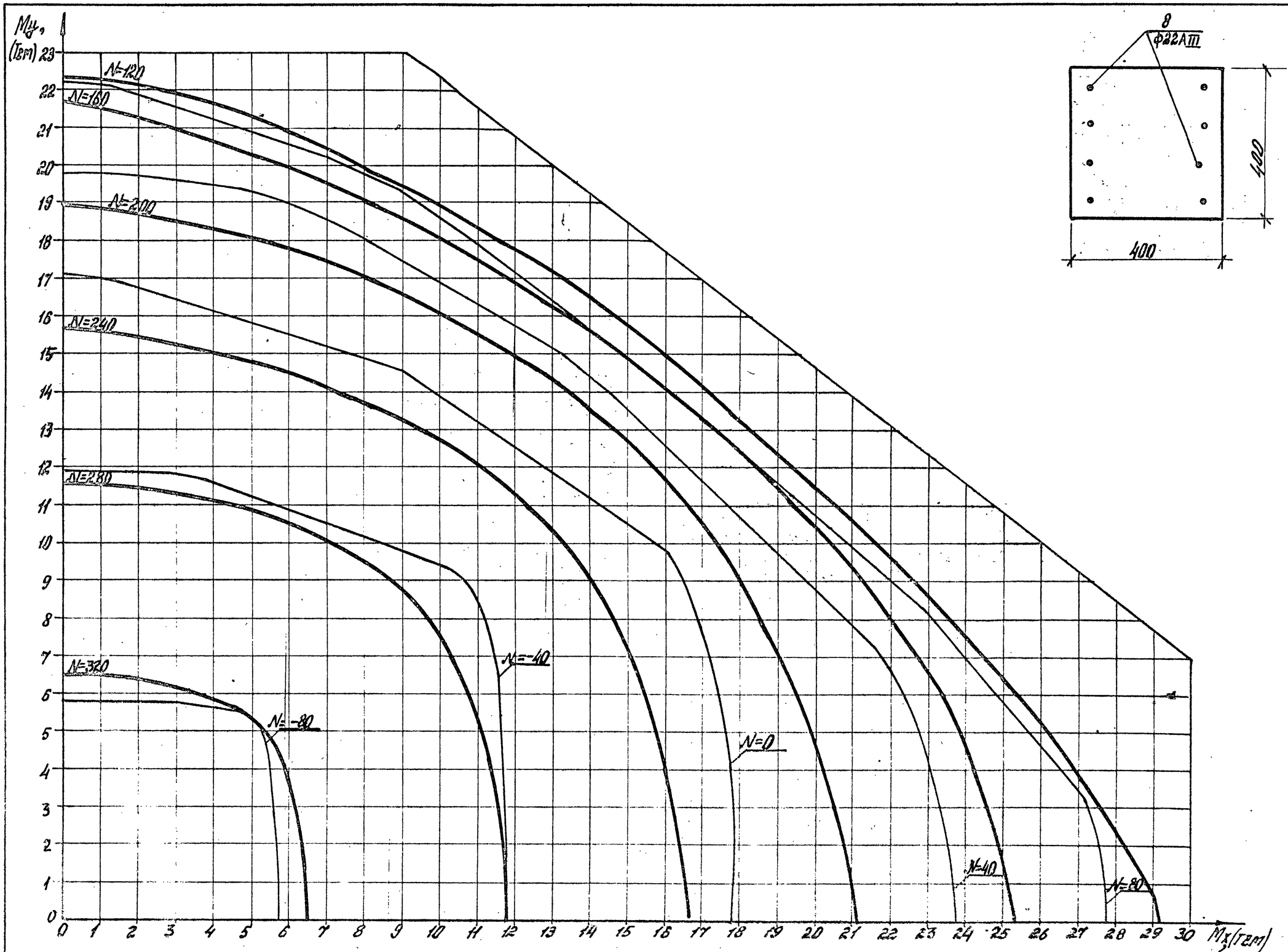

N,(тс)
e₀min. = 78
e₀ʸ = 600
330
300
270
240
210
180
150
120
90
60
30
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
6,5
7,0
7,5
8,0
l



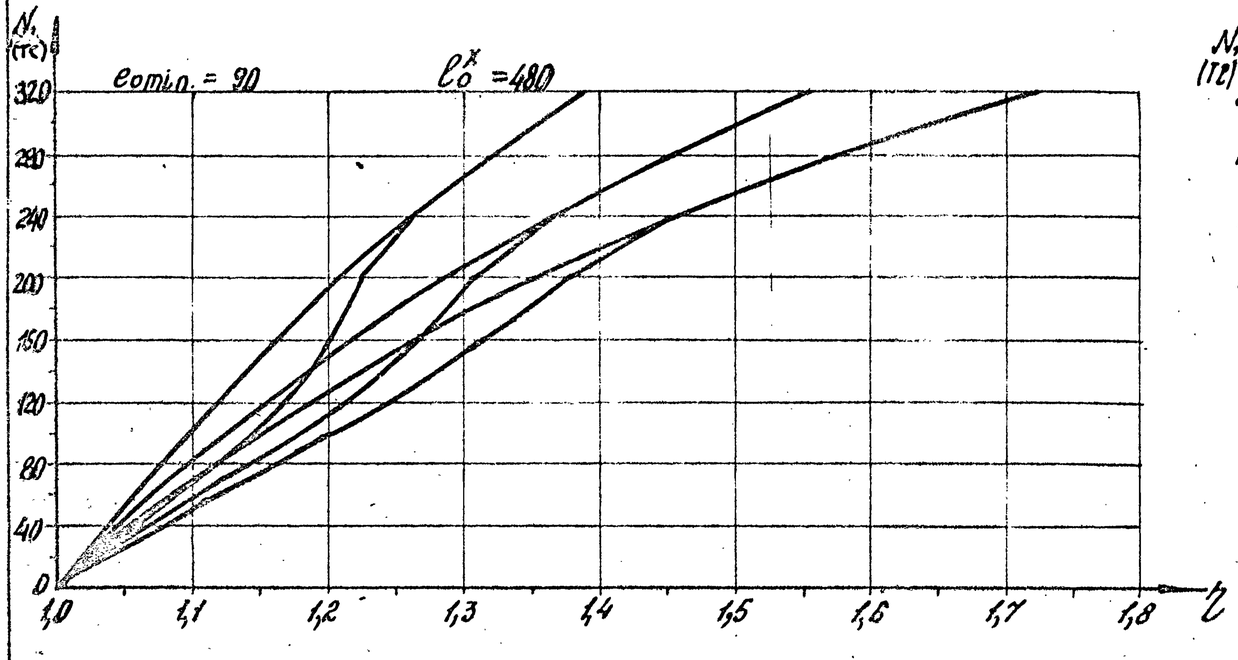
класс бетона В30 (R_b=192,3 кгс/см^2 при γ_b=1,10)

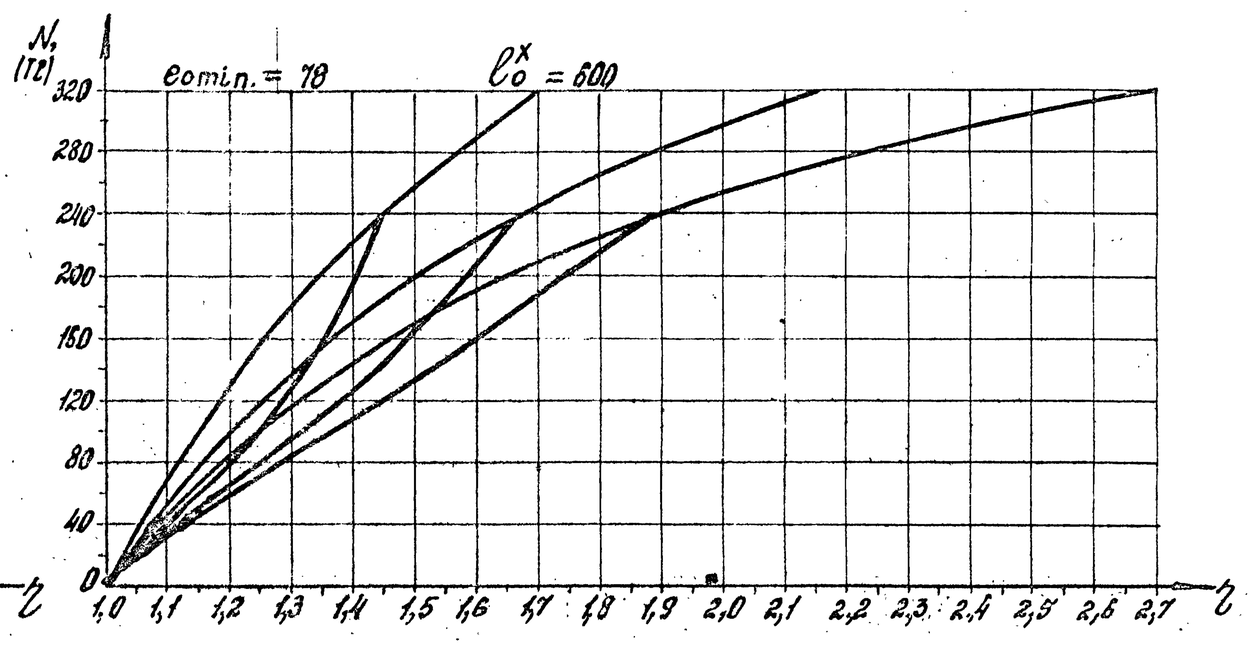

N,(тс)
e0min.= 64
l0x = 600
405
360
315
270
225
180
135
90
45
0
1,0 1,2 1,4 1,6 1,8 2,0 2,2 2,4 2,6 2,8 3,0 3,2 3,4 3,6 3,8 4,0 4,2 4,4 4,6 4,8
η

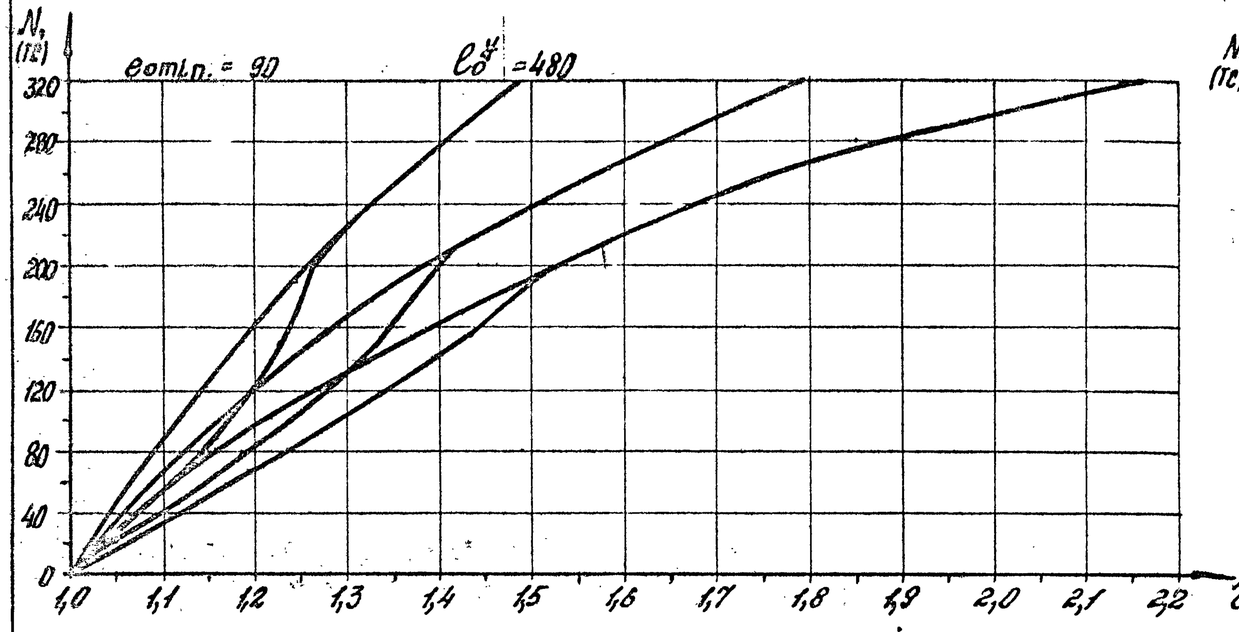

N(тс)
e0min.= 64
l0y = 600
405
360
315
270
225
180
135
90
45
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
η

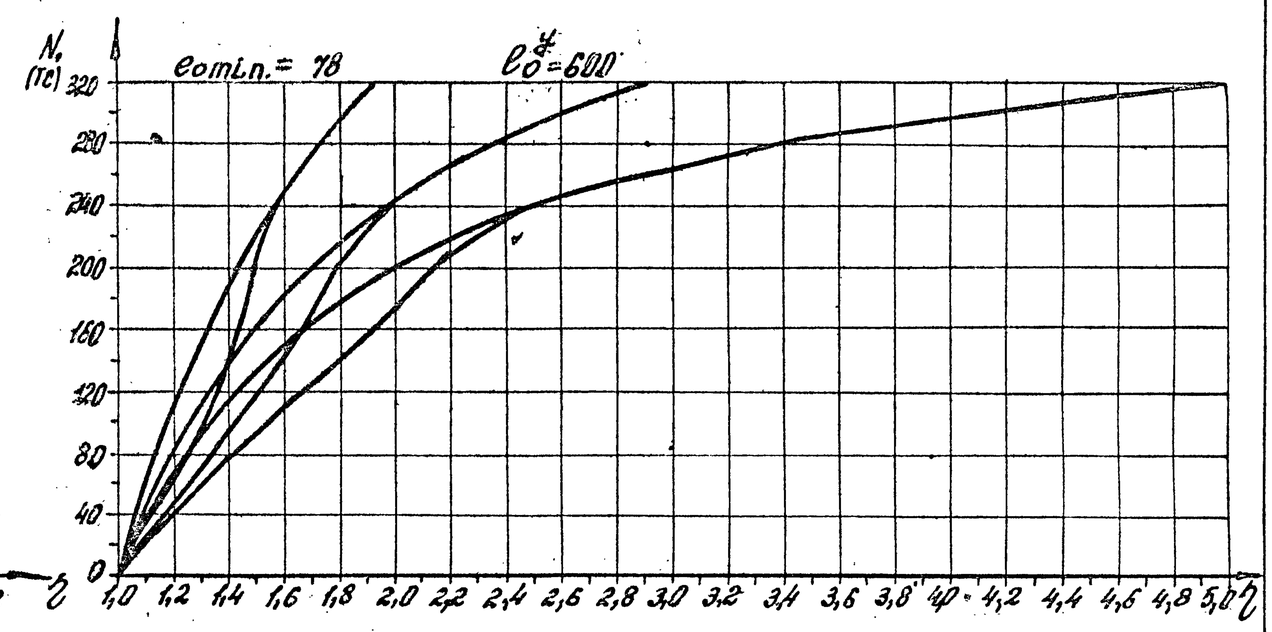


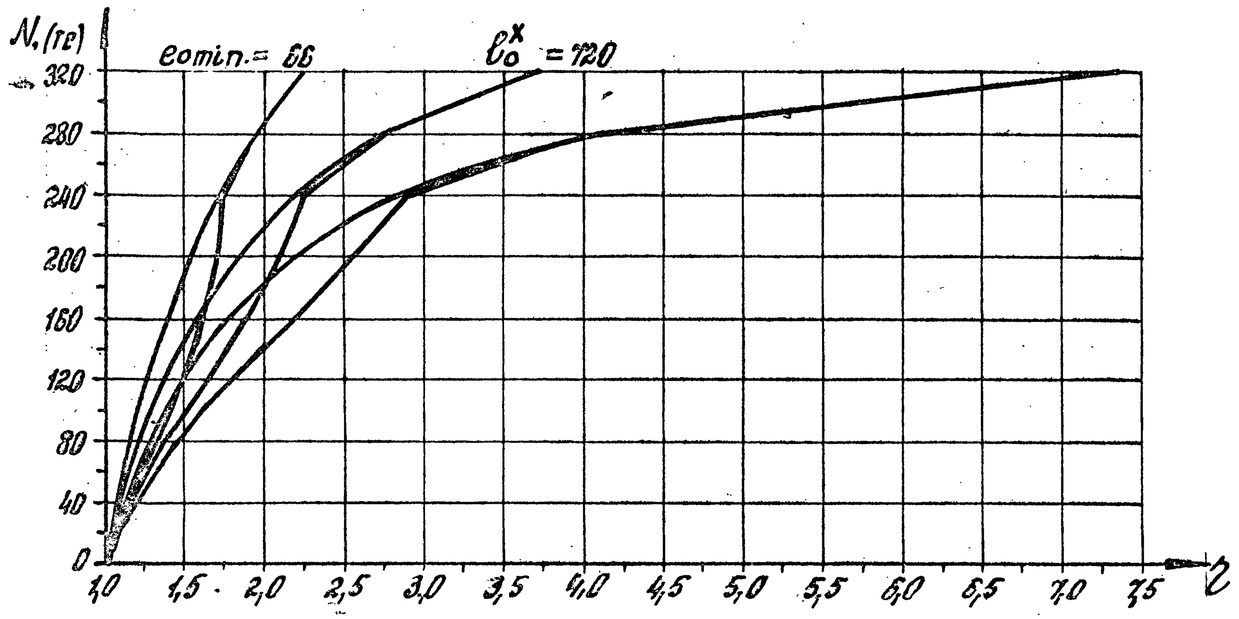
класс бетона В30 (R_B^8 = 155,7 кгс/см² при учете γ_{B2} = 0,9)

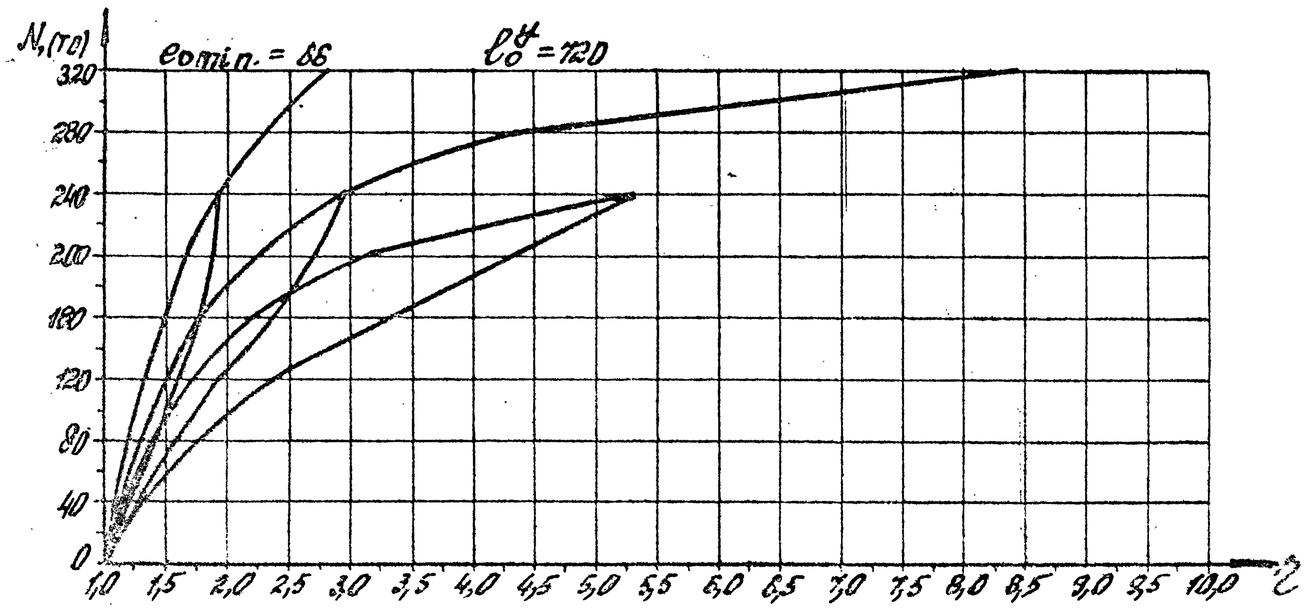

N, (тс)
e0min. = 90
l0x = 480
320
280
240
200
160
120
80
40
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
l

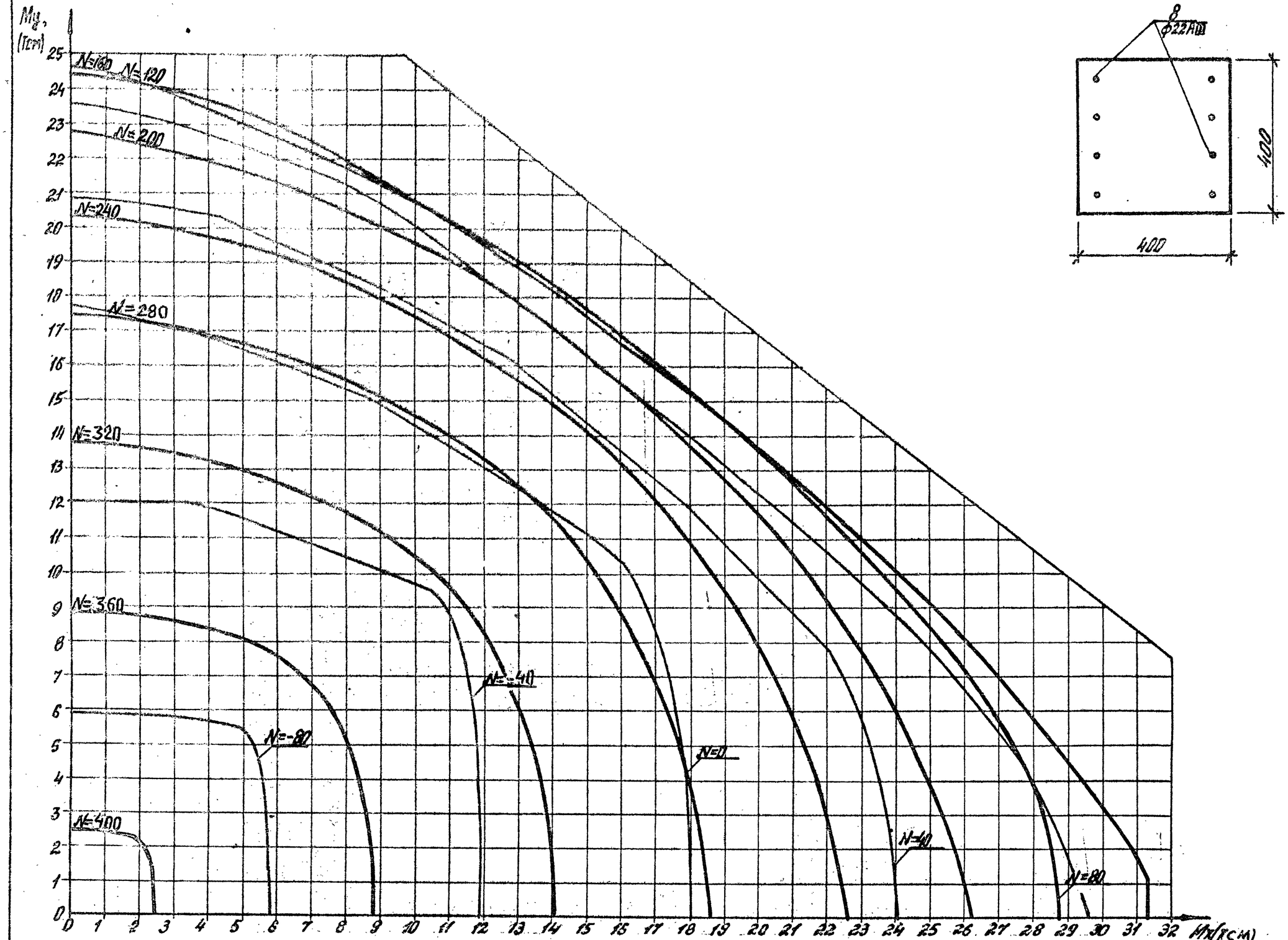

N, (тс)
e0min. = 78
l0x = 600
320
280
240
200
160
120
80
40
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
2,3
2,4
2,5
2,6
2,7
l


N, (тс)
e0min. = 90
l0y = 480
320
280
240
200
160
120
80
40
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
l


N, (тс)
e0min. = 78
l0y = 600
320
280
240
200
160
120
80
40
0
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
3,6
3,8
4,0
4,2
4,4
4,6
4,8
5,0
l


N,(тс)
e0min.= 66
l0x = 720
320
280
240
200
160
120
80
40
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
6,5
7,0
7,5
l


N,(тс)
e0min. = 66
l0y = 720
320
280
240
200
160
120
80
40
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
6,5
7,0
7,5
8,0
8,5
9,0
9,5
10,0
l

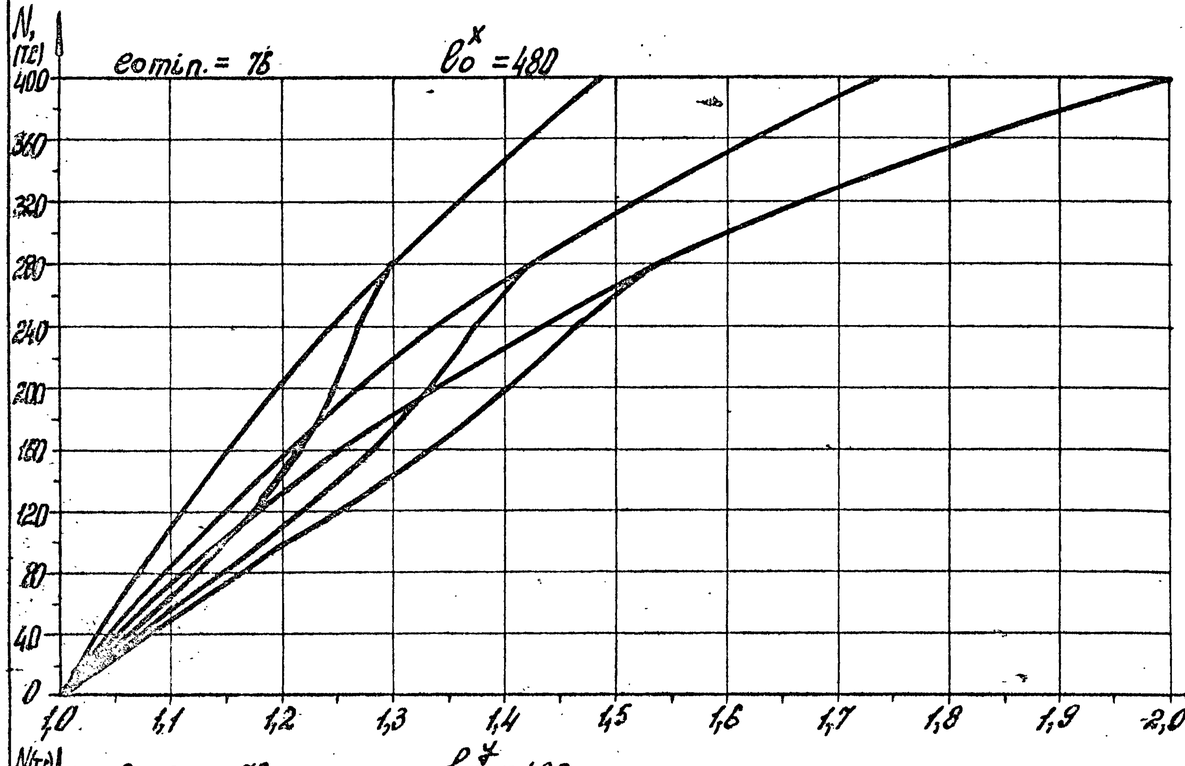


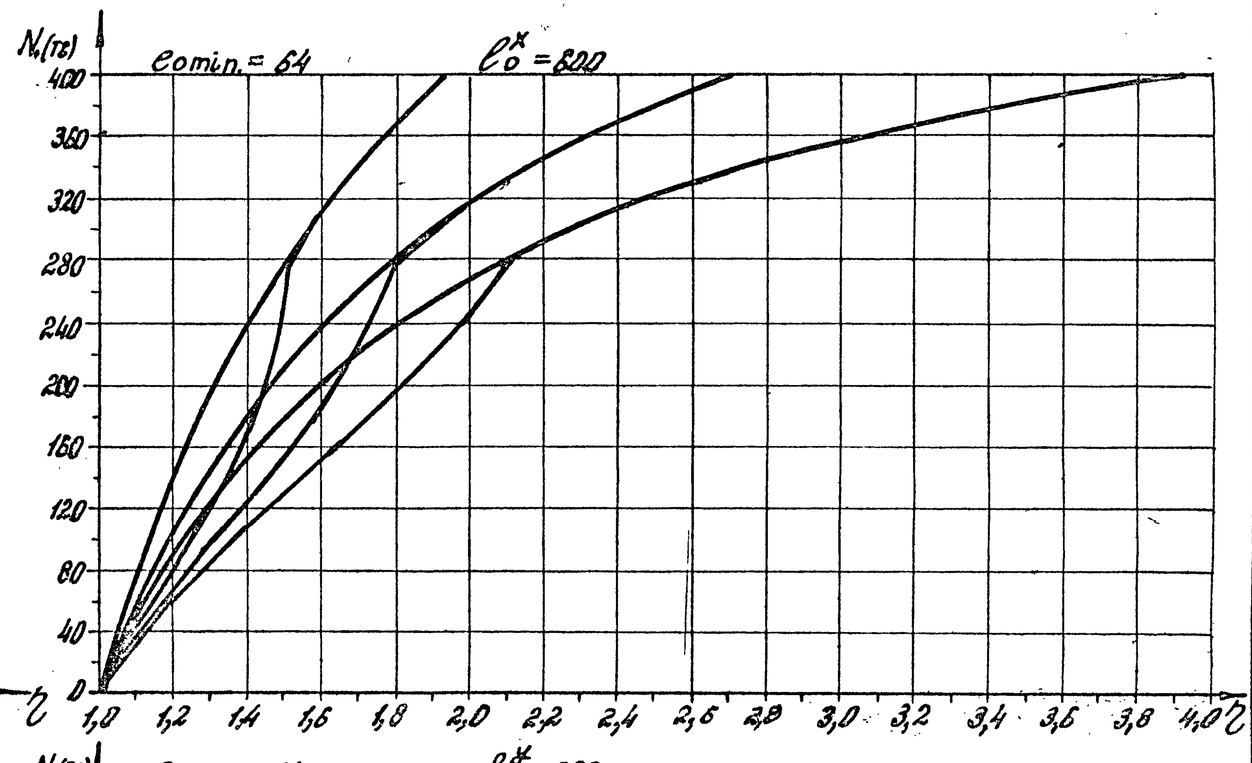
Класс бетона В30 (R_B = 190,3 кгс/см² при учете γ_{B2} = 1,10)

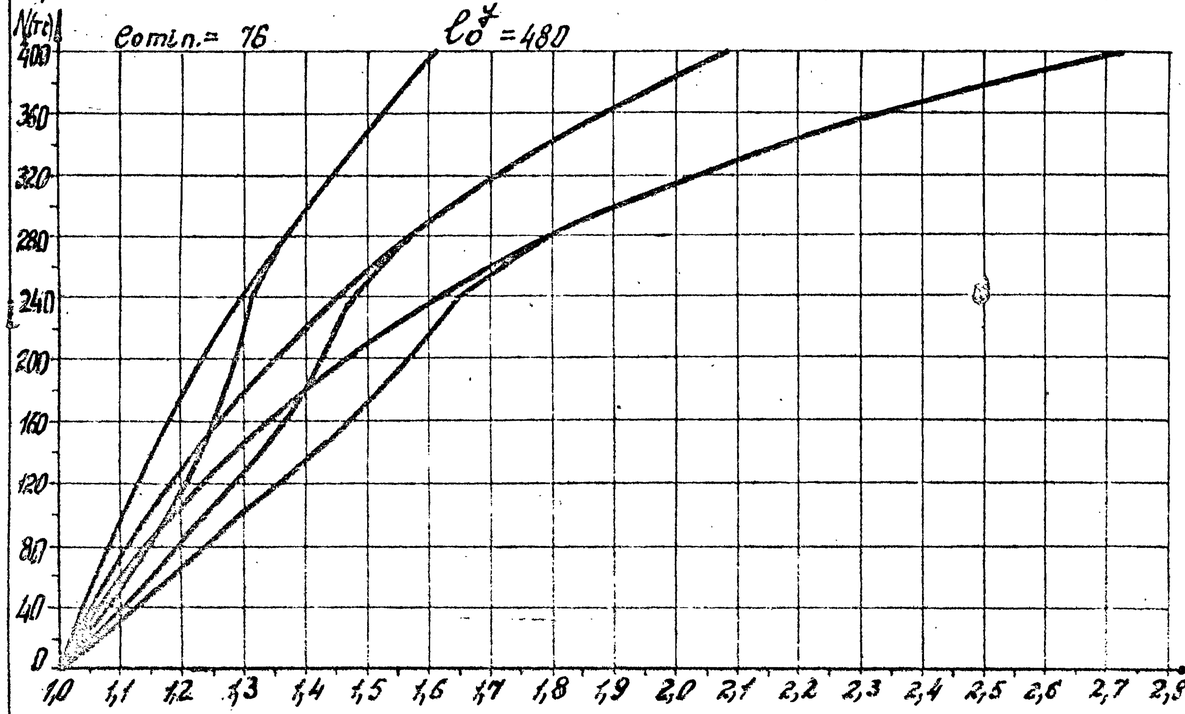
1.020-1/87.0-6-3 ПЗ

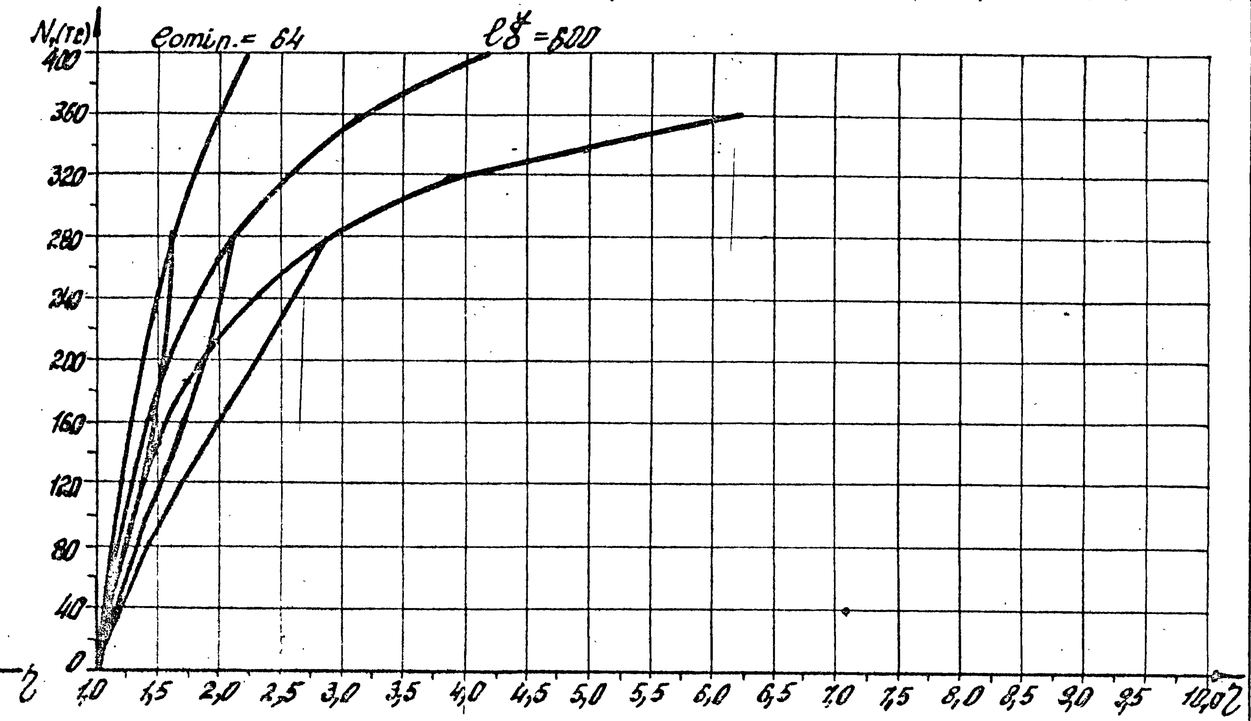
Лист 140

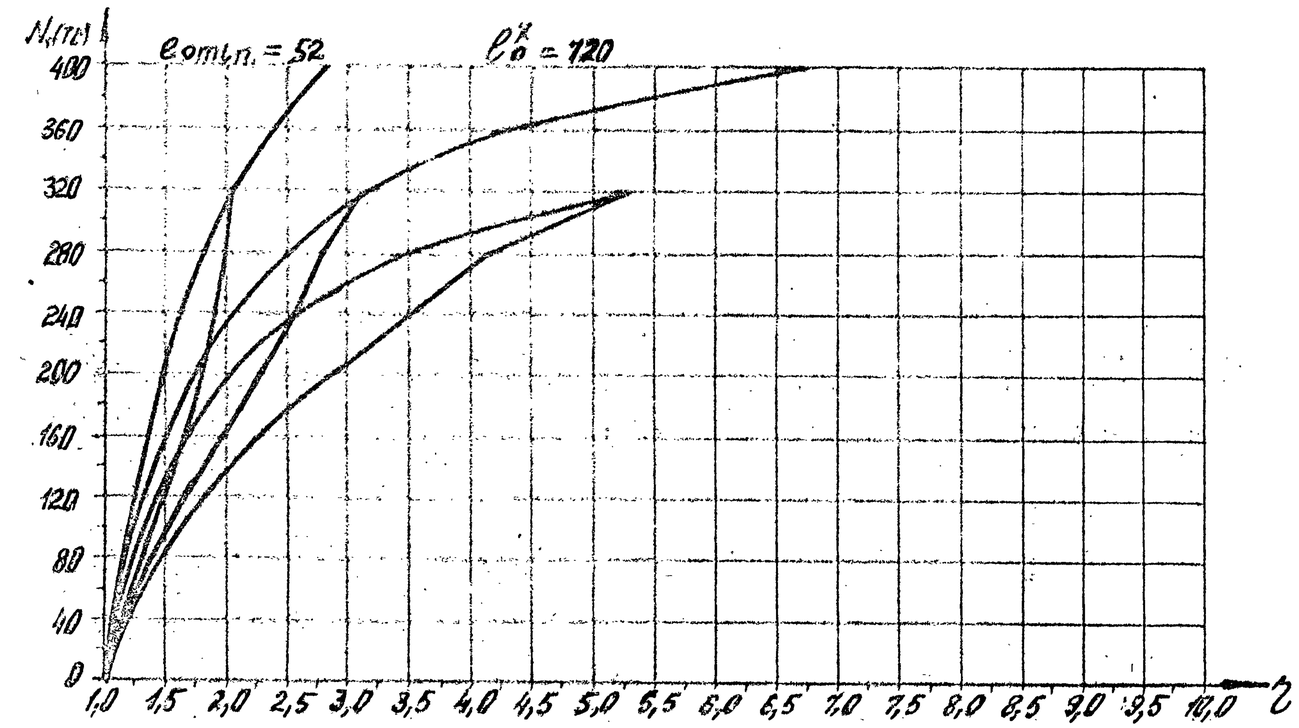
24788-02 4·6

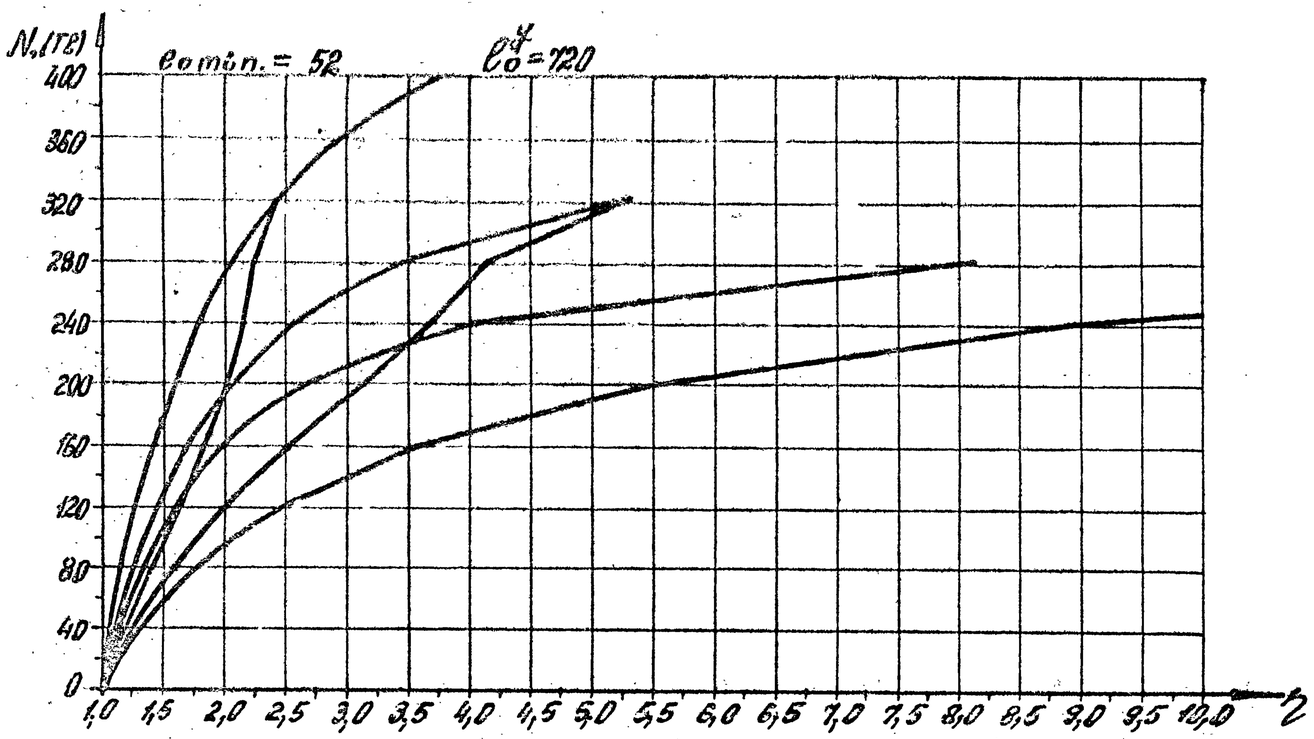

N, (тс)
e₀min. = 76
e₀* = 480
400
360
320
280
240
200
160
120
80
40
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0
ℓ

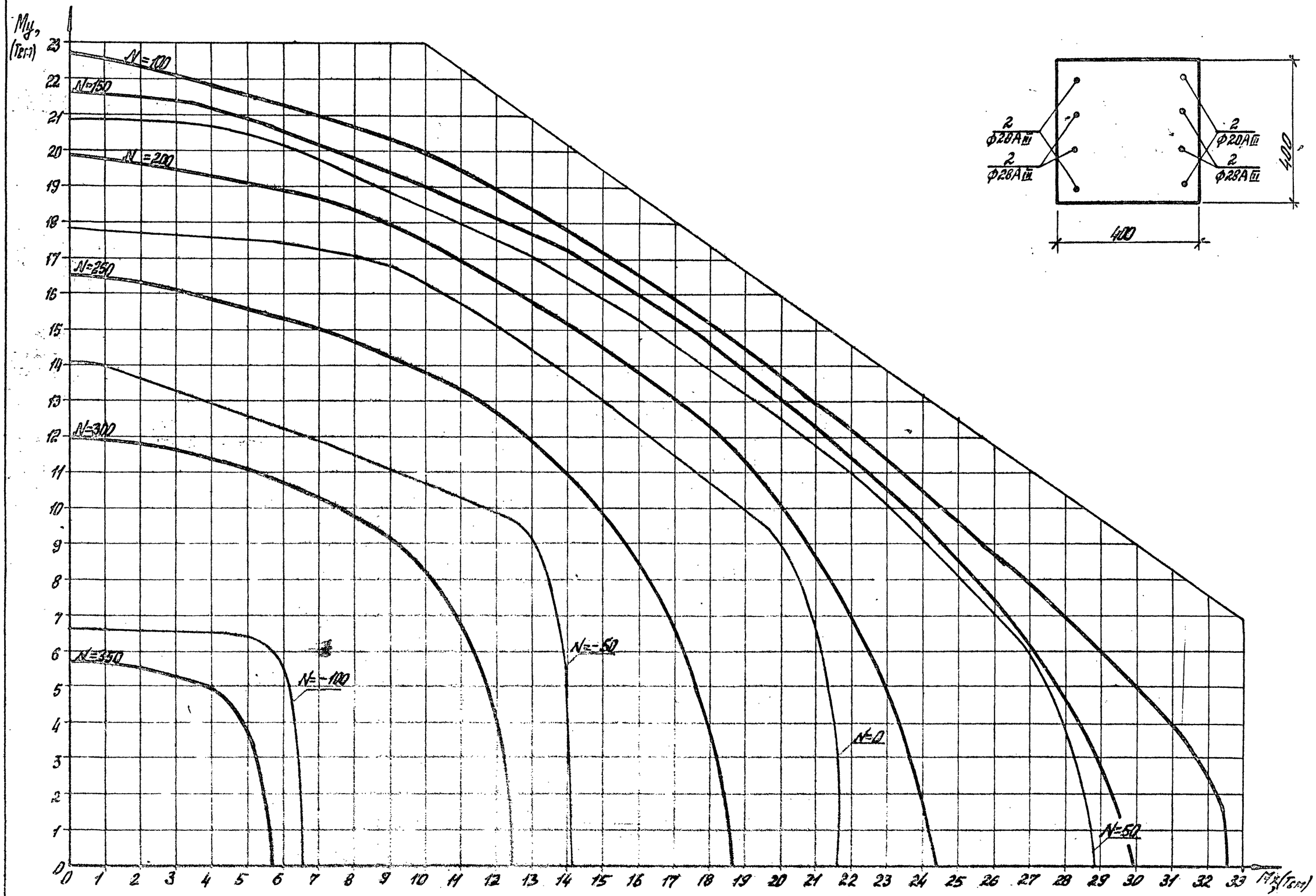

N, (тс)
e₀min. = 64
e₀* = 800
400
360
320
280
240
200
160
120
80
40
0
1,0 1,2 1,4 1,6 1,8 2,0 2,2 2,4 2,6 2,8 3,0 3,2 3,4 3,6 3,8 4,0
ℓ


N(тс)
e₀min. = 76
e₀* = 480
400
360
320
280
240
200
160
120
80
40
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8
ℓ


N, (тс)
e₀min. = 64
e₀* = 800
400
360
320
280
240
200
160
120
80
40
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
ℓ


N,(TC)
400
360
320
280
240
200
160
120
80
40
0
e om in. = 52
e₀ = 120
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
l

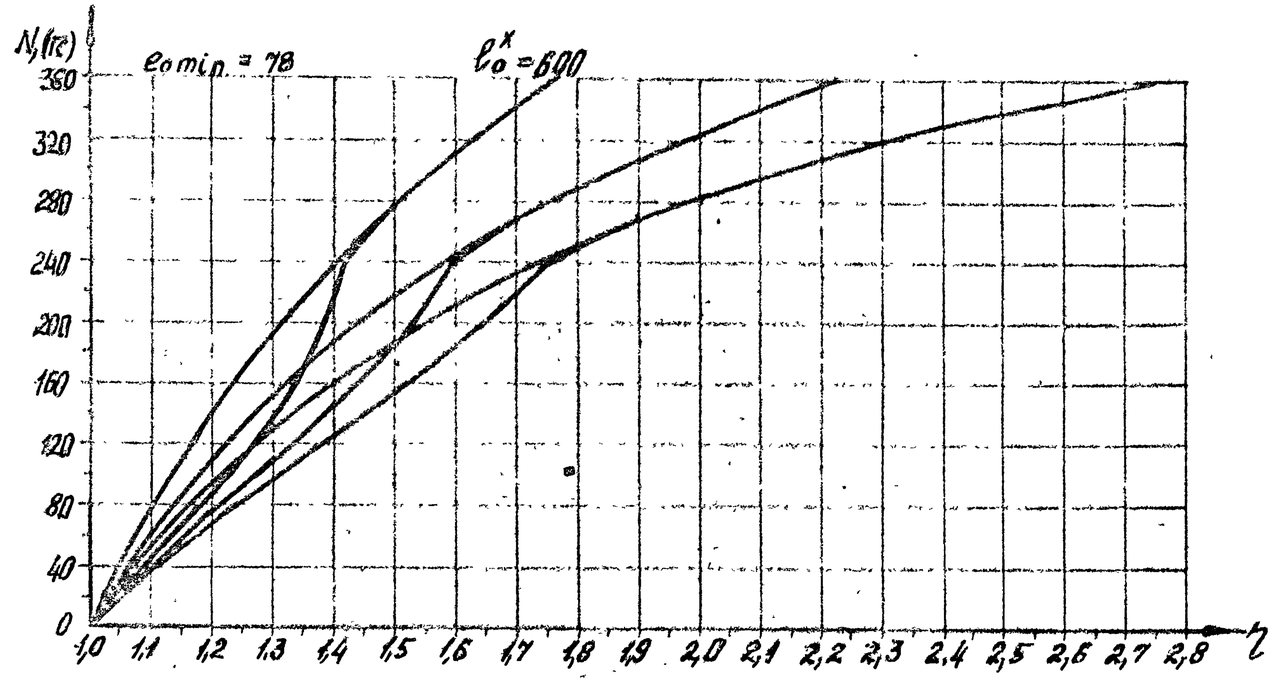

N,(TC)
400
360
320
280
240
200
160
120
80
40
0
e min. = 52
e₀ = 120
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
l

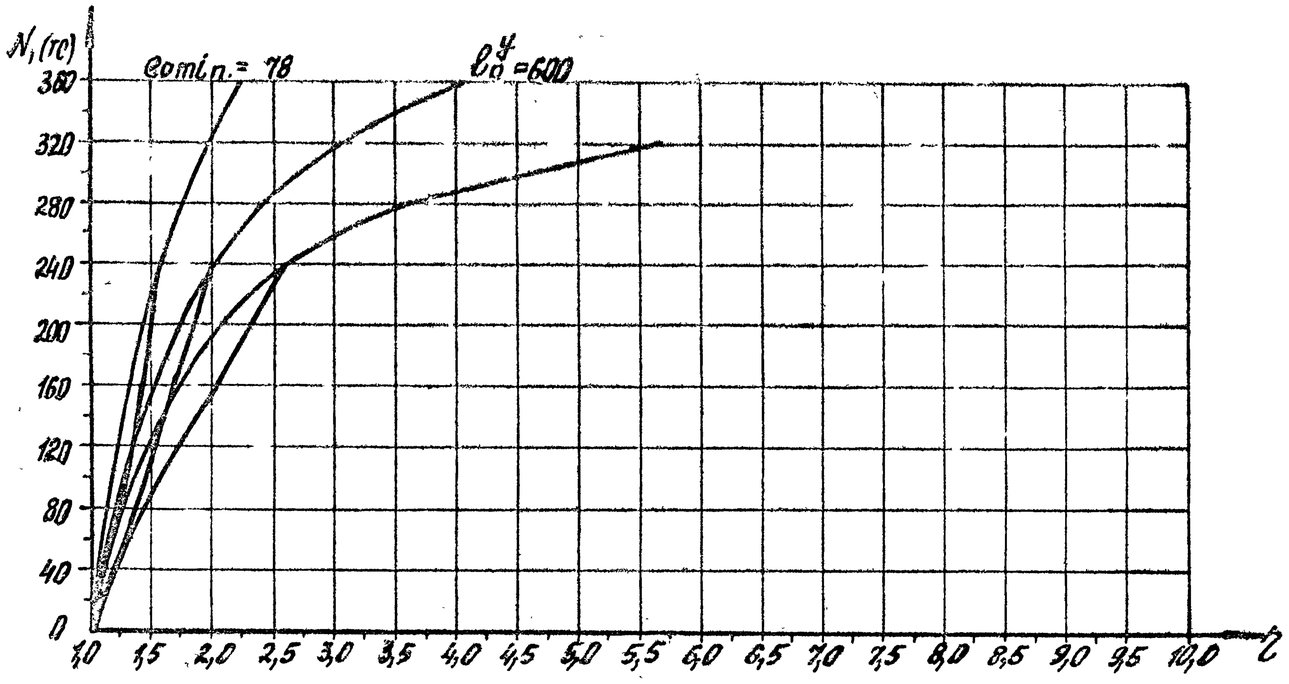


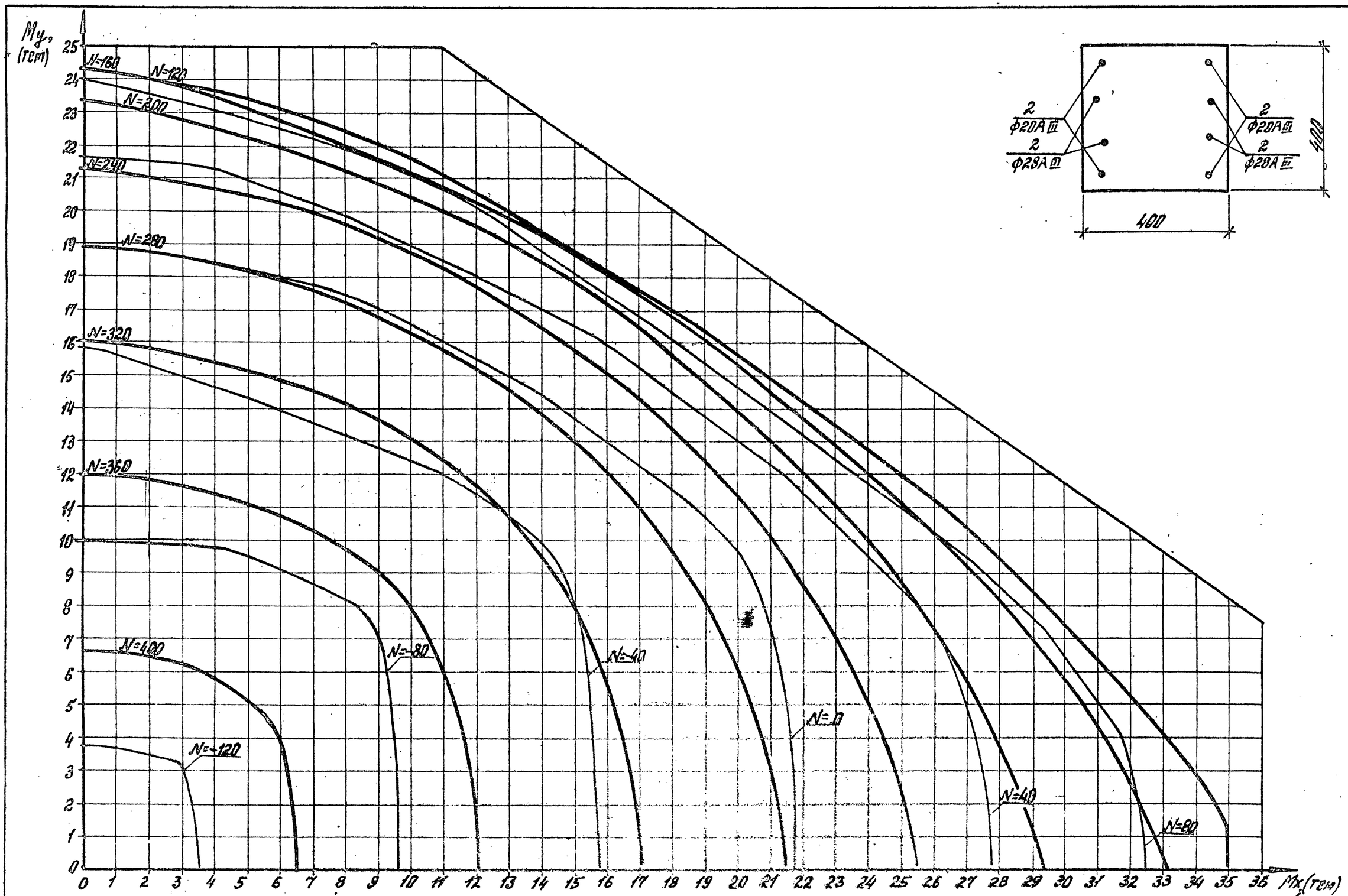
Класс бетона В30 (R_B=155,7 кгс/см^2 при учете γ_{b2}=0,9)

1.020-1/87.0-6-3 ПЗ

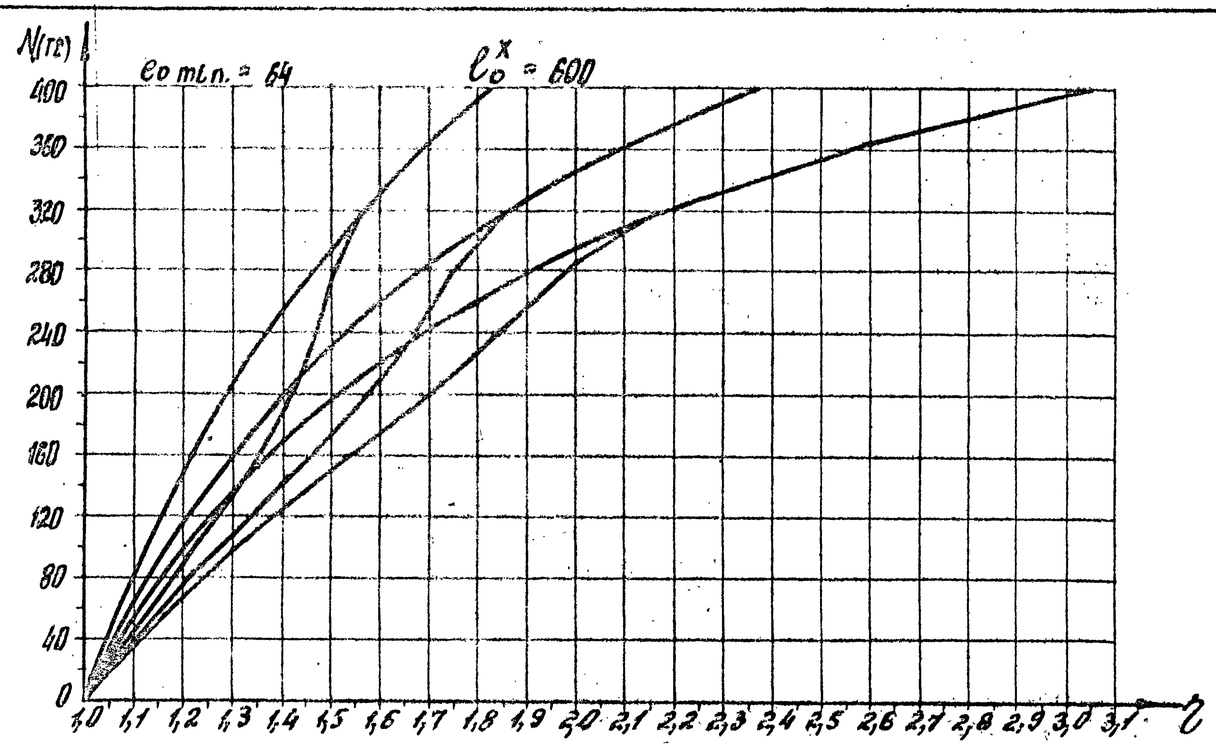
Лист 143

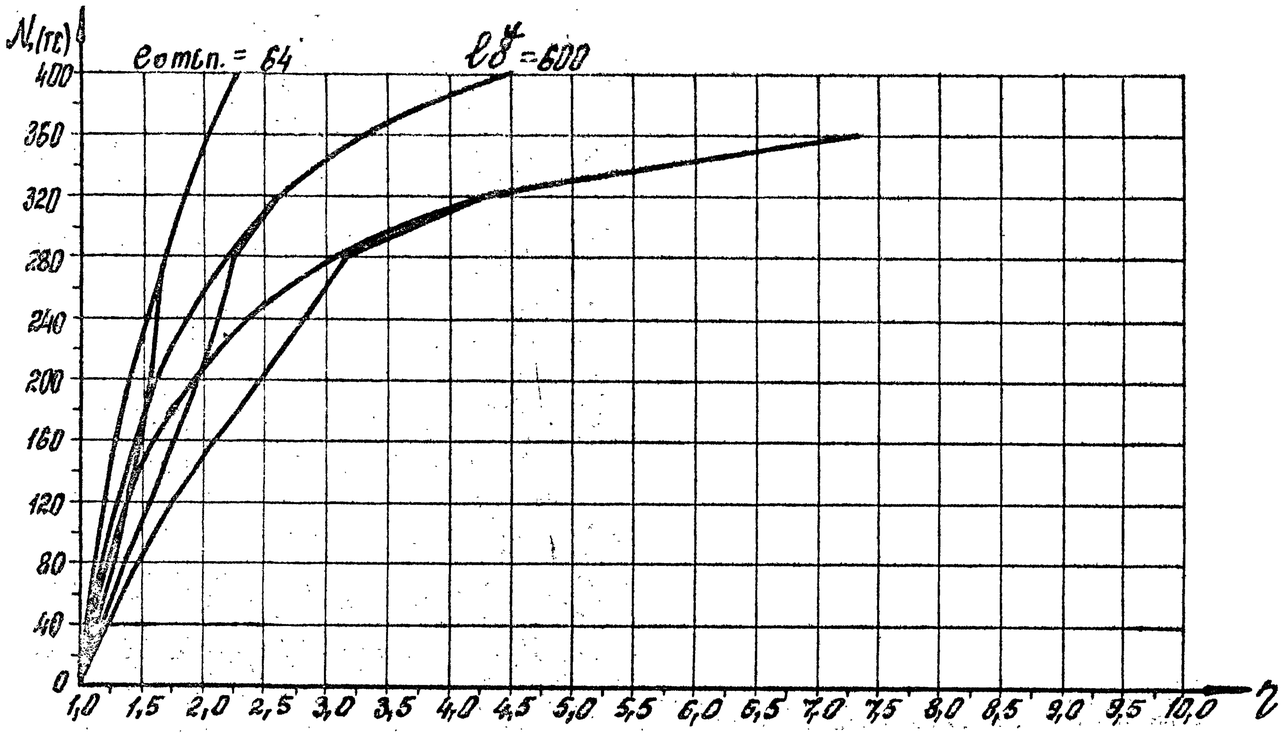

N, (тс)
e0 min. = 78
l0x = 600
360
320
280
240
200
160
120
80
40
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8
l

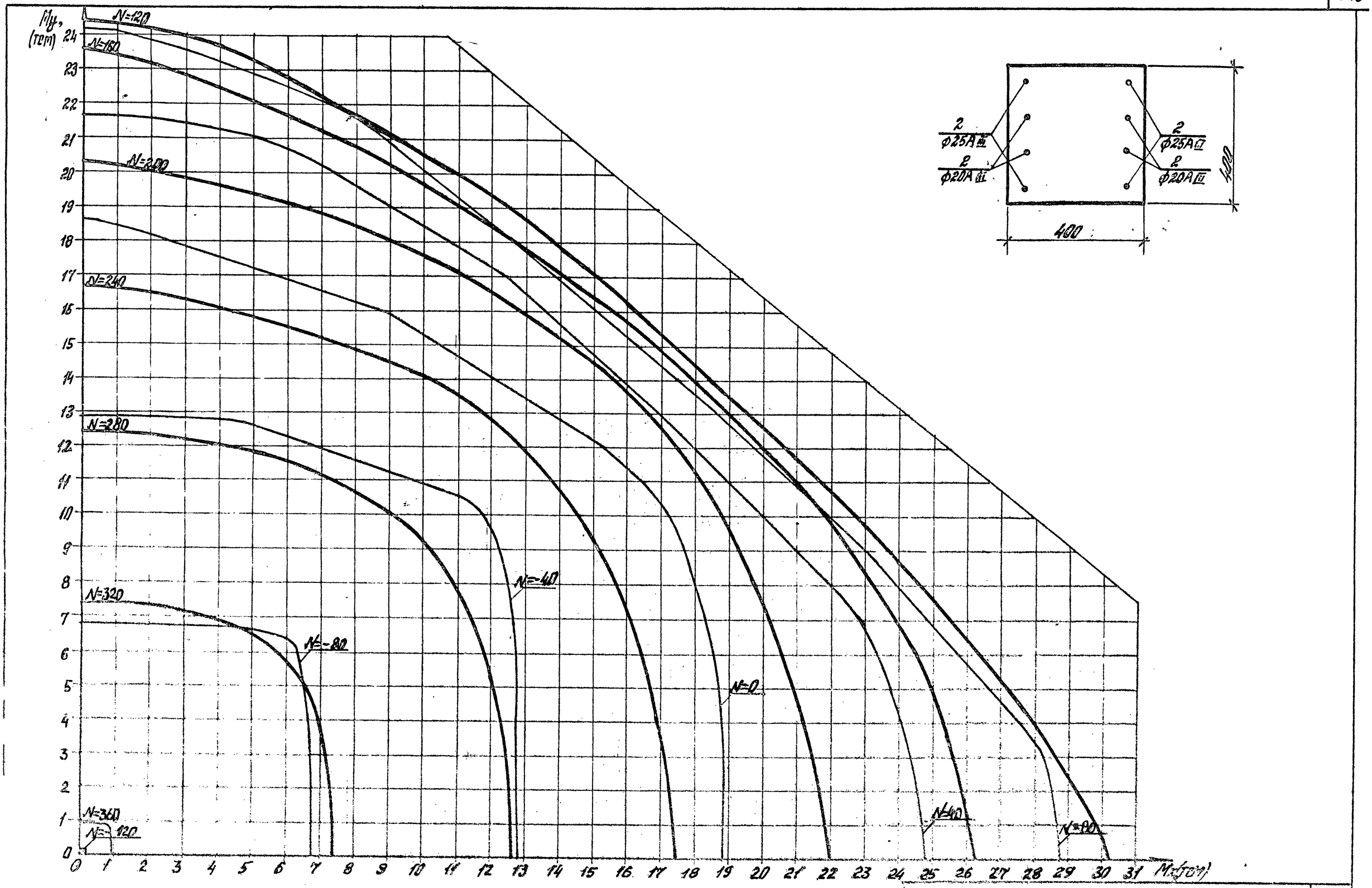

N, (тс)
e0 min. = 78
l0y = 600
360
320
280
240
200
160
120
80
40
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
l



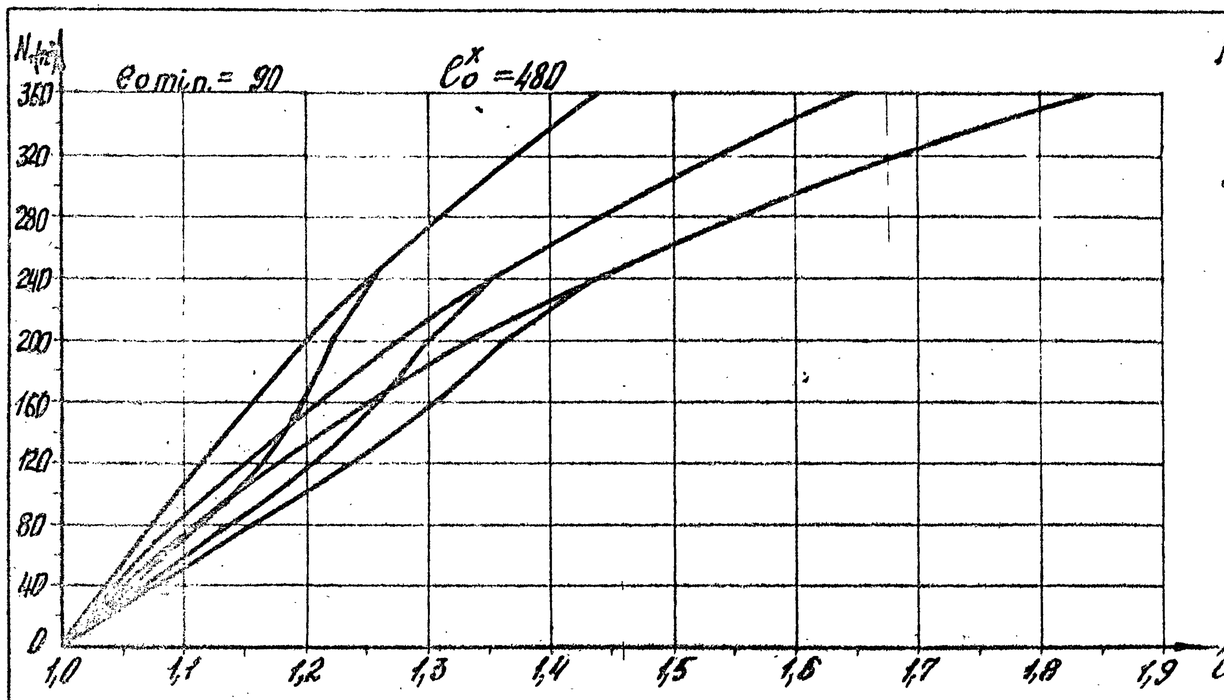
Класс бетона В30 (R_B = 190,3 кгс/см² при учете γ_{b2} = 1,10)

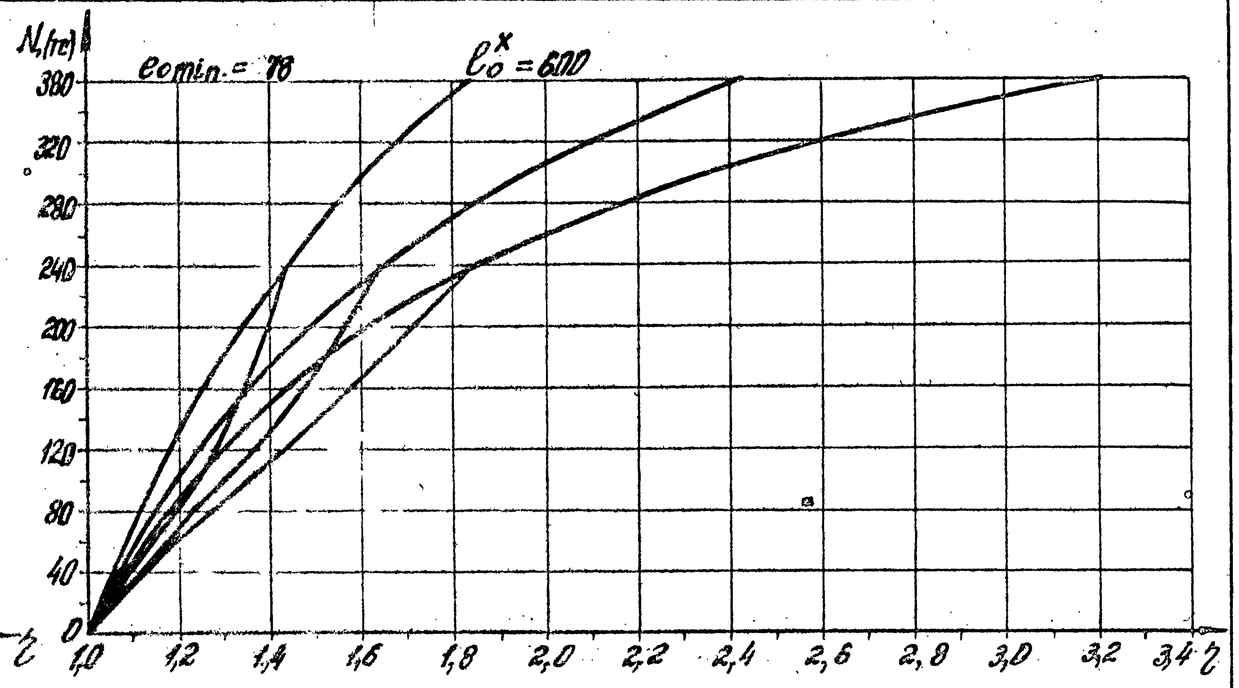

N(тс)
e₀ mln. = 64
e₀ˣ = 600
400
360
320
280
240
200
160
120
80
40
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9 3,0 3,1
e

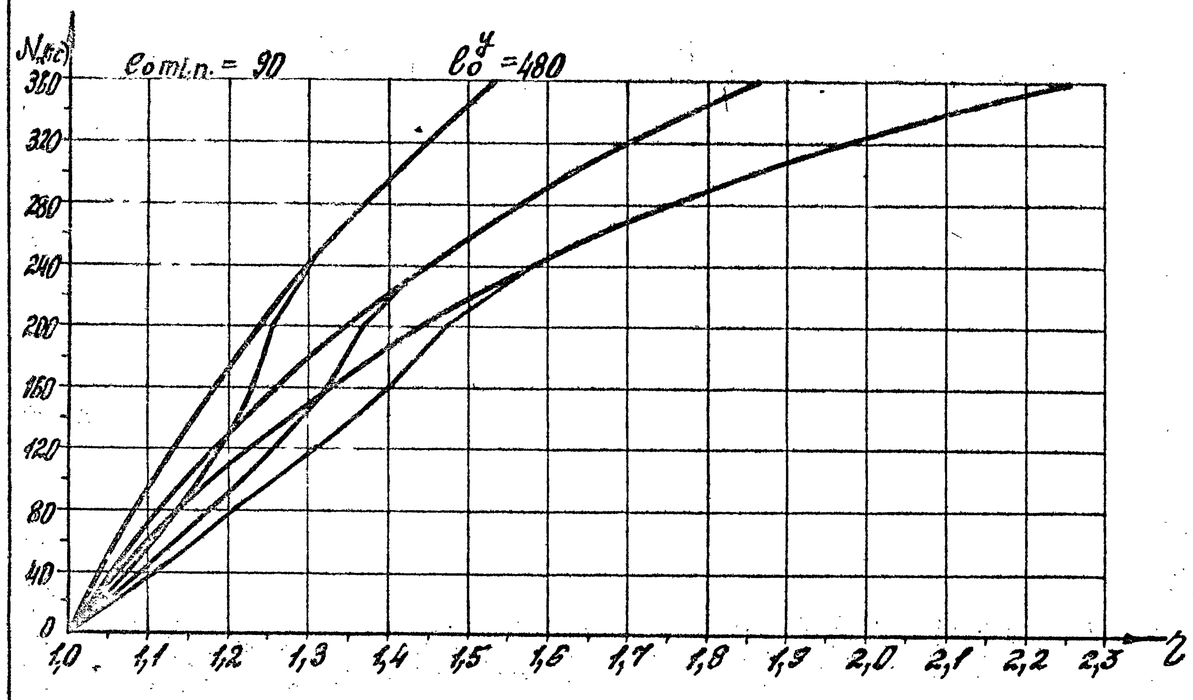

N,(тс)
e₀ mln. = 64
e₀ˣ = 600
400
350
320
280
240
200
160
120
80
40
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
e

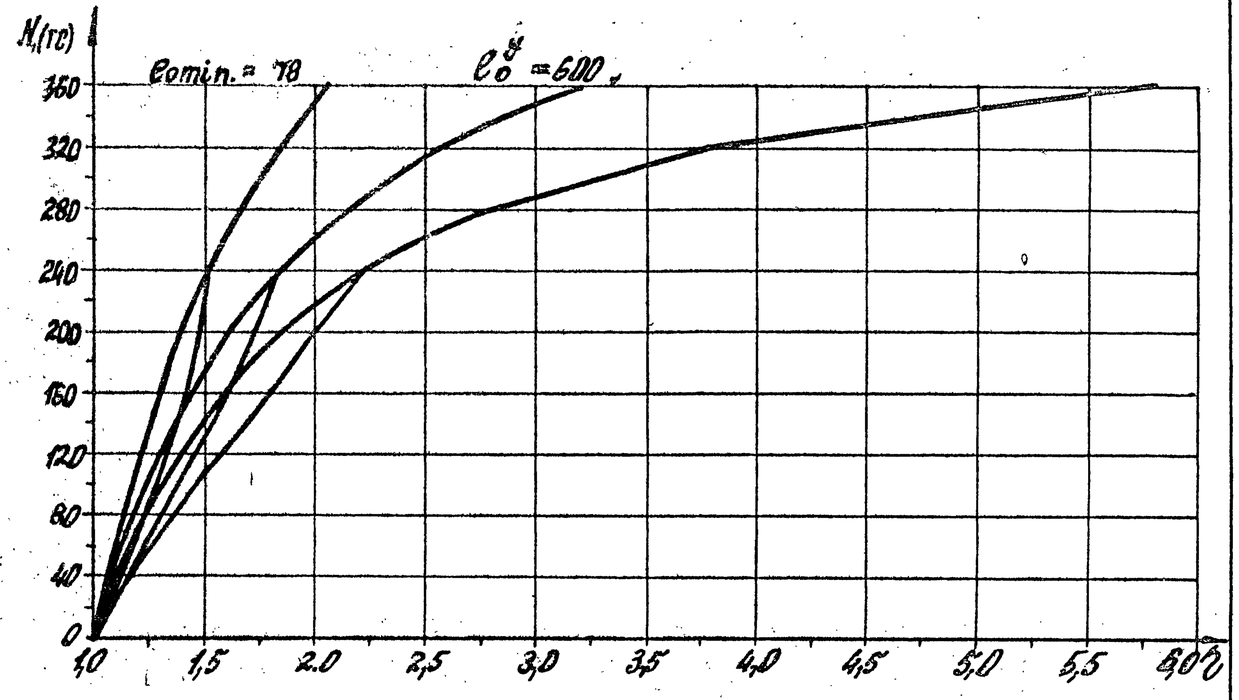


Класс бетона В30 (R_b = 155,7 кгс/см^2 при учете γ_{b2} = 0,9)



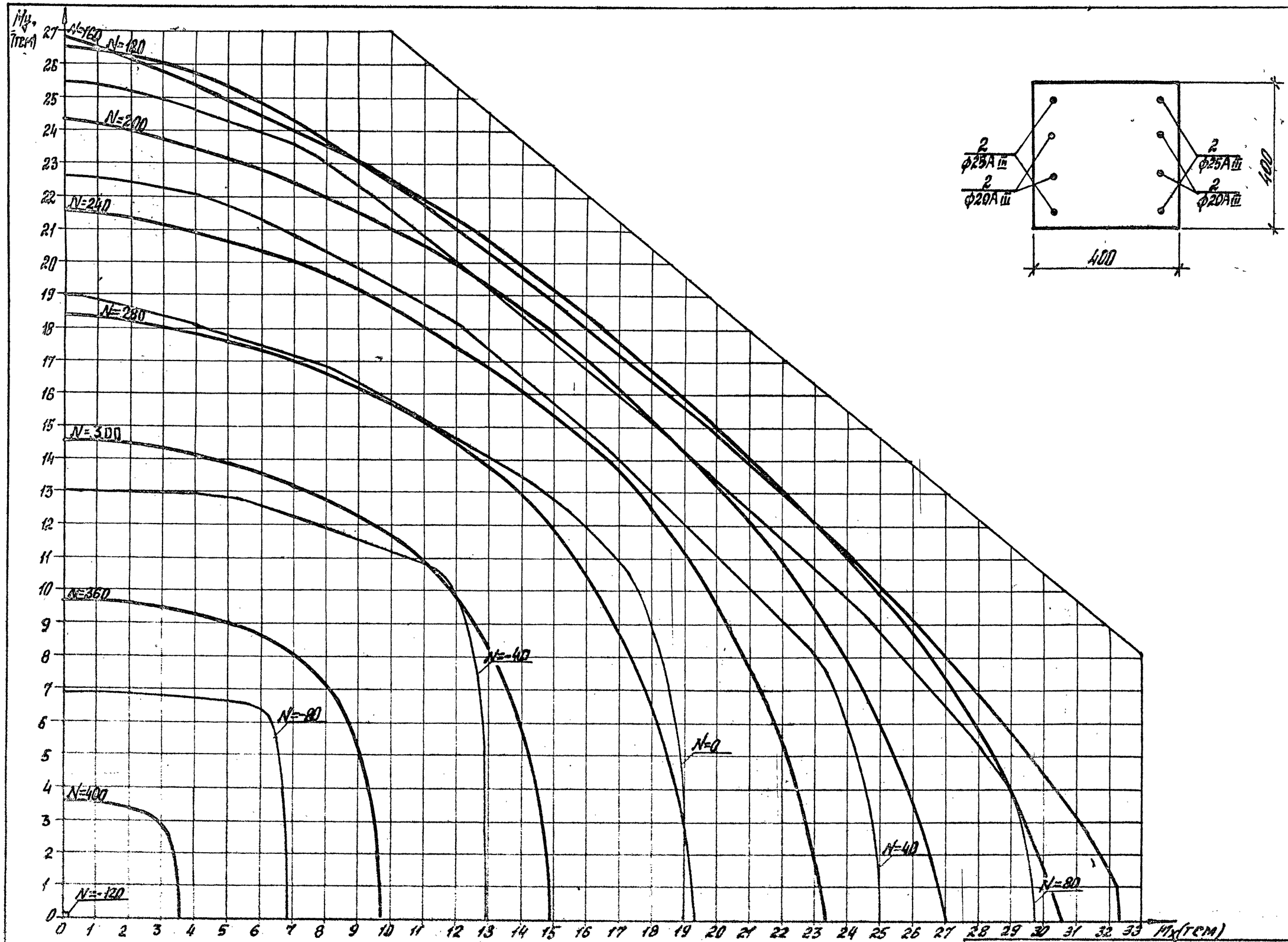






1020-1/87.0-6-ЗПЗ

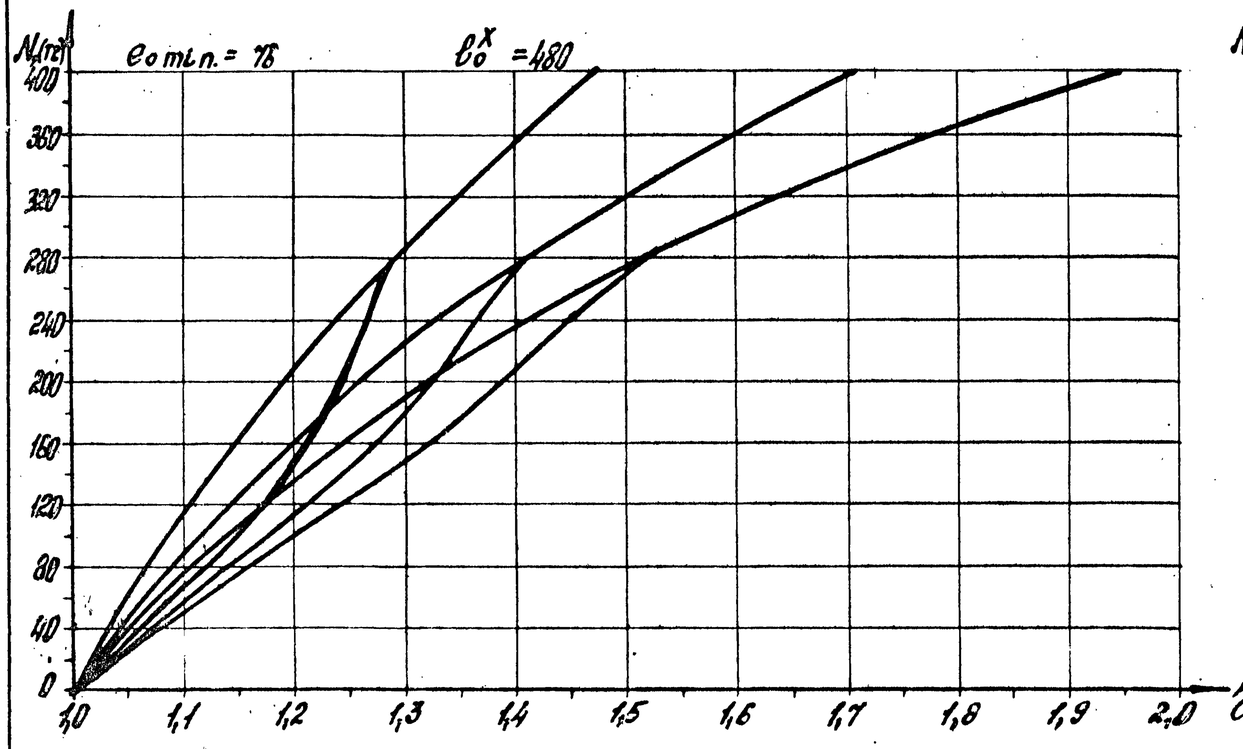
Лист 148

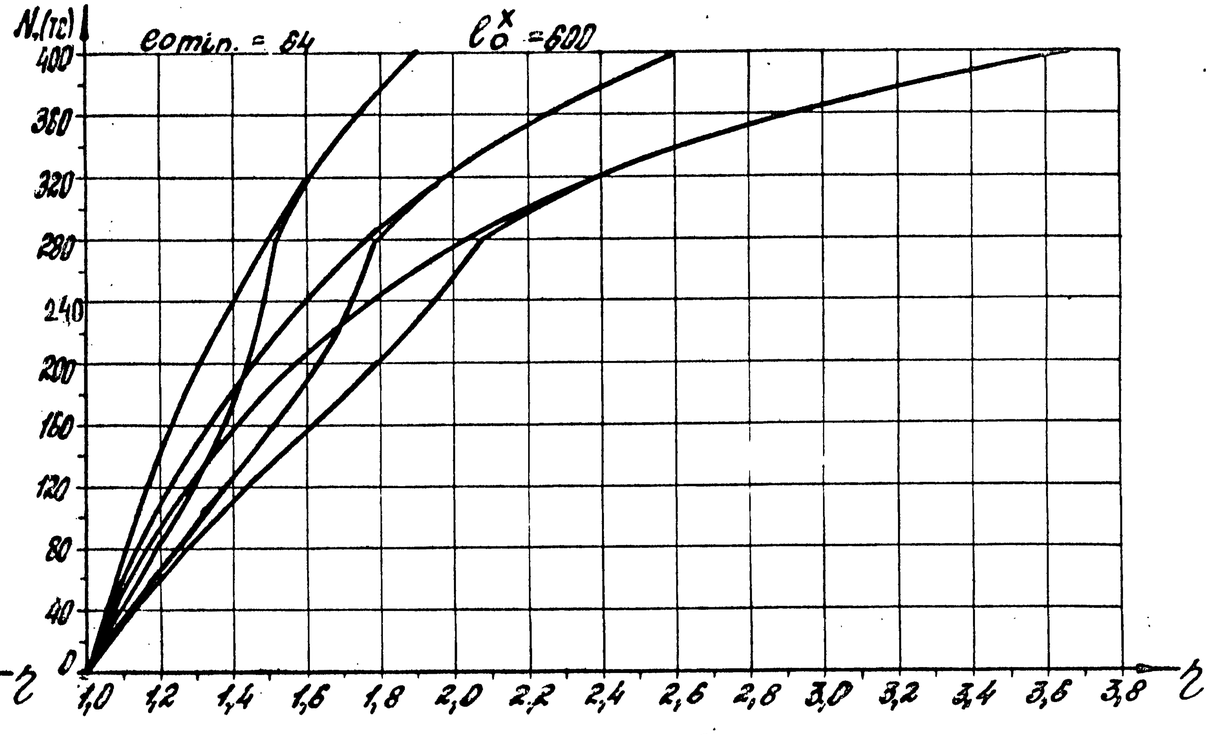


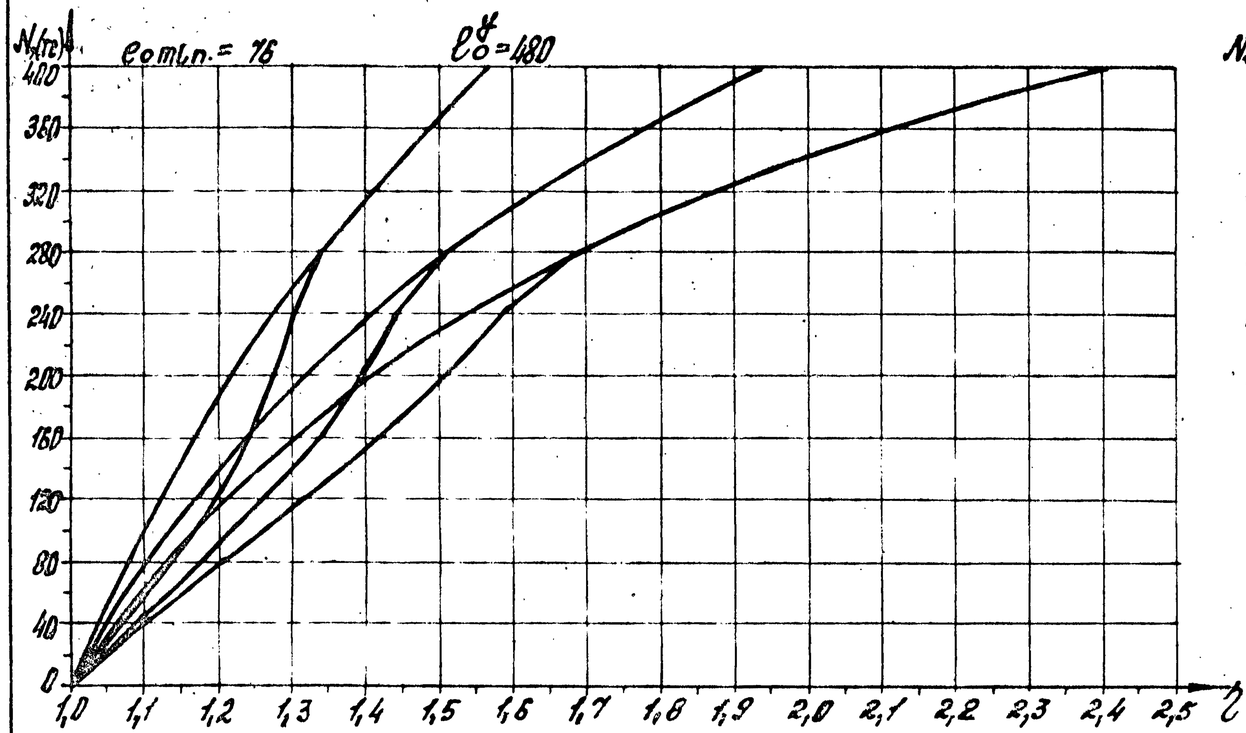
Класс бетона В30 (R_b = 130,3 кгс/см² при учете γ_{b2} = 1,10)

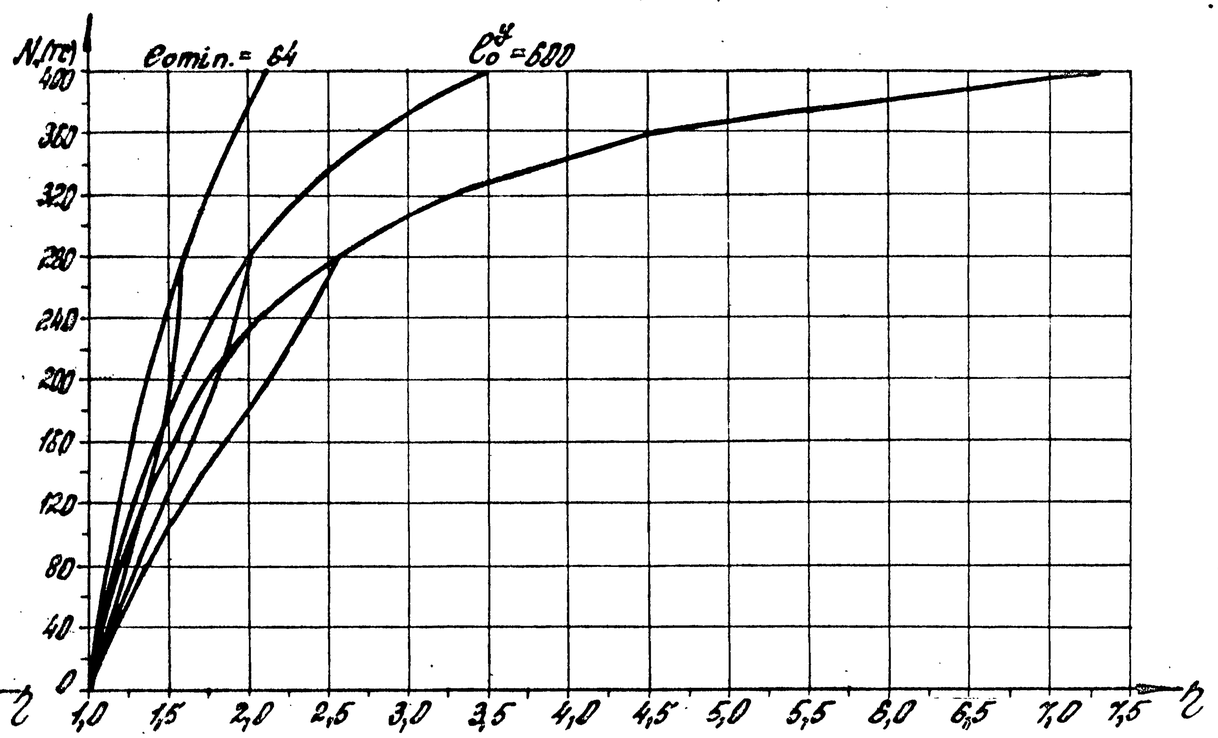
1.020-1/87. 0-6-3 ПЗ

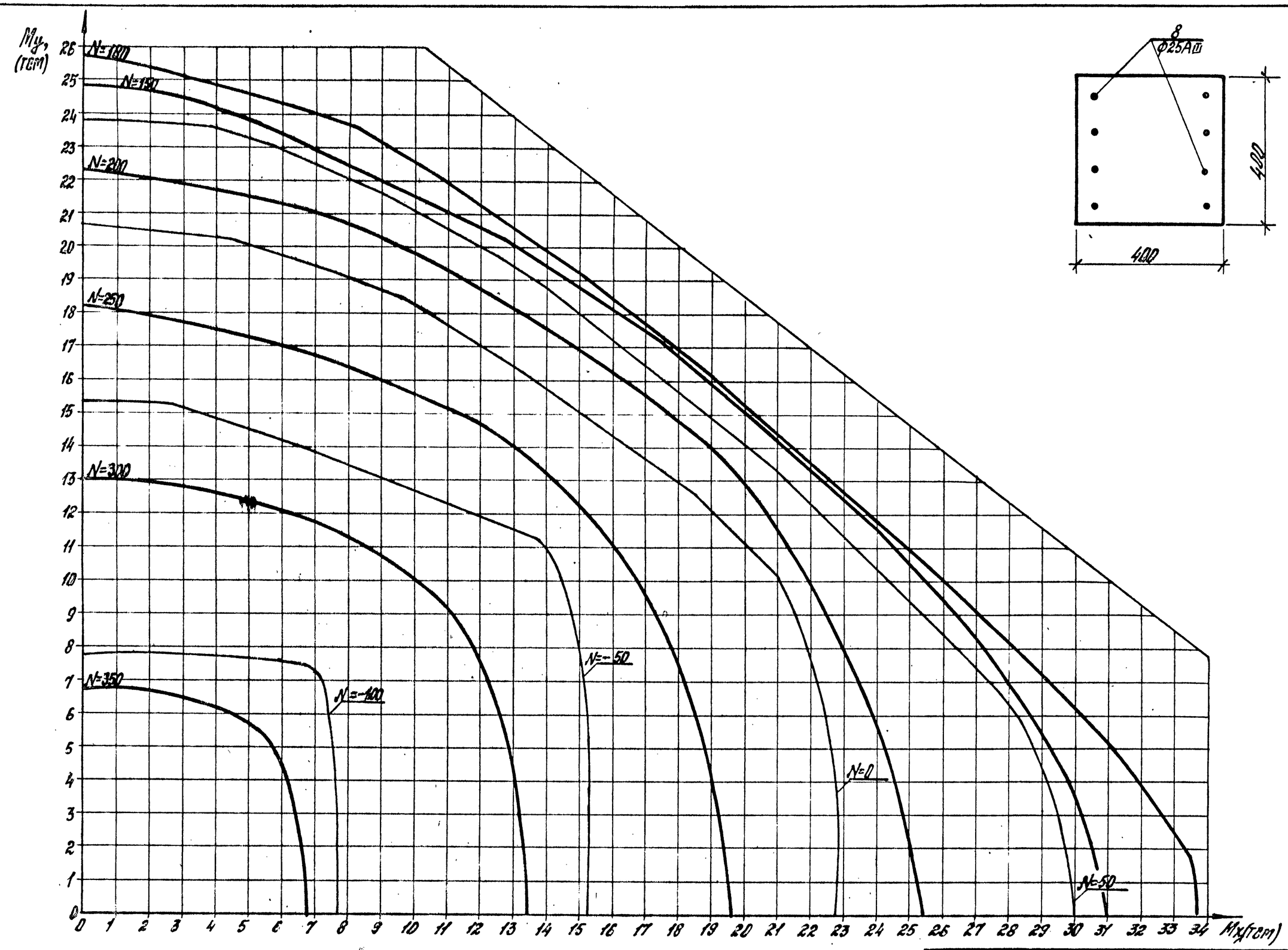
Лист 149


N,(тс)
e₀min. = 76
e₀ˣ = 480
400
360
320
280
240
200
160
120
80
40
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0
l

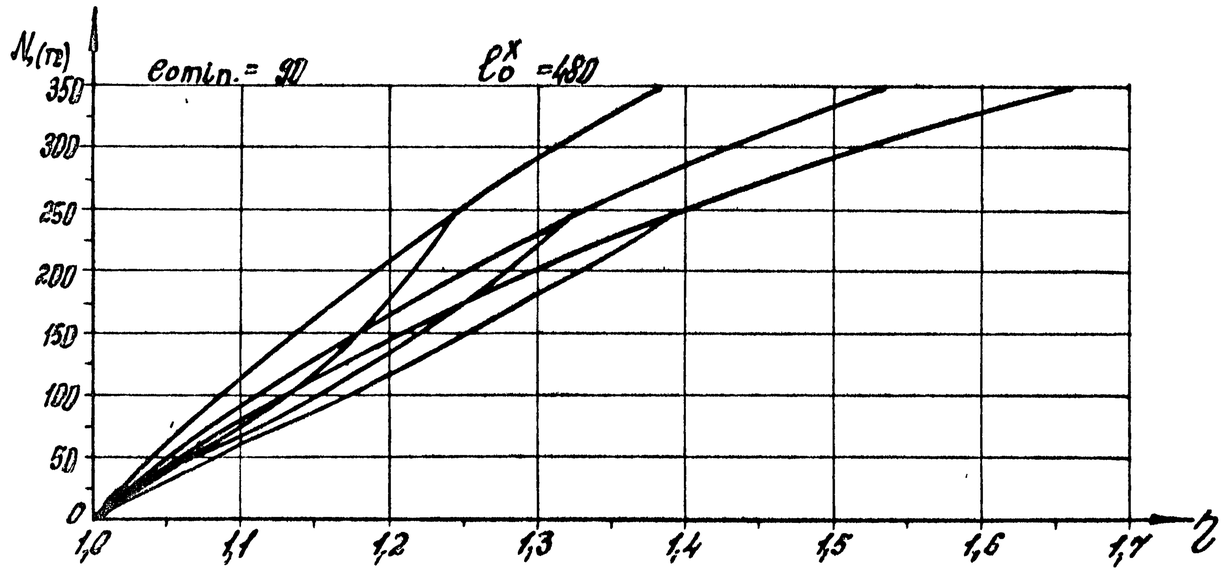

N,(тс)
e₀min. = 64
e₀ˣ = 600
400
360
320
280
240
200
160
120
80
40
0
1,0 1,2 1,4 1,6 1,8 2,0 2,2 2,4 2,6 2,8 3,0 3,2 3,4 3,6 3,8
l

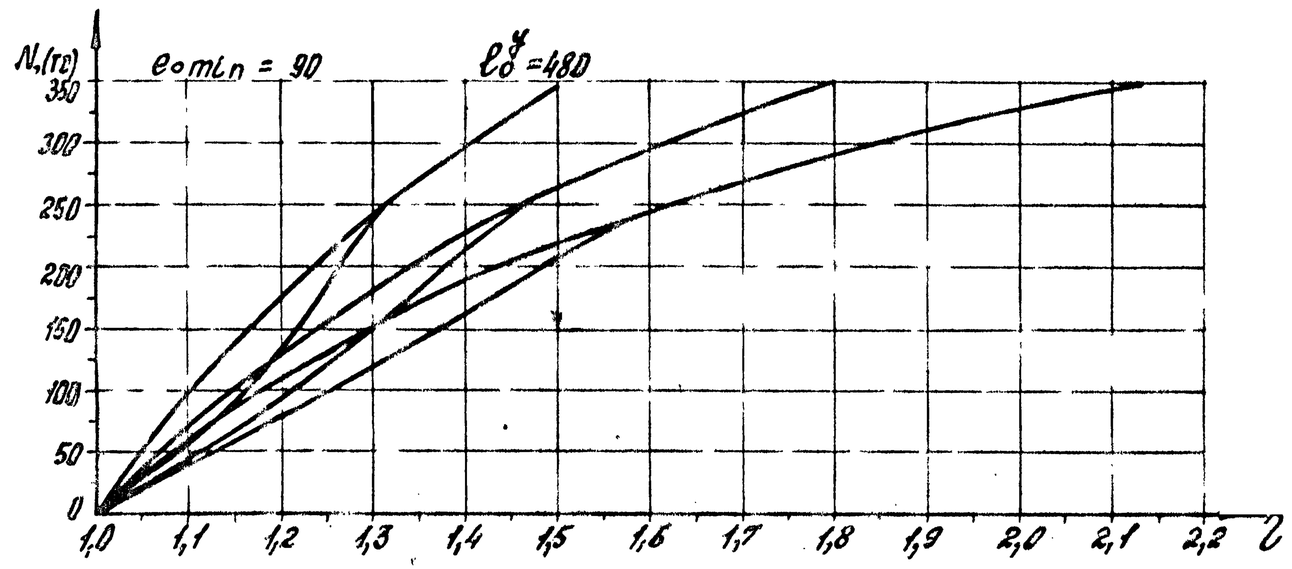

N,(тс)
e₀min. = 76
e₀ʸ = 480
400
360
320
280
240
200
160
120
80
40
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5
l

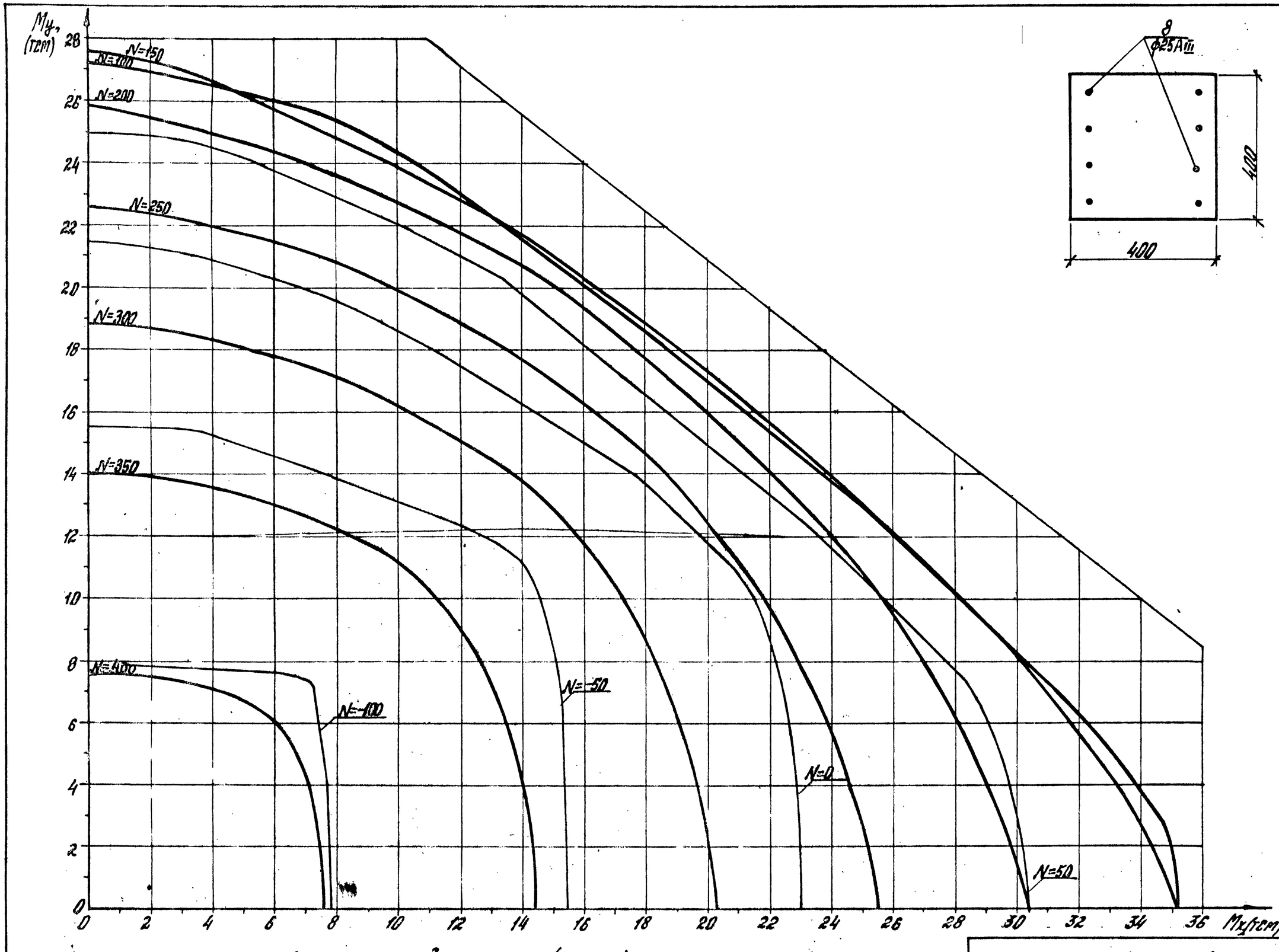

N,(тс)
e₀min. = 64
e₀ʸ = 600
400
360
320
280
240
200
160
120
80
40
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5
l



Класс бетона В30 (R_B=156,7 кгс/см^2 при учете γ_{b2}=0,9)


N,(тс)
e0min.= 20
l0x =480
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
η

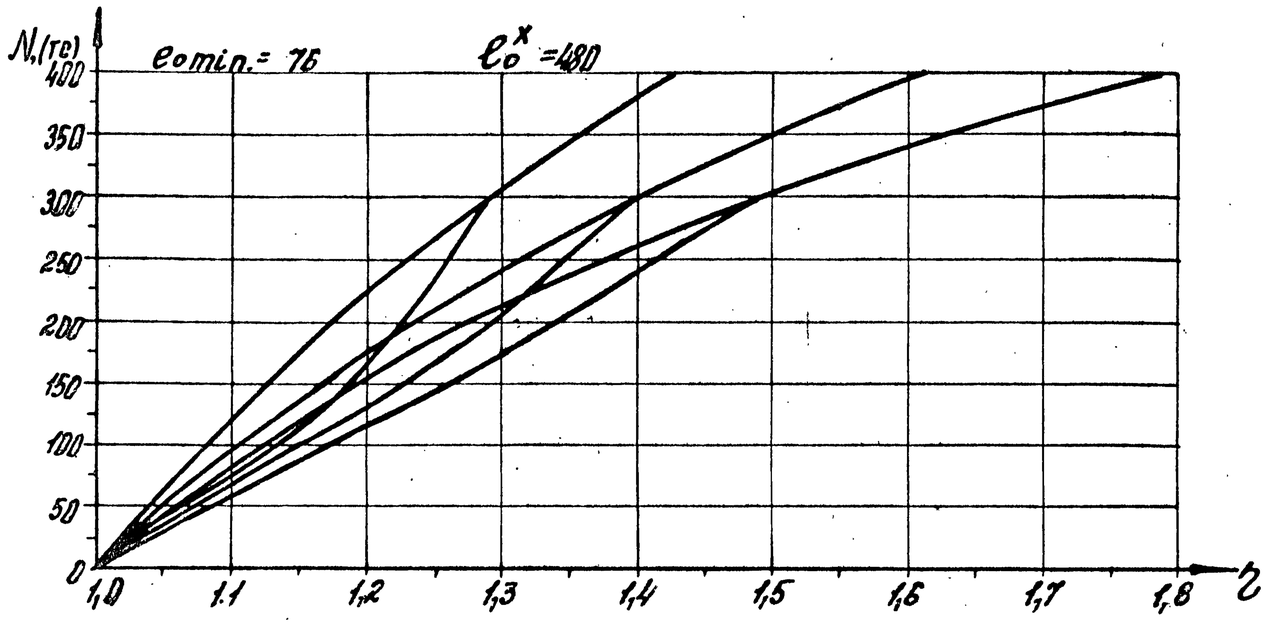

N,(тс)
e0min = 20
l0y =480
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
η

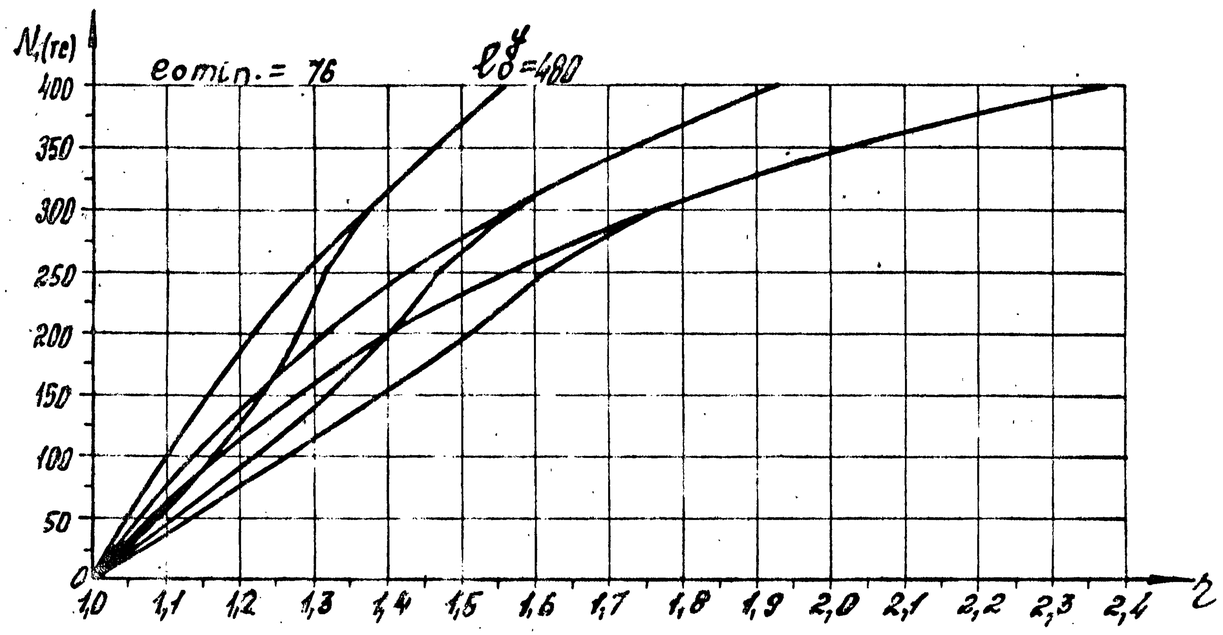


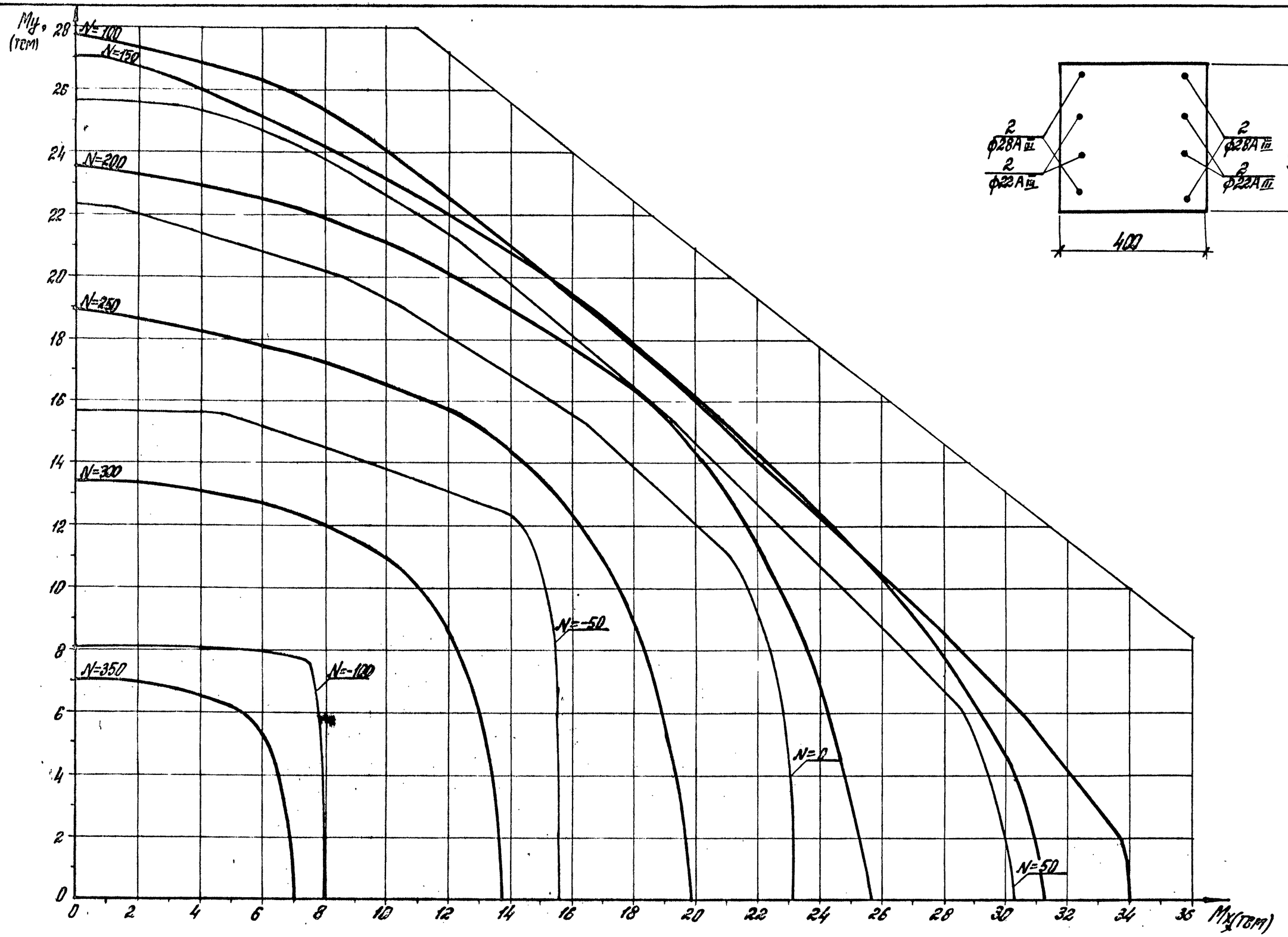
Класс бетона В30 (R_b = 190,3 кгс/см² при учете γ_{b2} = 1,10)

1.020-1/87. 0-6-3 ПЗ

Лист 153


N,(тс)
e0min.= 76
e0x=480
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
η

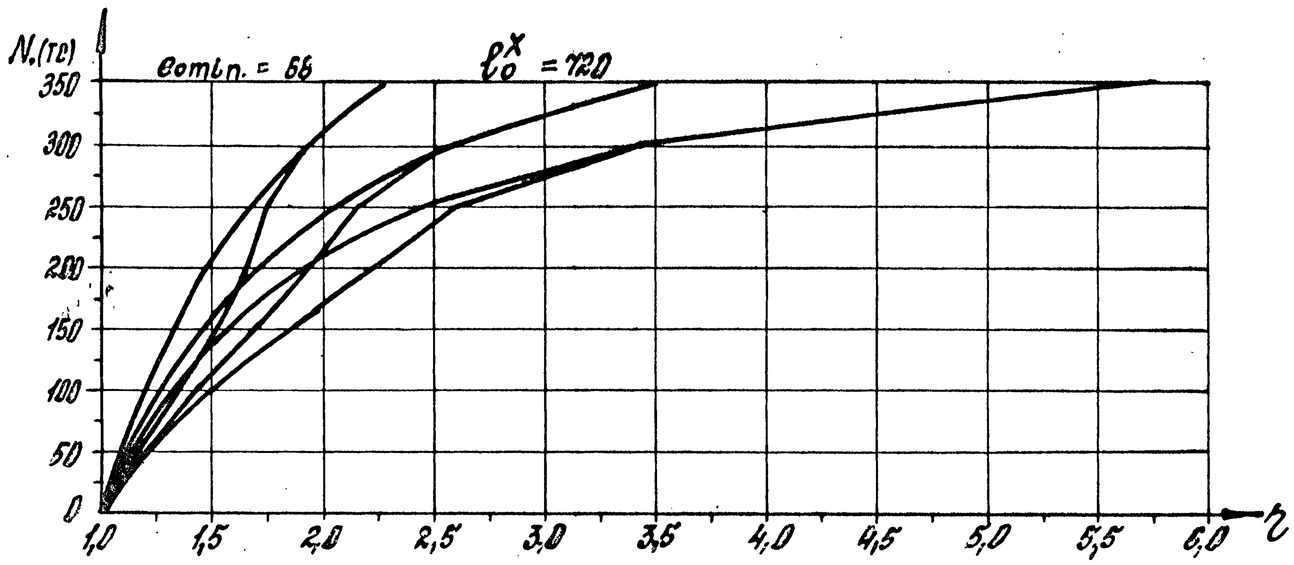

N,(тс)
e0min.= 76
e0y=480
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
2,3
2,4
η

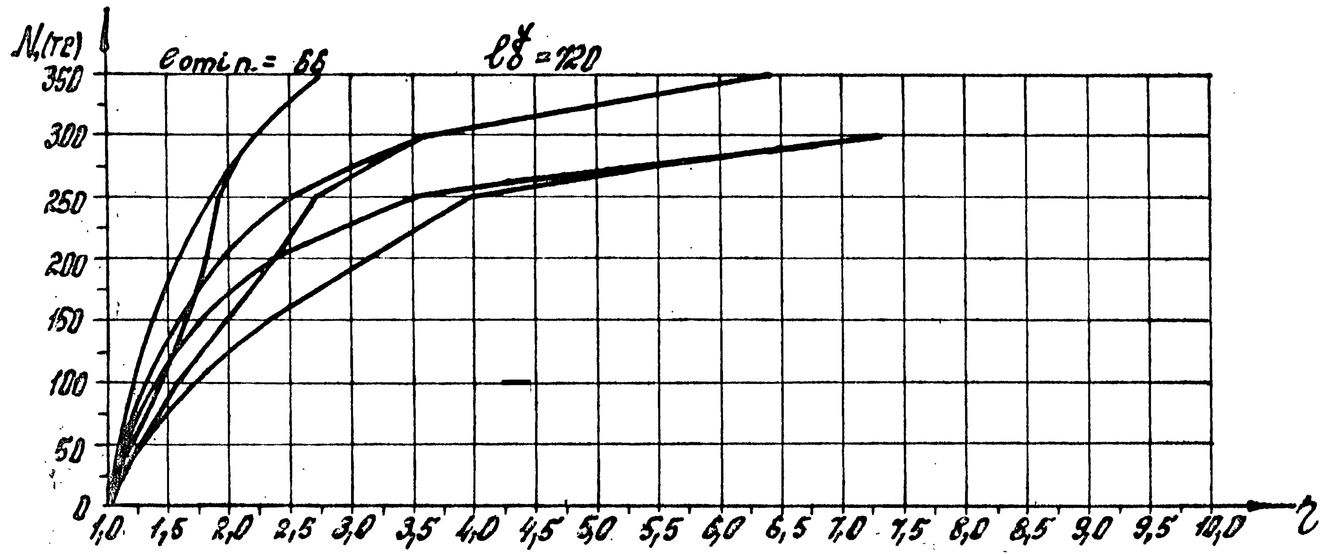


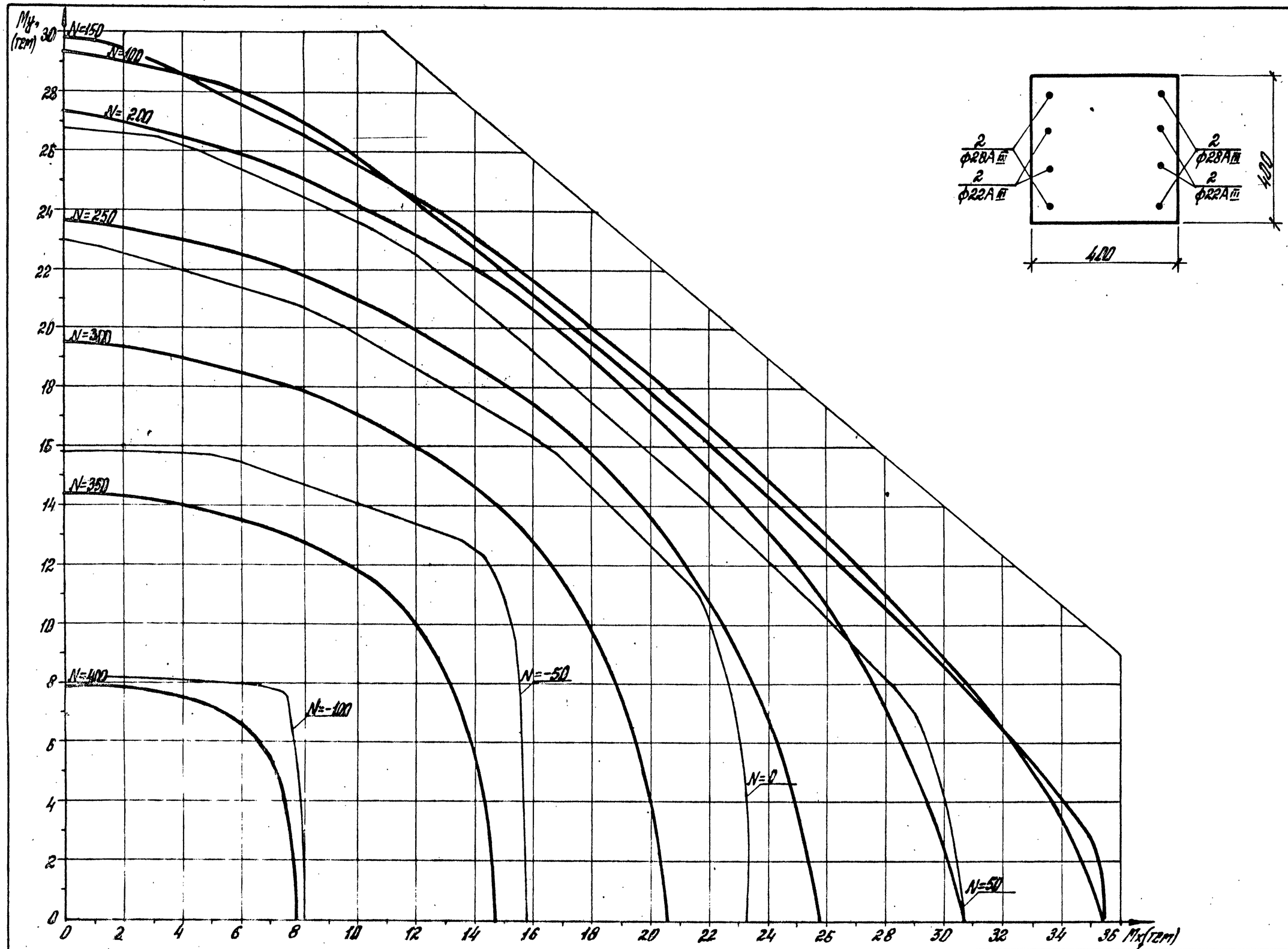
Класс бетона В30 (R_b=155,7кгс/см² при учете γ_{b2}=0,9)

1.020-1/87. 0-6-3 ПЗ

Лист 155.


N,(тс)
e min. = 66
l_0^x = 720
350
300
250
200
150
100
50
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
r

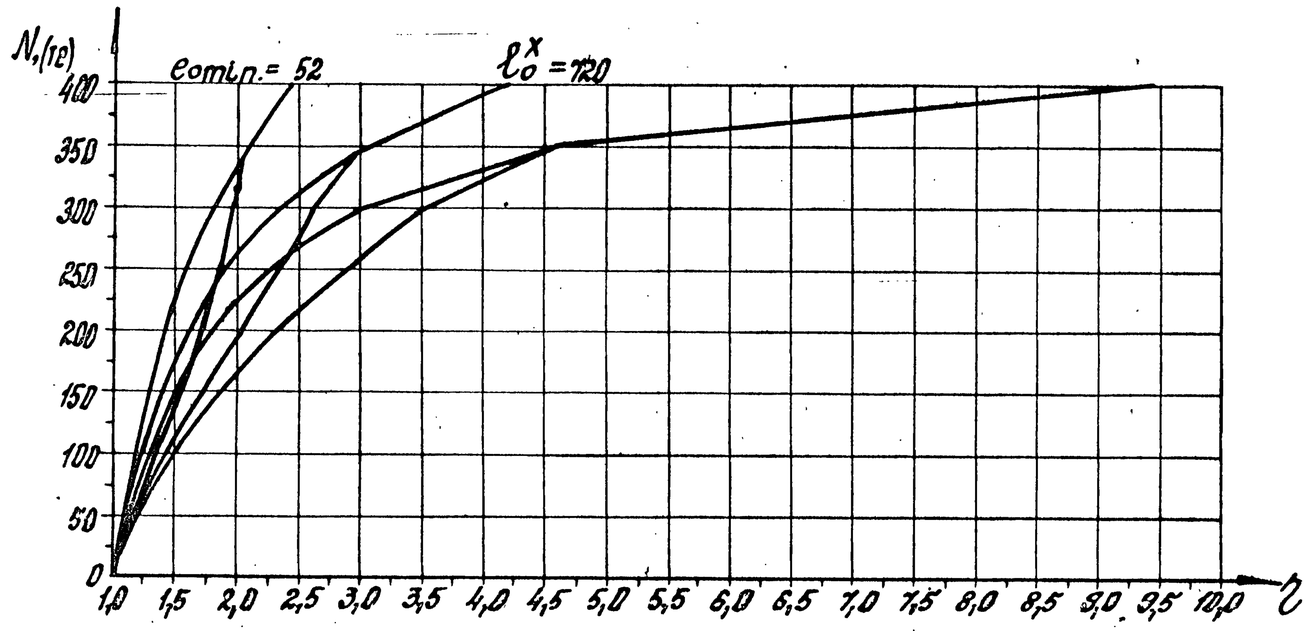

N,(тс)
e min. = 66
l_0^y = 720
350
300
250
200
150
100
50
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
6,5
7,0
7,5
8,0
8,5
9,0
9,5
10,0
r

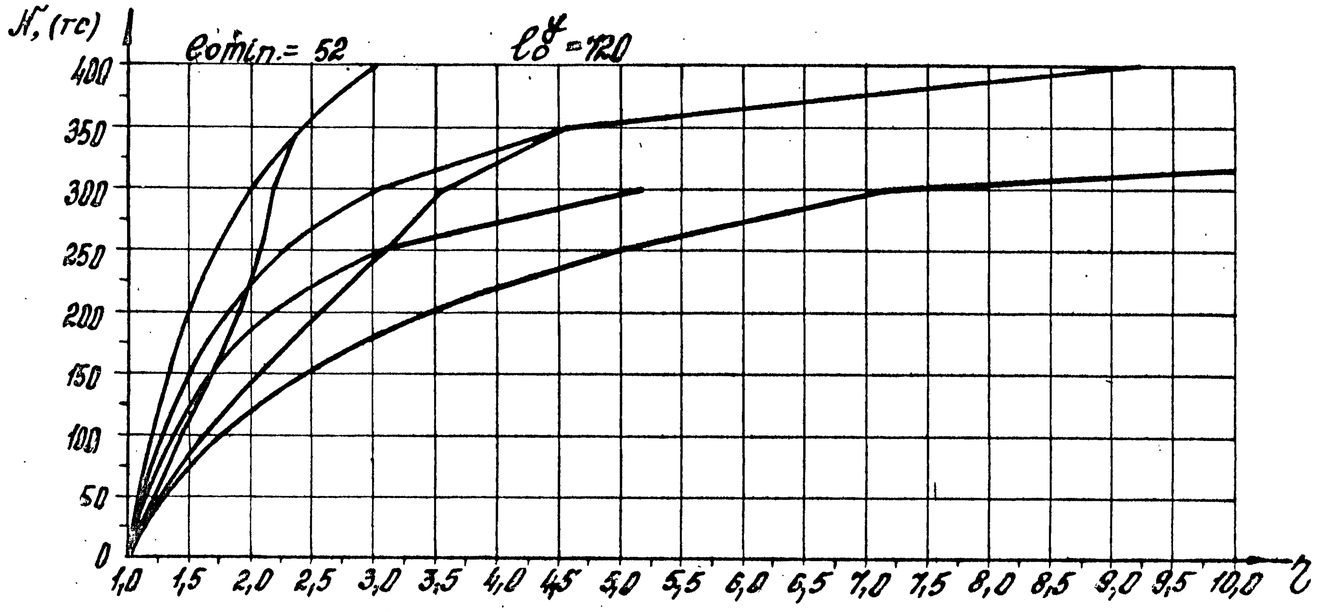


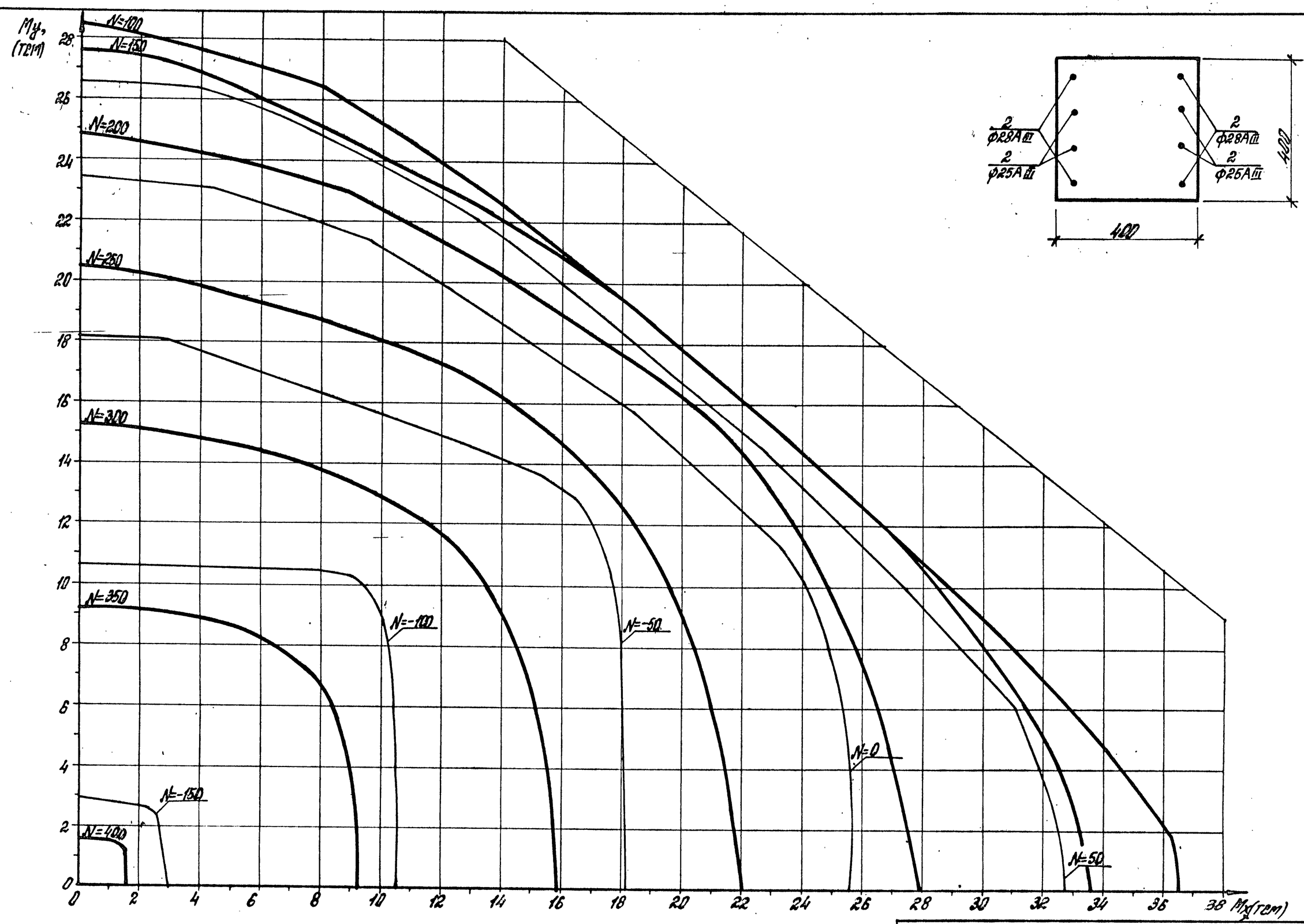
Класс бетона В30 (R_B = 190,3кгс/см² при учете γ_{b2} = 1,10)

1.020-1/87. 0-6 – 3 ПЗ

Лист 157


N,(тс)
e0min.= 52
l0x = 720
400
350
300
250
200
150
100
50
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
r

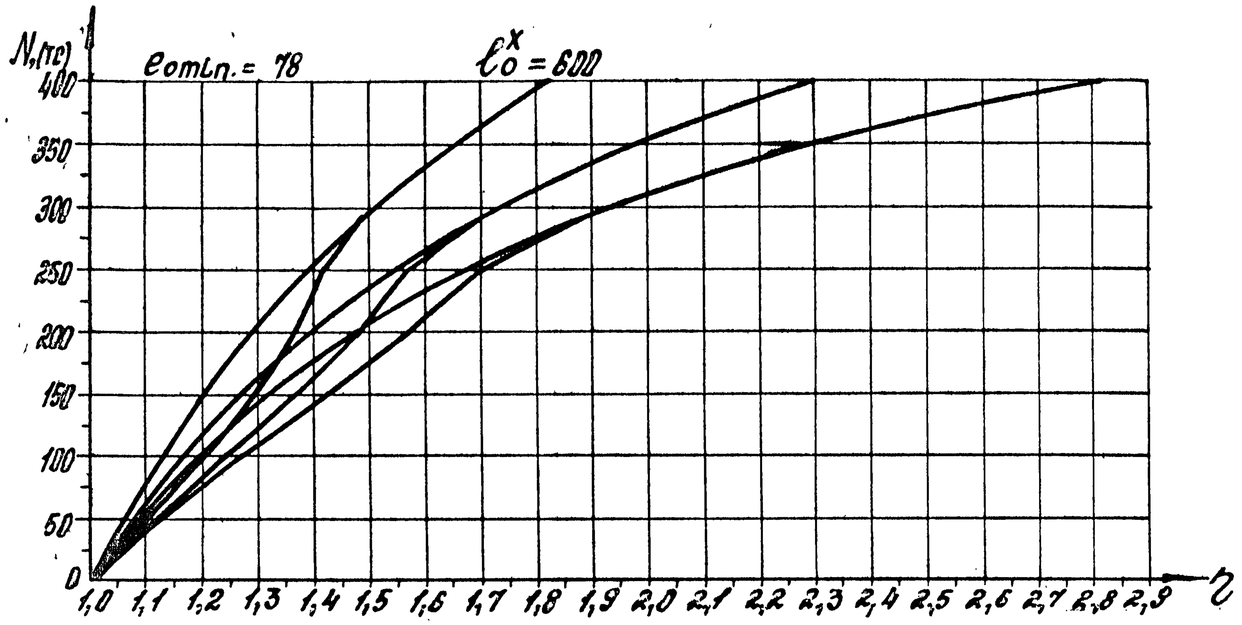

N, (тс)
e0min.= 52
l0y = 720
400
350
300
250
200
150
100
50
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
r

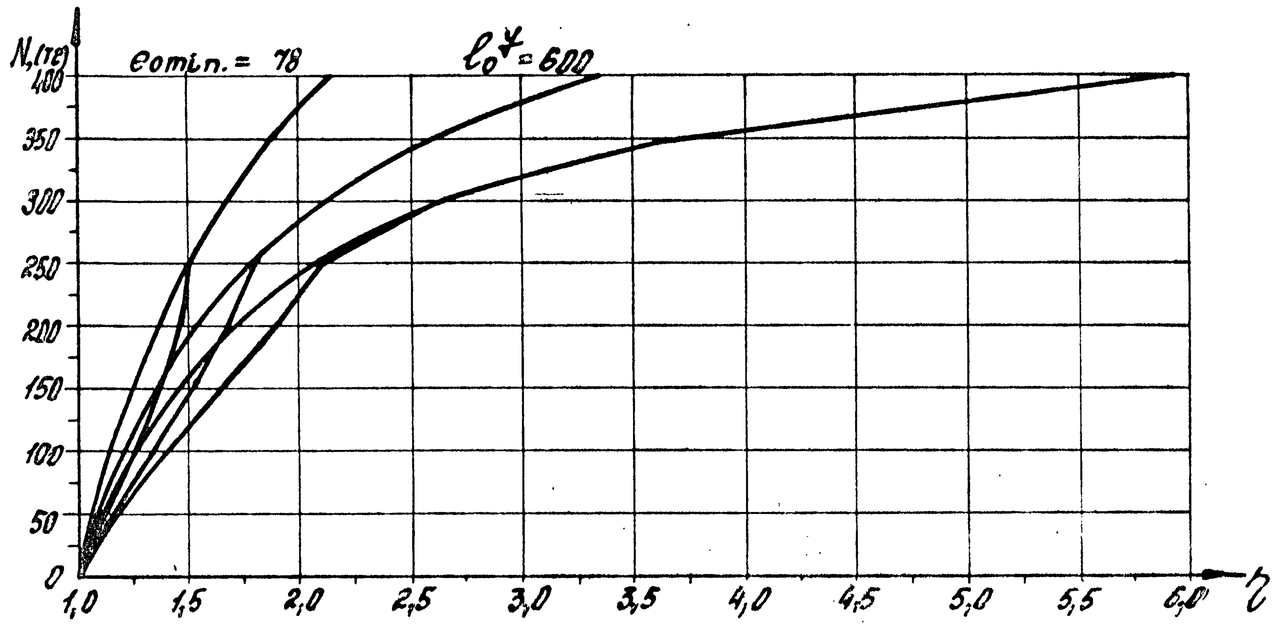


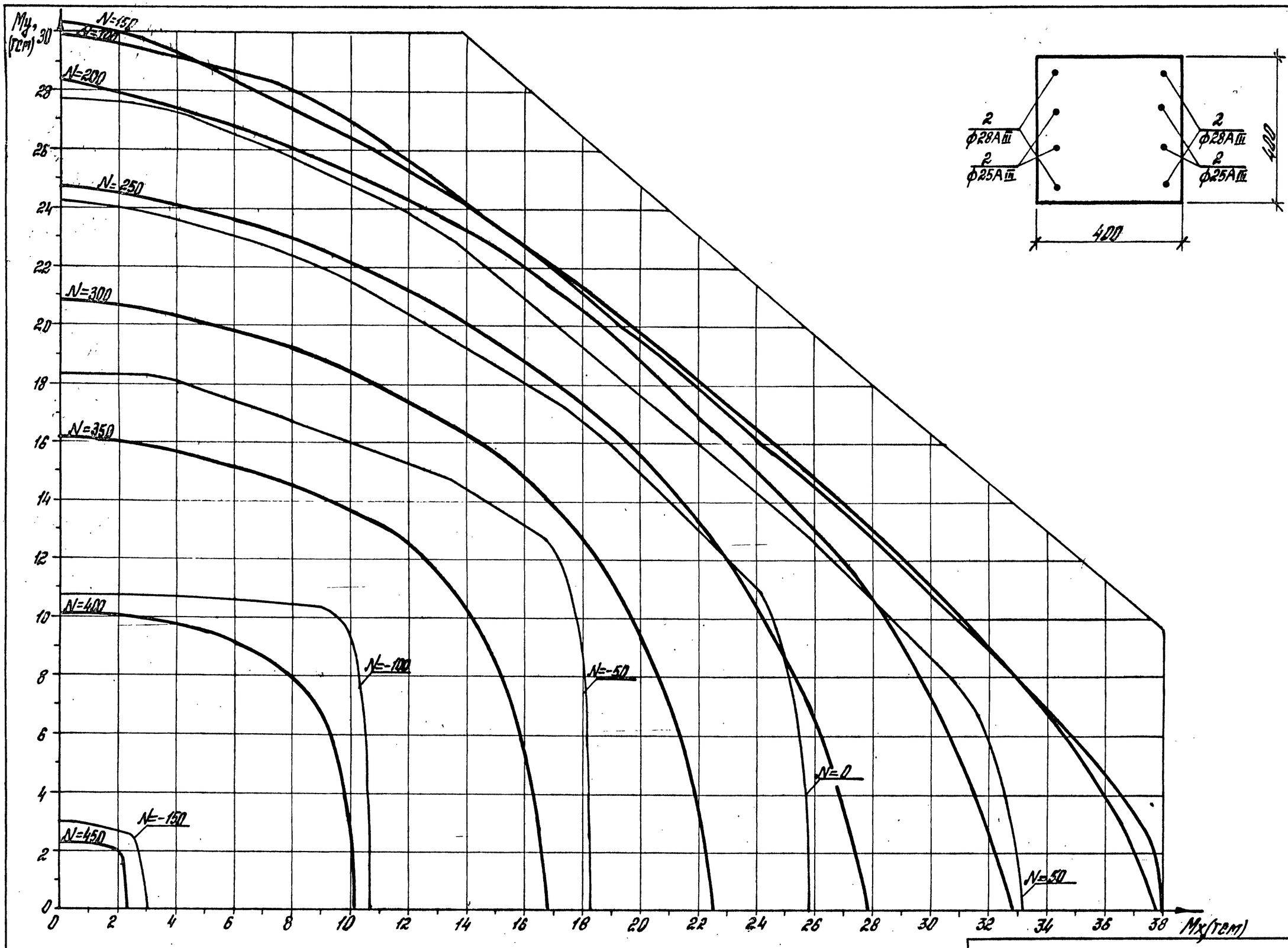
Класс бетона В30 (R_b=15,5 кгс/см^2 при учете γ_{b2}=0,9)

1.020-1/87.0-6-3 ПЗ

Лист 159


N,(тс)
e₀min.= 78
l₀ˣ = 600
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9
λ

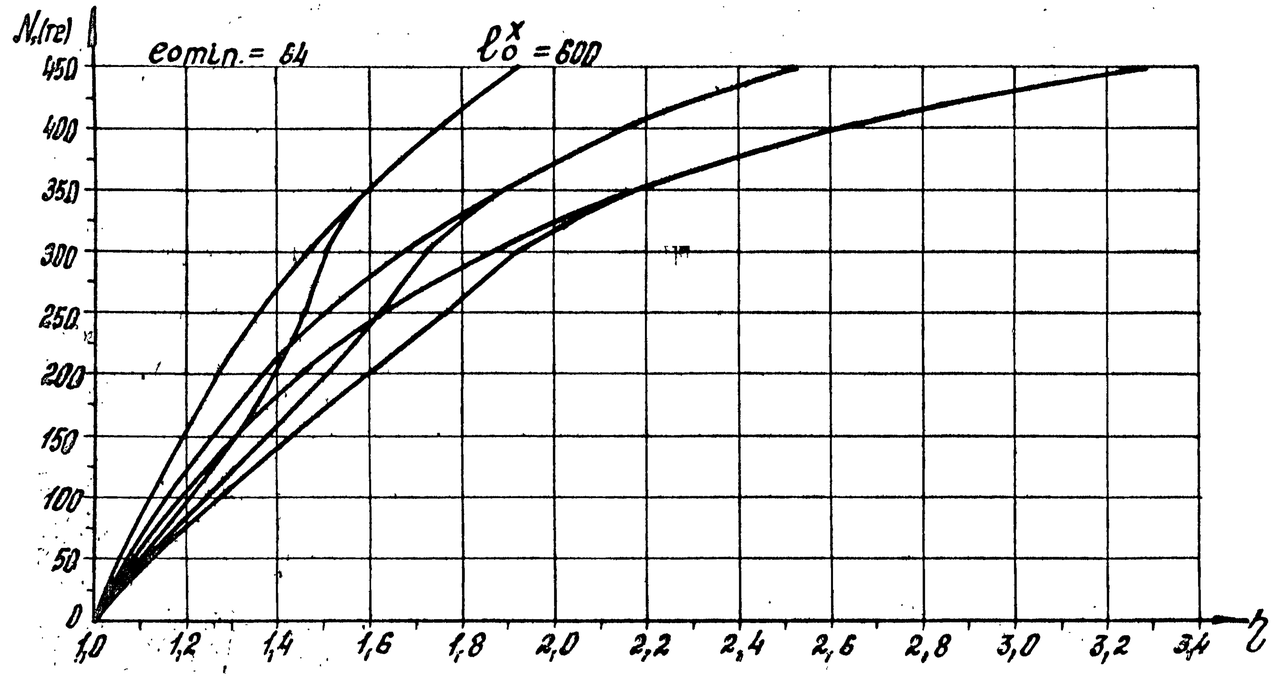

N,(тс)
e₀min.= 78
l₀ʸ = 600
400
350
300
250
200
150
100
50
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0
λ

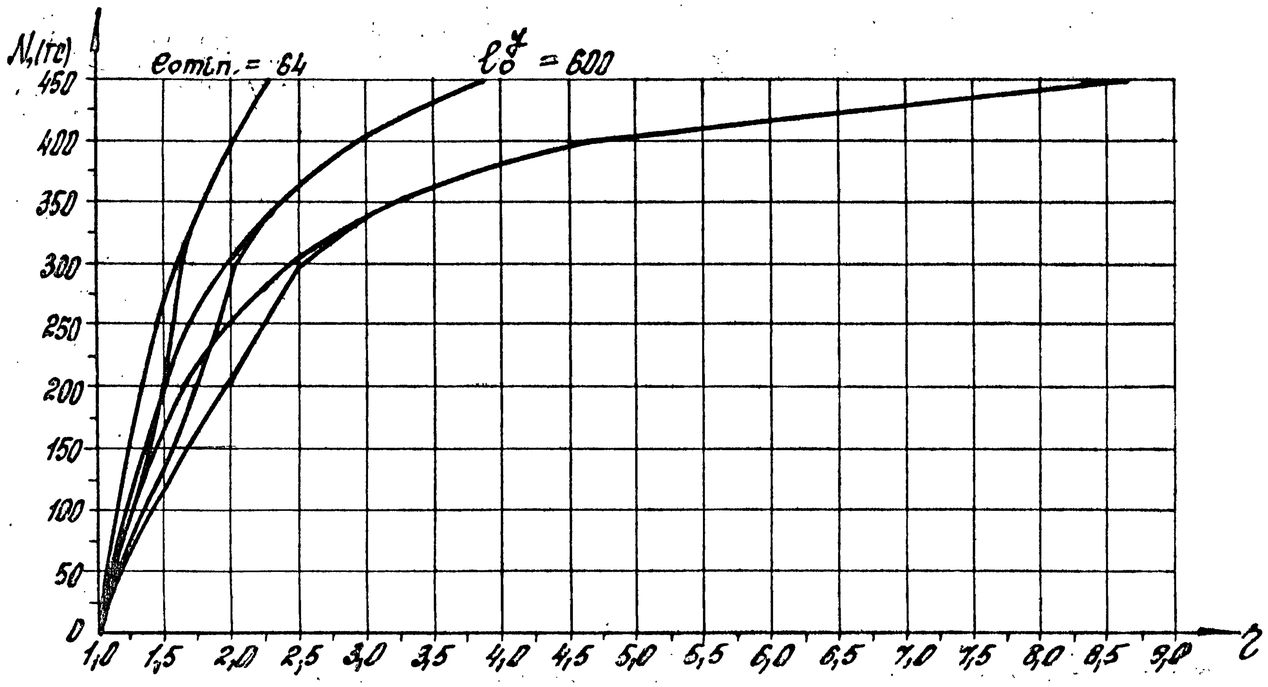


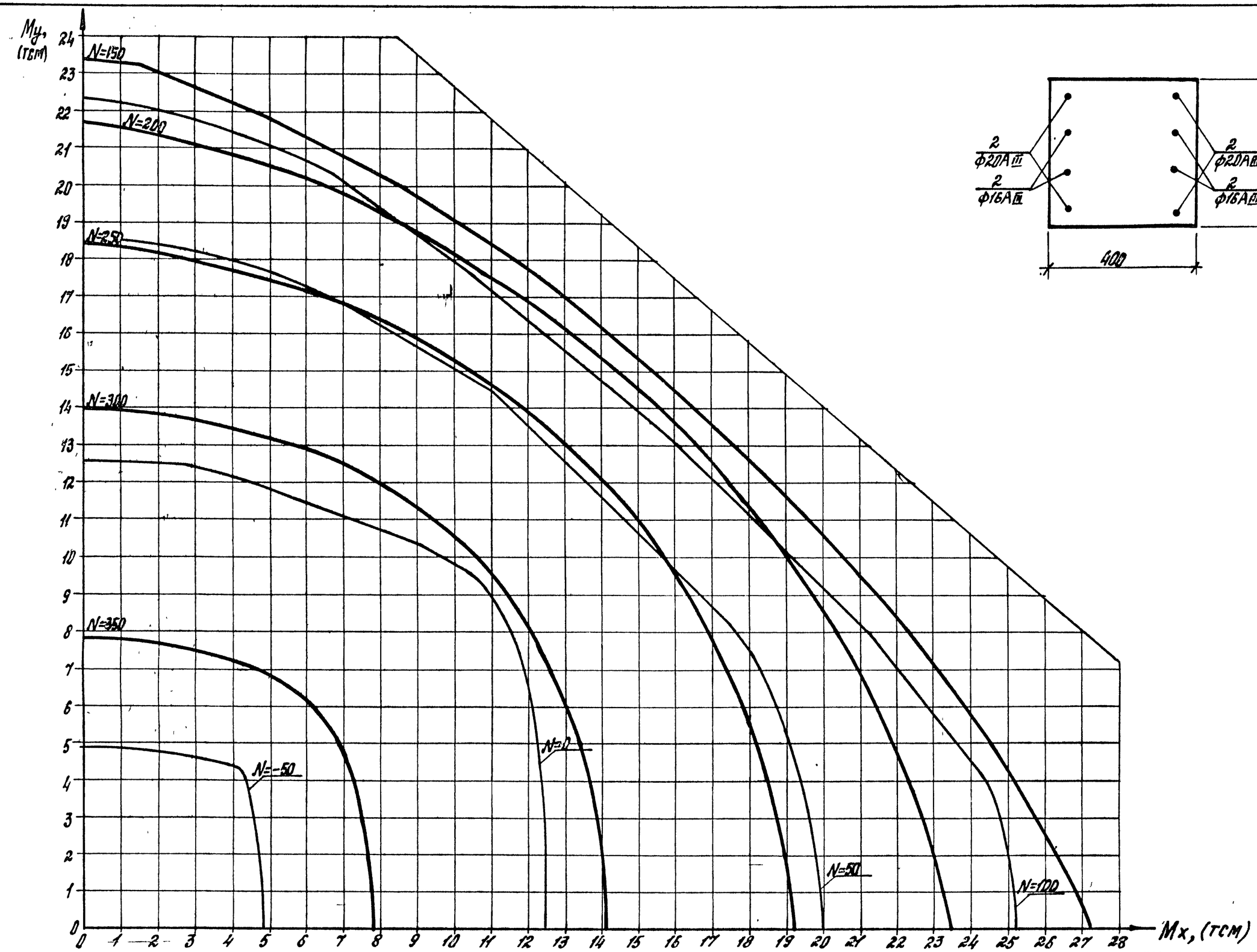
Класс бетона В30 (R_B=190,35кгс/см² при учете γ_{b2}=1,10)

1.020-1/87.0-6-3 ПЗ

Лист 164


N,(тс)
e0min.= 64
l_0^x = 600
450
400
350
300
250
200
150
100
50
0
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
λ

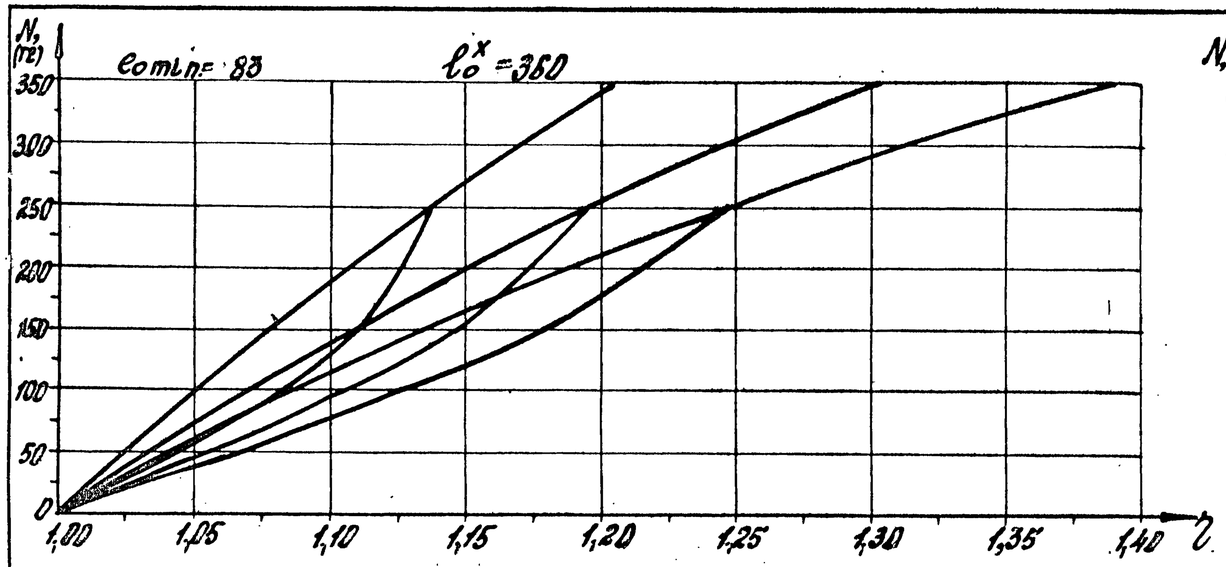

N,(тс)
e0min.= 64
l_0^y = 600
450
400
350
300
250
200
150
100
50
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
6,5
7,0
7,5
8,0
8,5
9,0
λ

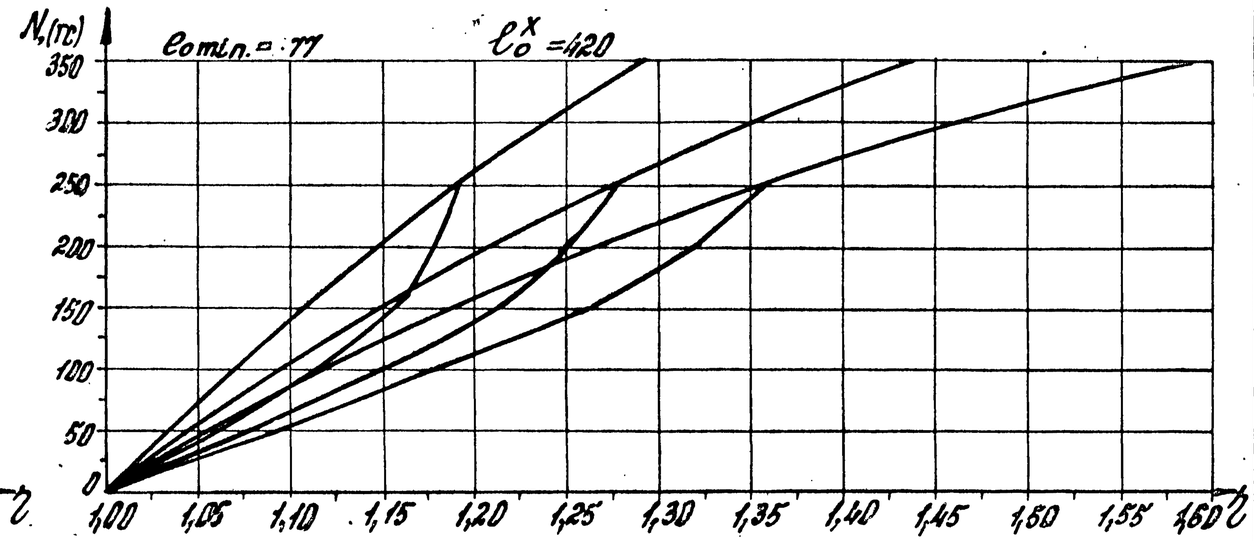


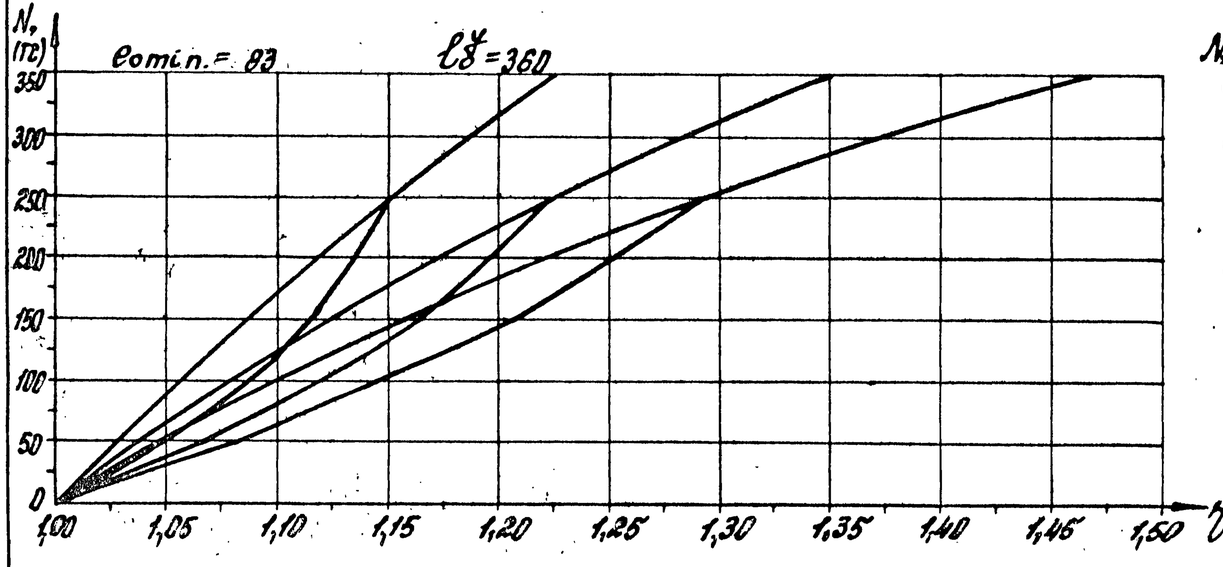
Класс бетона В40 (Rб= 201,6 кгс/см² при учете γб2= 0,9)

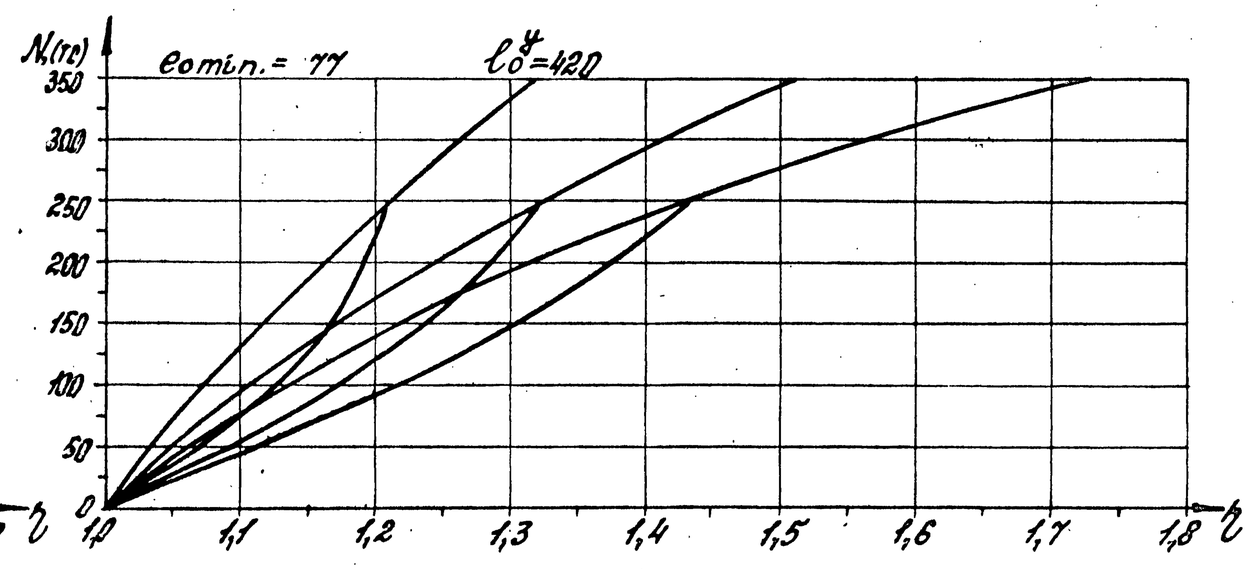
1.020-1/87.0-6-3ПЗ

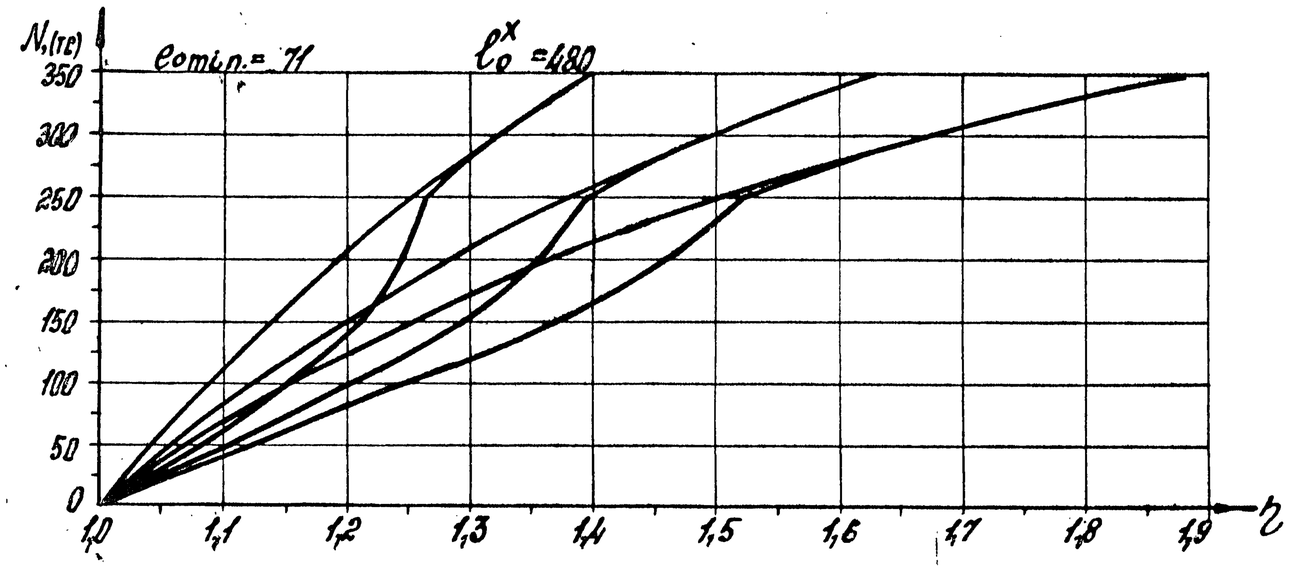
Лист 163

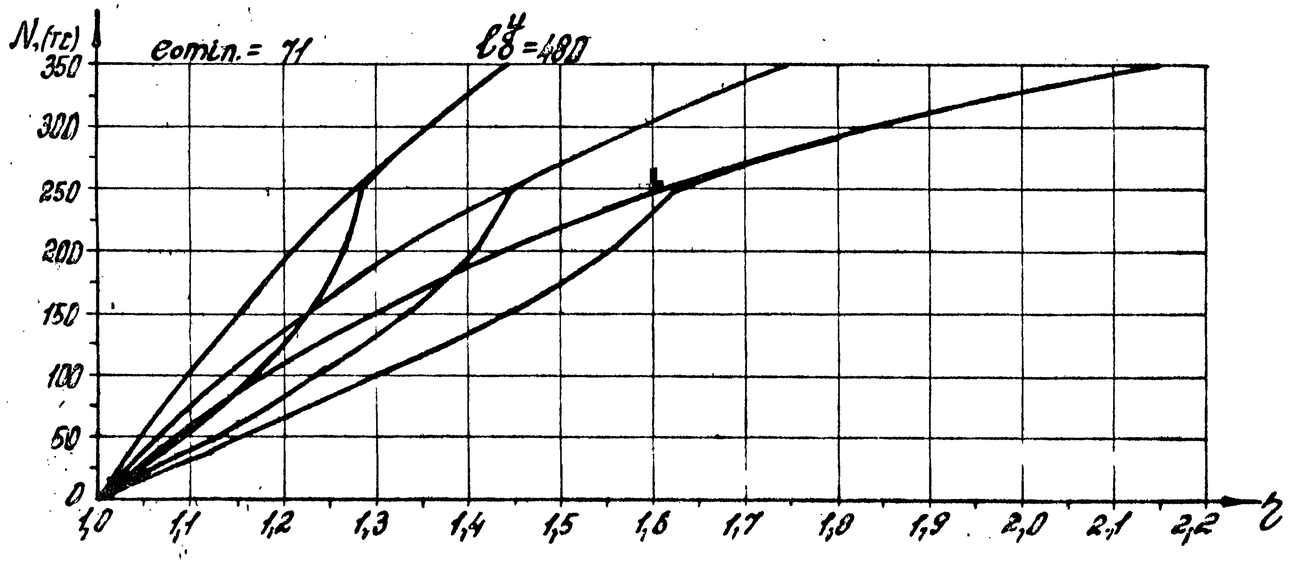

N, (тс)
e₀min= 83
l_0^x = 360
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
h

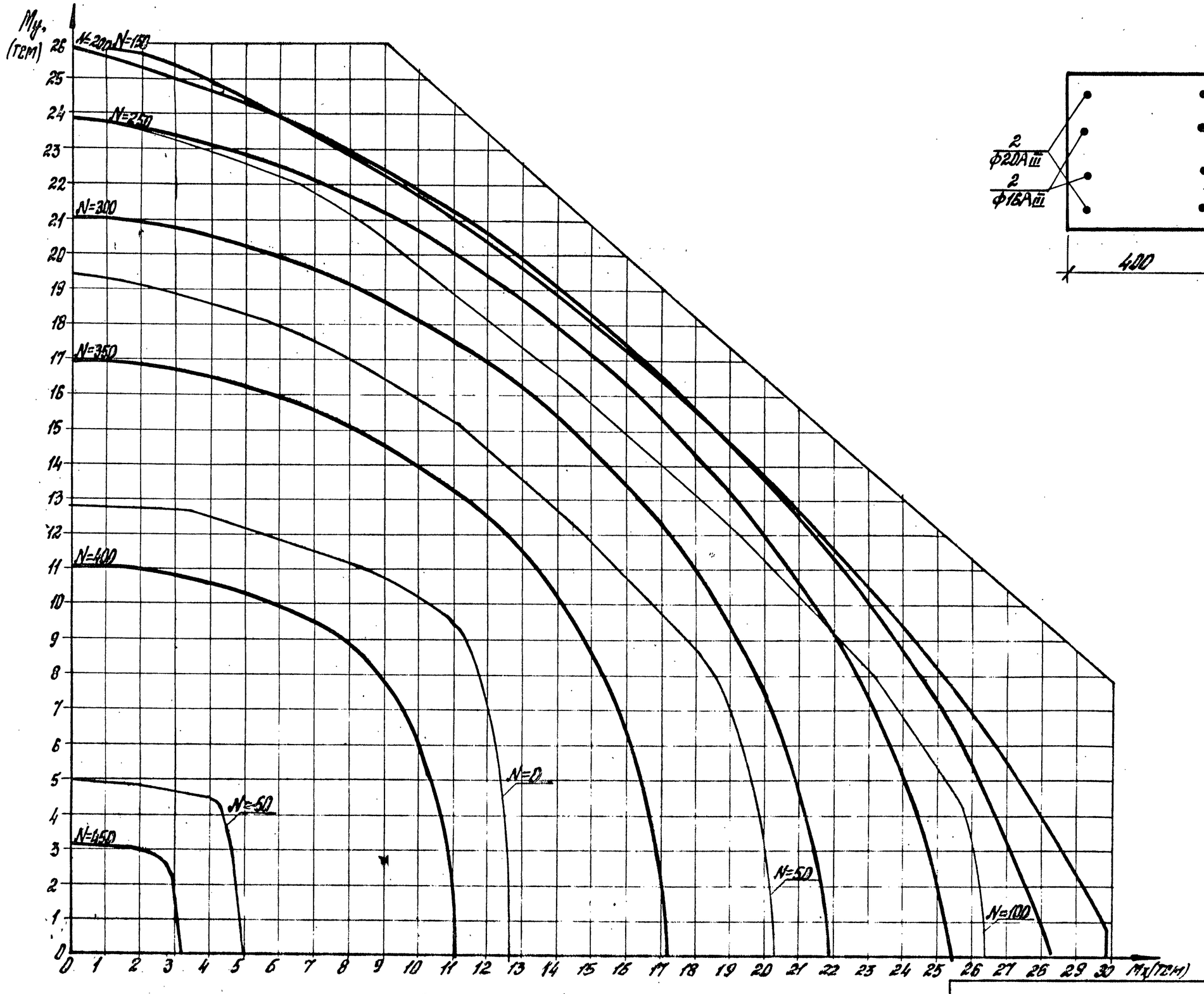

N,(тс)
e₀min. = 77
l_0^x = 420
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
1,60
h


N, (тс)
e₀min.= 83
l_0^y = 360
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
h

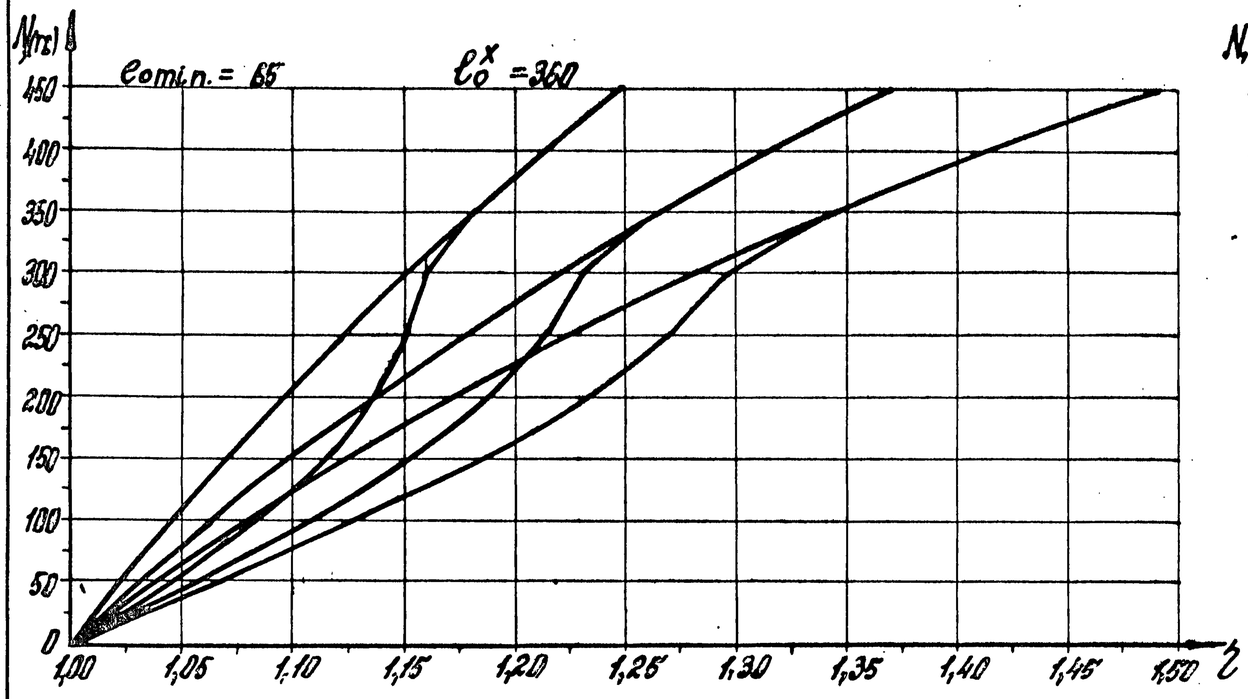

N,(тс)
e₀min. = 77
l_0^y = 420
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
h

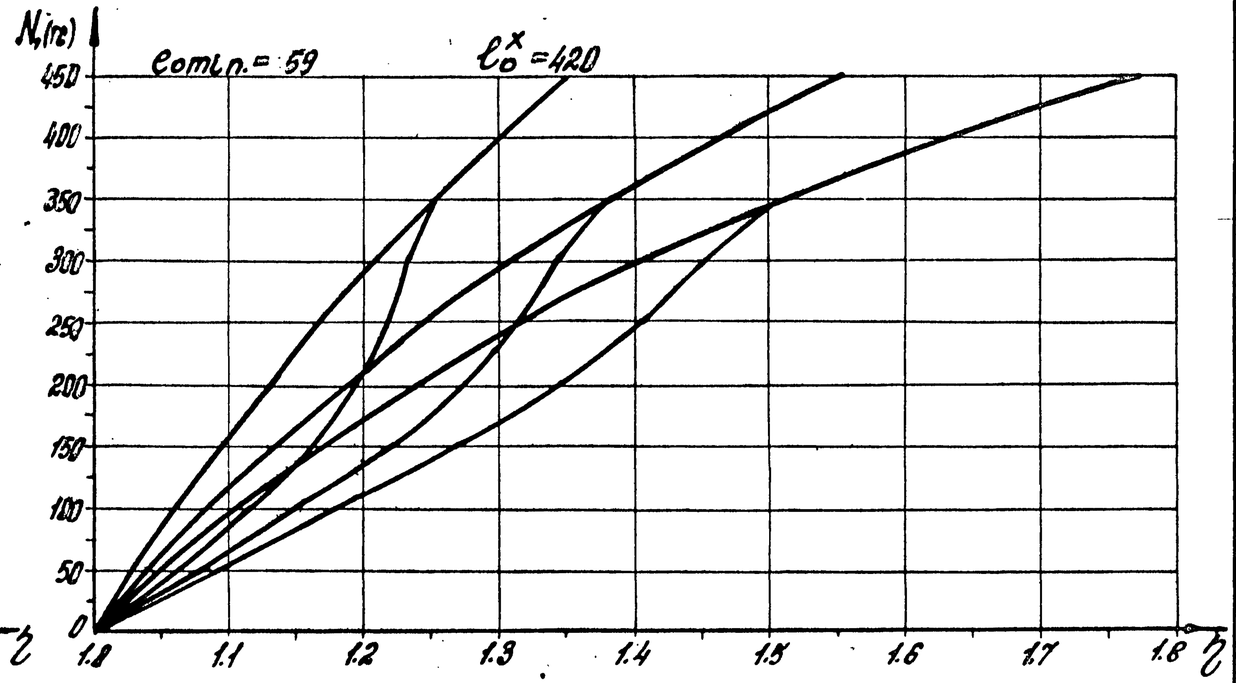

N,(тс)
e₀min.= 71
ℓ_0^x =480
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
λ

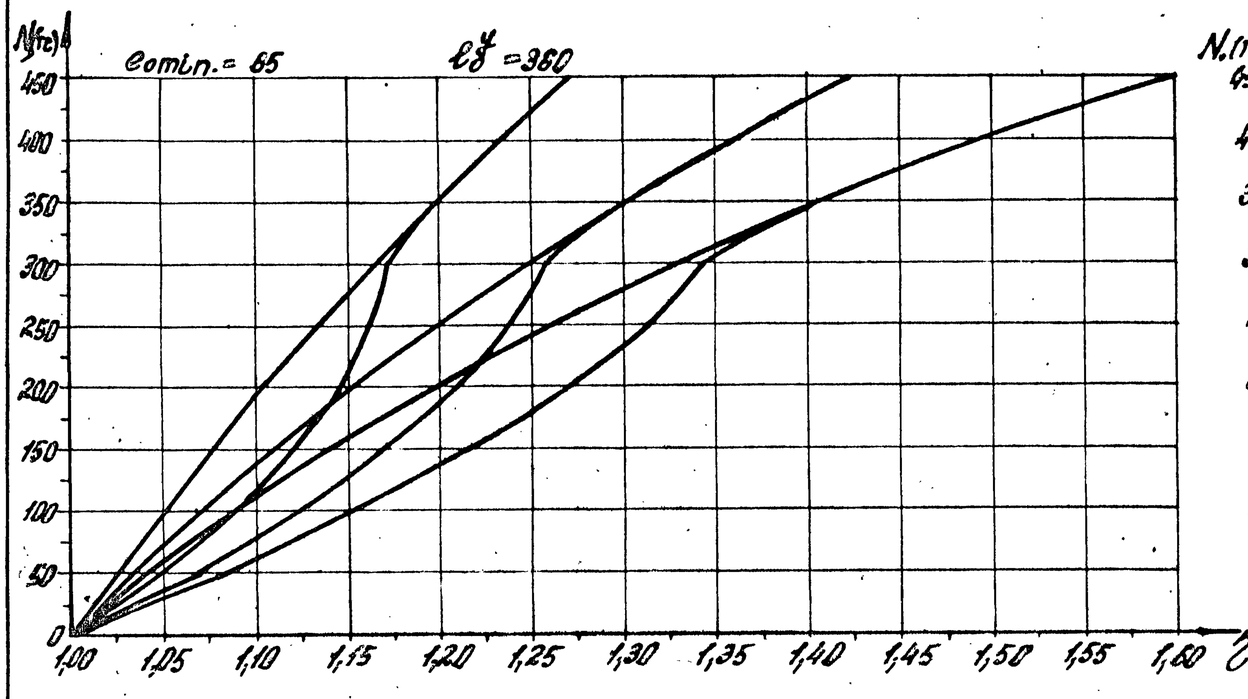

N,(тс)
e₀min.= 71
ℓ_0^y =480
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
λ

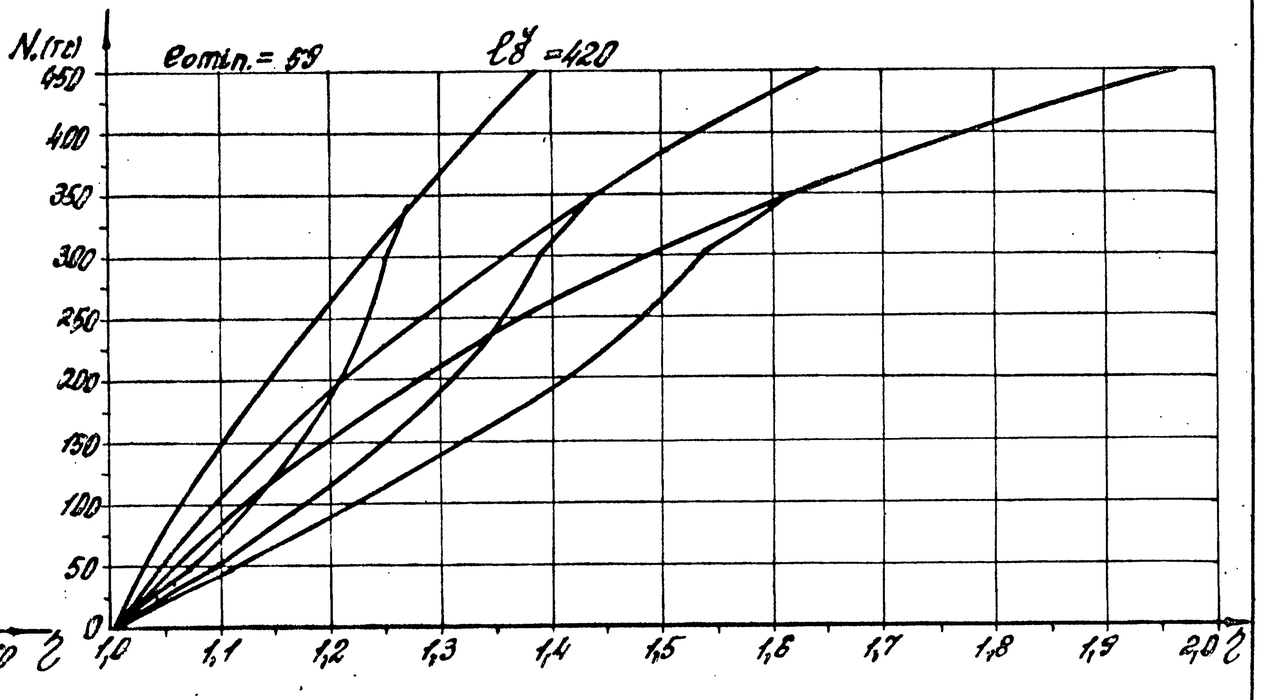


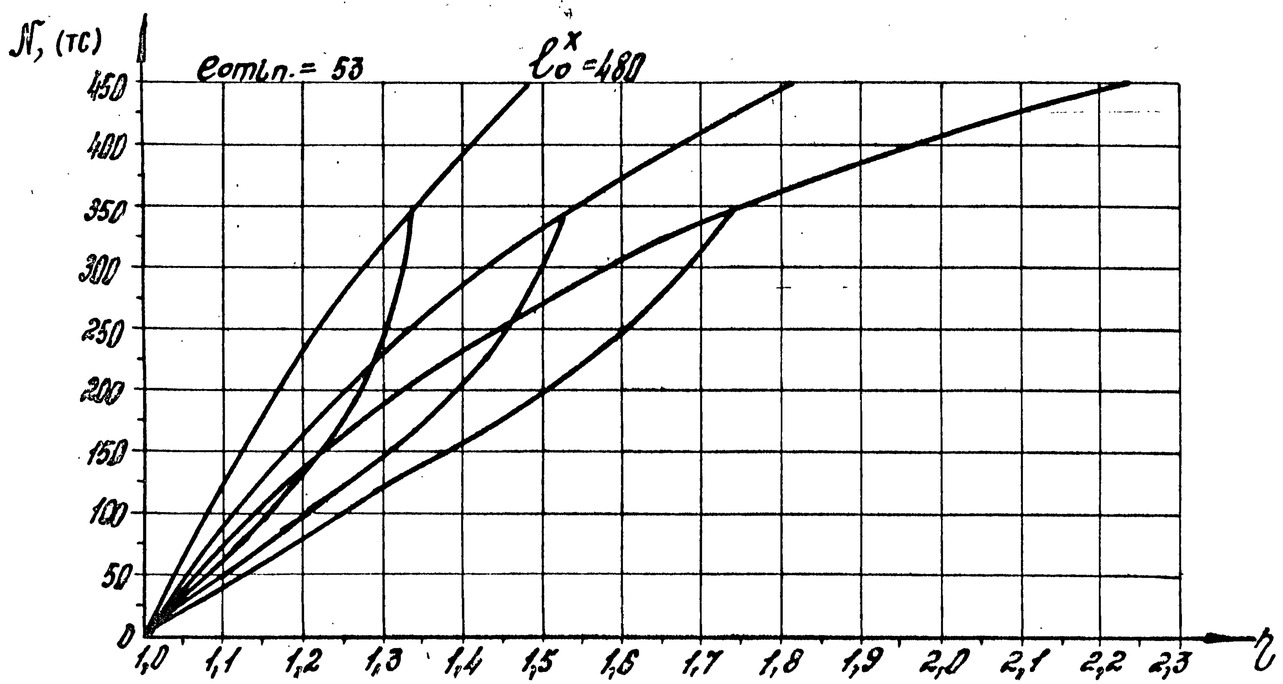
класс бетона В40 (R_B=246,4 кгс/см² при учете γ_{B2}=1,10)

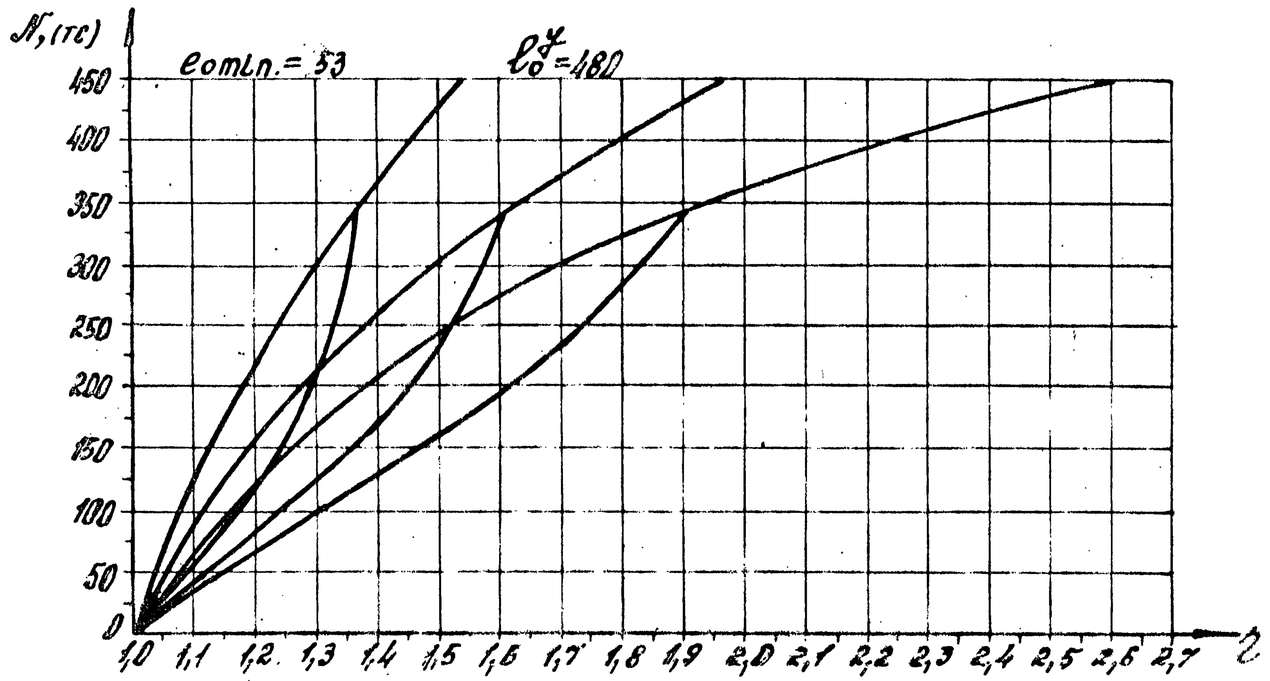

N(тс)
e₀min.= 65
l₀ˣ =360
0
50
100
150
200
250
300
350
400
450
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
l

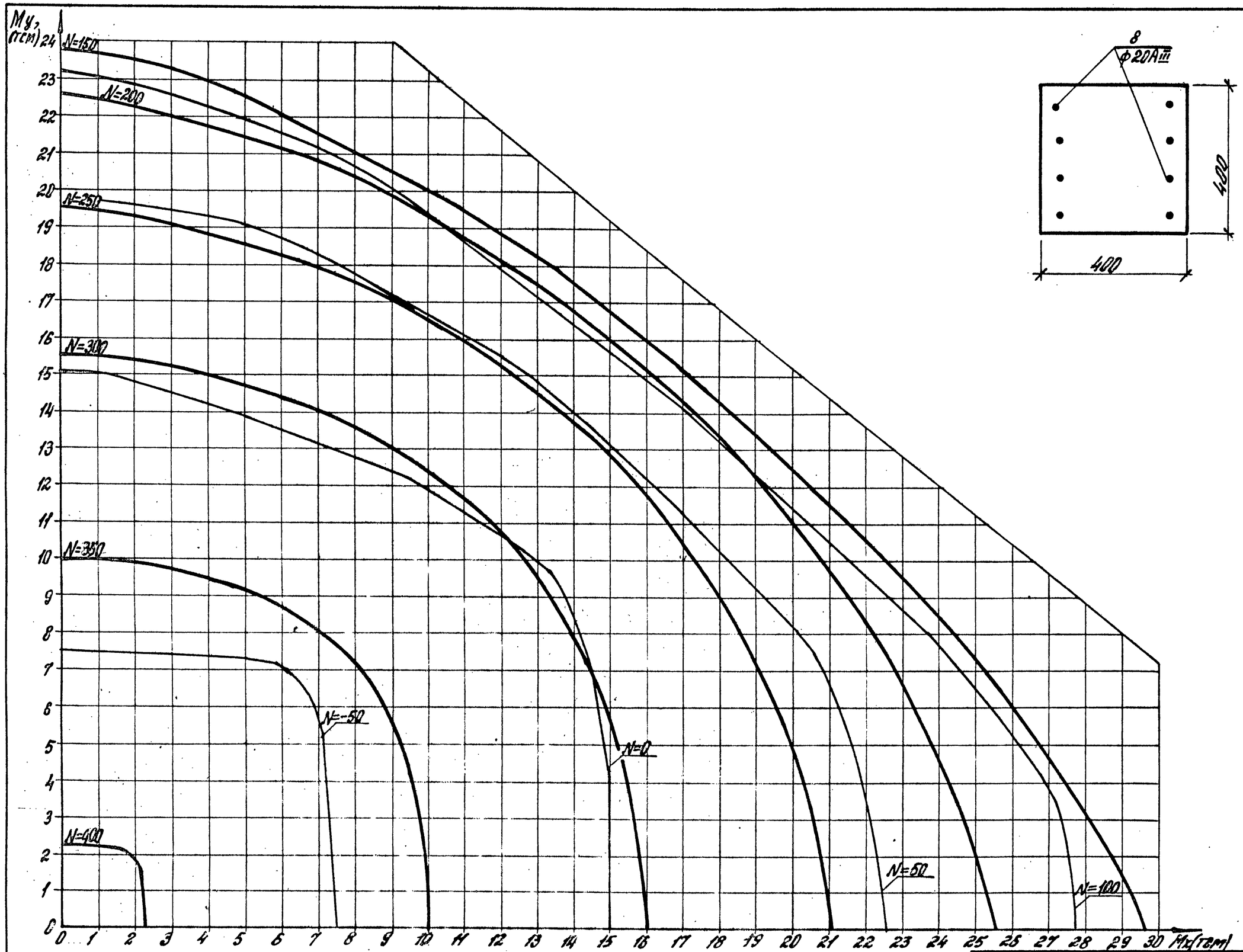

N,(тс)
e₀min.= 59
l₀ˣ =420
0
50
100
150
200
250
300
350
400
450
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
l


N(тс)
e₀min.= 65
l₀ʸ =360
0
50
100
150
200
250
300
350
400
450
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
1,60
l


N.(тс)
e₀min.= 59
l₀ʸ =420
0
50
100
150
200
250
300
350
400
450
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
l


N, (тс)
e_от.л. = 53
ℓ_o^x = 480
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
2,3
r

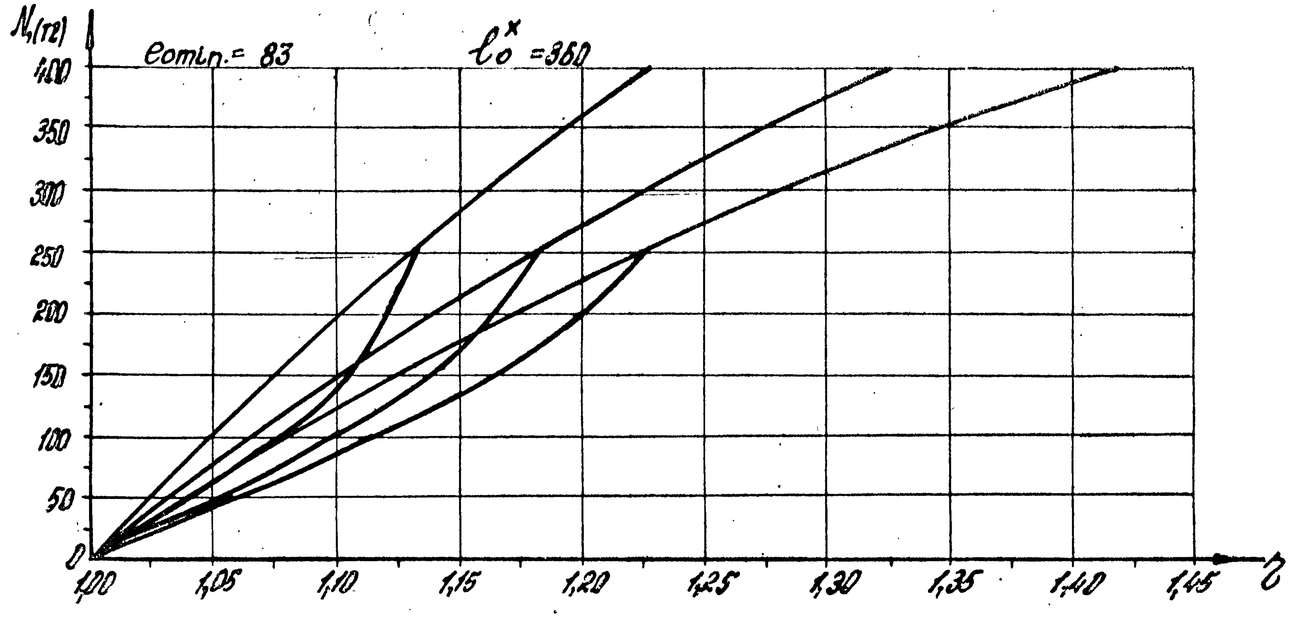

N, (тс)
e_от.л. = 53
ℓ_o^y = 480
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
2,3
2,4
2,5
2,6
2,7
r

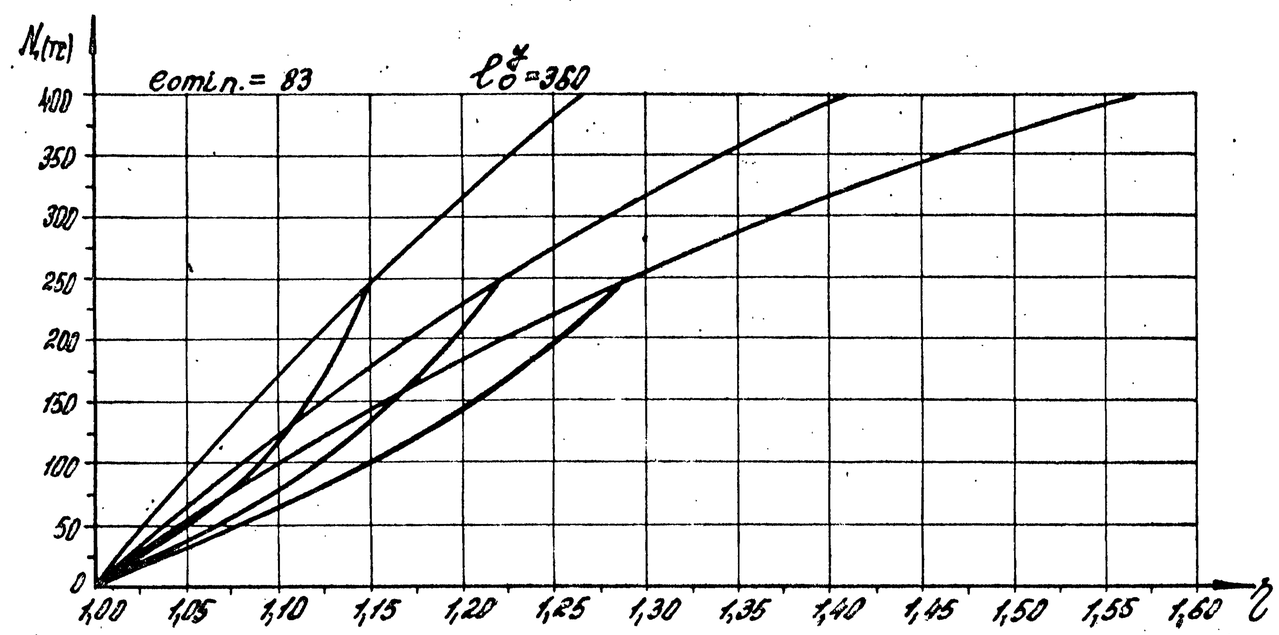


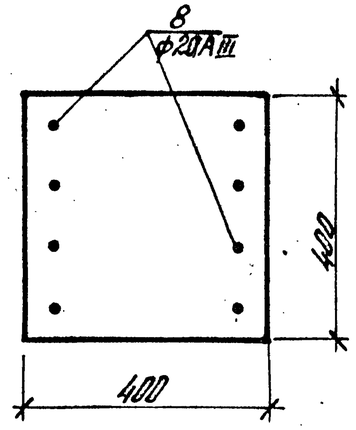
Классы бетона В40 (R_b=201,6 кгс/см^2 при учете γ_{b2}=0,9)

1.020-1/87. 0-6-3.113

Лист 169


N,(тс)
e_omin.= 83
l_o^x =360
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
η


N,(тс)
e_omin.= 83
l_o^y =360
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
1,60
η

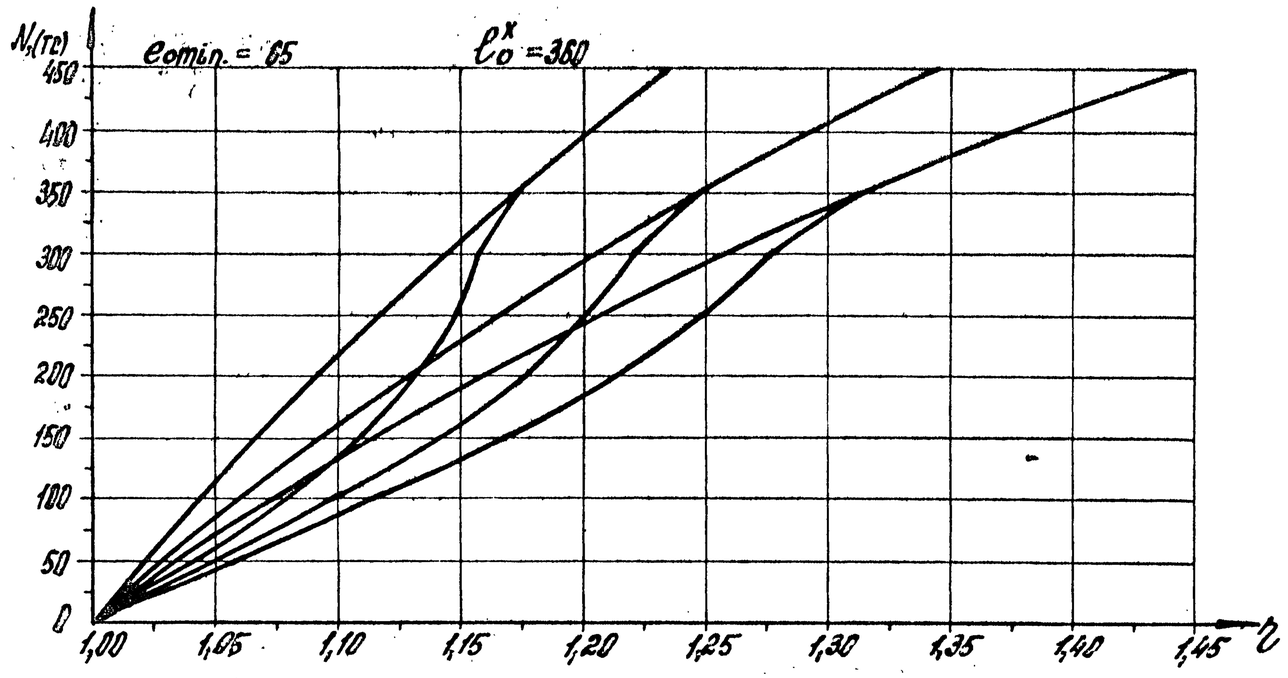


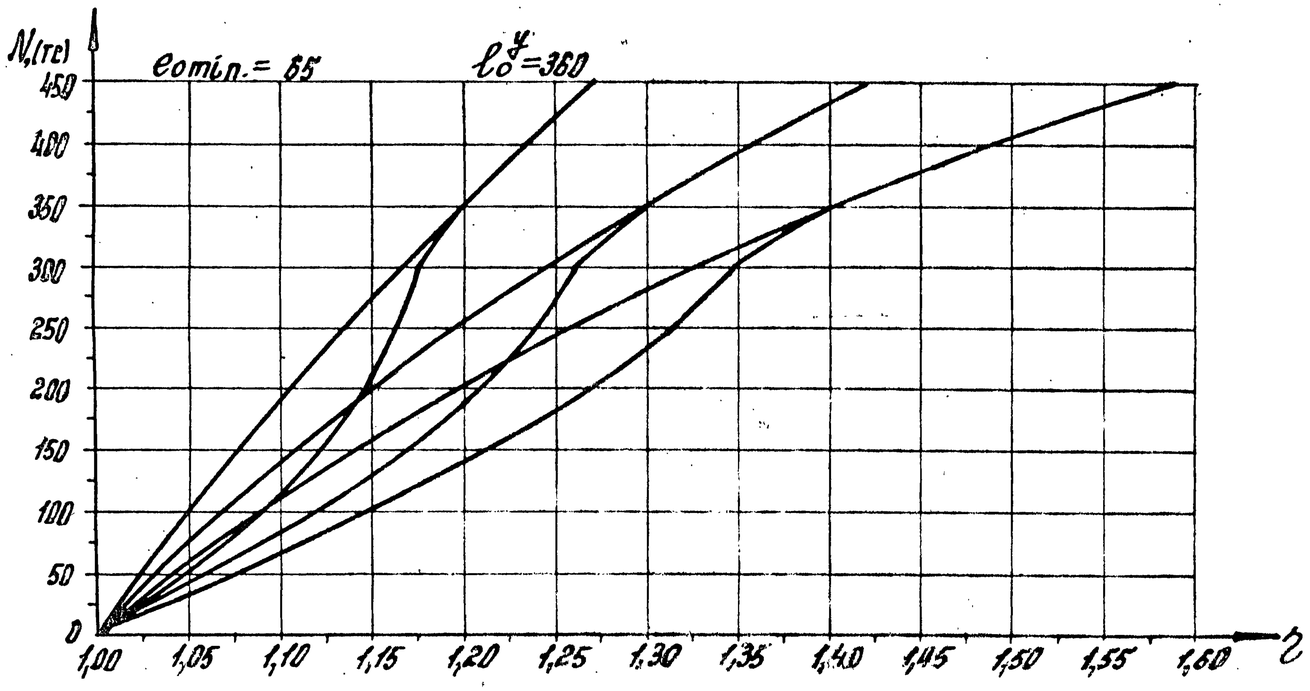
My, (тс·м)

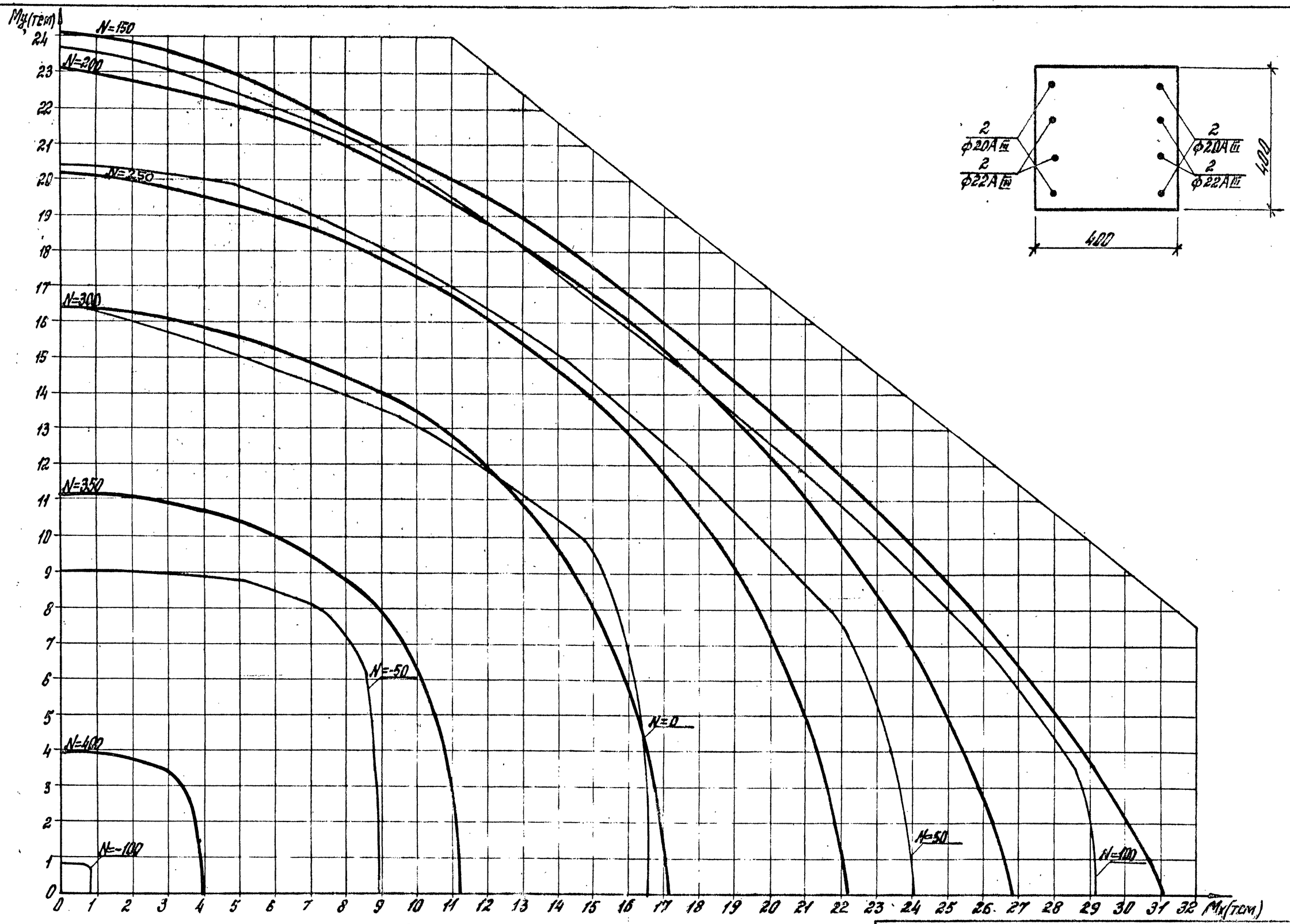
N=150 N=200 N=250 N=300 N=350 N=400 N=450 N=-50 N=0 N=50 N=100

Mx (тс·м)

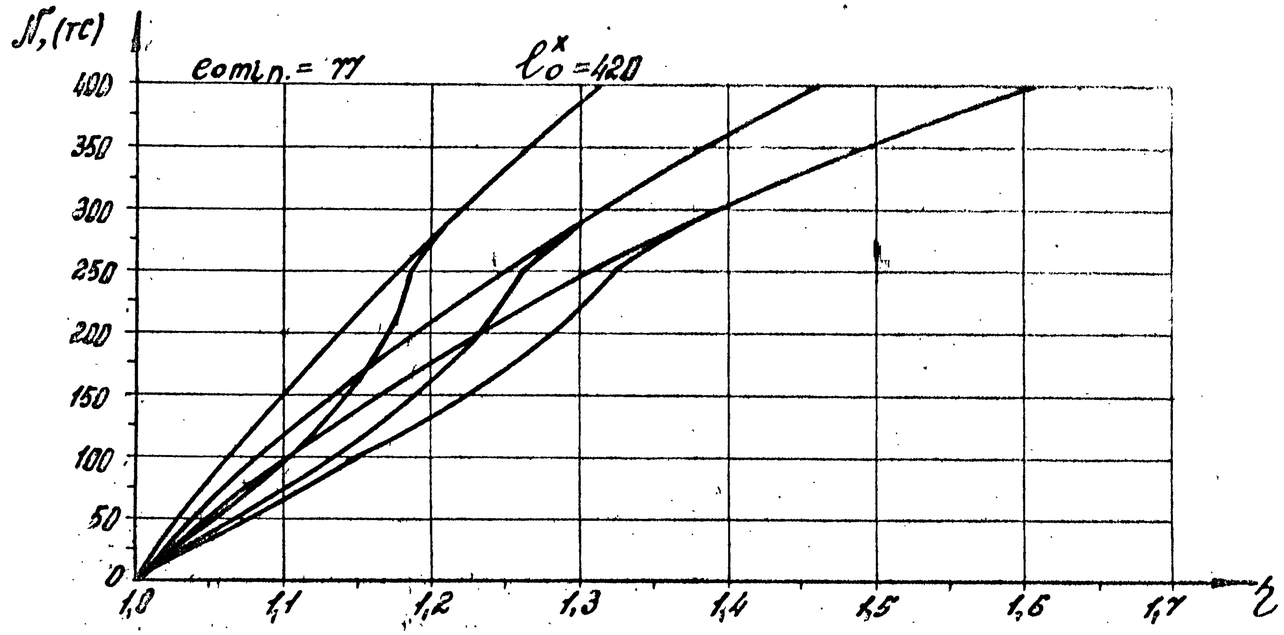
Класс бетона В40 (R_b = 246,4 кгс/см² при учете γ_{b2} = 1,10)

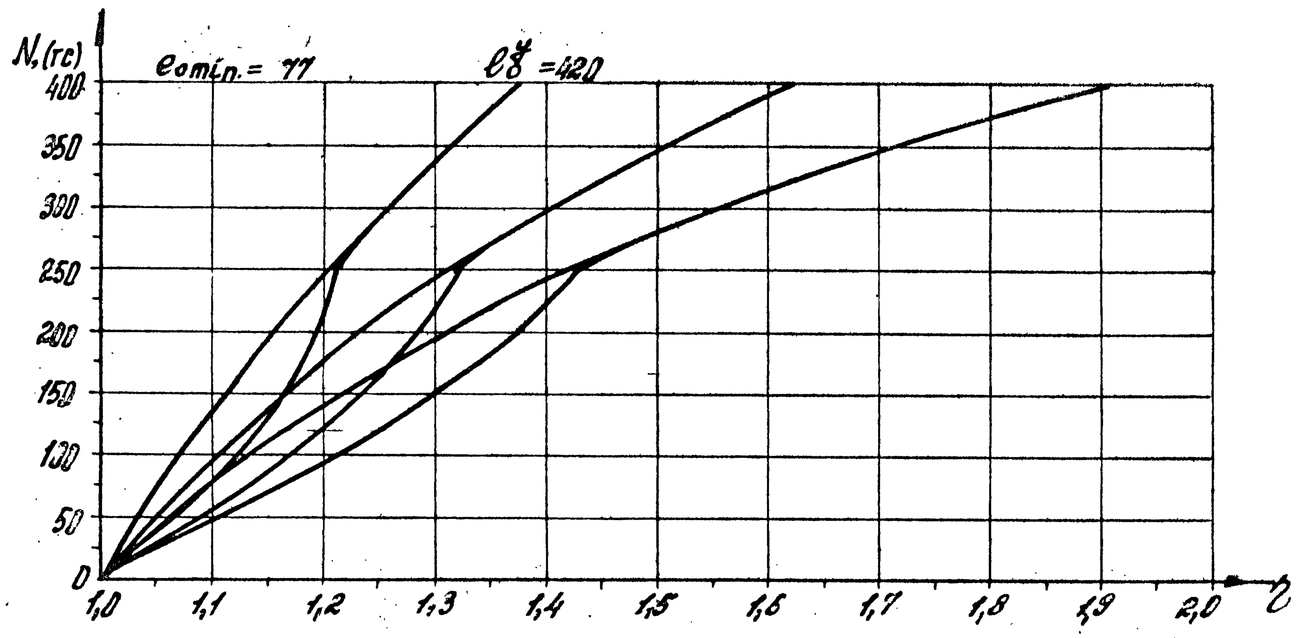

N,(тс)
e0min.= 65
l_0^x=360
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
η

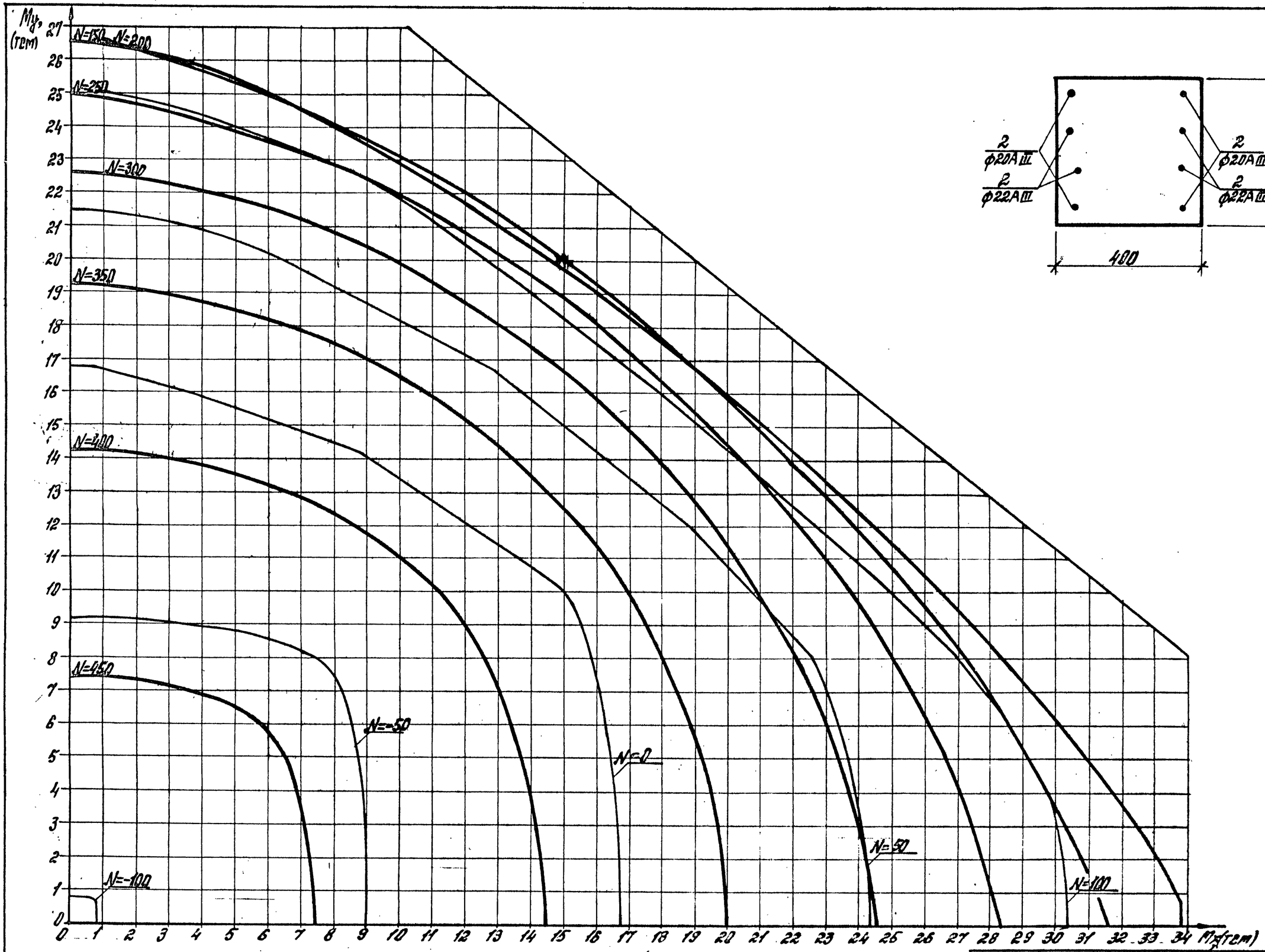

N,(тс)
e0min.= 65
l_0^y=360
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
1,60
η



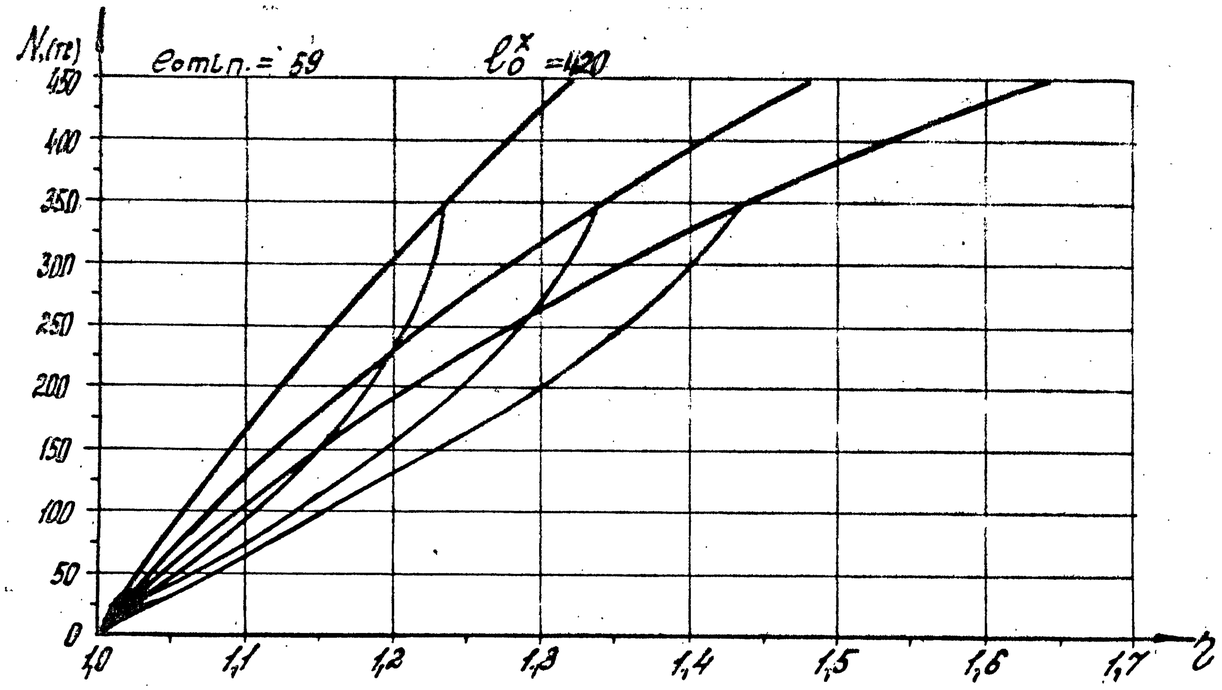
Класс бетона В40 (R_b = 201,6 кгс/см² при учете γ_{b2} = 0,9)

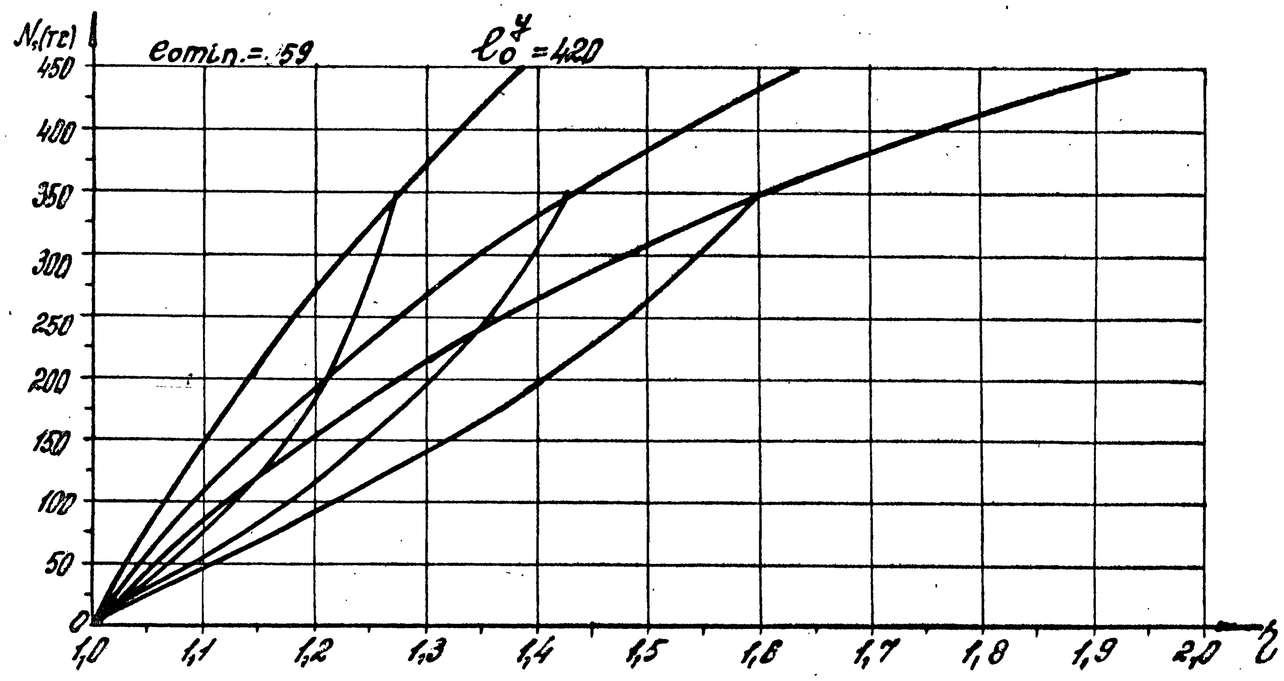

N,(тс)
e0min.= 77
l0x=420
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
l

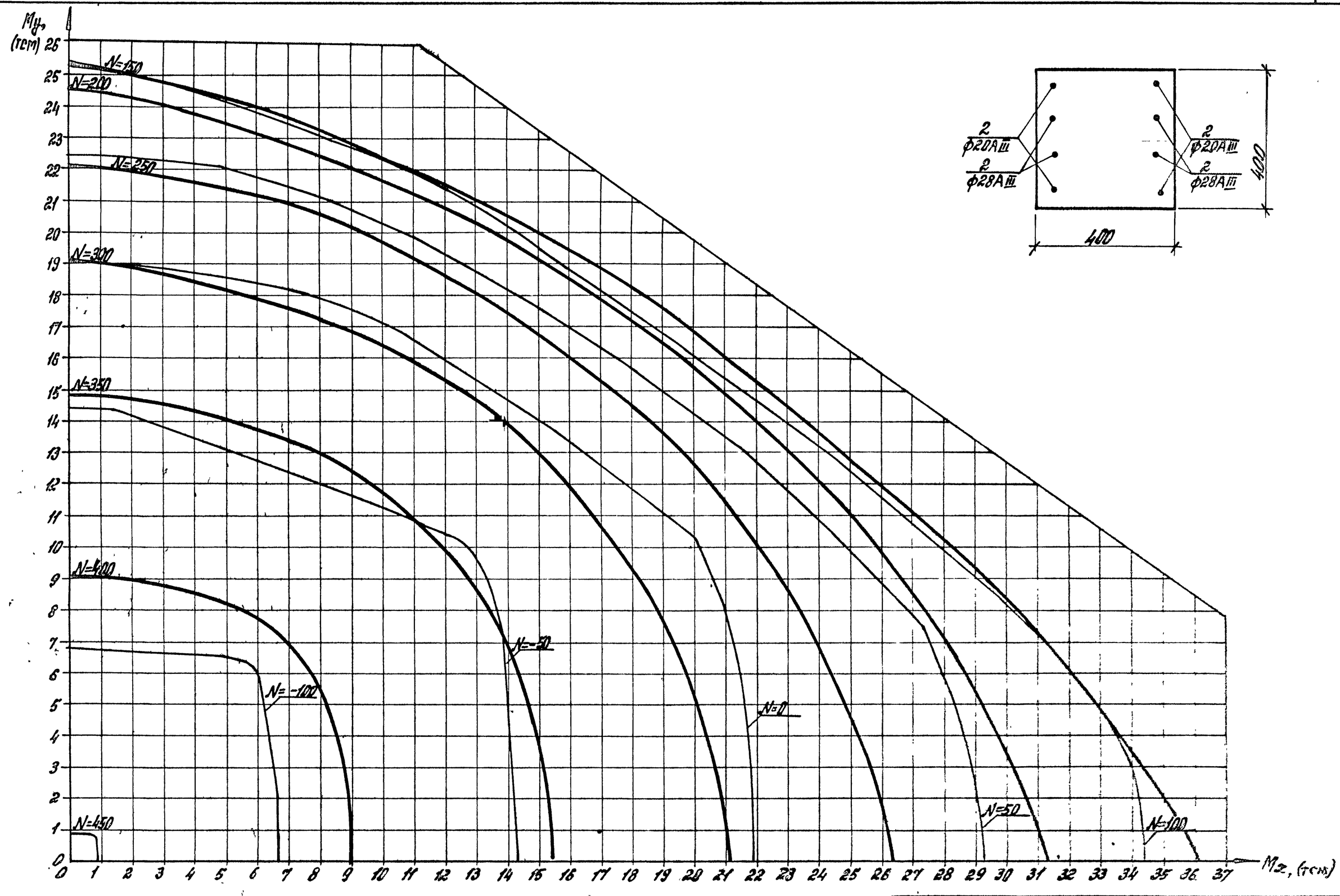

N,(тс)
e0min.= 77
l0y=420
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
l



Класс бетона В40 ($R_б$ = 246,4 кгс/см² при учете $\gamma_{б2}$ = 1,10)


N,(тс)
e_omin.= 59
l_0^x =420
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
b

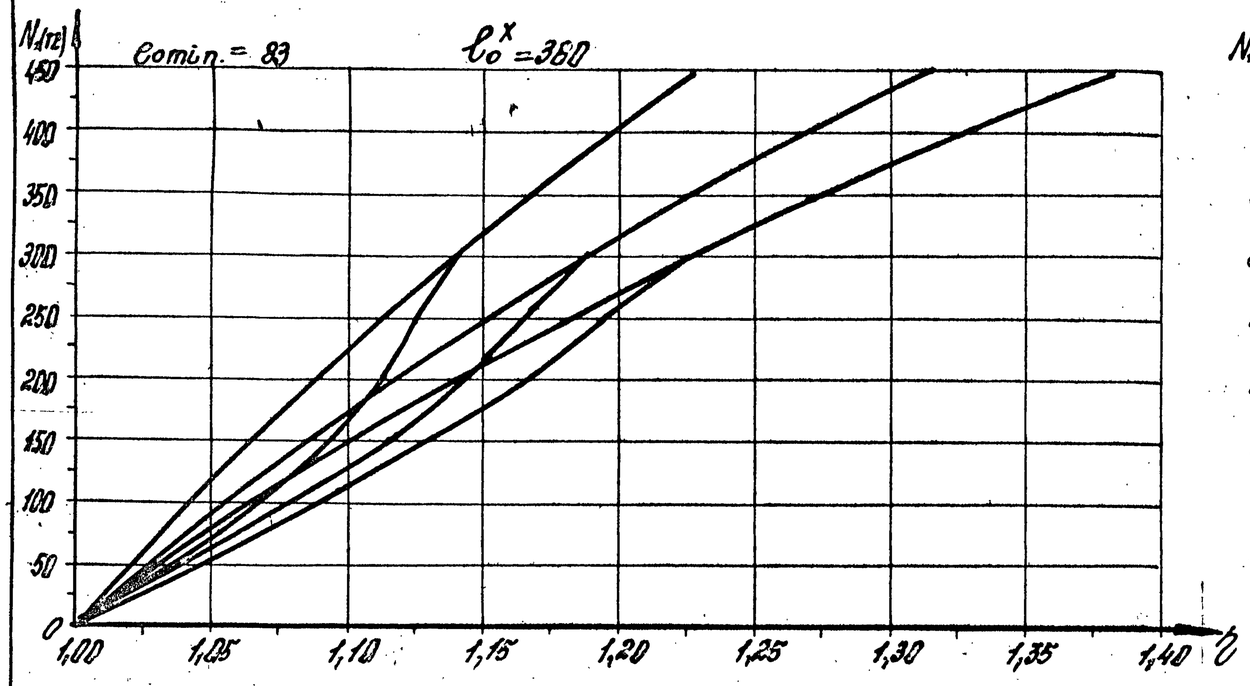

N,(тс)
e_omin.= 59
l_0^y =420
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
b

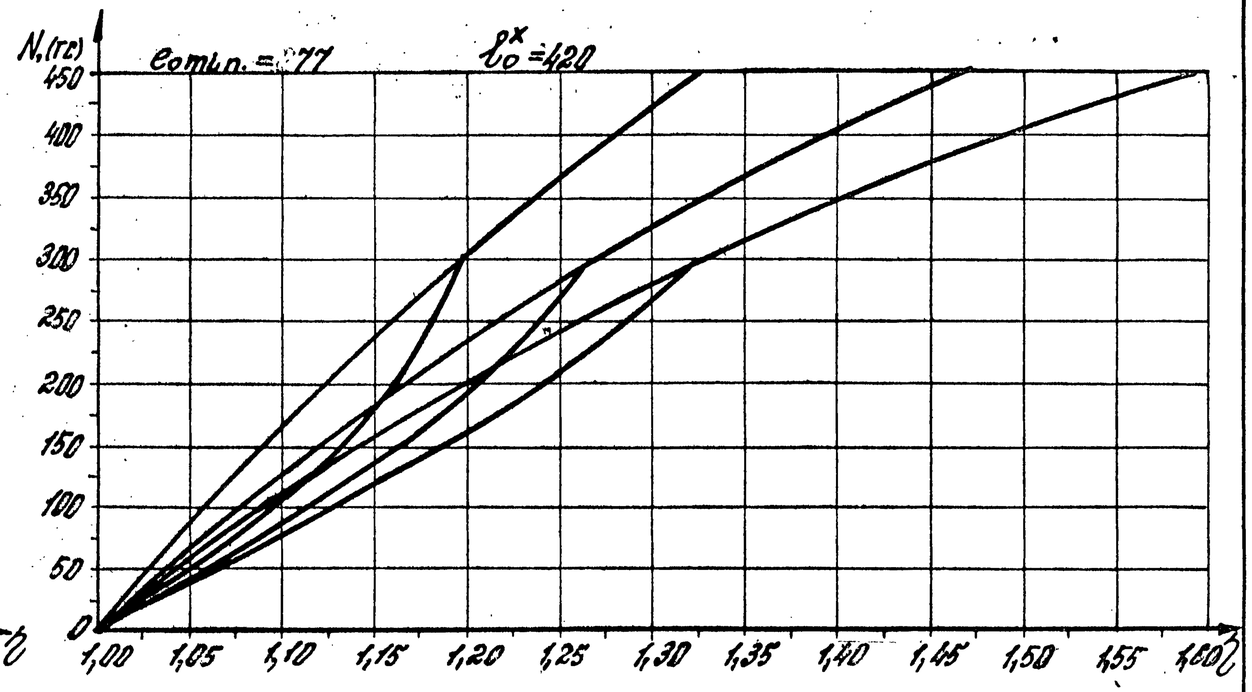


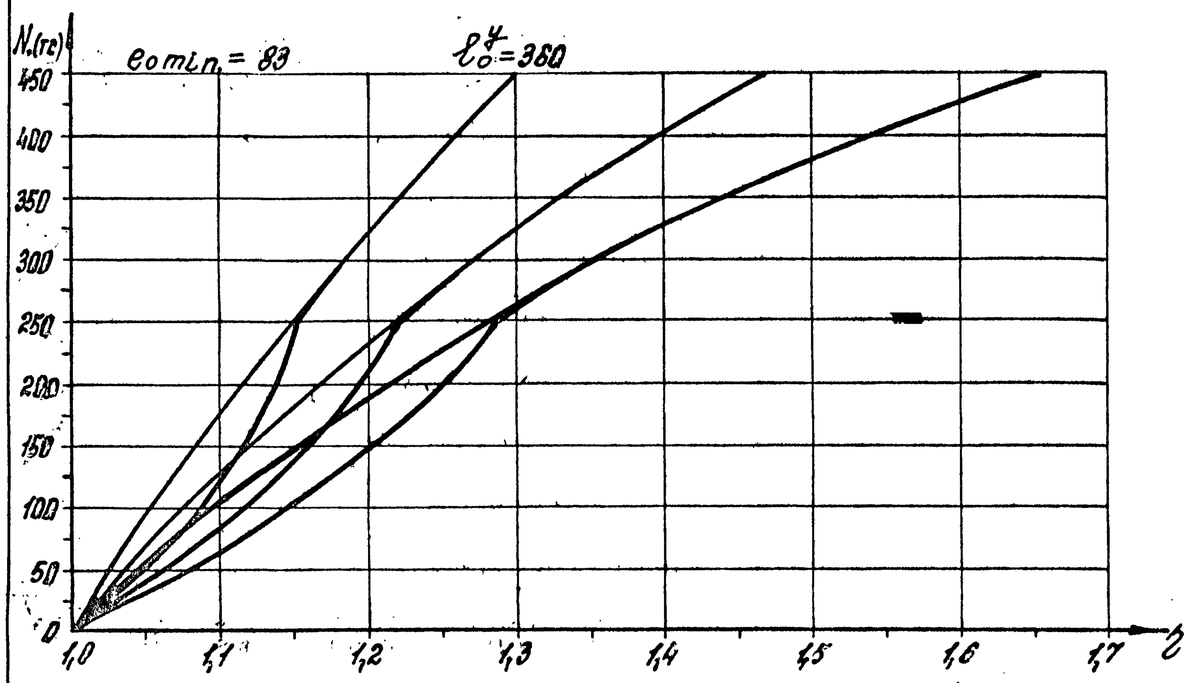
Класс бетона В40 (R_B=201,6 кгс/см² при учете γ_{B2}=0,9)

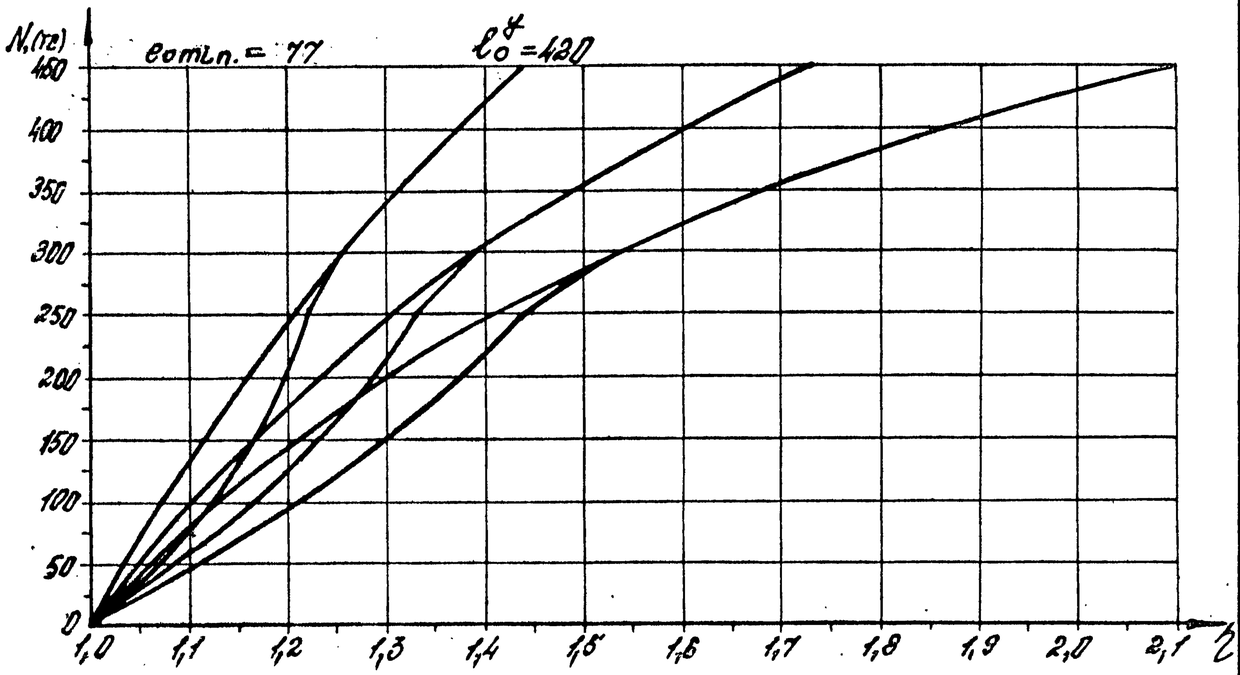
1.020-1/87. 0-6-ЭП3

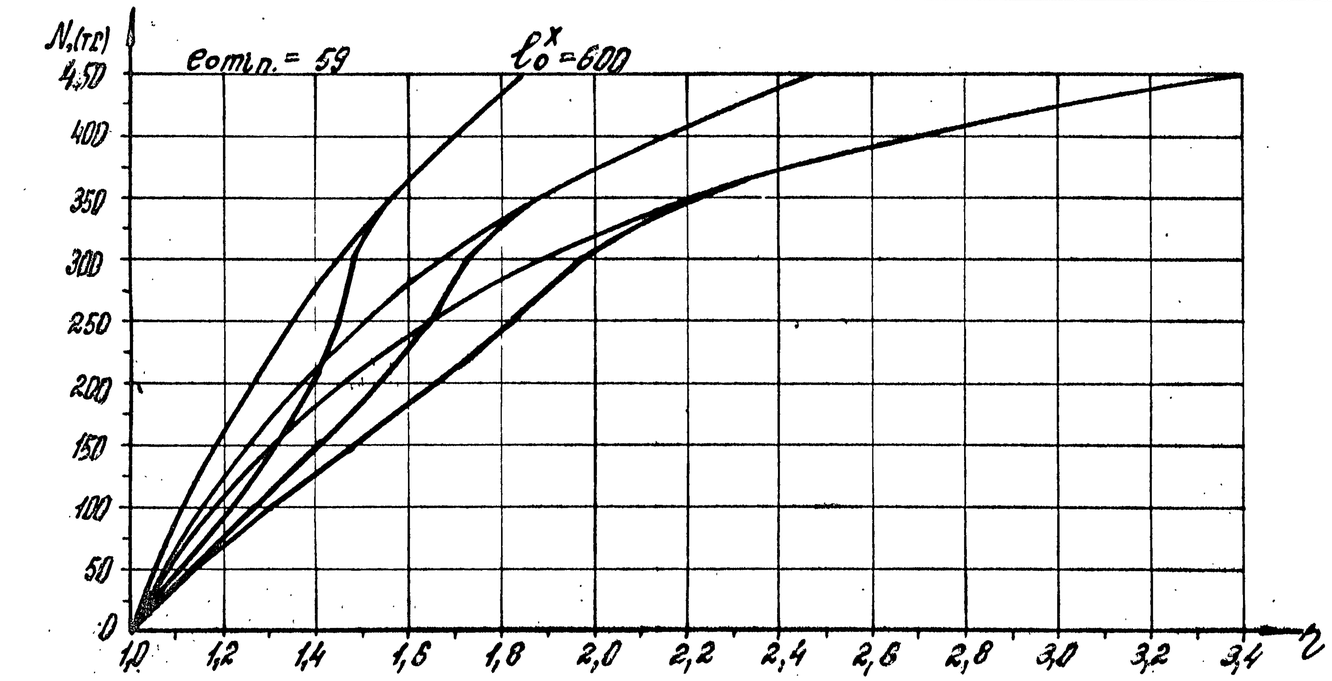
Лист 177

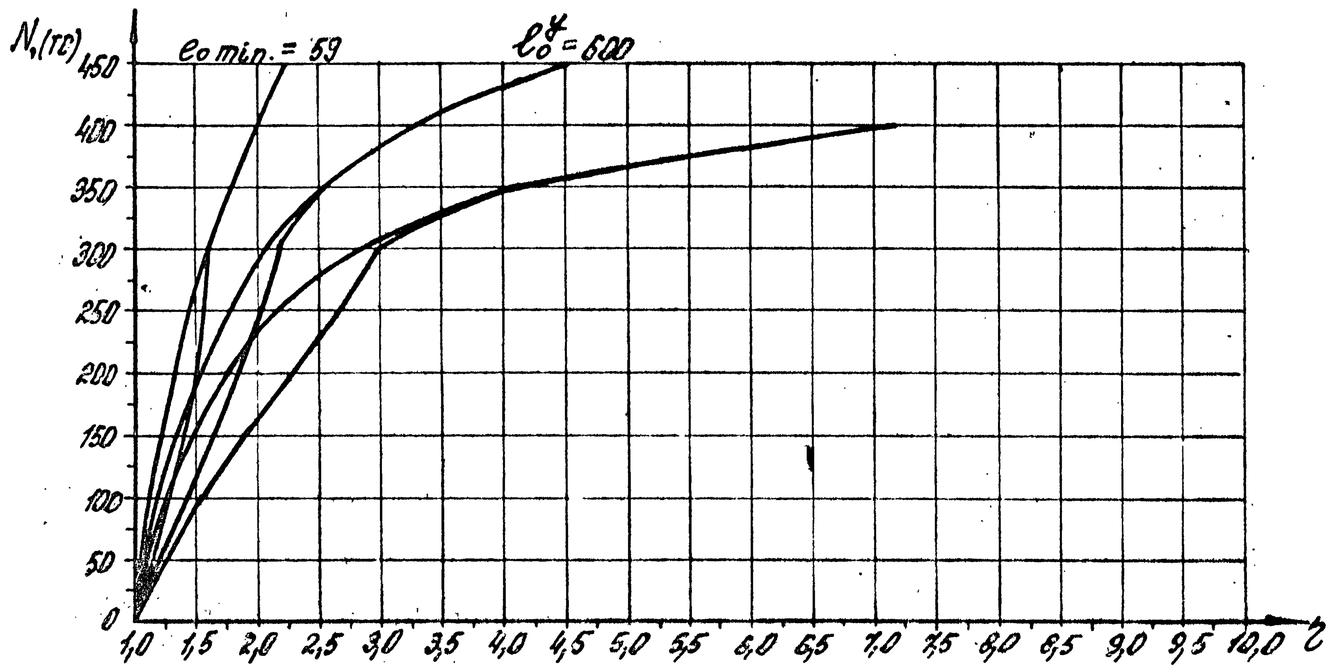

N,(тс)
e₀min.= 83
l₀ˣ=360
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
l

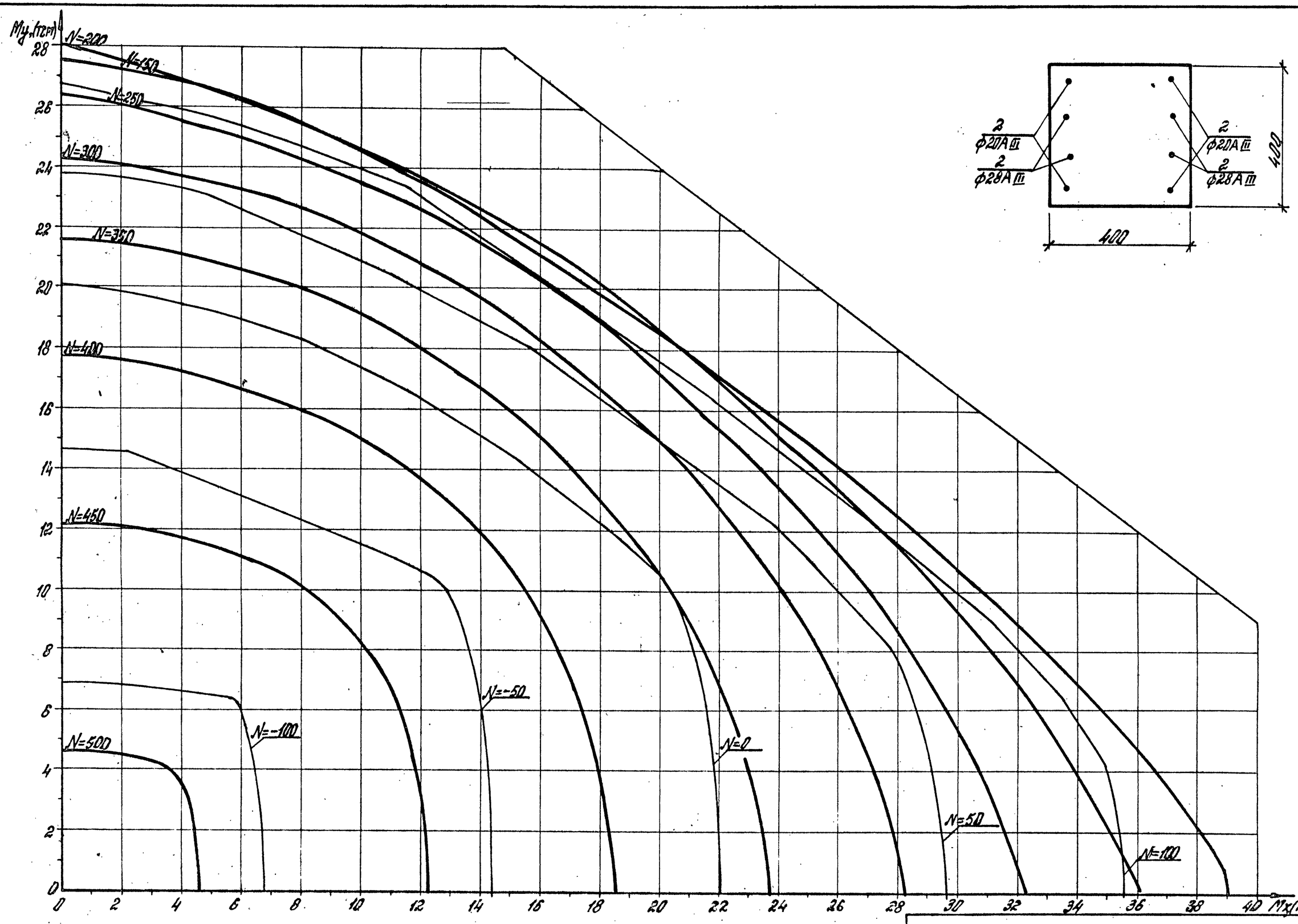

N,(тс)
e₀min.= 77
l₀ˣ=420
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
1,60
l


N,(тс)
e₀min.= 83
l₀ʸ=360
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
l


N,(тс)
e₀min.= 77
l₀ʸ=420
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
l


N,(тс)
e0 min. = 59
l0x = 600
450
400
350
300
250
200
150
100
50
0
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
ζ

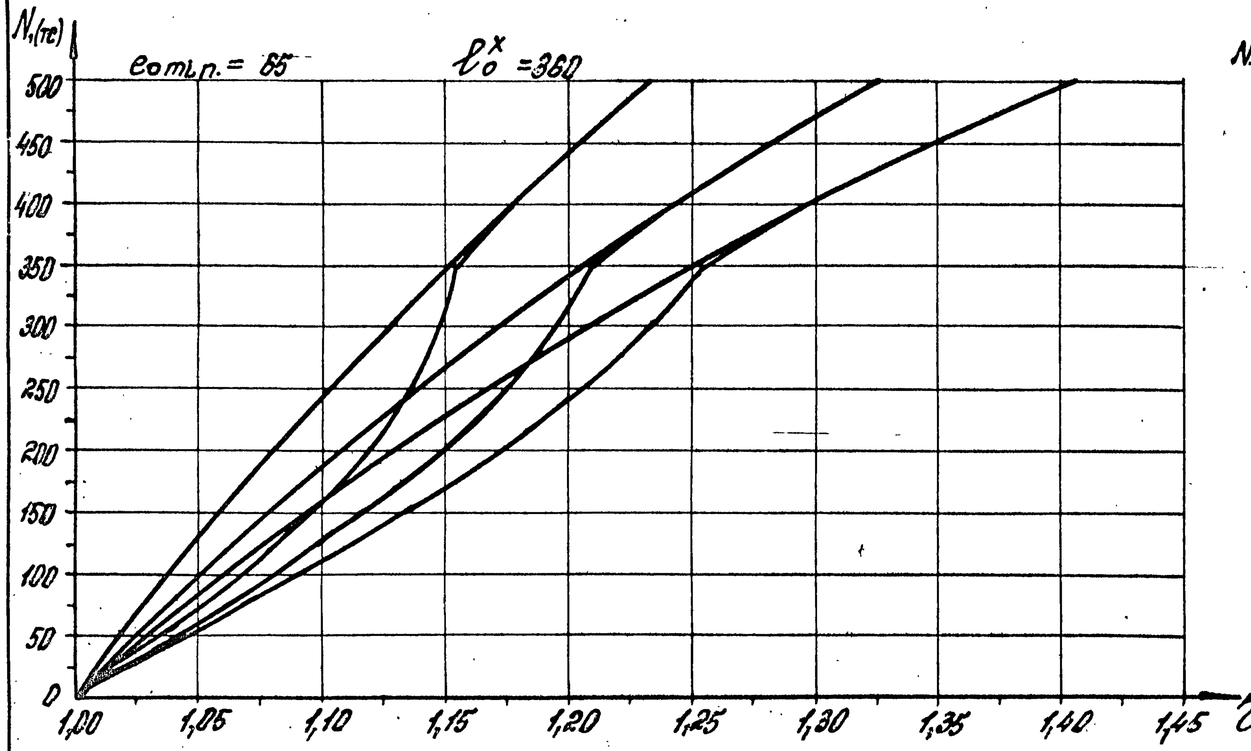

N,(тс)
e0 min. = 59
l0y = 600
450
400
350
300
250
200
150
100
50
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
6,5
7,0
7,5
8,0
8,5
9,0
9,5
10,0
ζ

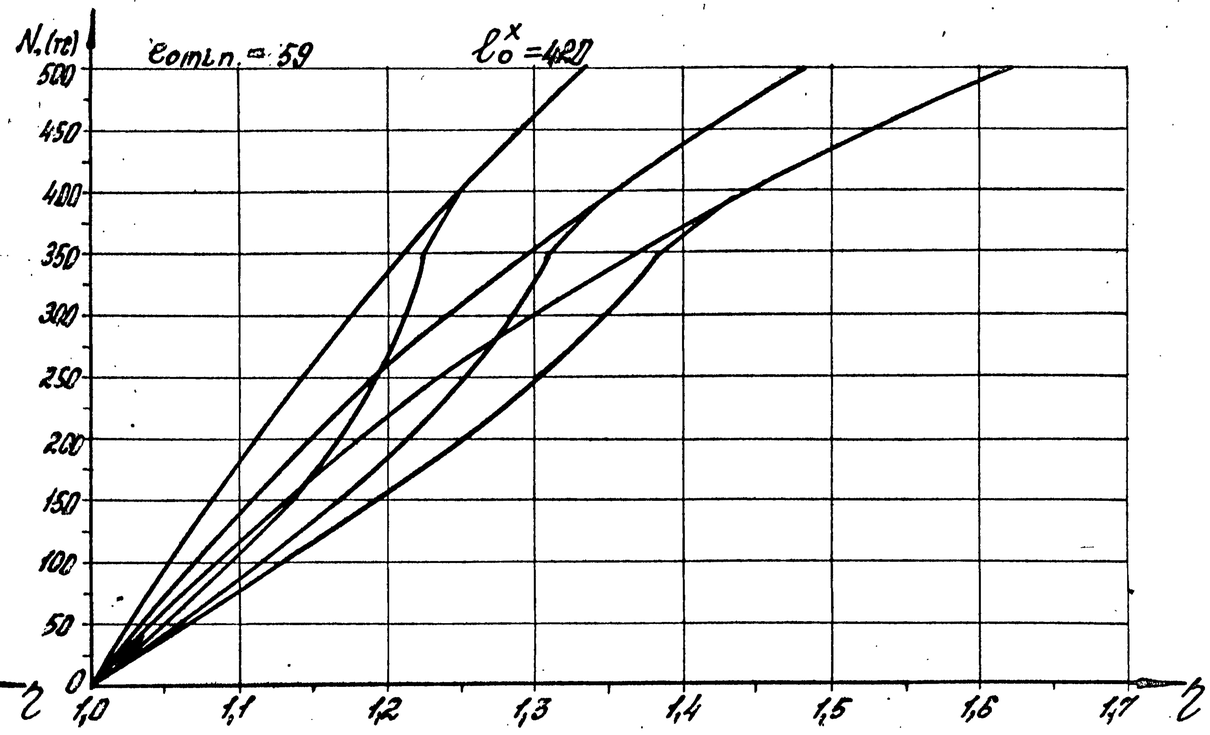


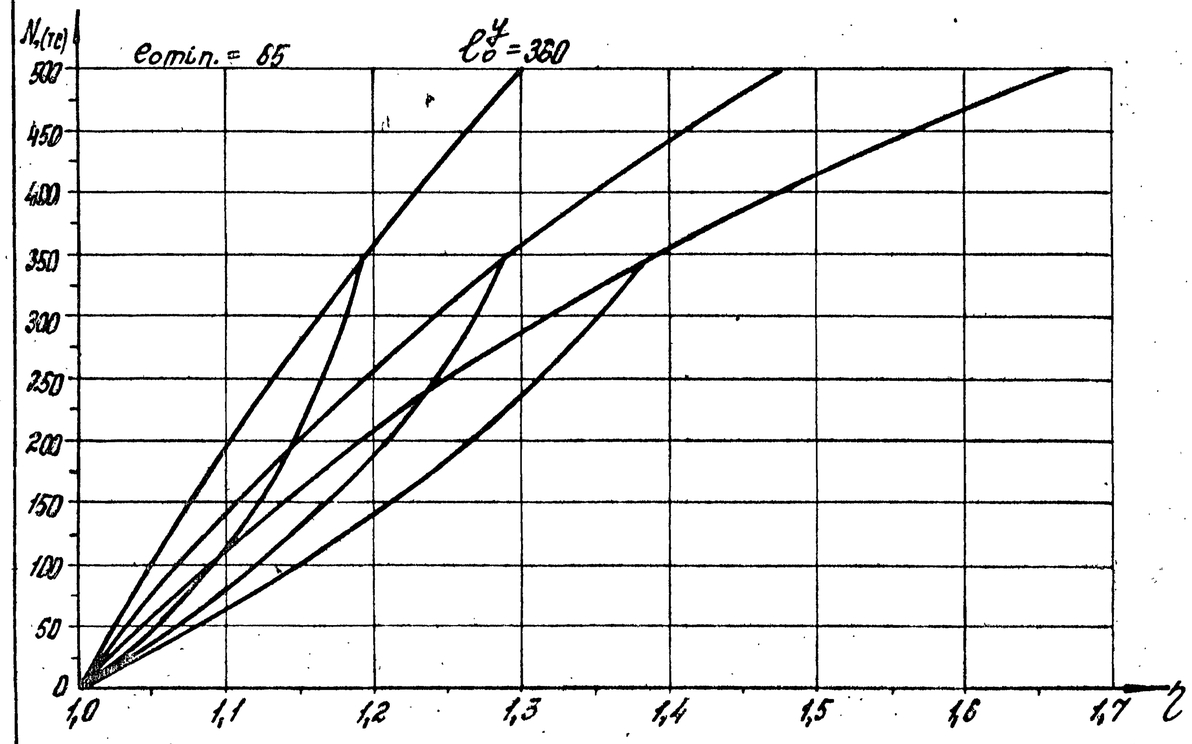
Класс бетона В40 (R_B=246,4 кгс/см² при учете γ_{b2}=1,10)

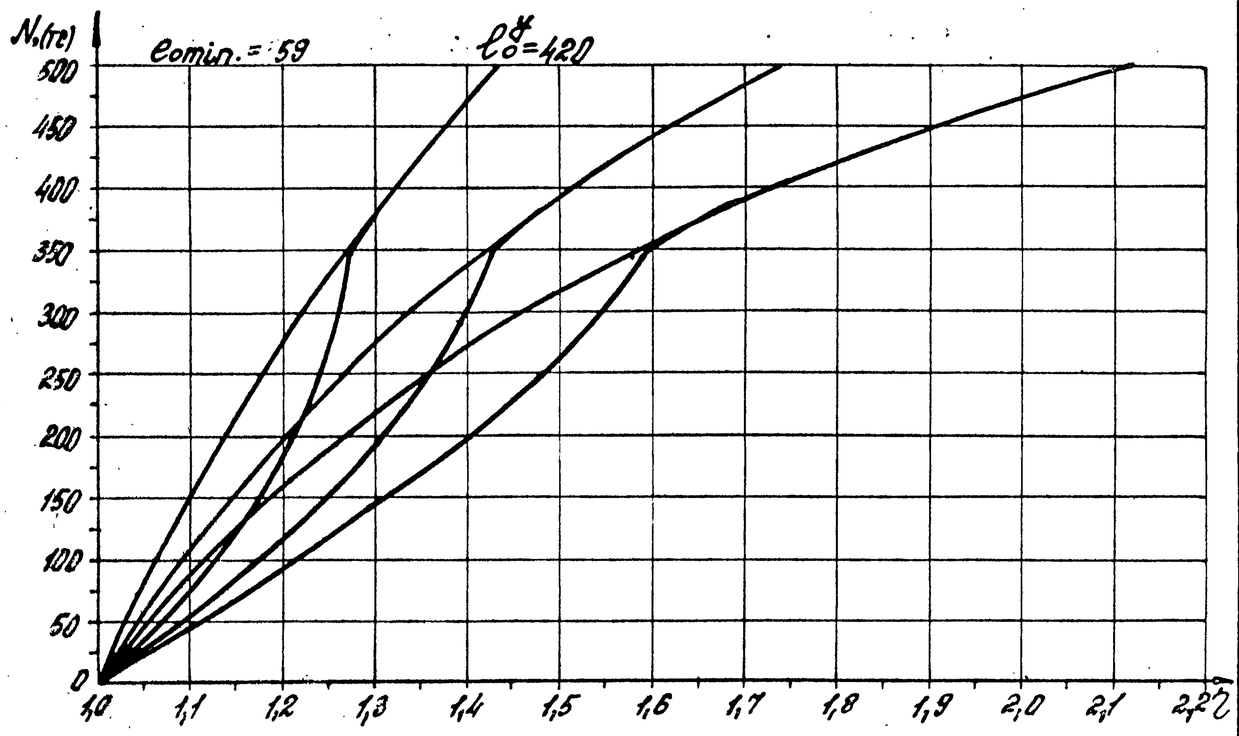
1.020-1/87. 0-6 – 3 ПЗ

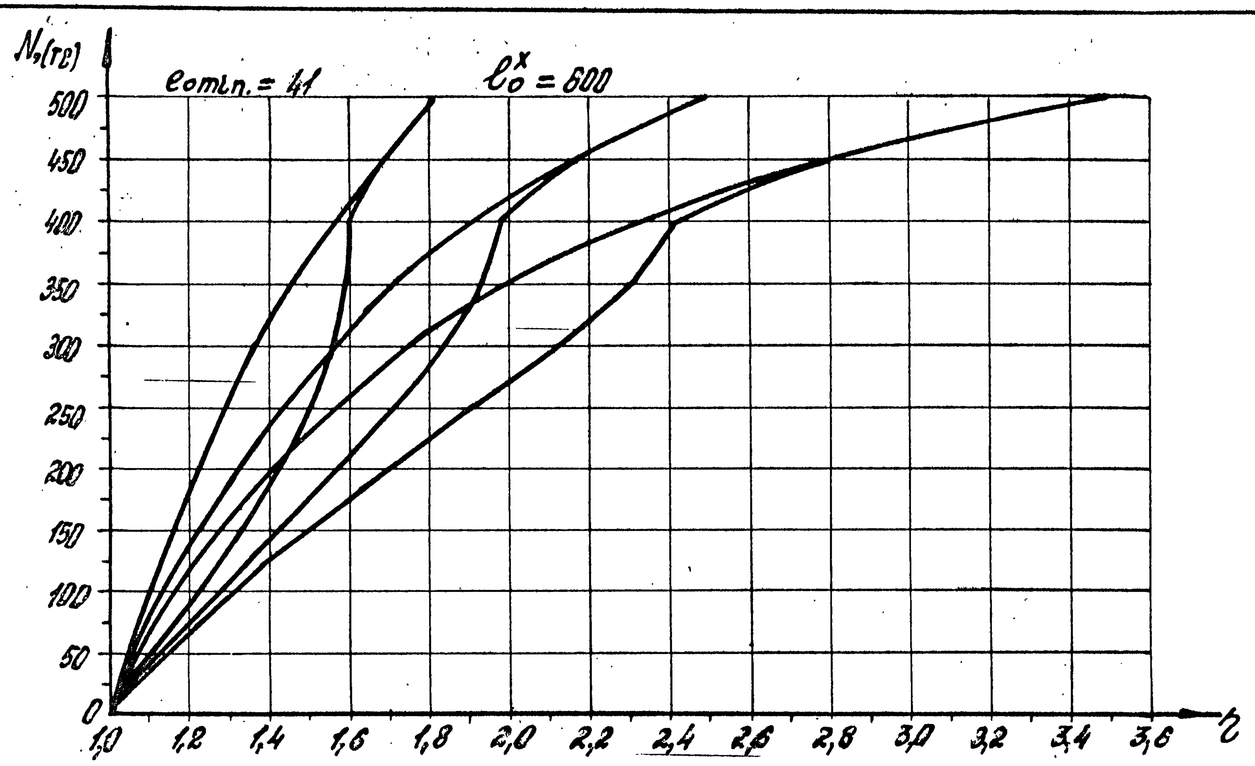
Лист 180

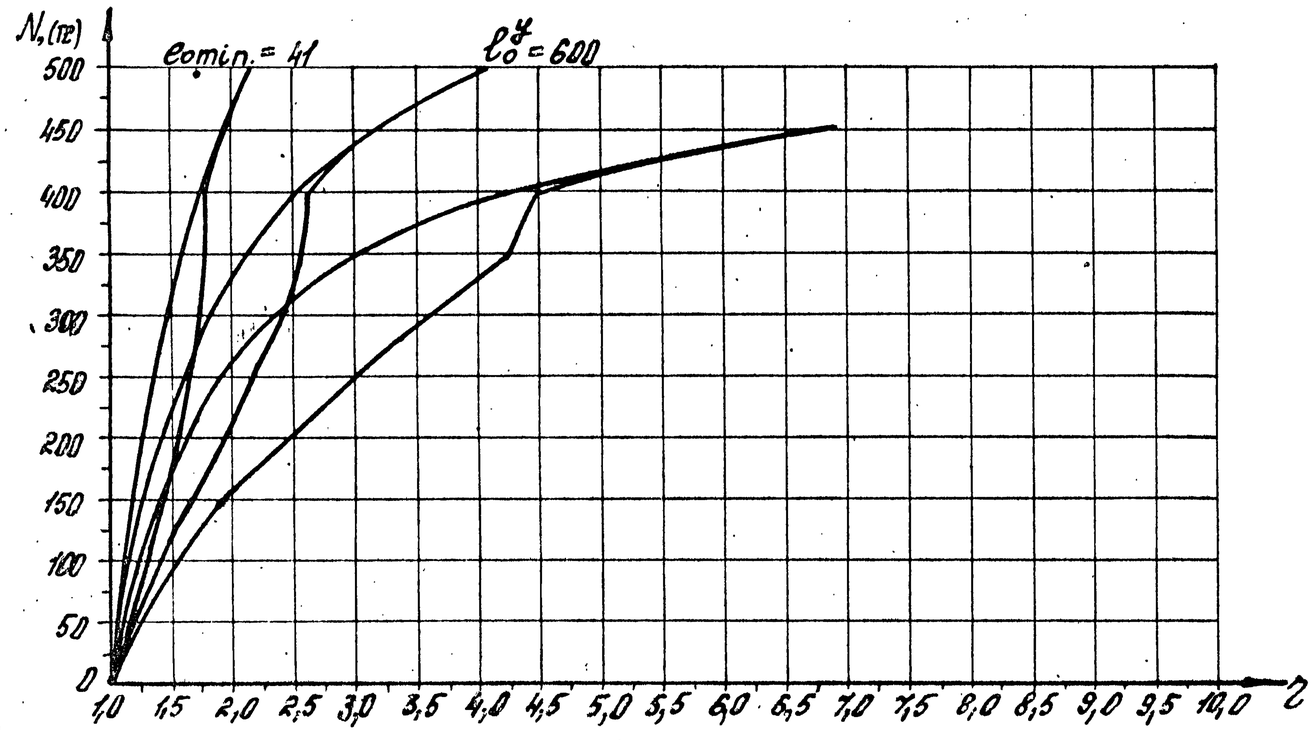

N,(тс)
e₀min.= 65
l_0^x =360
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
l

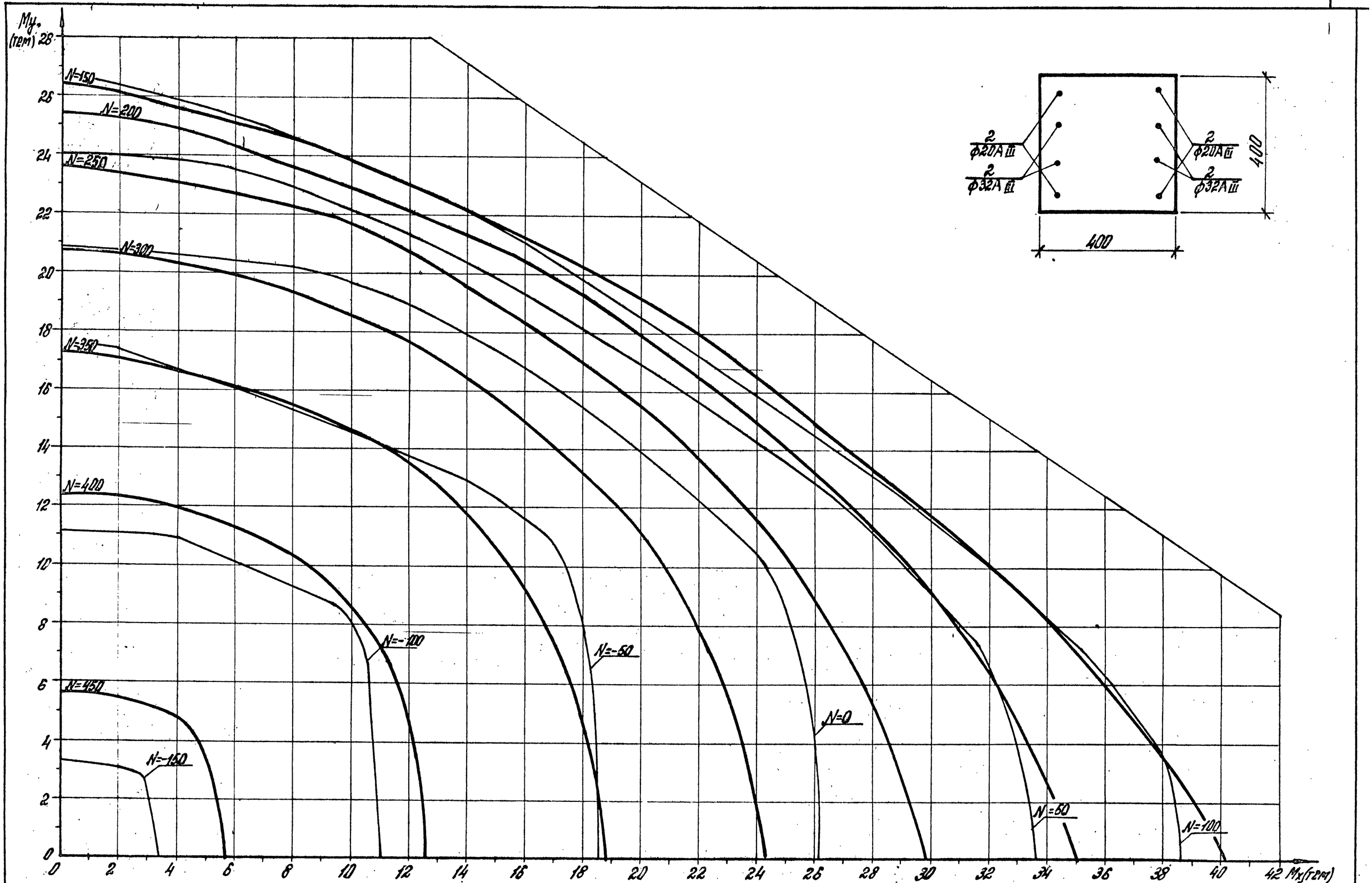

N,(тс)
e₀min.= 59
l_0^x =420
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
l


N,(тс)
e₀min.= 65
l_0^y =360
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
l


N,(тс)
e₀min.= 59
l_0^y =420
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
l


N,(тс)
e0min.= 41
l_0^x = 600
500
450
400
350
300
250
200
150
100
50
0
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
3,6
b


N,(тс)
e0min.= 41
l_0^y = 600
500
450
400
350
300
250
200
150
100
50
0
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
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6,5
7,0
7,5
8,0
8,5
9,0
9,5
10,0
l

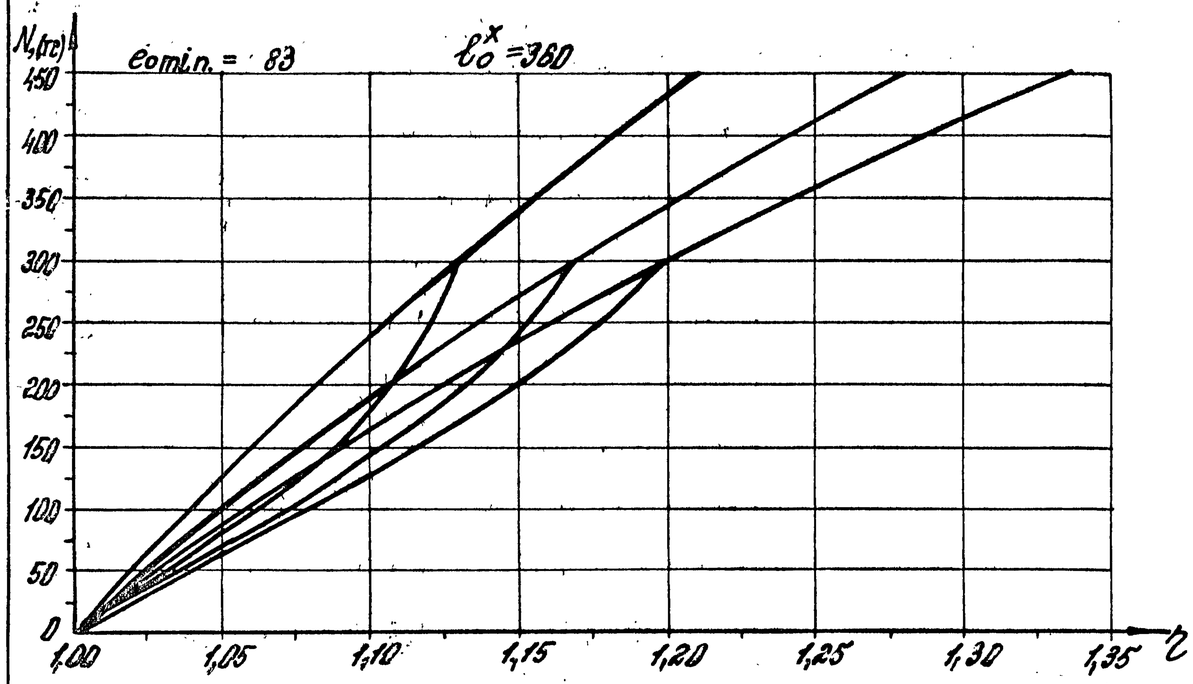


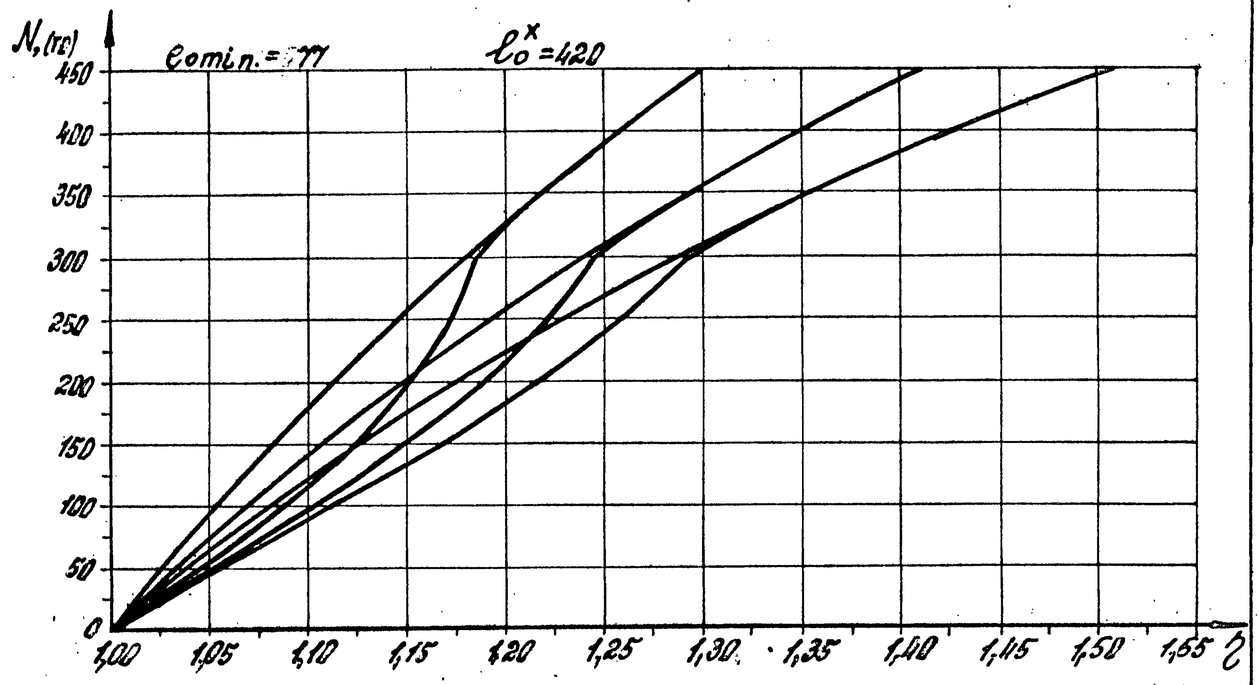
Класс бетона В40 ($R_б$=201,6 кгс/см^2 при учете $\gamma_{б2}$=0,9)

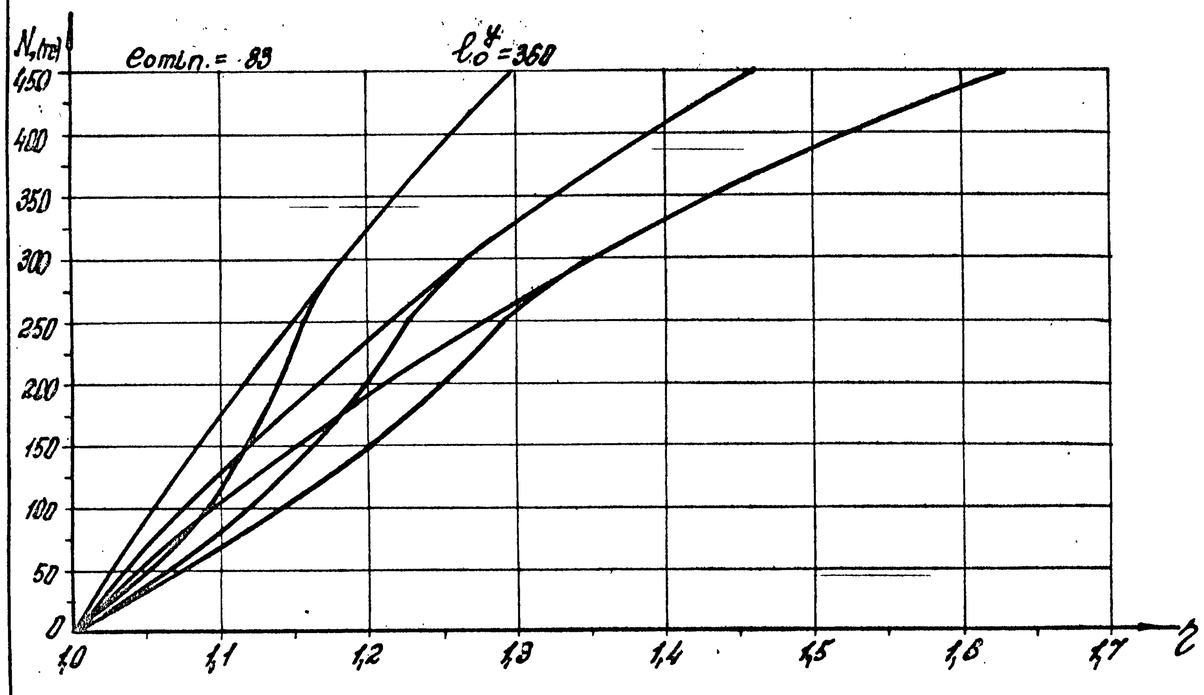
1.020-1/87. 0-6 — 3 ПЗ

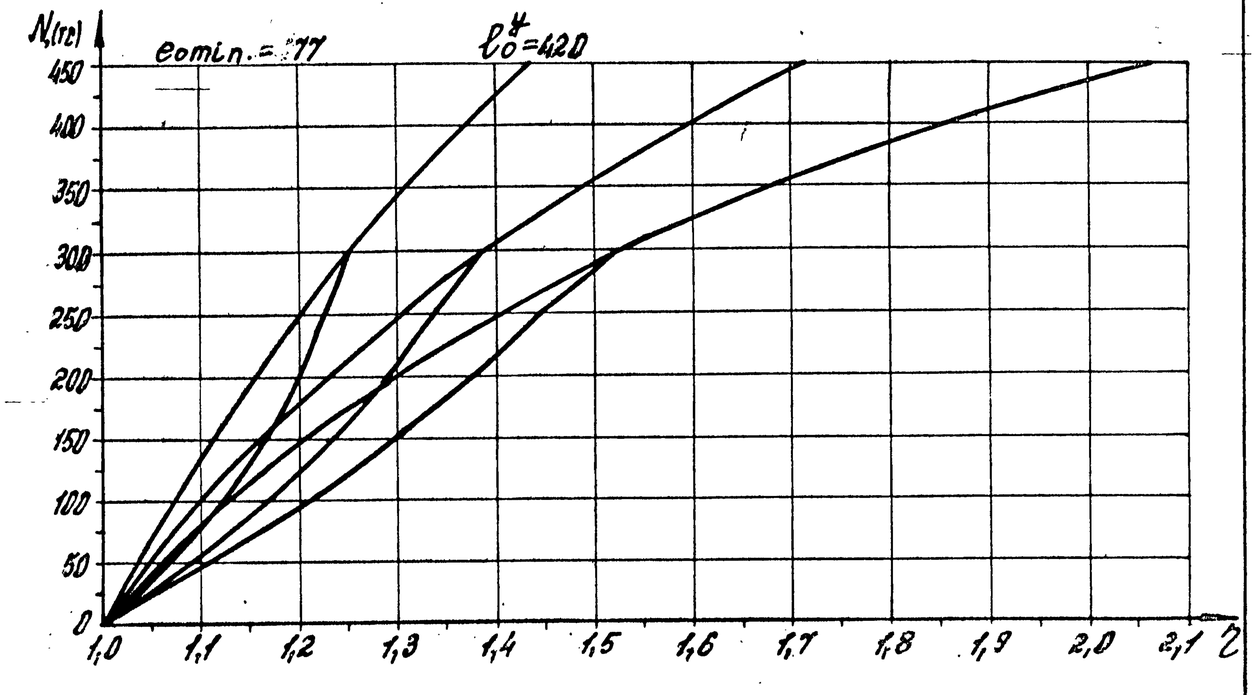
Лист 183

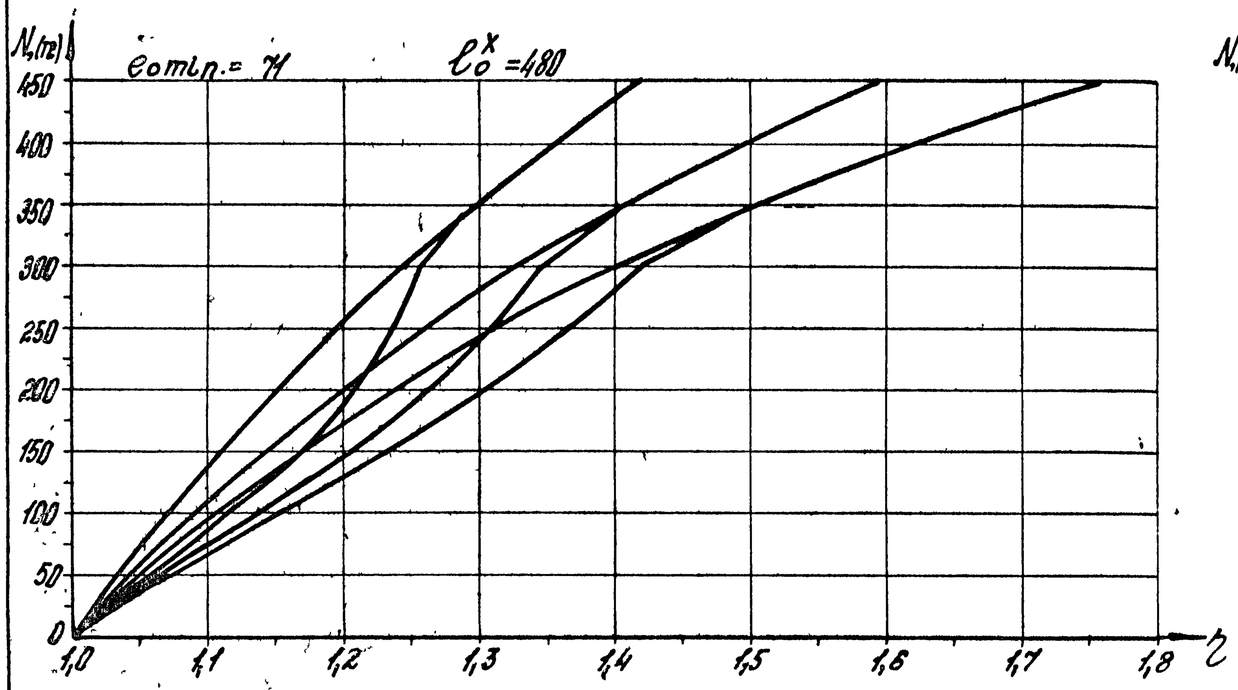
24788-02 89

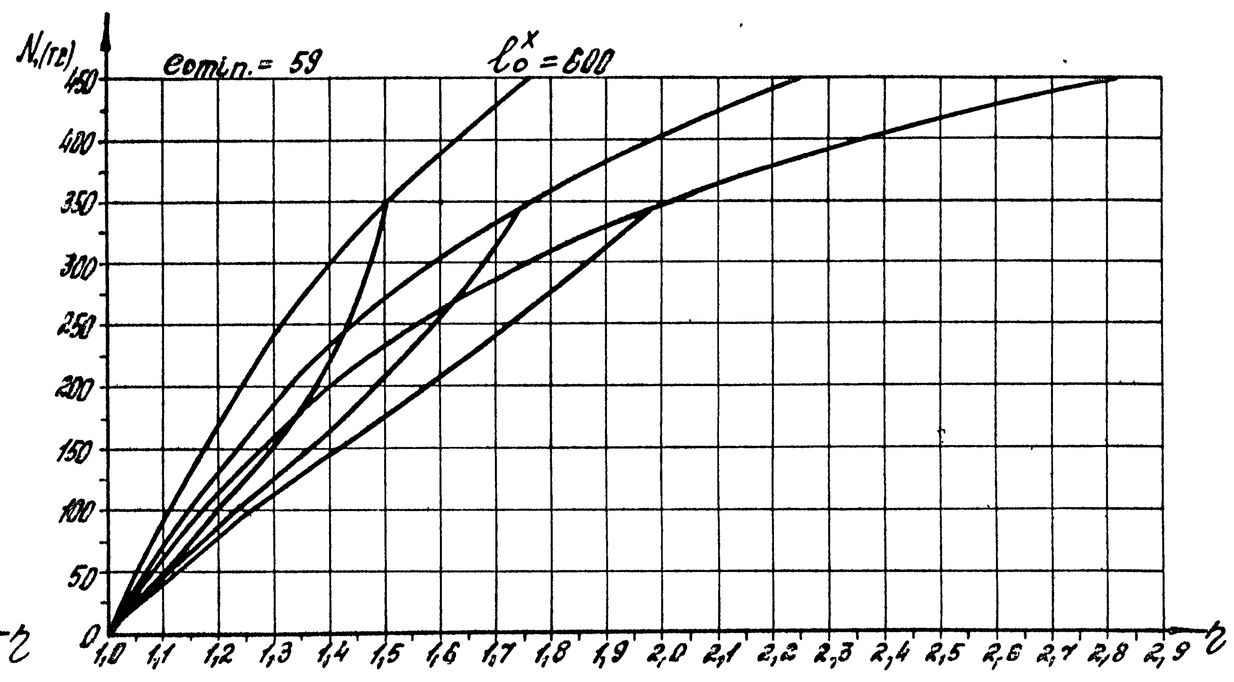

N,(тс)
e0min. = 83
l_0^x = 360
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
ζ

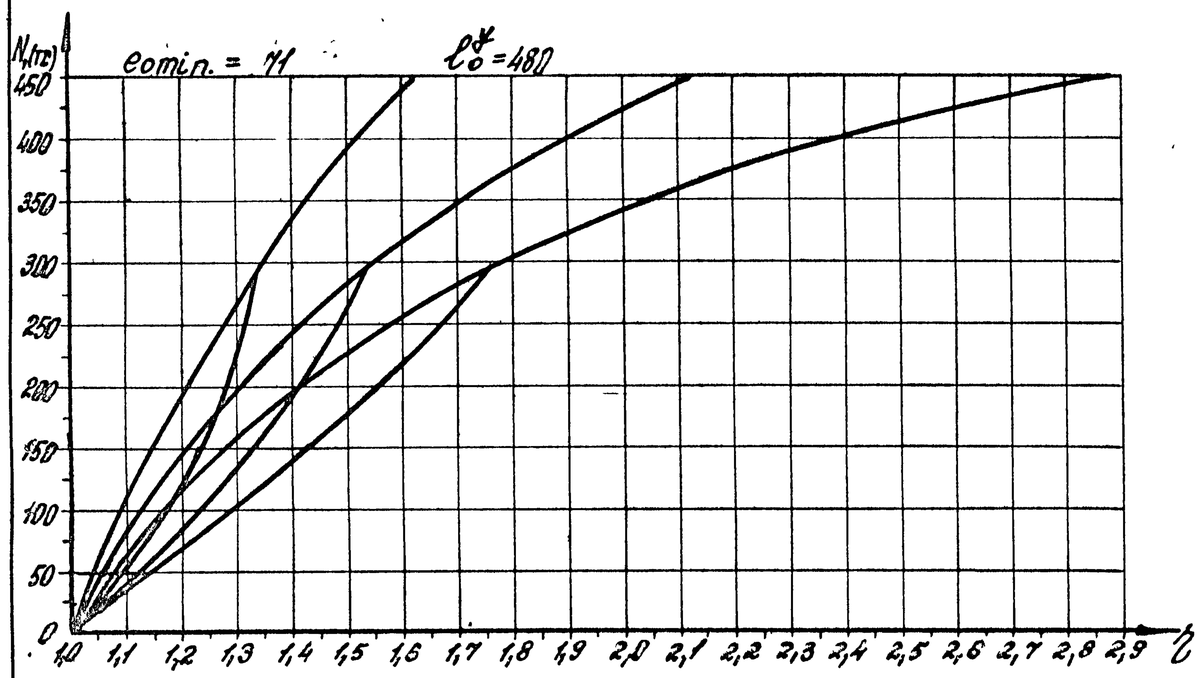

N,(тс)
e0min. = 77
l_0^x = 420
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
ζ

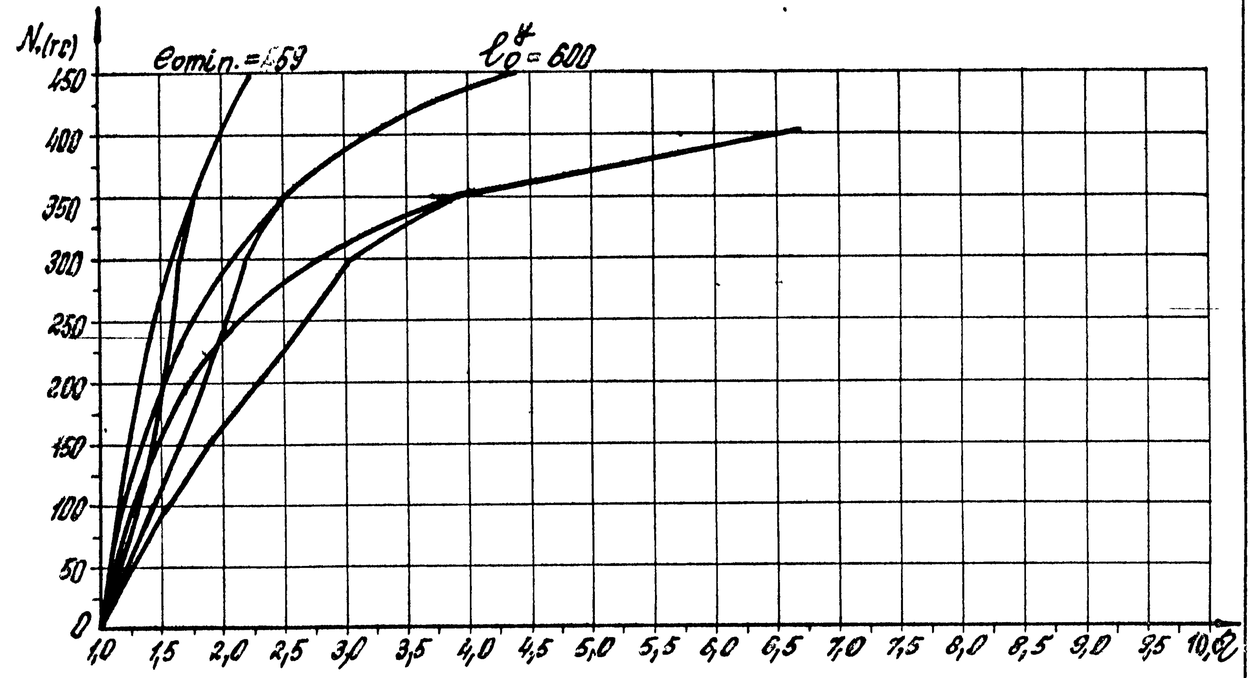

N,(тс)
e0min. = 83
l_0^y = 360
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
ζ

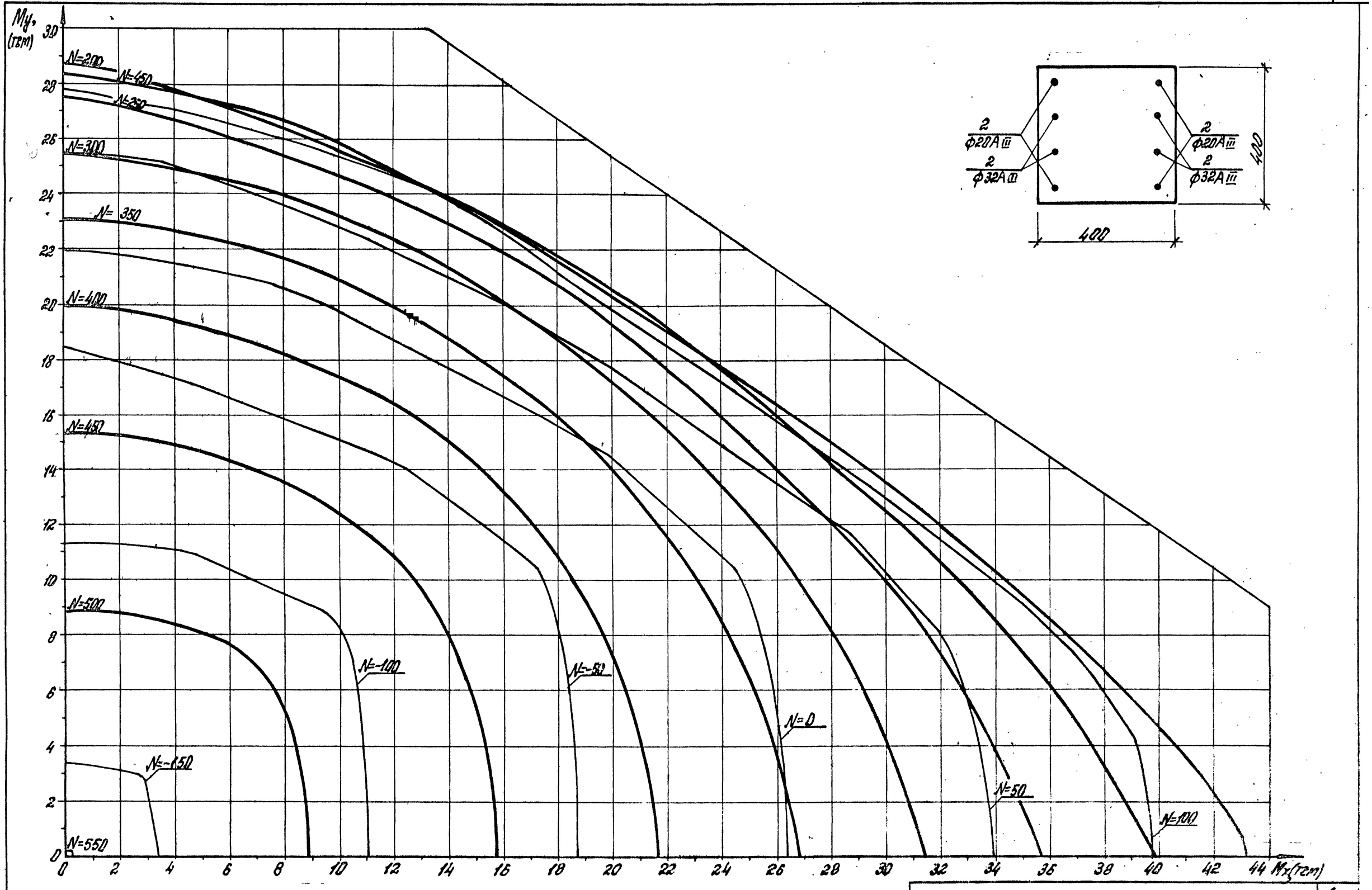

N,(тс)
e0min. = 77
l_0^y = 420
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
ζ


N,(тс)
e₀min.= 71
l₀ˣ=480
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8
l


N,(тс)
e₀min.= 59
l₀ˣ=600
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9
l


N,(тс)
e₀min.= 71
l₀ʸ=480
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9
l

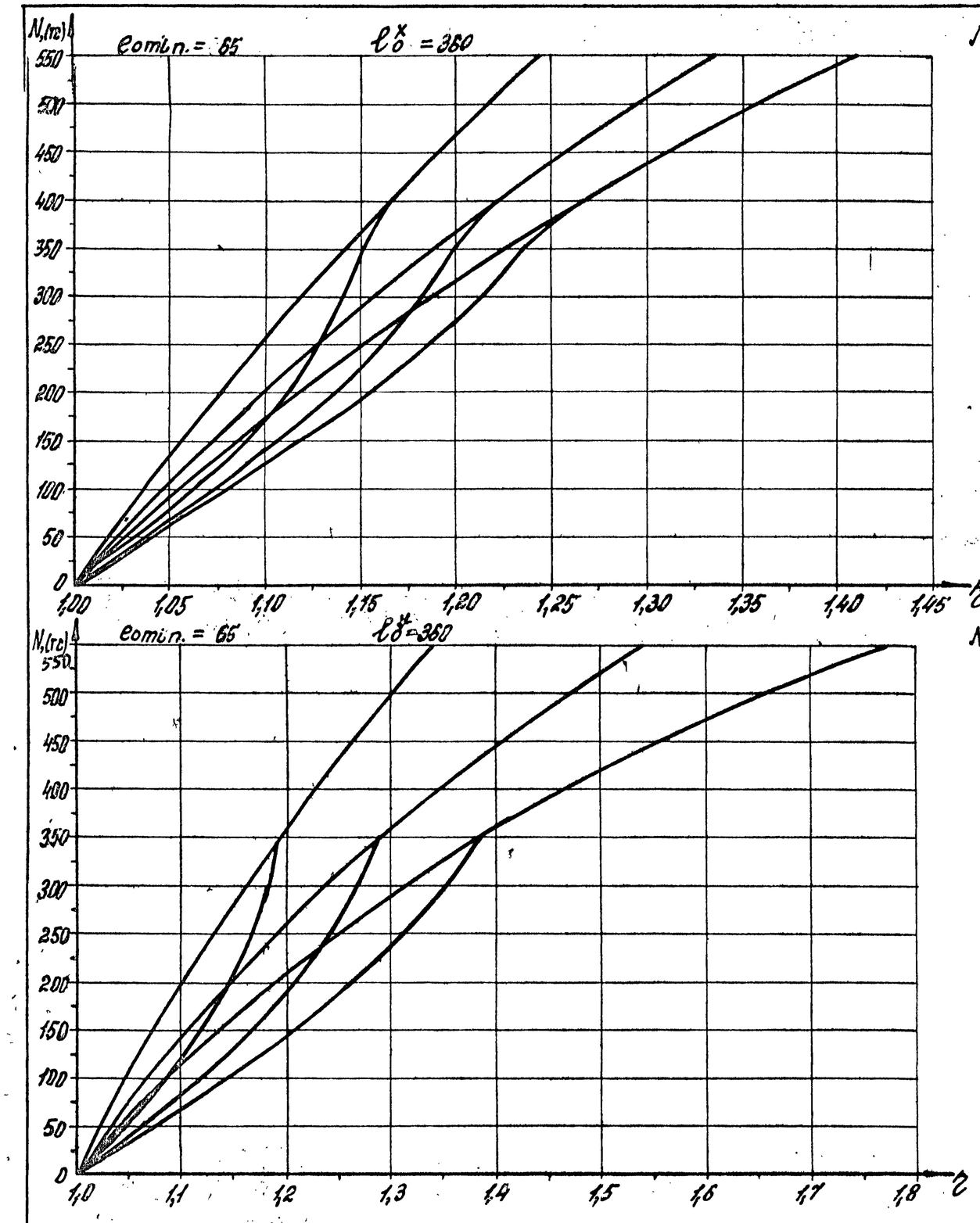

N,(тс)
e₀min.= 59
l₀ʸ=600
450
400
350
300
250
200
150
100
50
0
1,0 1,5 2,0 2,5 3,0 3,5 4,0 4,5 5,0 5,5 6,0 6,5 7,0 7,5 8,0 8,5 9,0 9,5 10,0
l

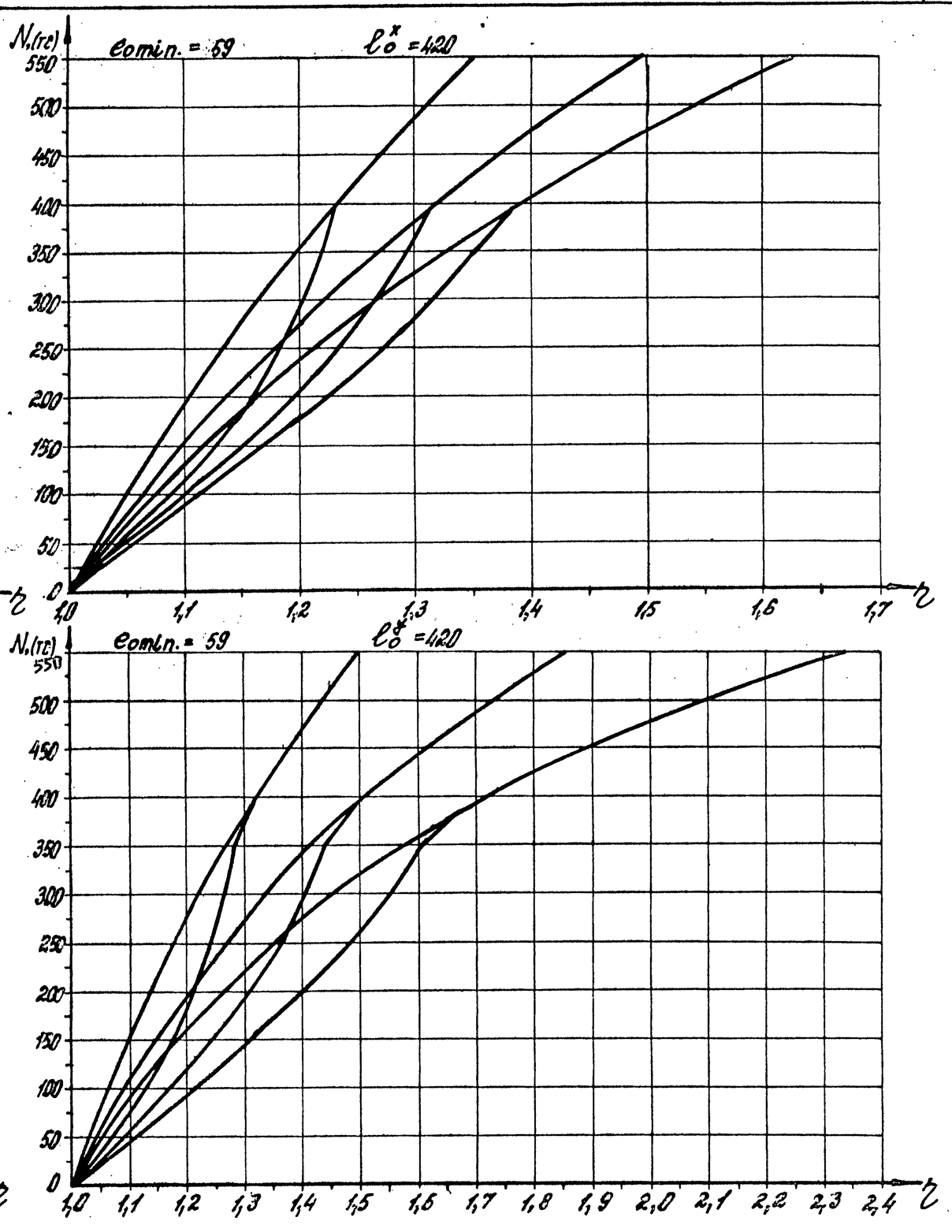


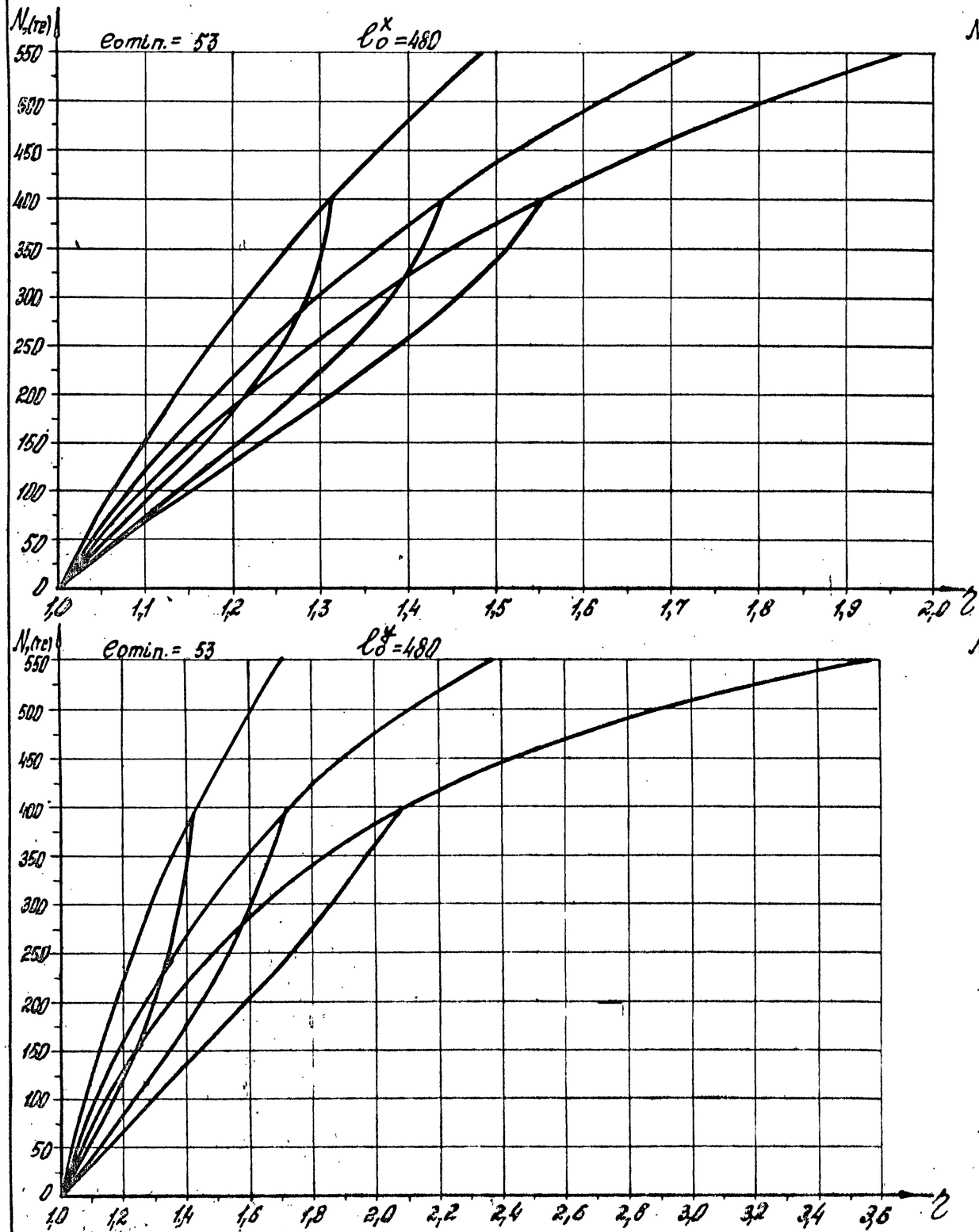
Класс бетона В40 (R_b=246, 4 кгс/см^2 при учете γ_{b2} = 1,10)

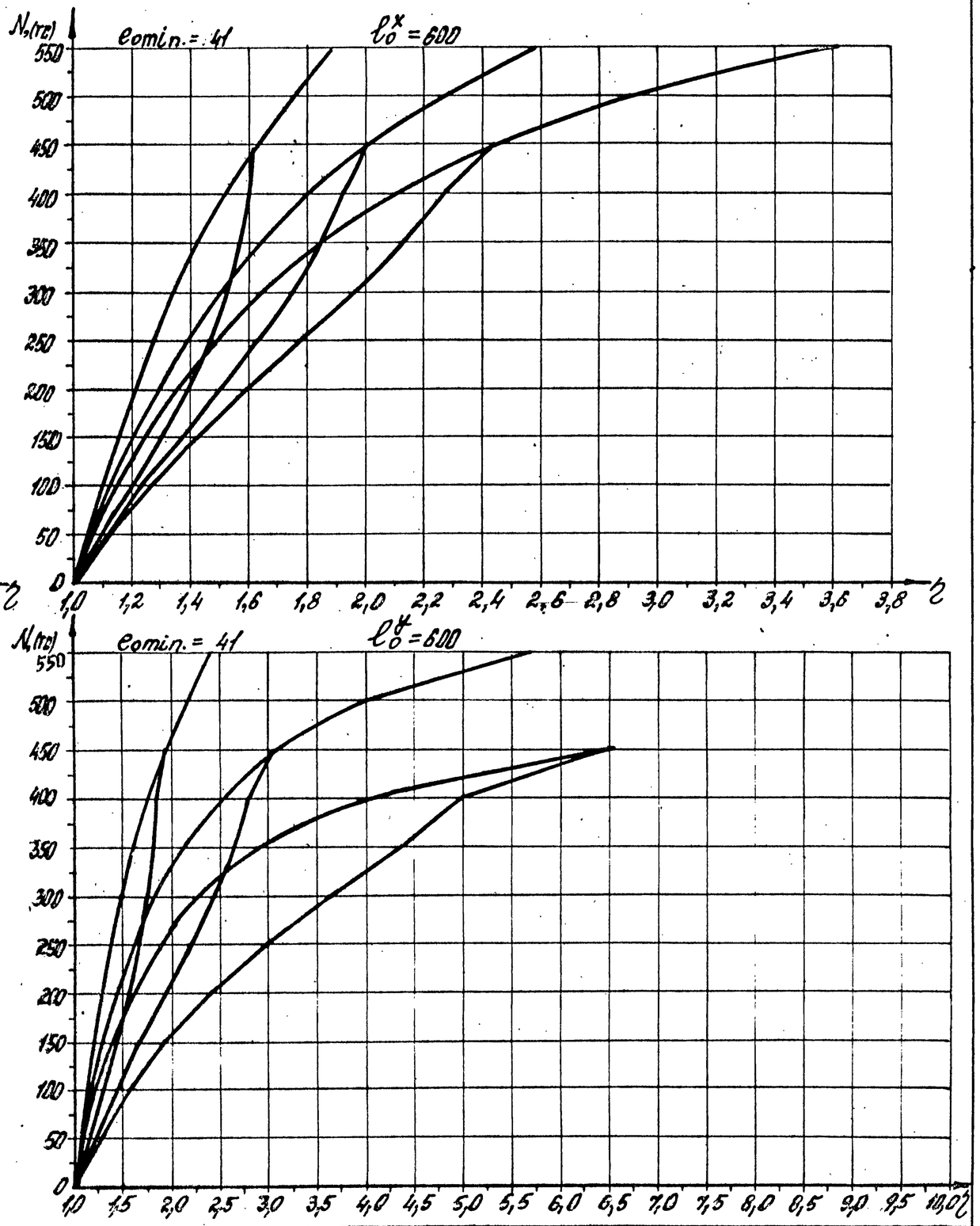
1.020.-1/87 0-6-3ПЗ

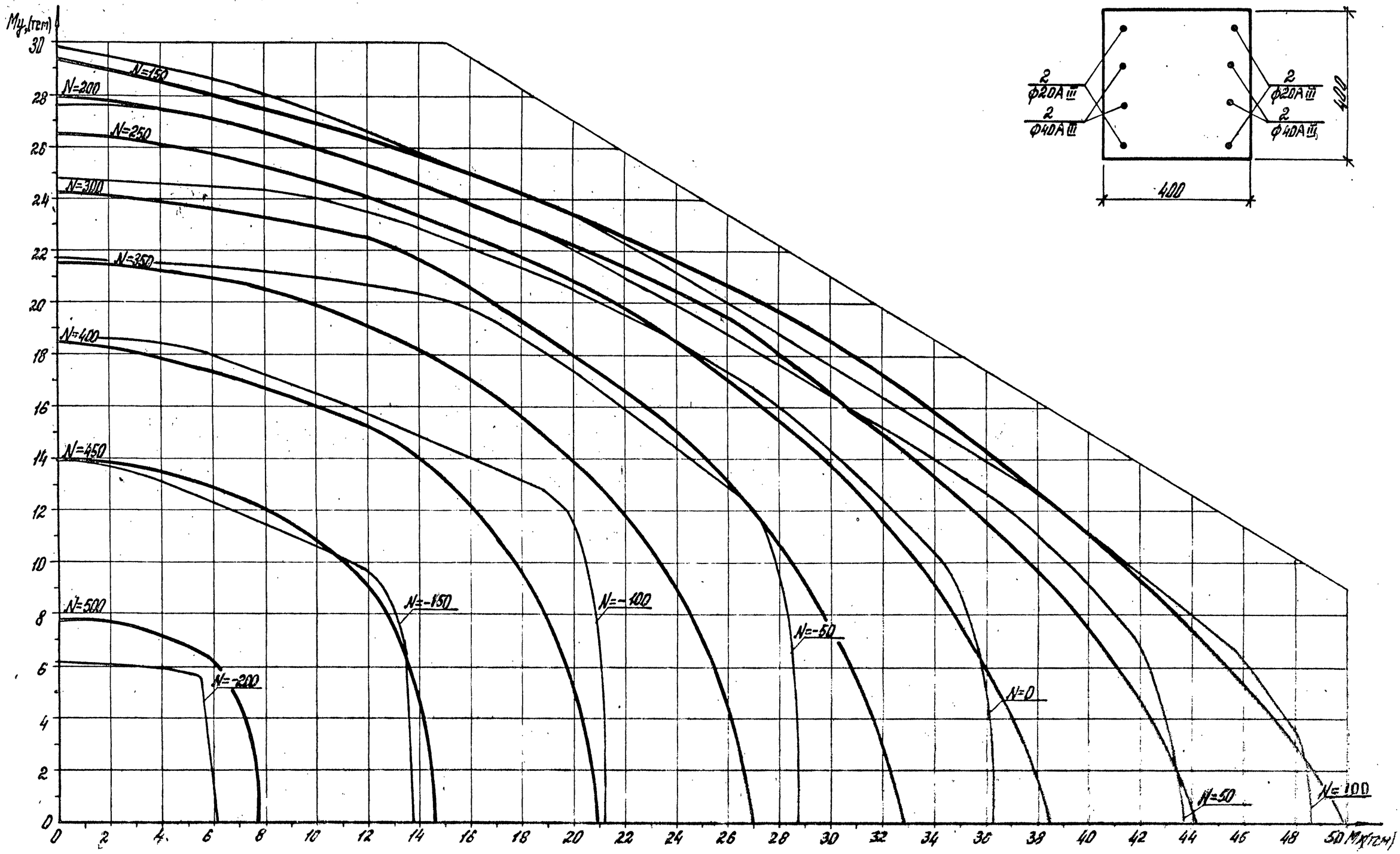
Лист 186


N,(тс)
e₀min. = 65
l₀ˣ = 360
550
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
η
N,(тс)
e₀min. = 65
l₀ʸ = 360
550
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
η

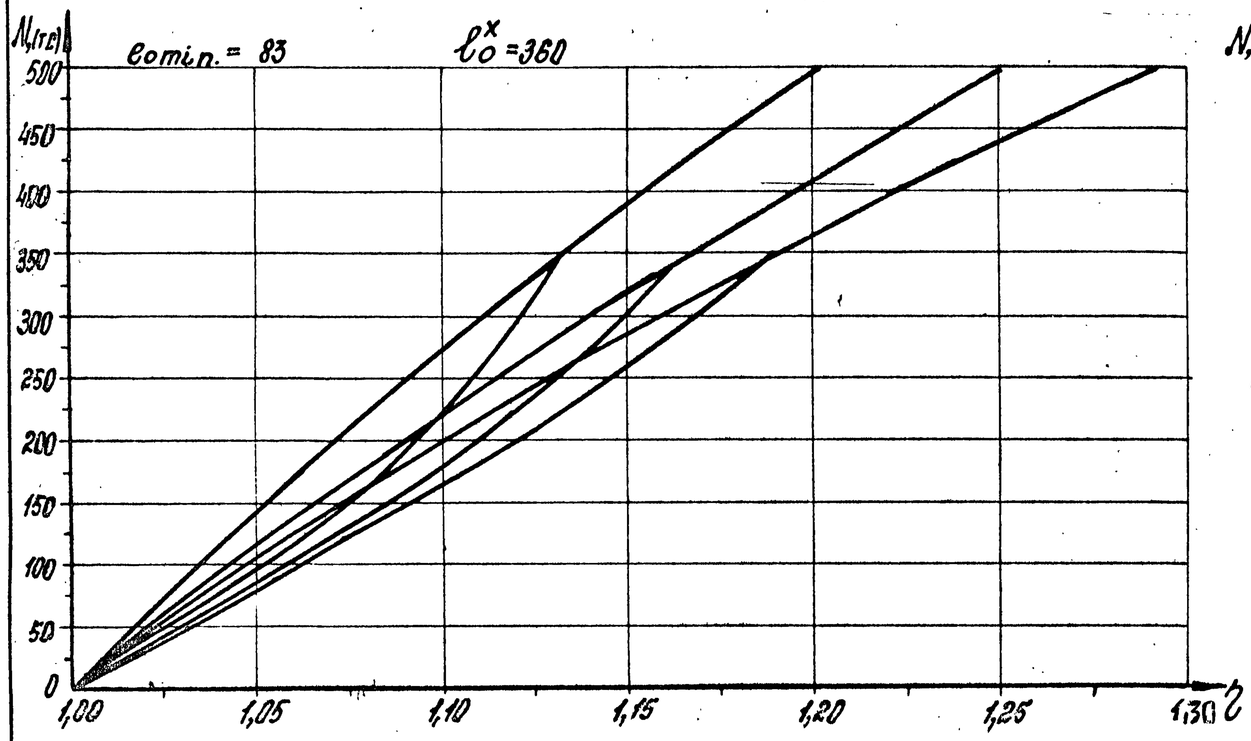

N,(тс)
e₀min. = 59
l₀ˣ = 420
550
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
η
N,(тс)
e₀min. = 59
l₀ʸ = 420
550
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
2,3
2,4
η

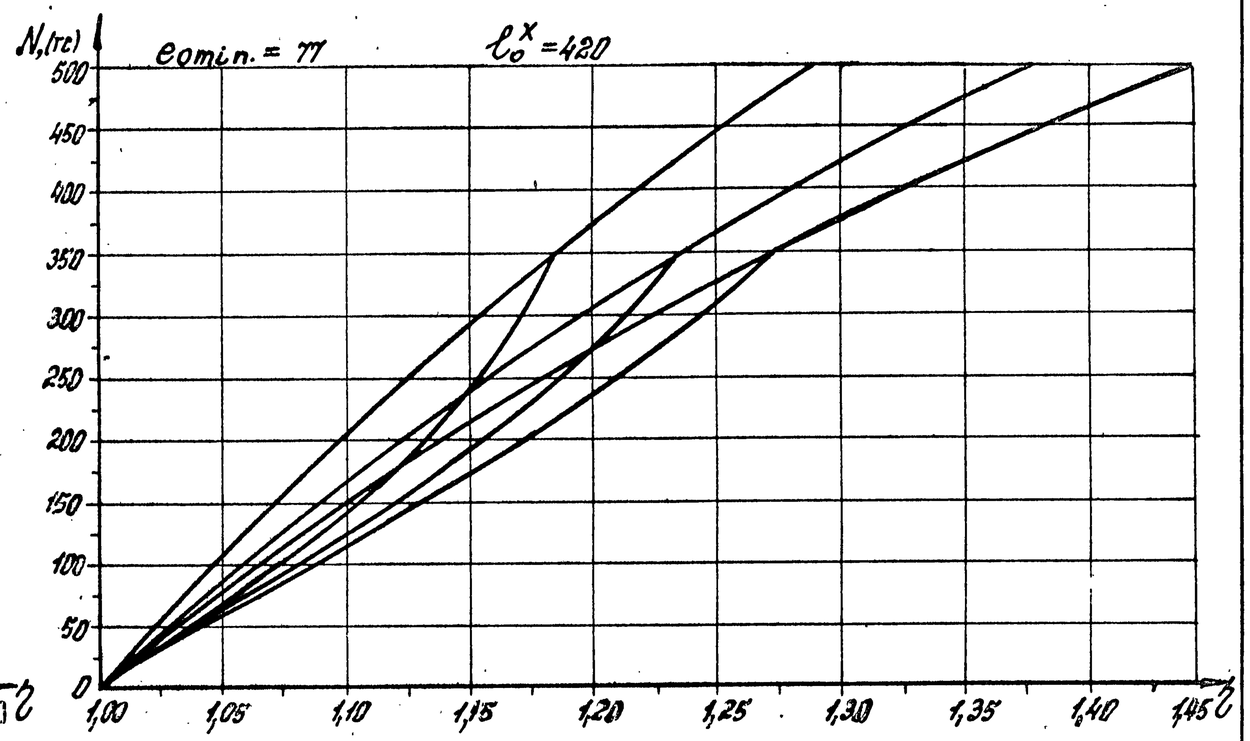

N_1(тс)
$e_{0min.}$ = 53
l_0^x = 480
0
50
100
150
200
250
300
350
400
450
500
550
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
l
N_1(тс)
$e_{0min.}$ = 53
l_0^y = 480
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
3,6
l

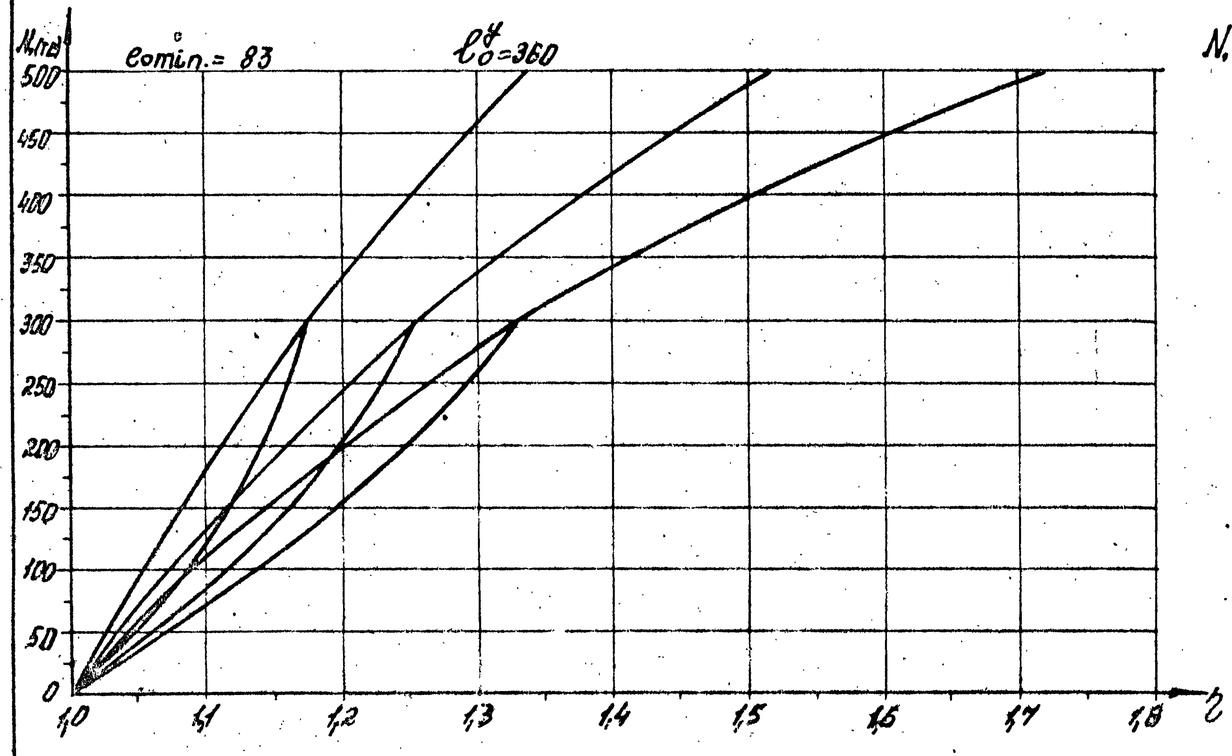

N_1(тс)
$e_{0min.}$ = 41
l_0^x = 600
0
50
100
150
200
250
300
350
400
450
500
550
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
3,6
3,8
l
N_1(тс)
$e_{0min.}$ = 41
l_0^y = 600
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
6,0
6,5
7,0
7,5
8,0
8,5
9,0
9,5
10,0
l

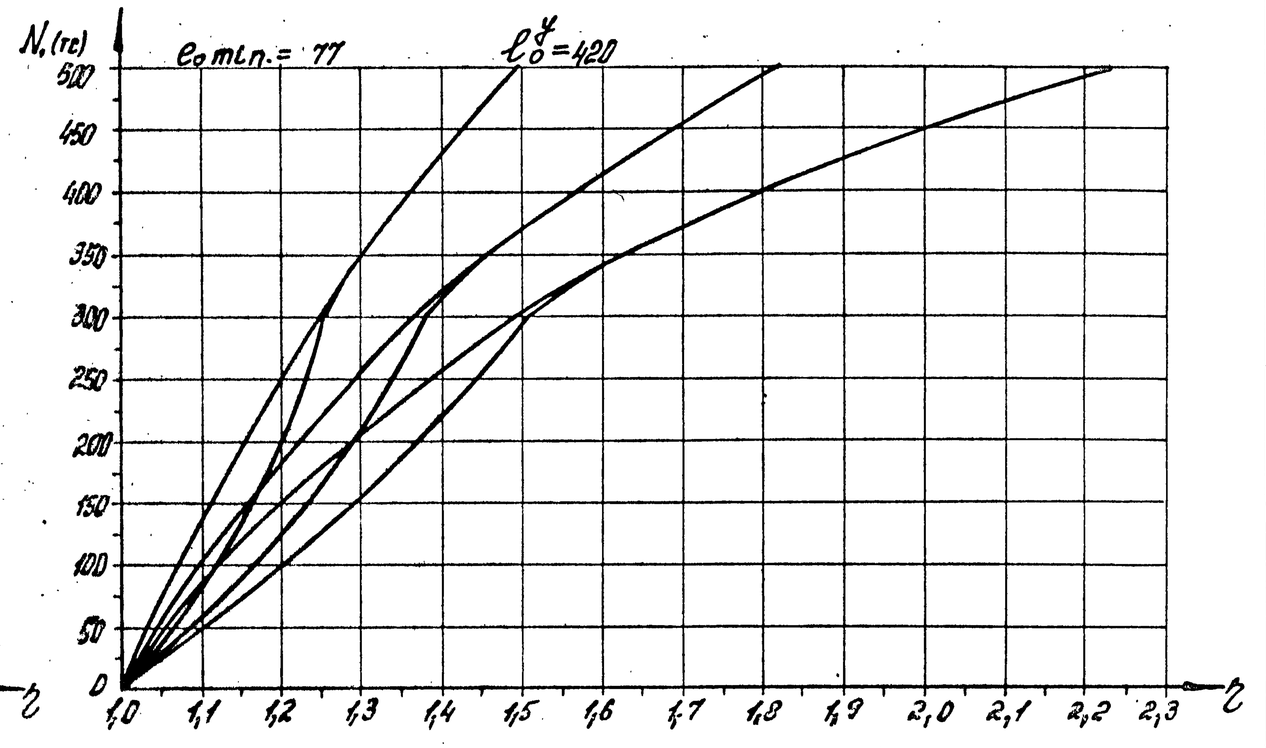


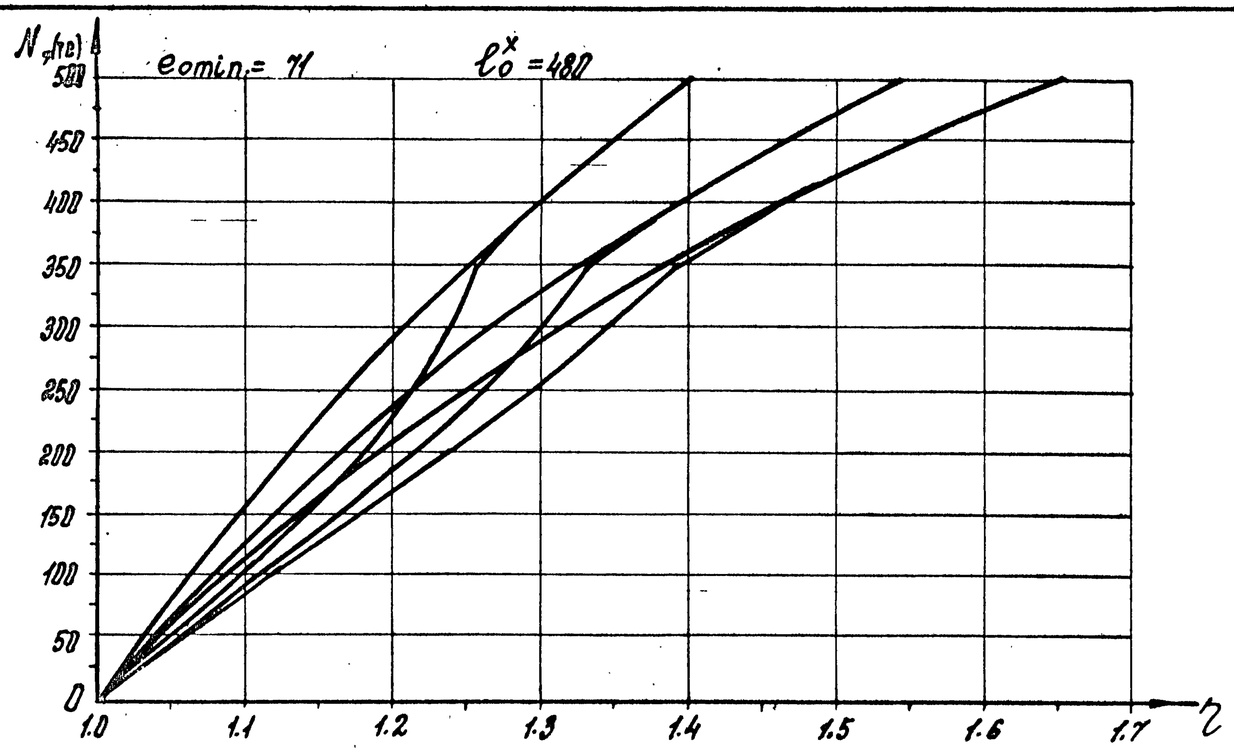
бетона В40 (R_B=204,6кгс/см^2 при учете γ_{b2}=0,9)

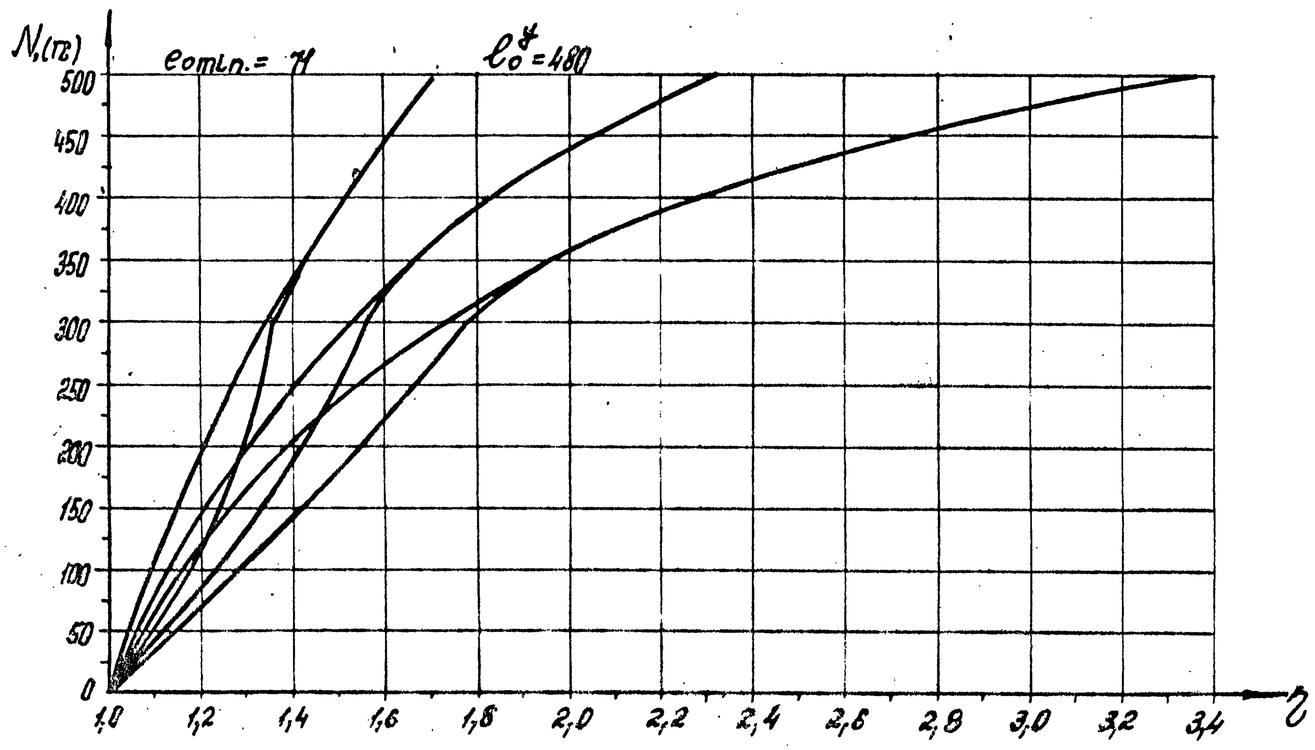

N,(тс)
e₀min.= 83
ℓ_0^x=360
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
ℓ

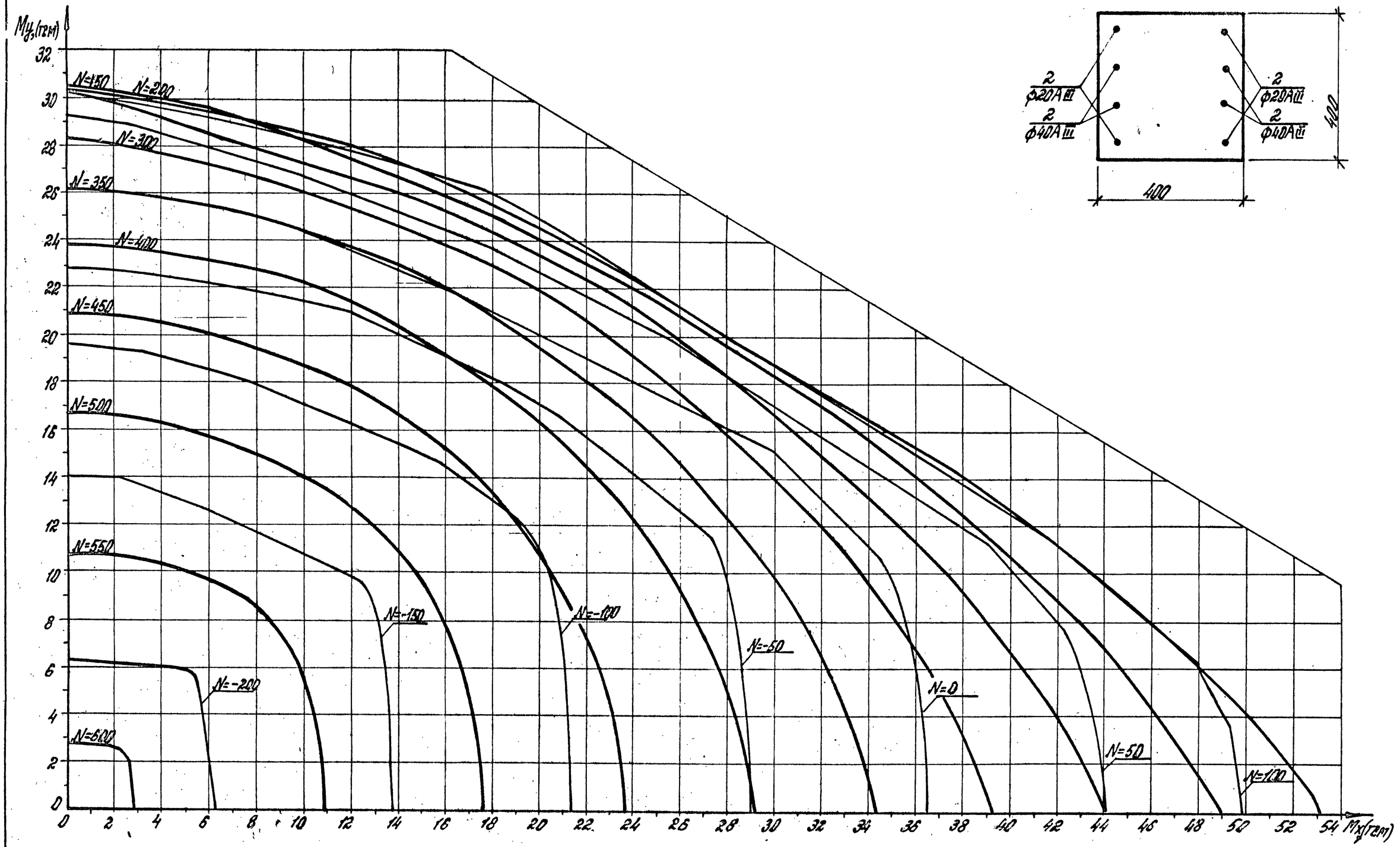

N,(тс)
e₀min.= 77
ℓ_0^x=420
500
450
400
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
ℓ


N,(тс)
e₀min.= 83
ℓ_0^y=360
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
ℓ


N,(тс)
e₀min.= 77
ℓ_0^y=420
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
2,3
ℓ


N,(тс)
500
450
400
350
300
250
200
150
100
50
0
e0min.= 11
l0x =480
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
η

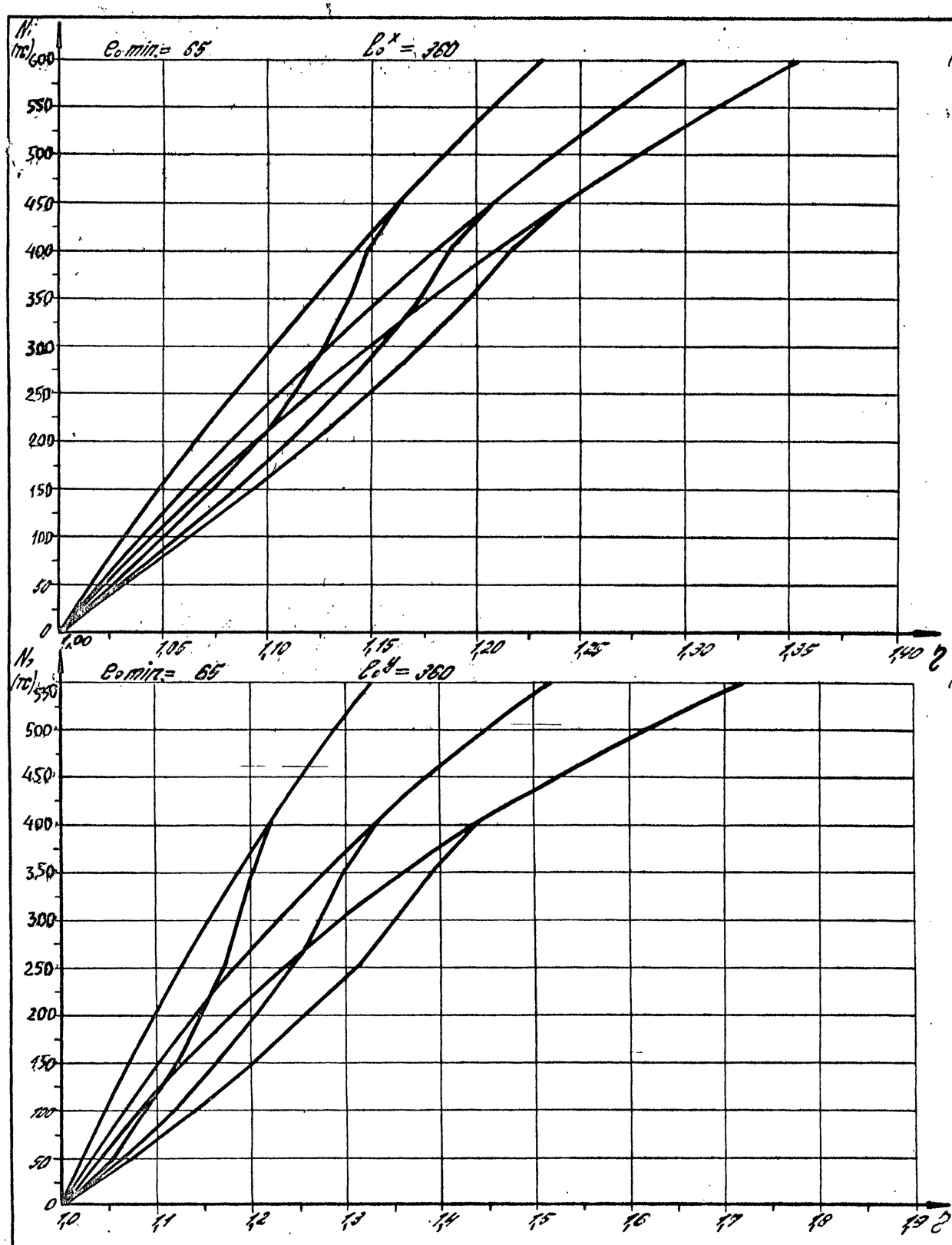

N,(тс)
500
450
400
350
300
250
200
150
100
50
0
e0min.= 11
l0y =480
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
ζ

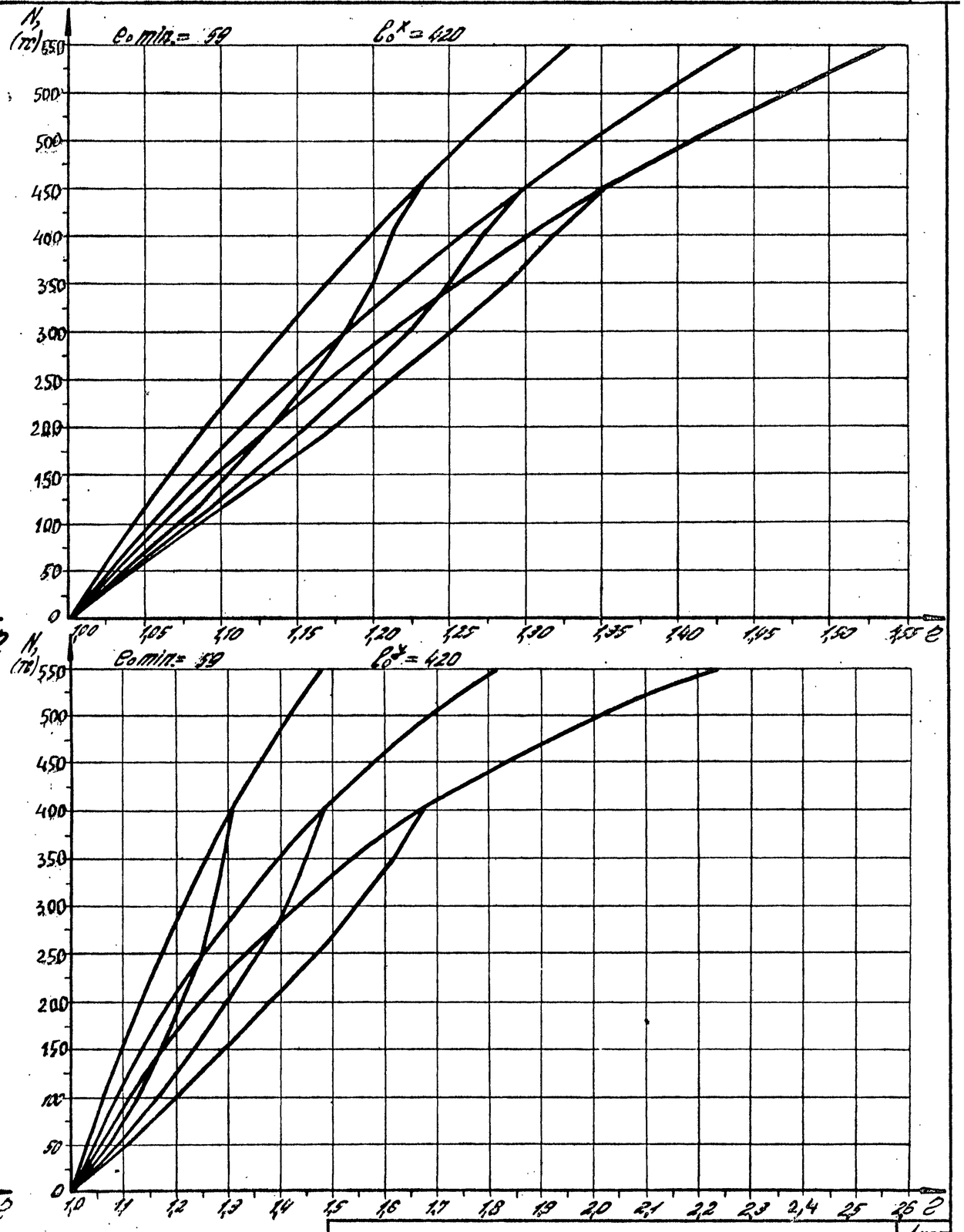


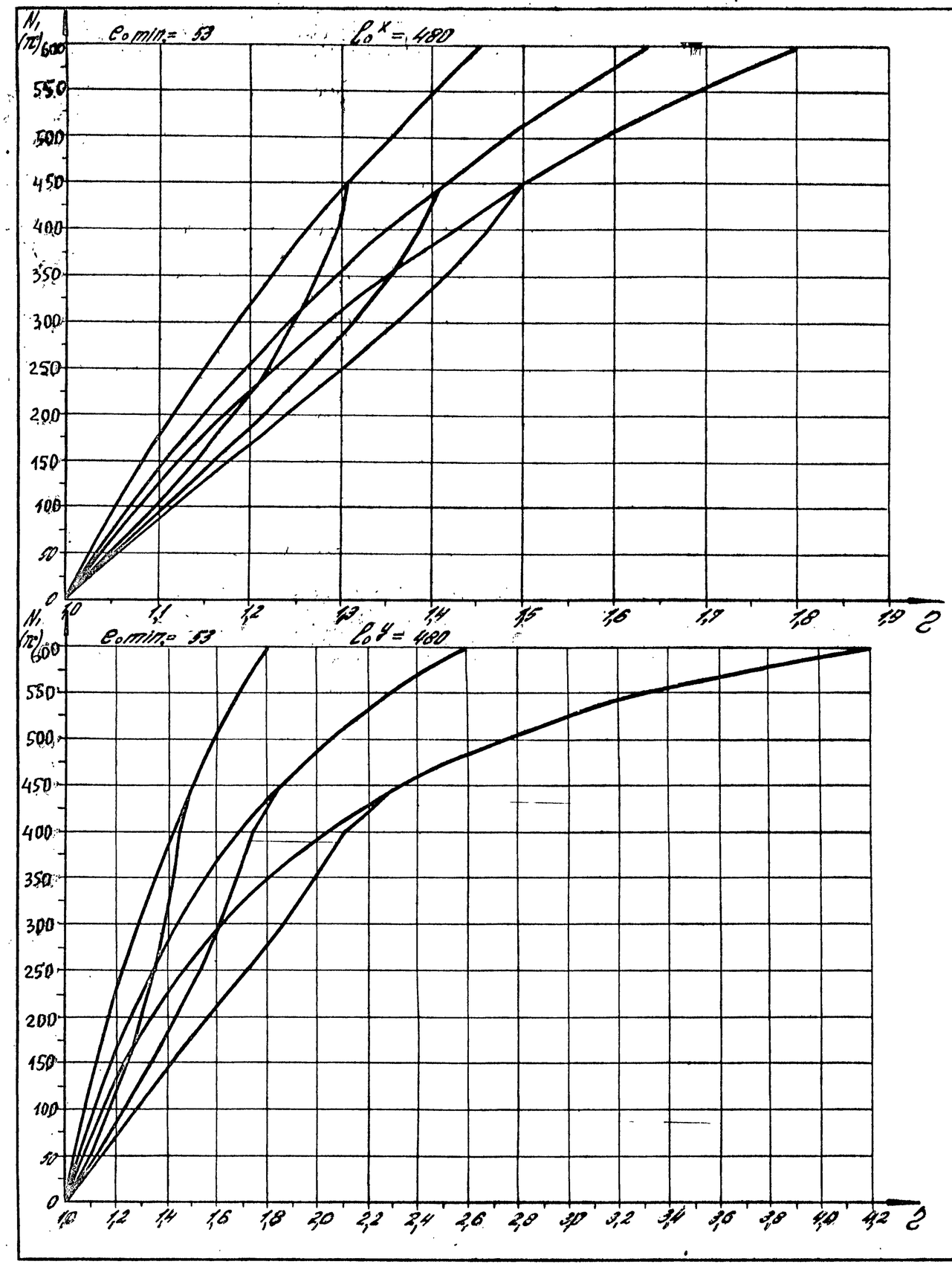
Класс бетона В40 (R_B=246,4 кгс/см^2 при учете γ_{b2}=1,10)

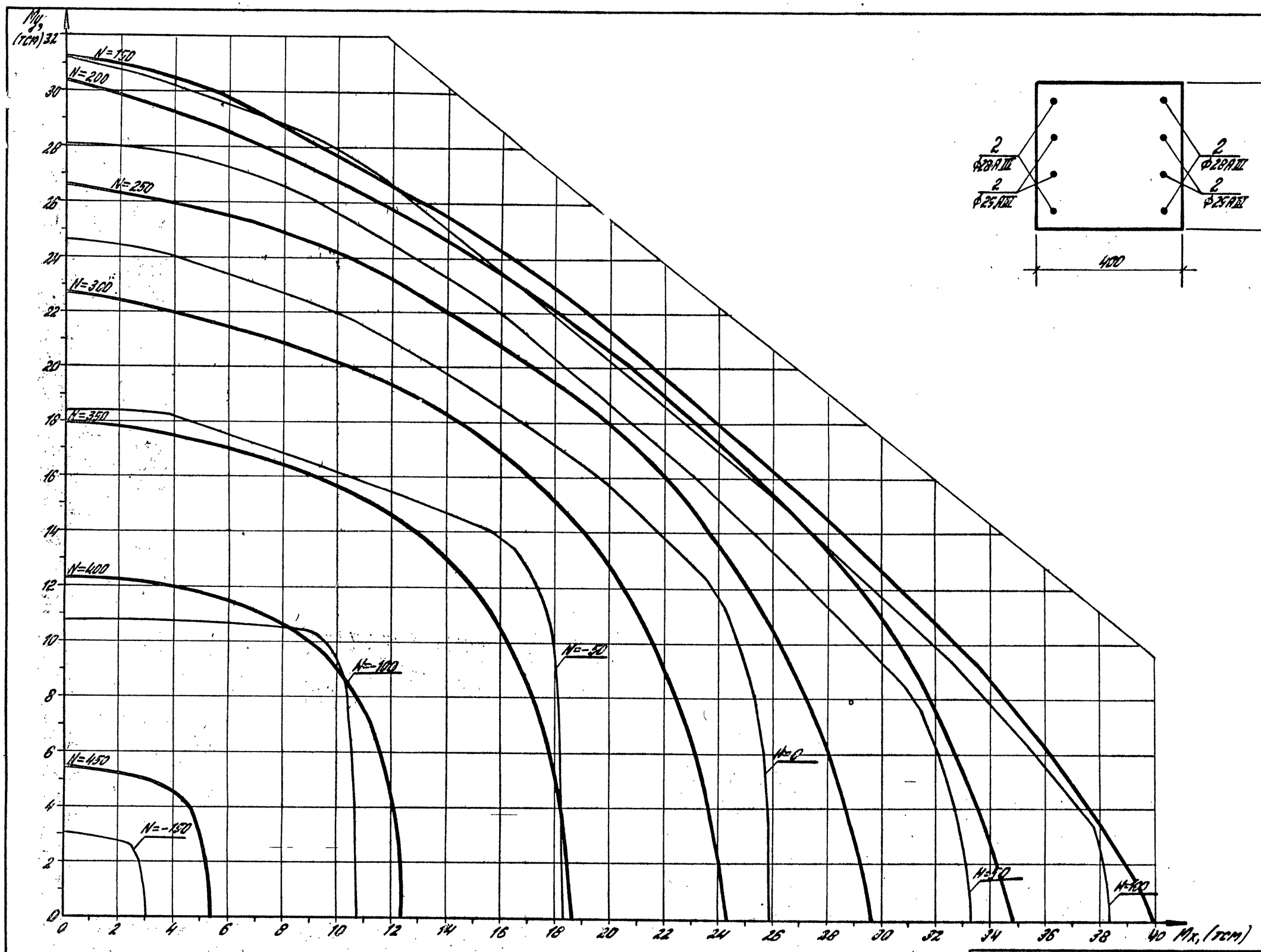
1.020-1/87. 0-6 – 3 ПЗ	Лист 192

24788-02 98


N, (тс)
e₀min.= 65
e₀ˣ = 360
e
N, (тс)
e₀min.= 65
e₀ʸ = 360
e


N, (тс)
e₀min.= 99
e₀ˣ = 420
e
N, (тс)
e₀min.= 99
e₀ʸ = 420
e


N_1 (тс)
e_{0min}= 53
l_0^x = 480
600
550
500
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
e
N_1 (тс)
e_{0min}= 53
l_0^y = 480
600
550
500
450
400
350
300
250
200
150
100
50
0
1,0
1,2
1,4
1,6
1,8
2,0
2,2
2,4
2,6
2,8
3,0
3,2
3,4
3,6
3,8
4,0
4,2
e



Класс бетона В40 (R_B = 201,6 кгс/см² при учете γ_{B2} = 0,9)

1.020-1/87. 0-6 – 3 ПЗ

Лист 195

Ерас-