ТИПОВЫЕ КОНСТРУКЦИИ, ИЗДЕЛИЯ И УЗЛЫ ЗДАНИЙ И СООРУЖЕНИЙ

# СЕРИЯ 1.020.1-4

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

ВЫПУСК 0-9

УКАЗАНИЯ ПО ПОДБОРУ ЭЛЕМЕНТОВ КАРКАСА.

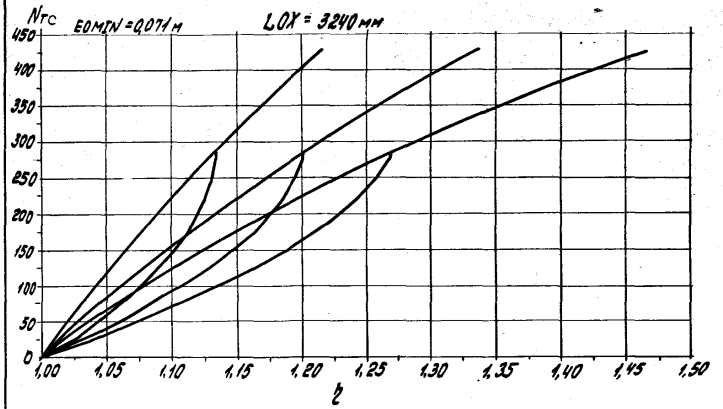
(ВАРИАНТ АРМИРОВАНИЯ ИЗДЕЛИЙ СТАЛЬЮ КЛАССОВ Ат-IVС и Врп-I).

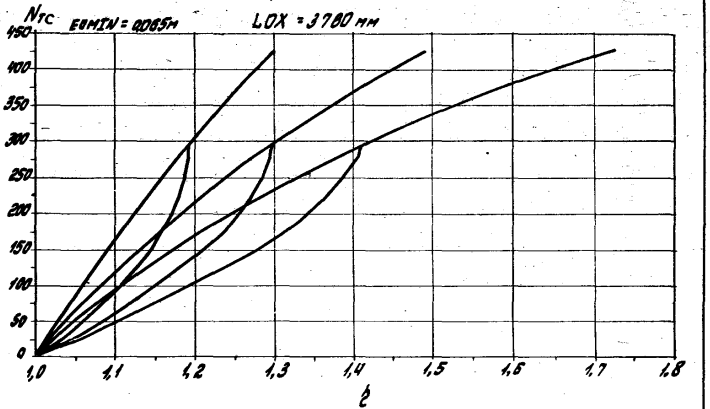
ЧАСТЬ 1 КНИГА 2 (СТР. 57÷111)

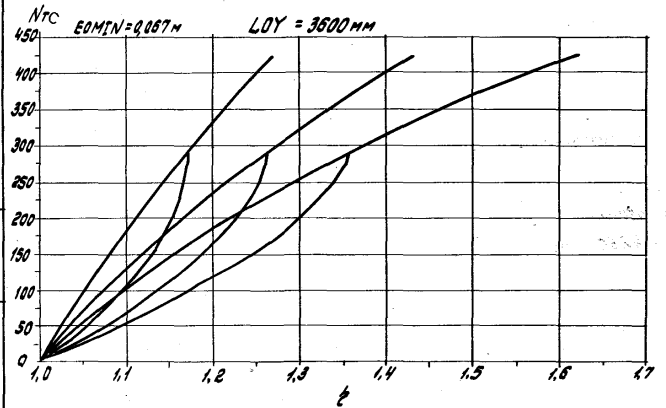
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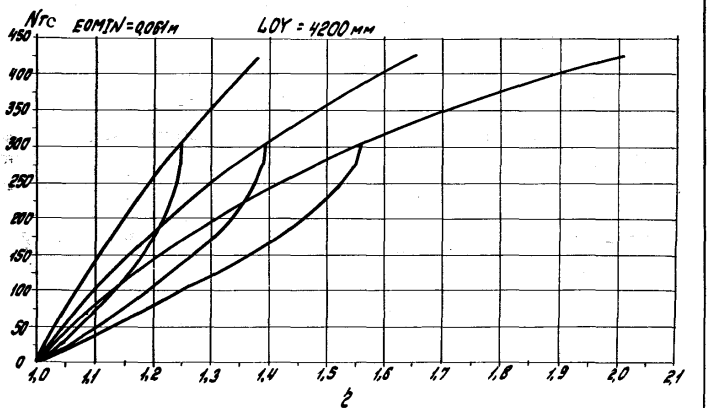
ОКОНЧАНИЕ

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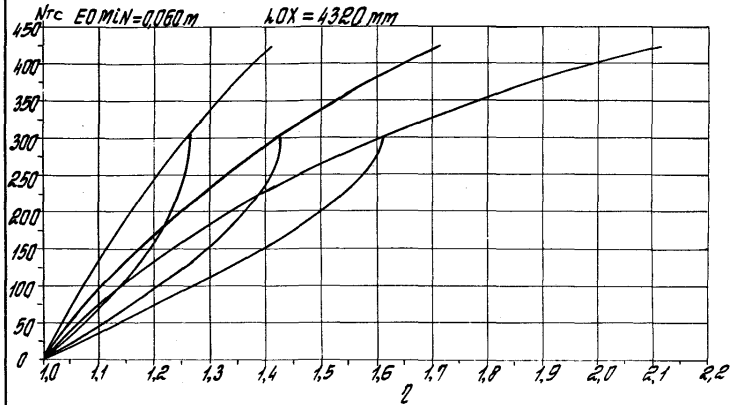



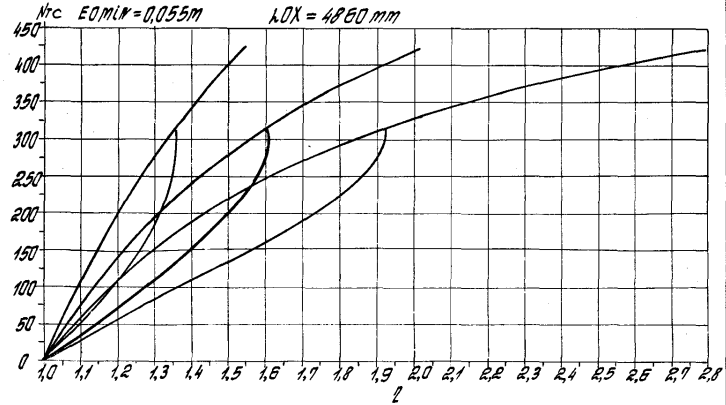



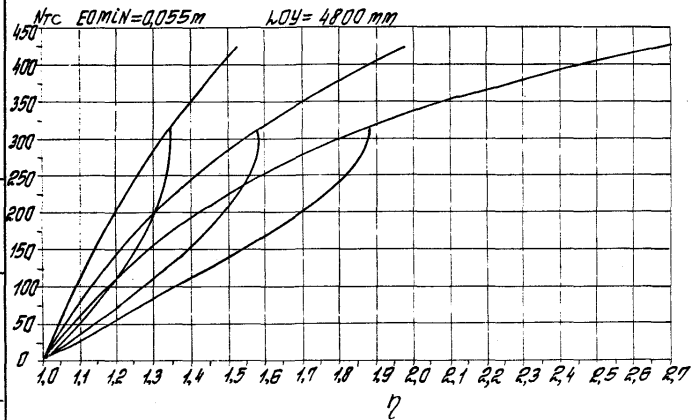



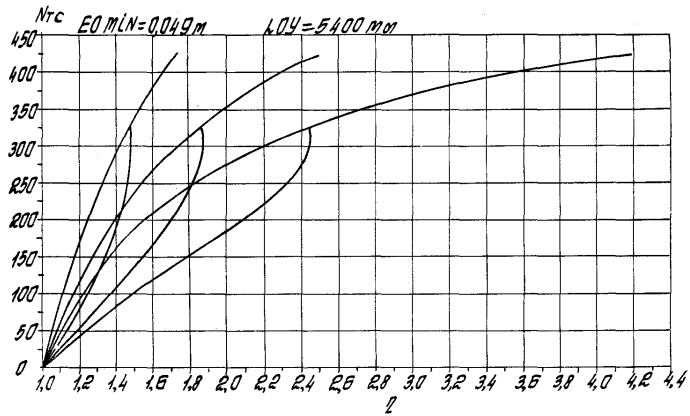

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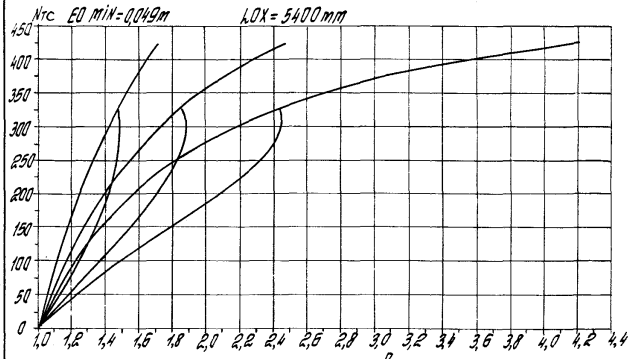
| 1.020.1-4 0-9 302 | Лист 42 |
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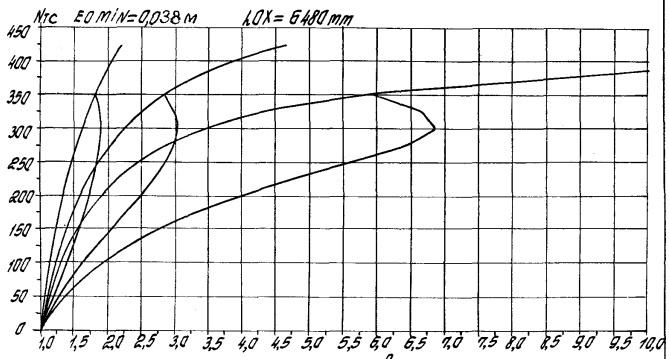

Nrc
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l0x = 4320 mm
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2
η

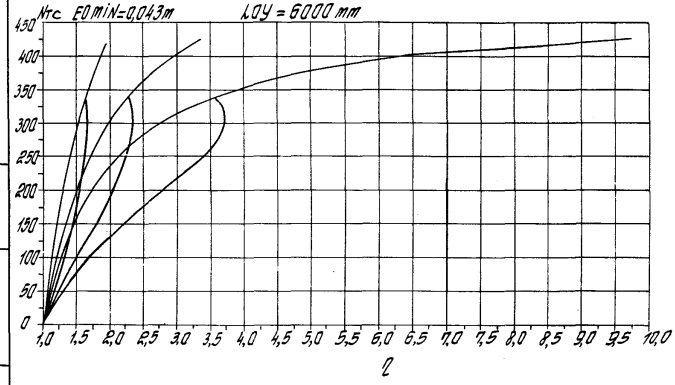

Nrc
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l0x = 4860 mm
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8
η

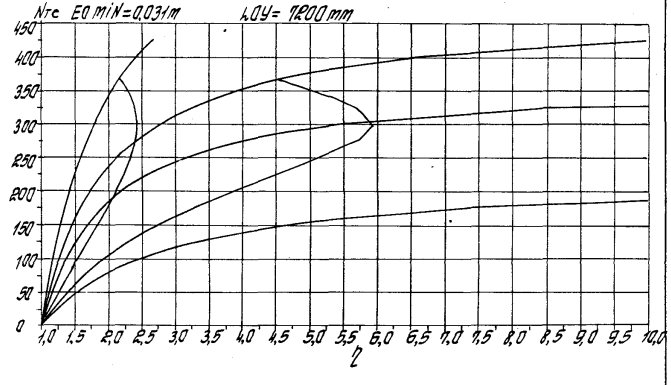

Nrc
E0 min=0,055 m
l0y = 4800 mm
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7
η


Nrc
E0 min=0,049 m
l0y = 5400 mm
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
η



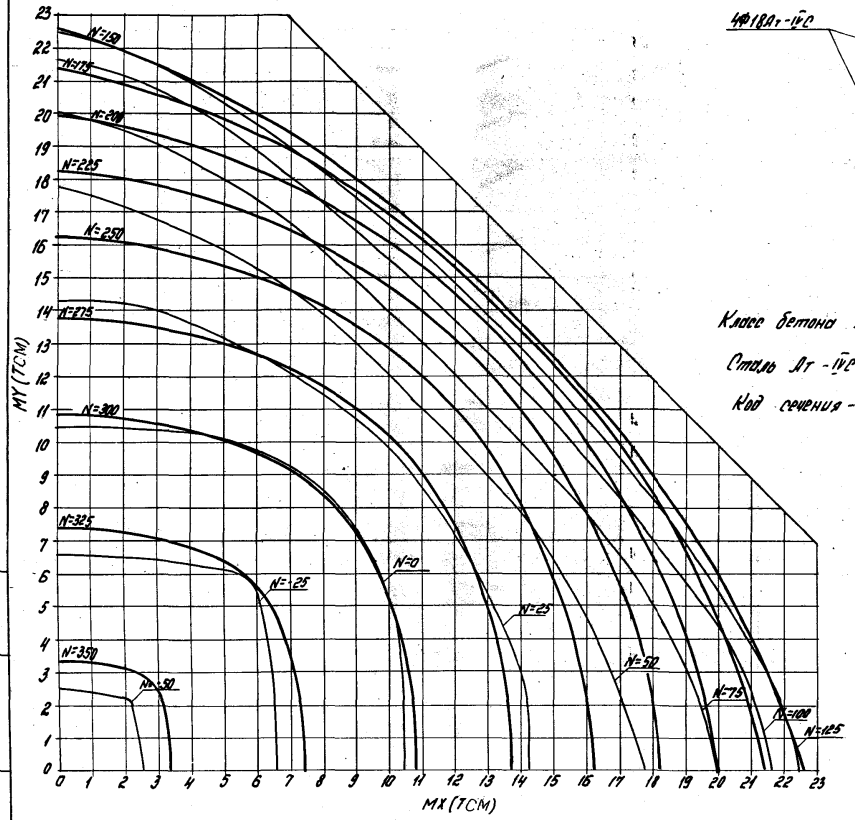



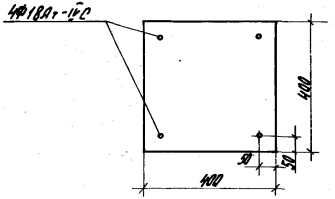




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Лист 44

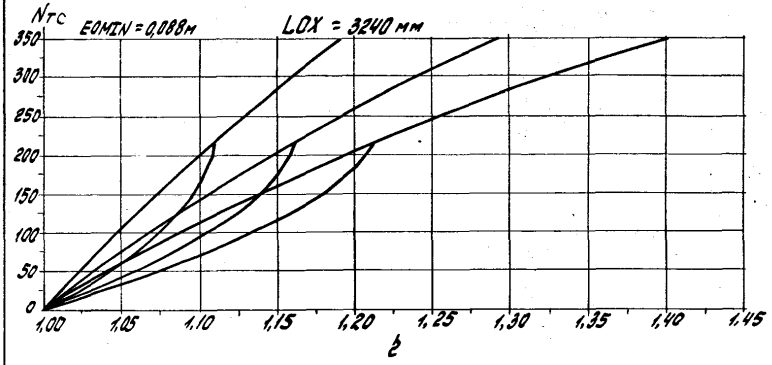


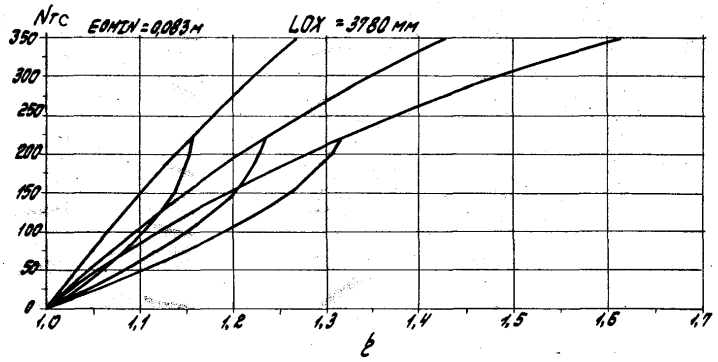



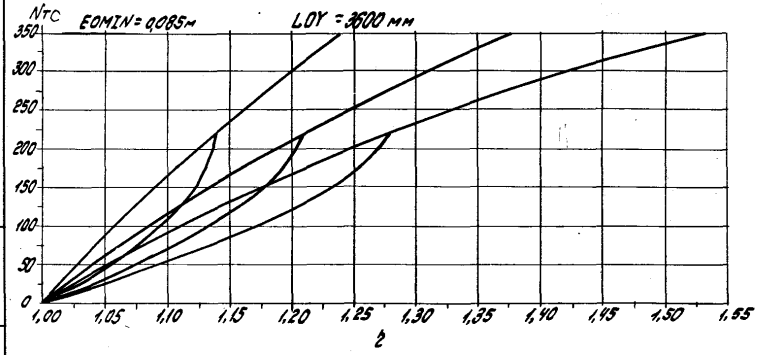

Класс бетона В40,0 ($R_B$ = 19,8 МПа ; $\gamma_{b_2}$ = 0,90)

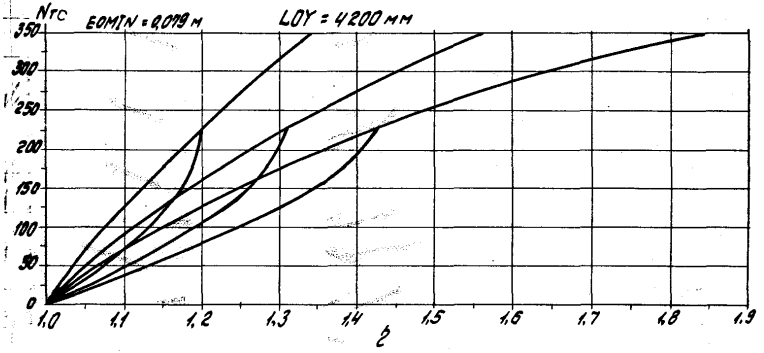
Сталь Ат - IVС

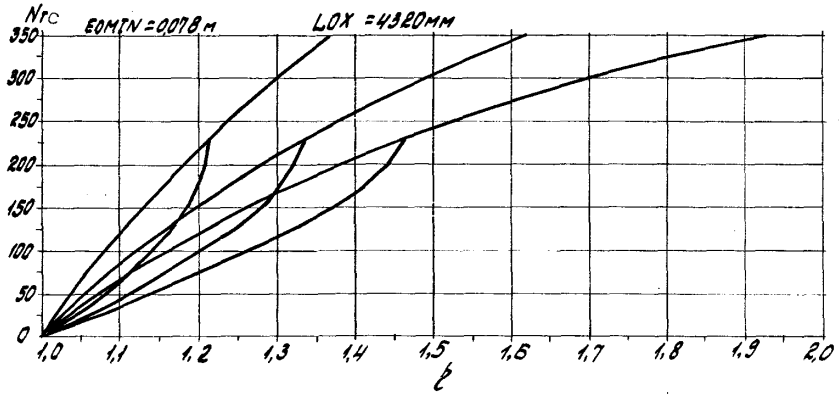
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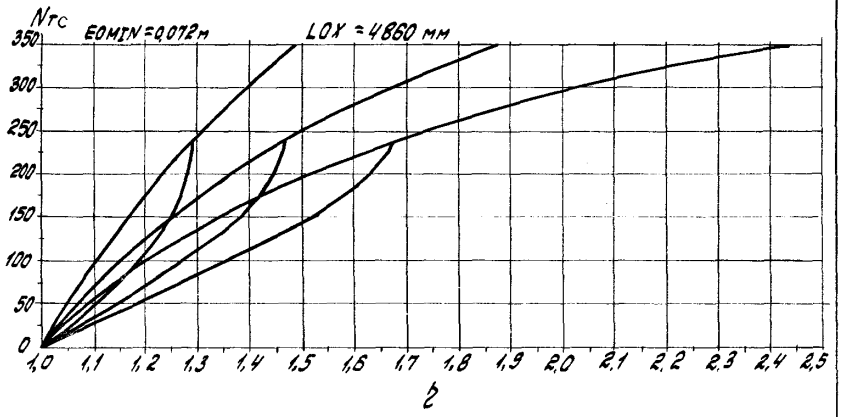

Nтс
EOMIN = 0,088 м
LOX = 3240 мм
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
ℓ

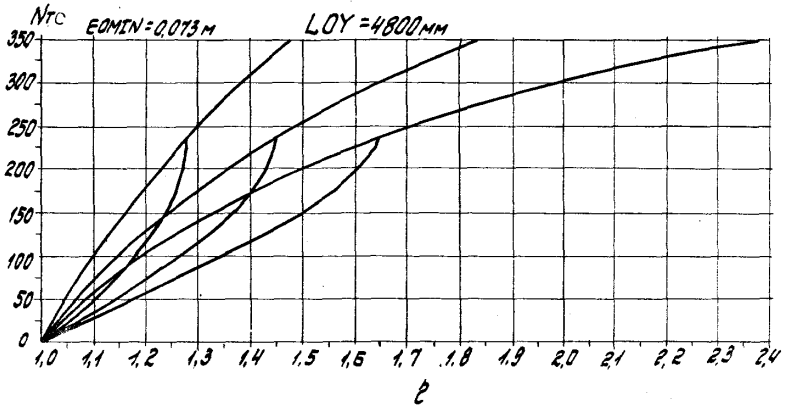

Nтс
EOMIN = 0,083 м
LOX = 3780 мм
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
ℓ

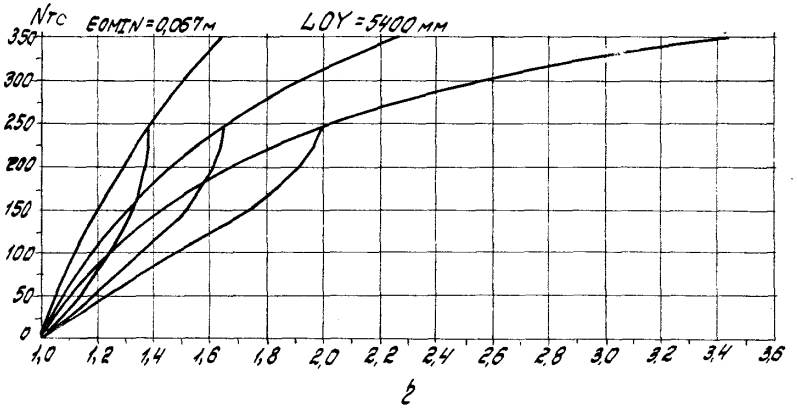

Nтс
EOMIN = 0,085 м
LOY = 3600 мм
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300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
ℓ

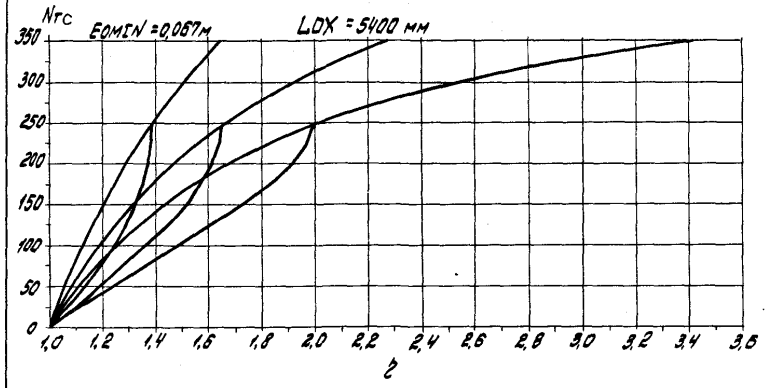

Nтс
EOMIN = 0,079 м
LOY = 4200 мм
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300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
ℓ

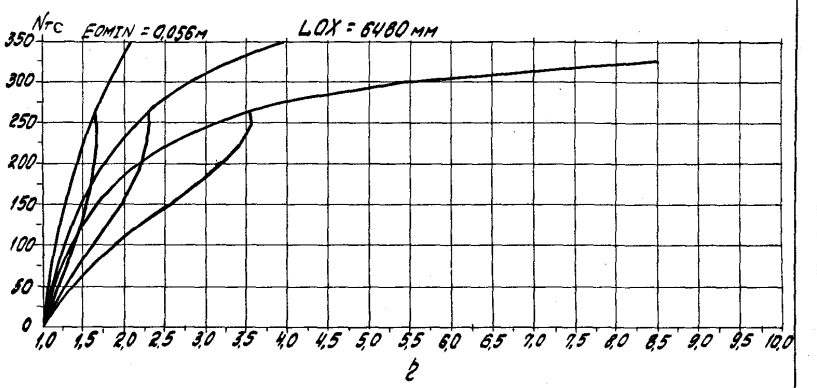

Nтс
EOMIN=0,078 м
LOX =4320мм
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300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0
ℓ

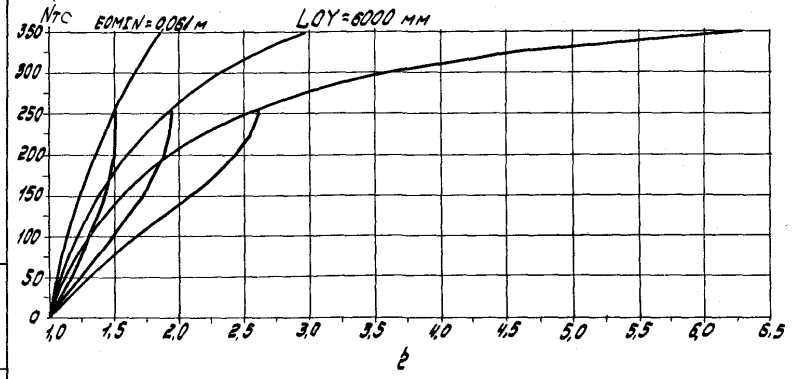

Nтс
EOMIN=0,072 м
LOX =4860 мм
350
300
250
200
150
100
50
0
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ℓ

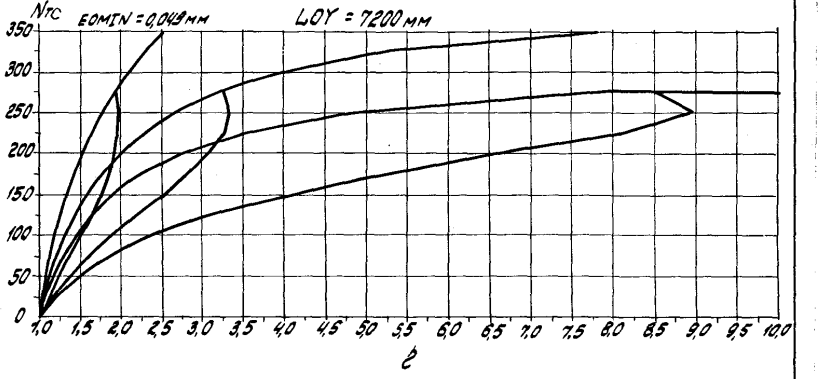

Nтс
EOMIN=0,073 м
LOY =4800мм
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4
ℓ


Nтс
EOMIN=0,067 м
LOY =5400 мм
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
ℓ

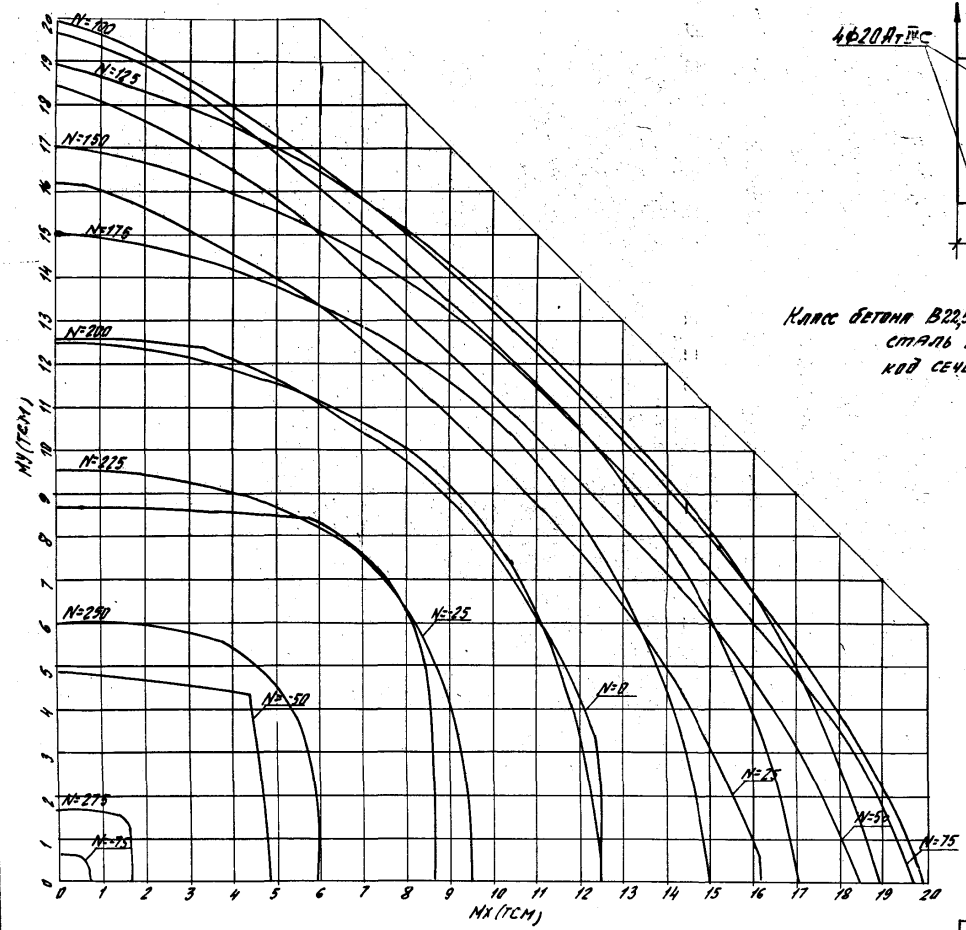


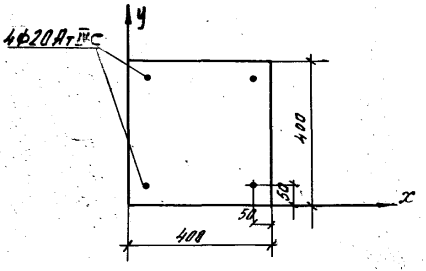



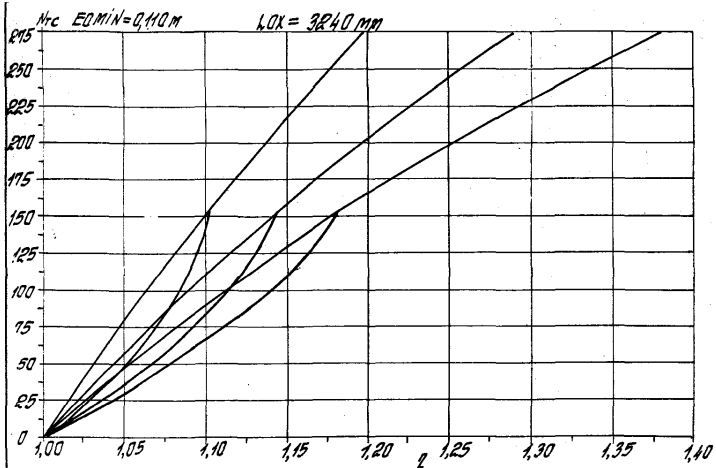



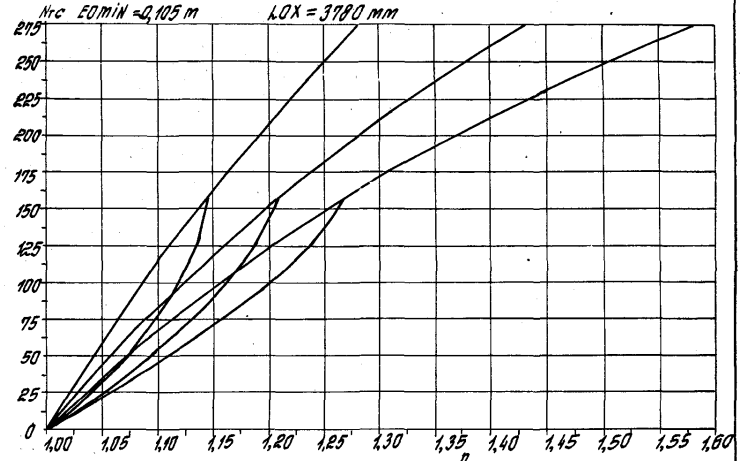

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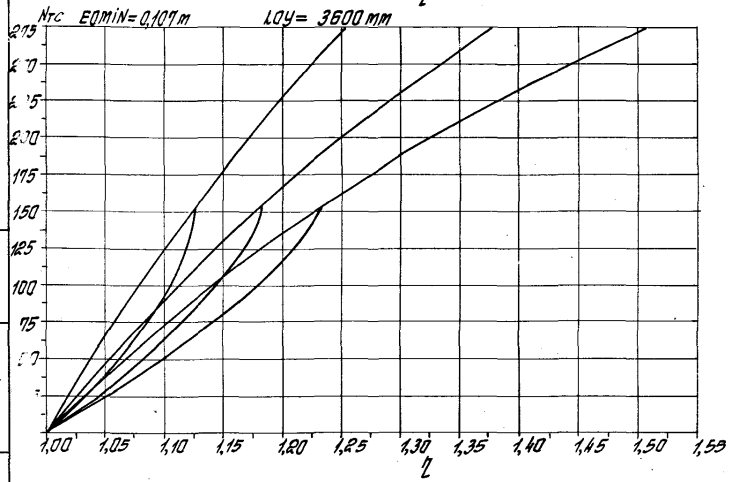


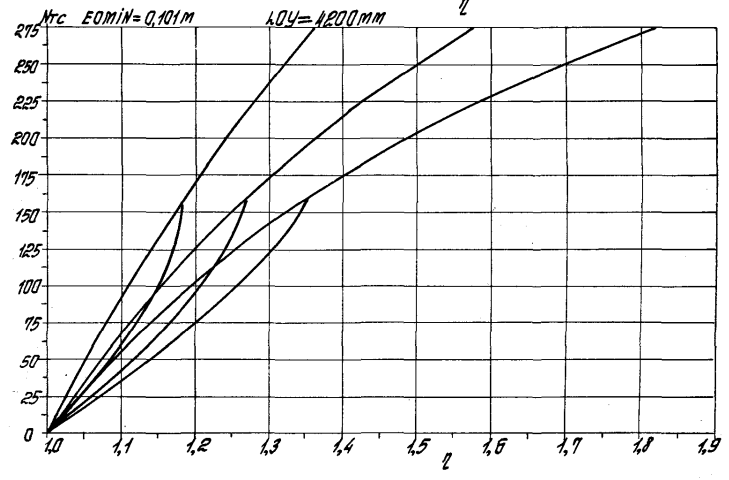




Класс бетона В22,5 ($R_b$ = 14,3 МПа при учете $\gamma_{b2}$ = 1,10)
сталь Ат-IVс
код сечения - 107а

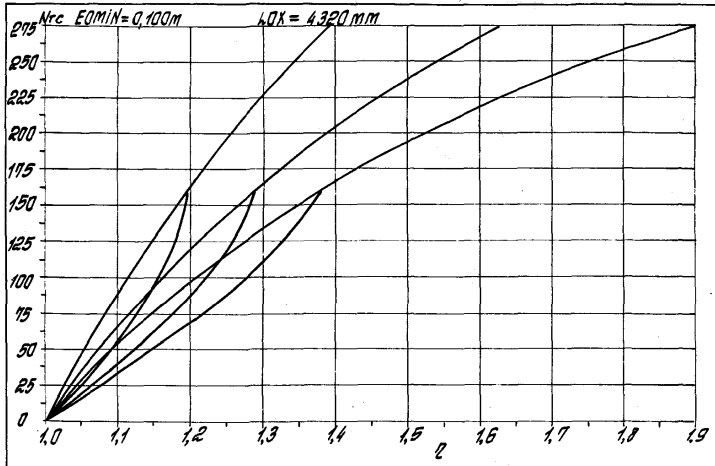


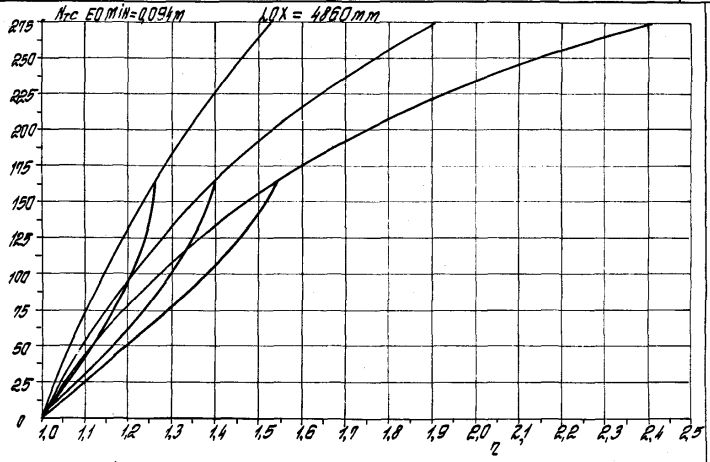



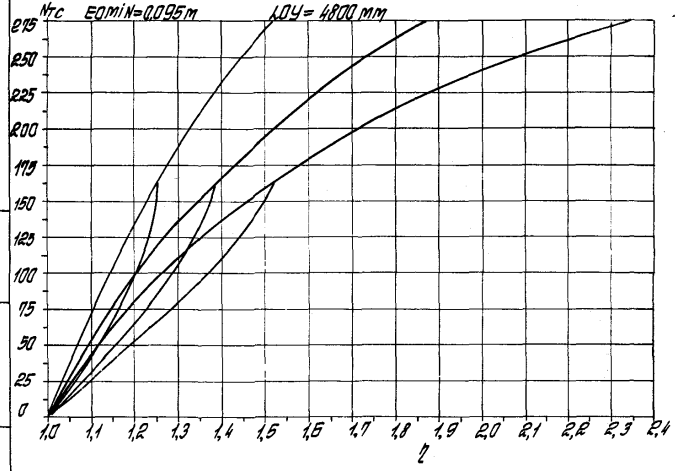



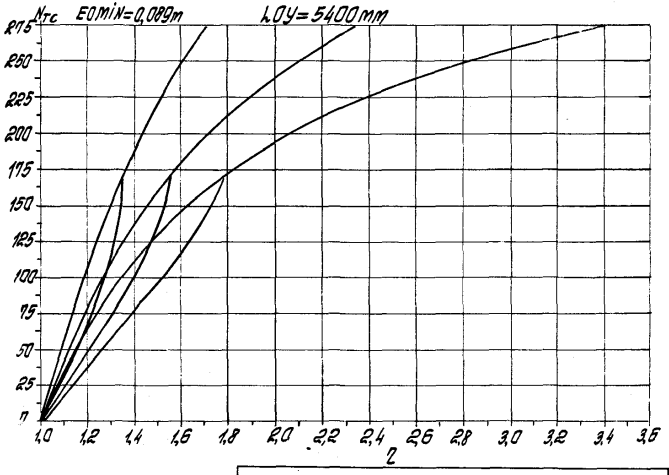




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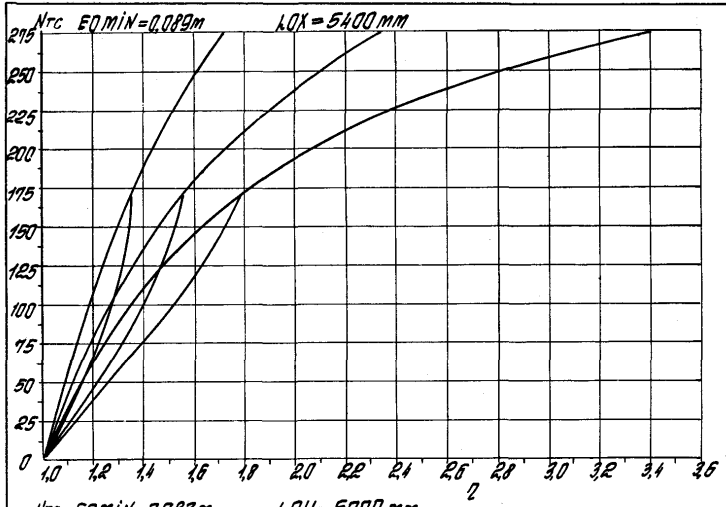



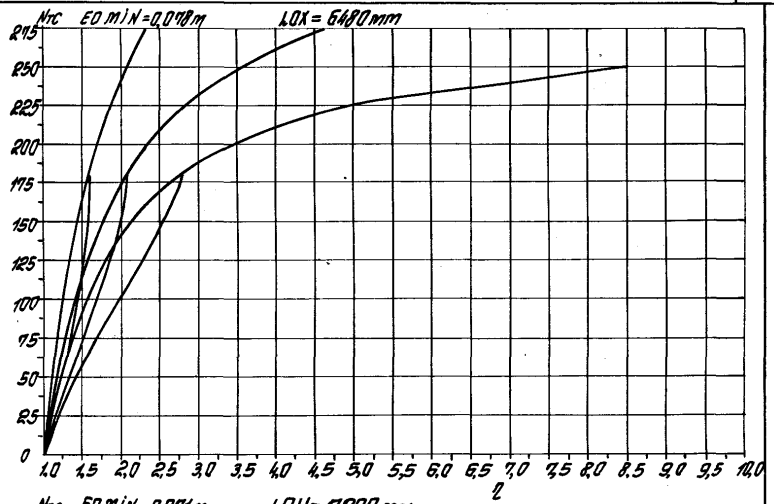



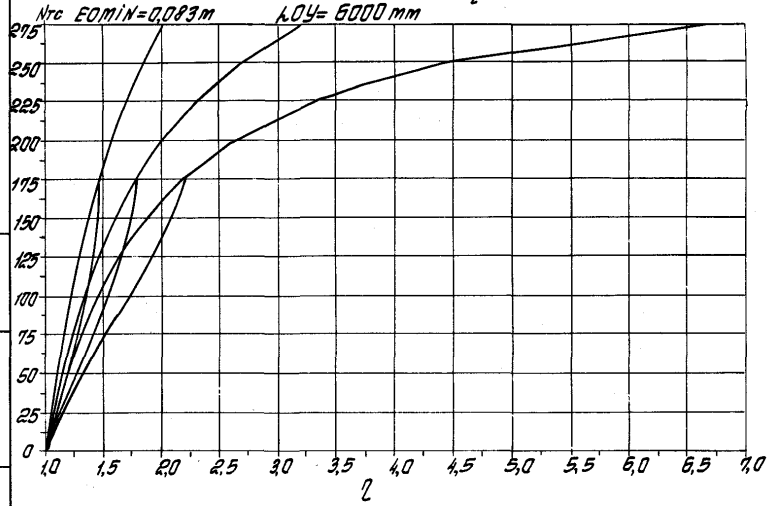

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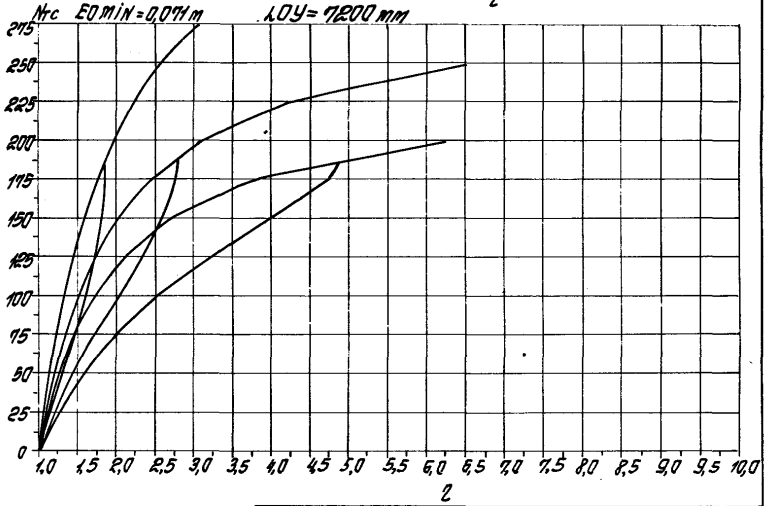
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Лист 51



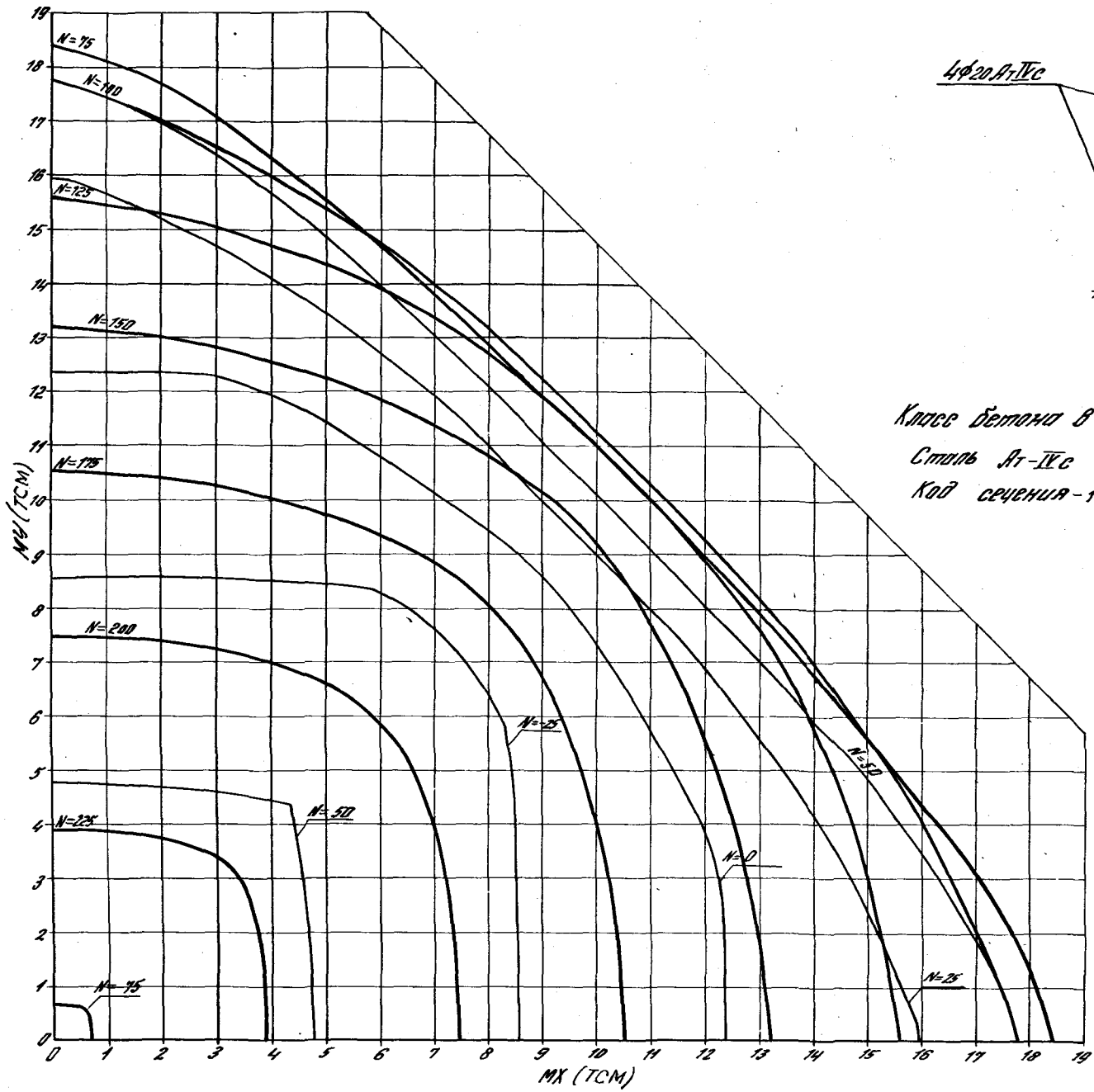



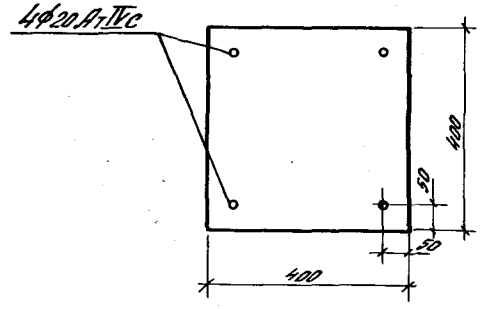




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1.020.1-4 0-9 ОВ2

Лист 52



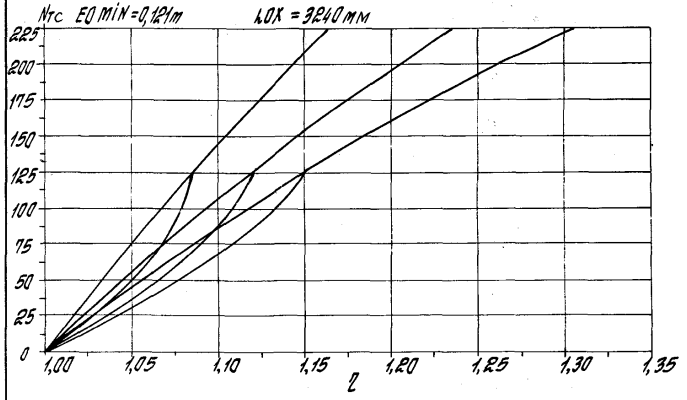



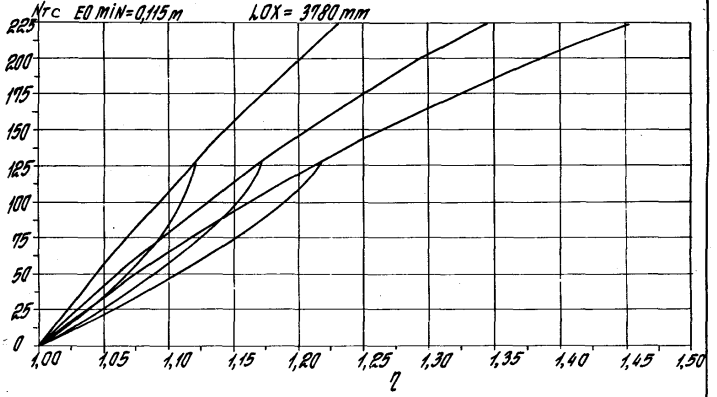

Класс бетона В 22,5 (RB=11,7 МПа при учете $\gamma_{b2}$ = 0,90)

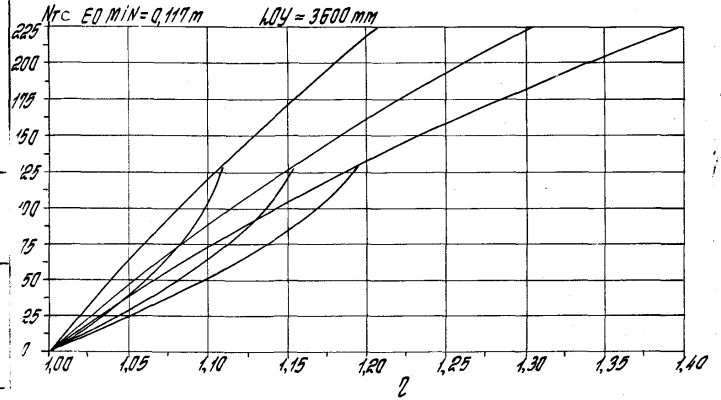
Сталь Ат-IVс

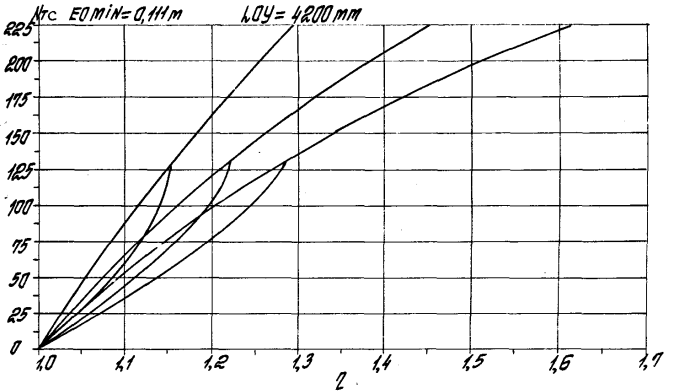
Код сечения - 107δ

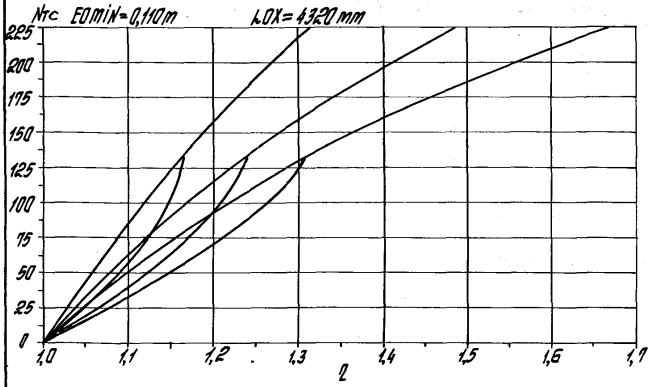
| | | |
|---|---|---|
| 1.020.1-4 | 0-9 002 | Лист 53 |

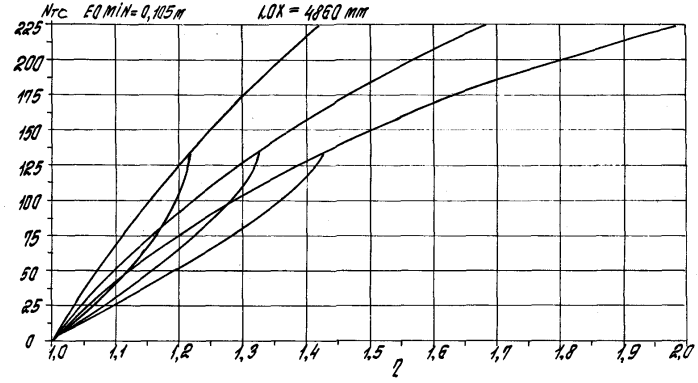

Nгс Е0 min=0,121m
L0X = 3240 мм
225
200
175
150
125
100
75
50
25
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
l

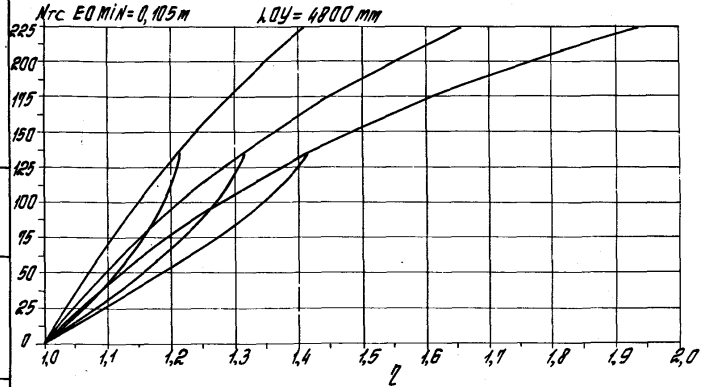

Nгс Е0 min=0,115m
L0X = 3780 mm
225
200
175
150
125
100
75
50
25
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
l

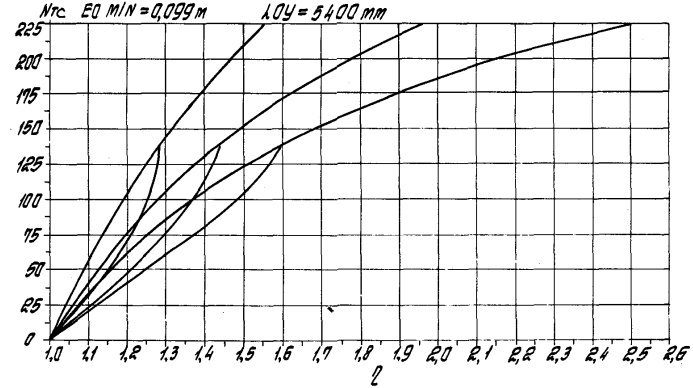

Nгс Е0 min=0,117m
L0Y = 3600 mm
225
200
175
150
125
100
75
50
25
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
l


Nгс Е0 min=0,111m
L0Y = 4200 mm
225
200
175
150
125
100
75
50
25
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
l

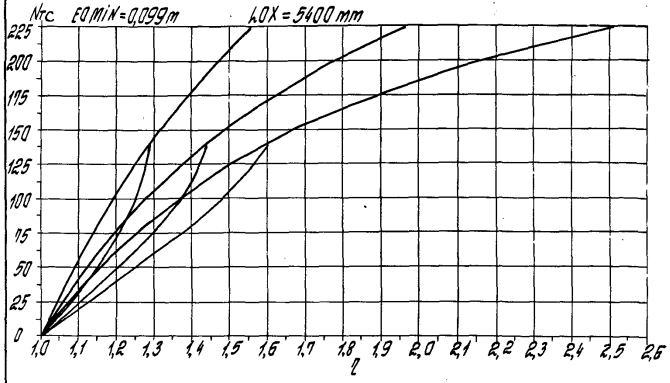


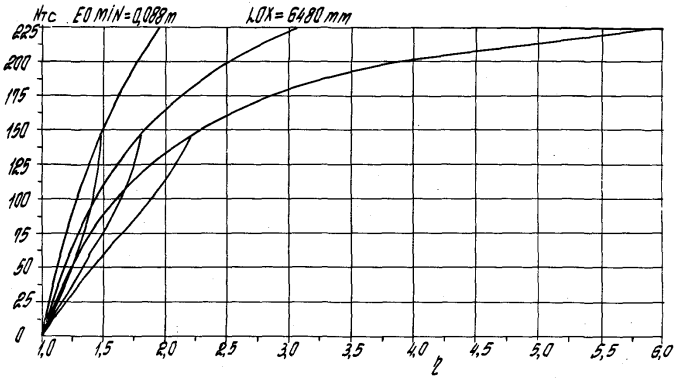



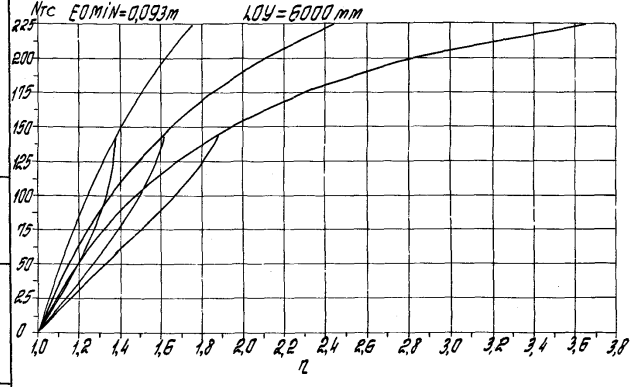



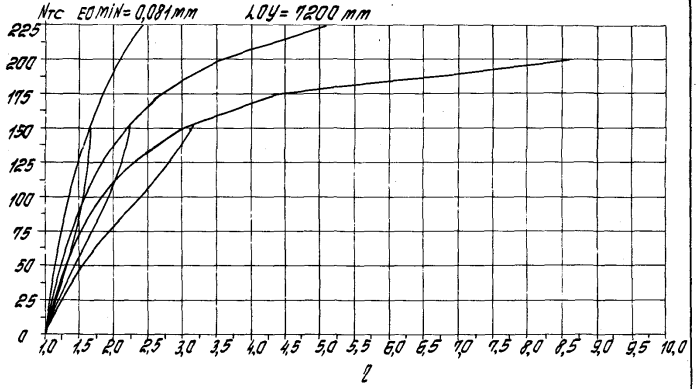




Инв. № подл. | Подпись и дата | Взам. инв. №

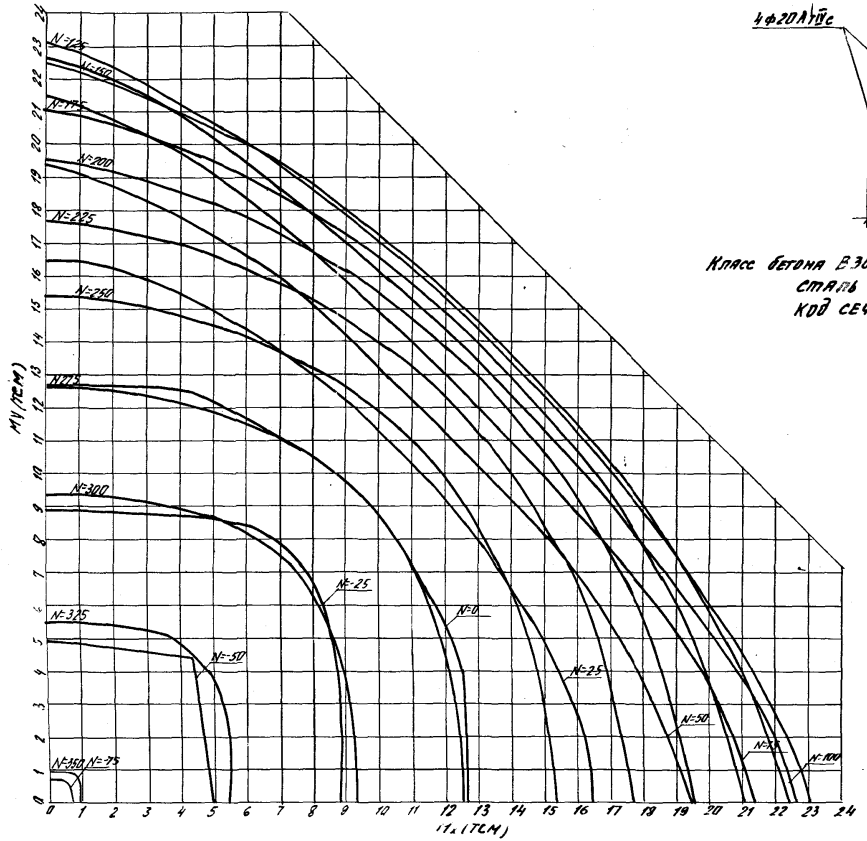


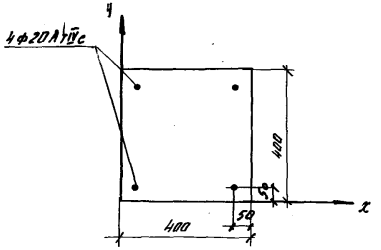




Инв.№ подл. | Подпись и дата | Взам.инв.№

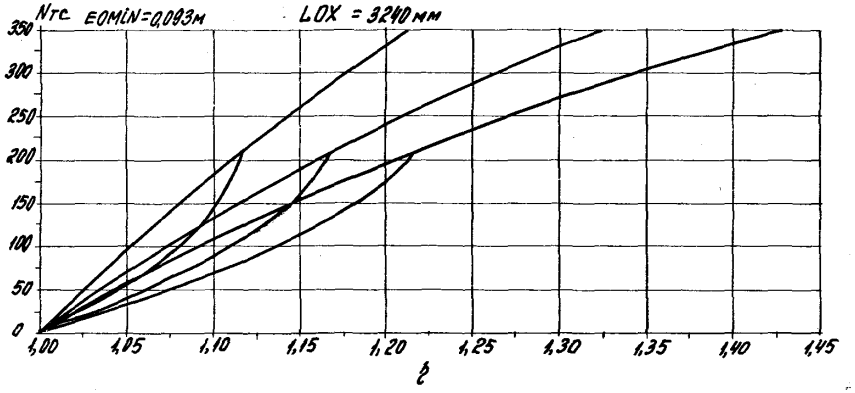


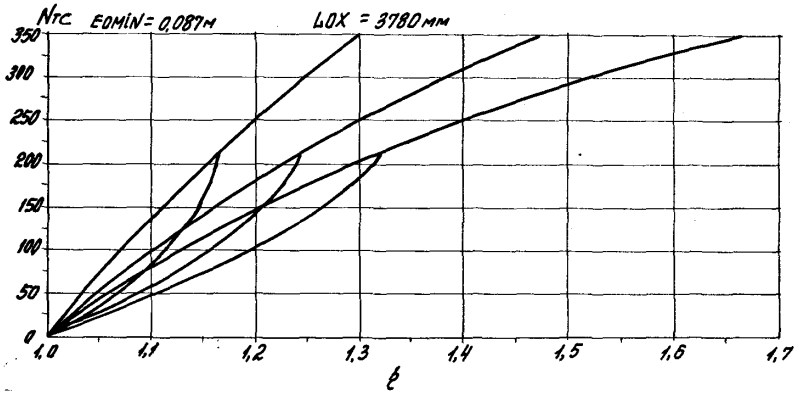



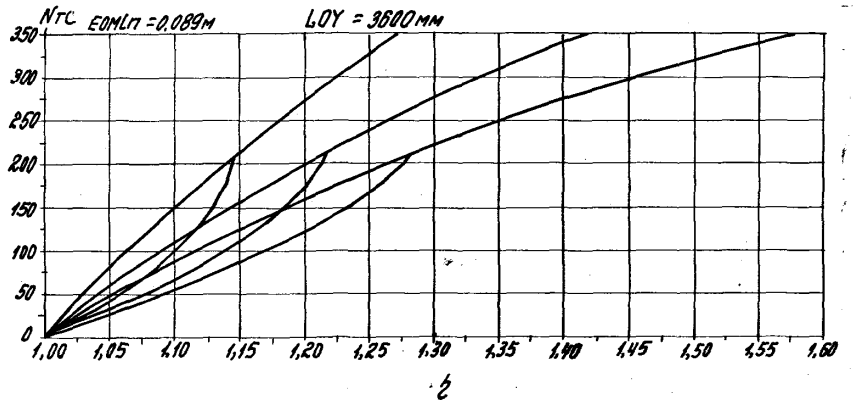

Класс бетона В30.0 ($R_в$ = 18,7 МПа при учете $\gamma_{в2}$ = 1,10)
сталь Ат-IIIс
код сечения - 108а

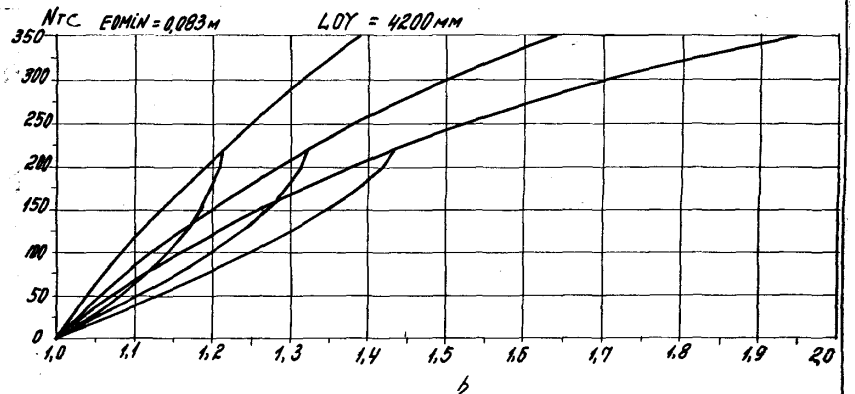
1.020.1-4 0-9 002

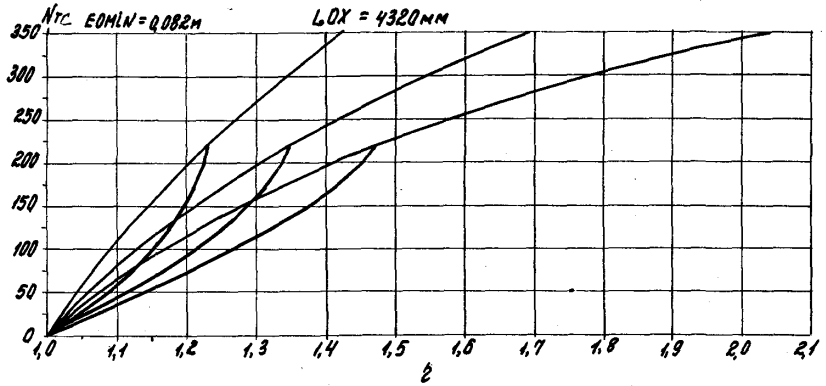
Альб. 57

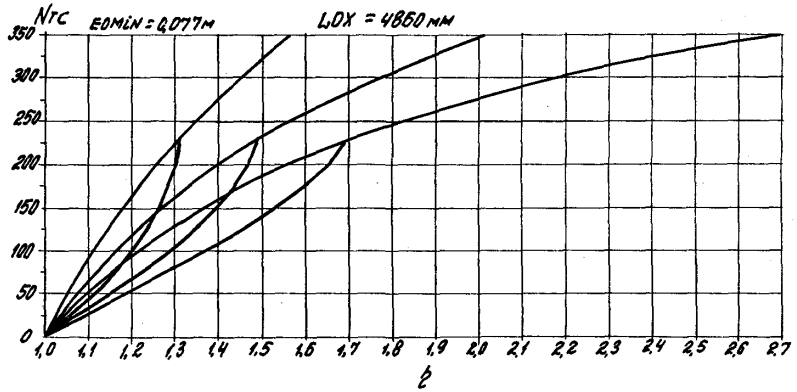

Nтс. EOMIN=0,093м
LOX = 3240мм
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
ℓ

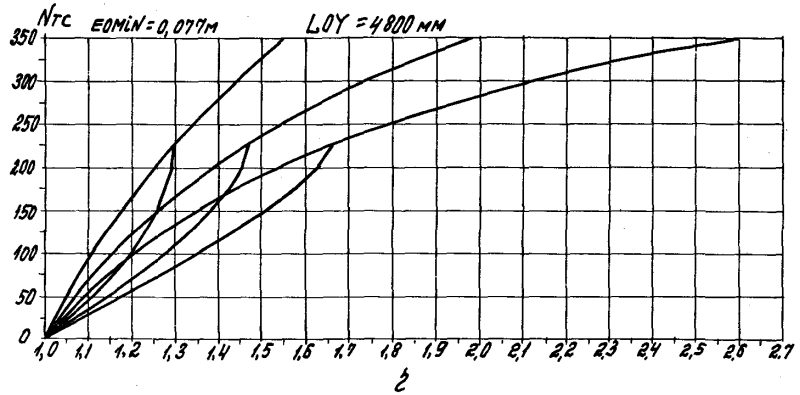

Nтс. EOMIN=0,087м
LOX = 3780мм
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
ℓ

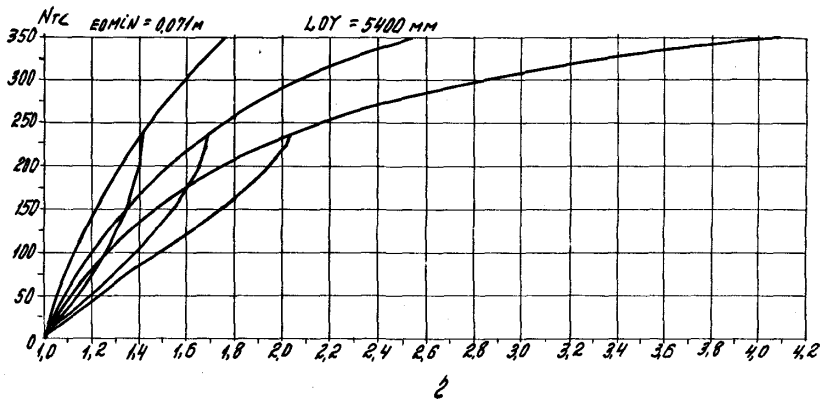

Nтс. EOMIN=0,089м
LOY = 3600мм
350
300
250
200
150
100
50
0
1,00
1,05
1,10
1,15
1,20
1,25
1,30
1,35
1,40
1,45
1,50
1,55
1,60
ℓ

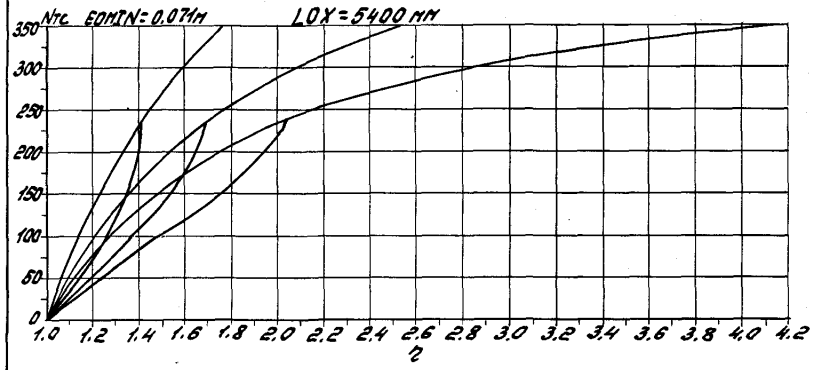

Nтс. EOMIN=0,083м
LOY = 4200мм
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
ℓ

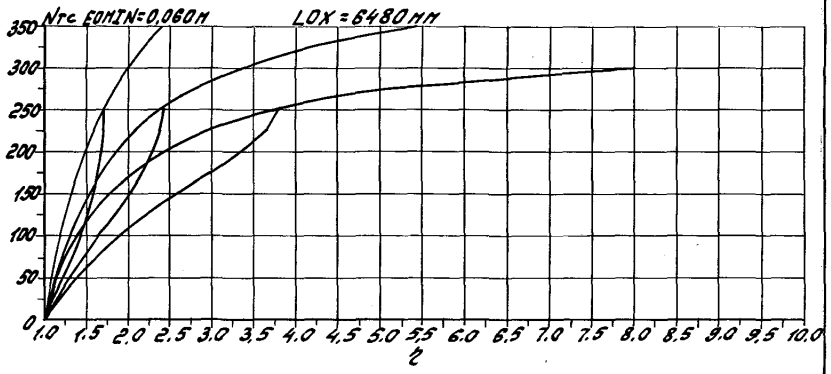

Nтс
e0min = 0,082м
Lox = 4320мм
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1
e

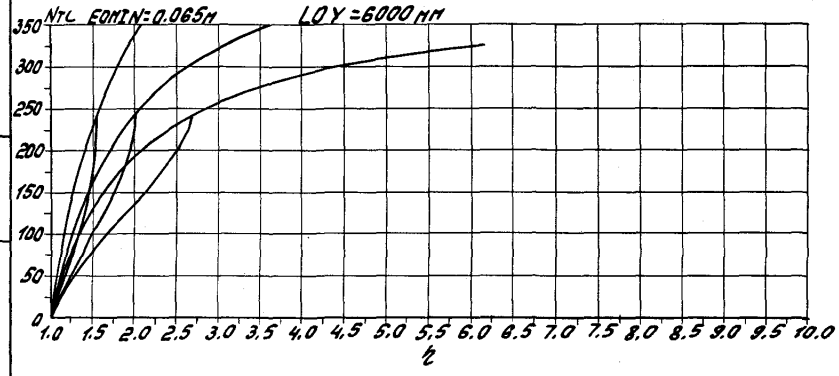

Nтс
e0min = 0,077м
Lox = 4860мм
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7
e

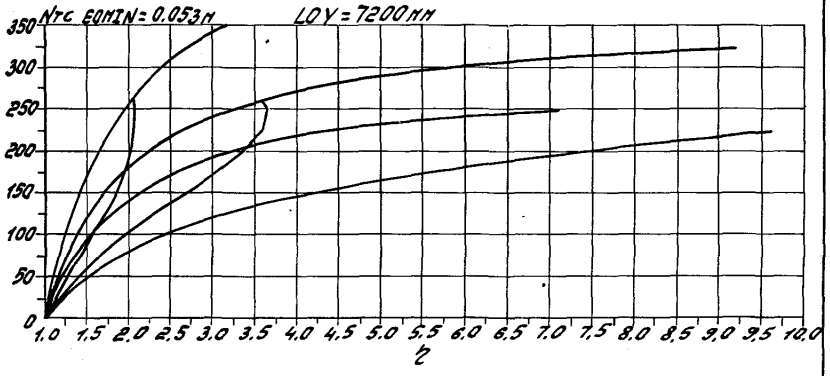

Nтс
e0min = 0,077м
Loy = 4800мм
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7
e


Nтс
e0min = 0,071м
Loy = 5400мм
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

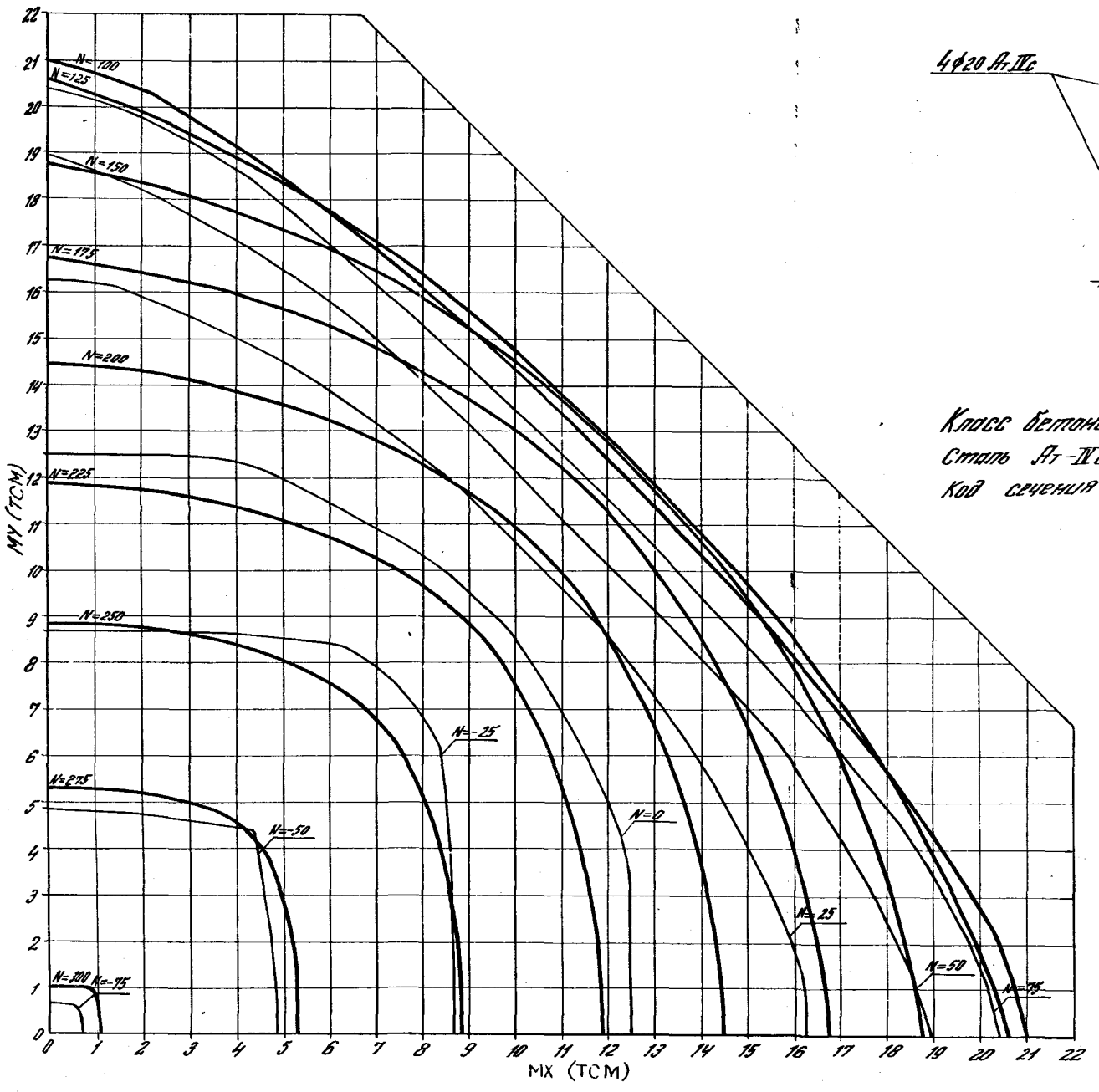


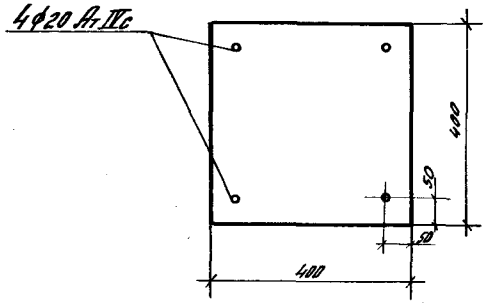




Инв.№ подл. | Подпись и дата | Взам.инв.№

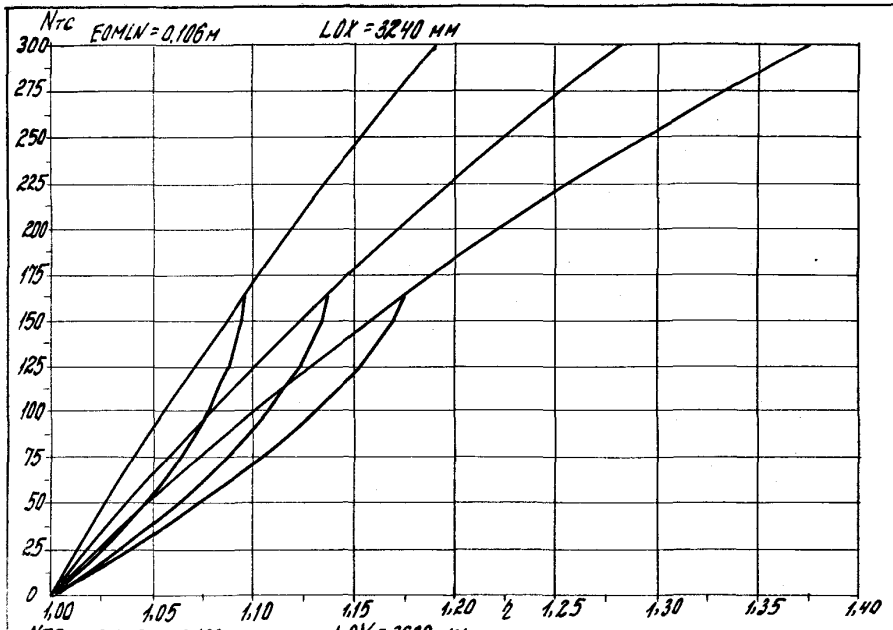


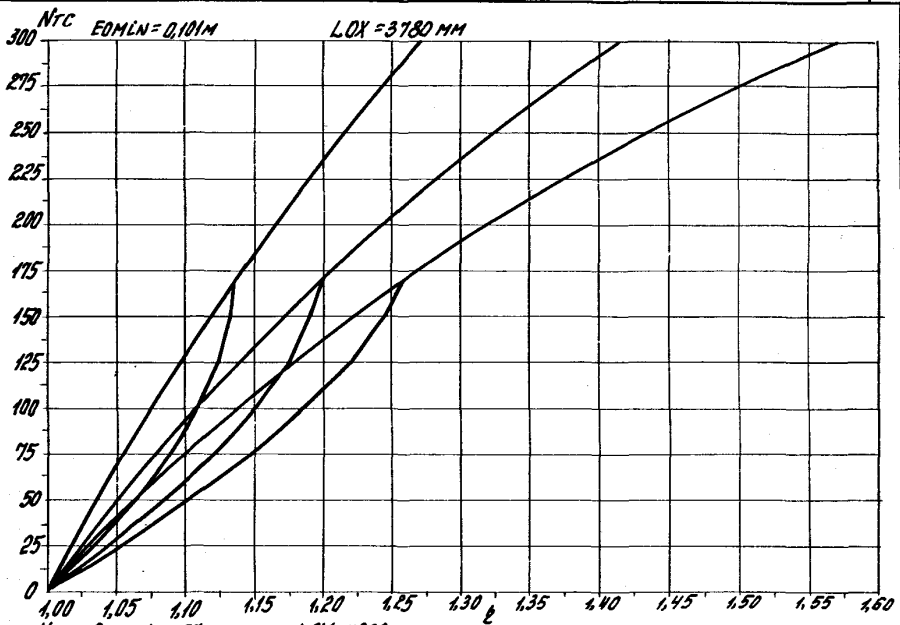



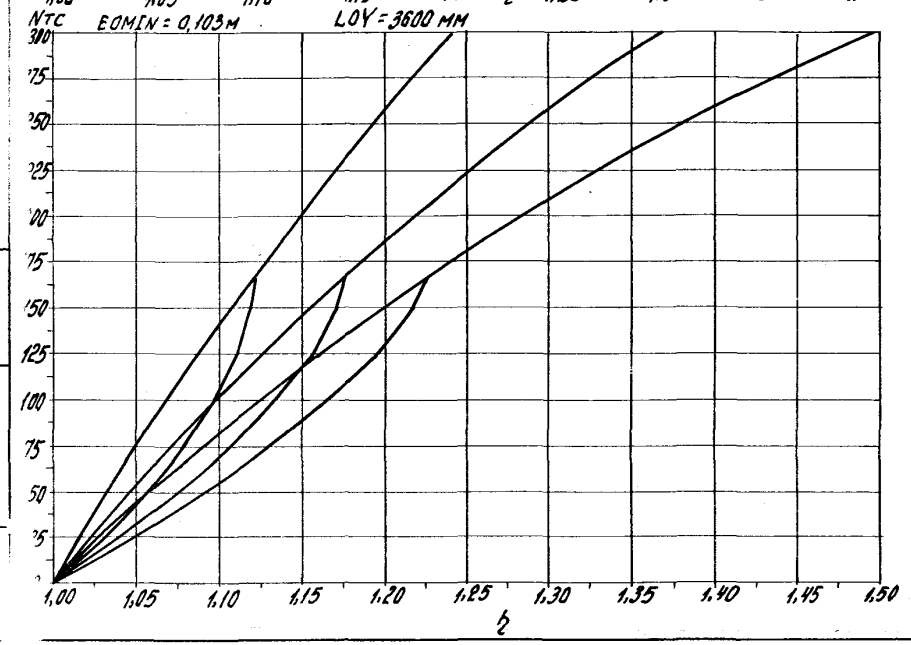

Класс бетона В30 ($R_B$ = 15,3 МПа при учете $\gamma_{B2}$ = 0,90)
Сталь Ат-IIIс
Код сечения - 108 б

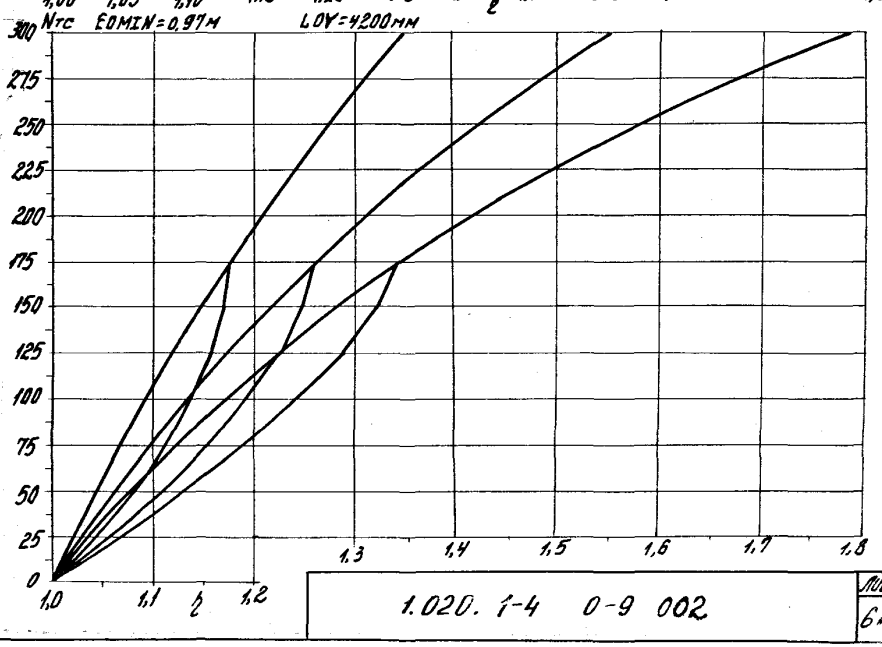
| | | | |
|---|---|---|---|
| 1.020.1-4 | 0-9 | 002 | Лист 61 |

Инв. № подл. | Подпись и дата | Взам. инв. №



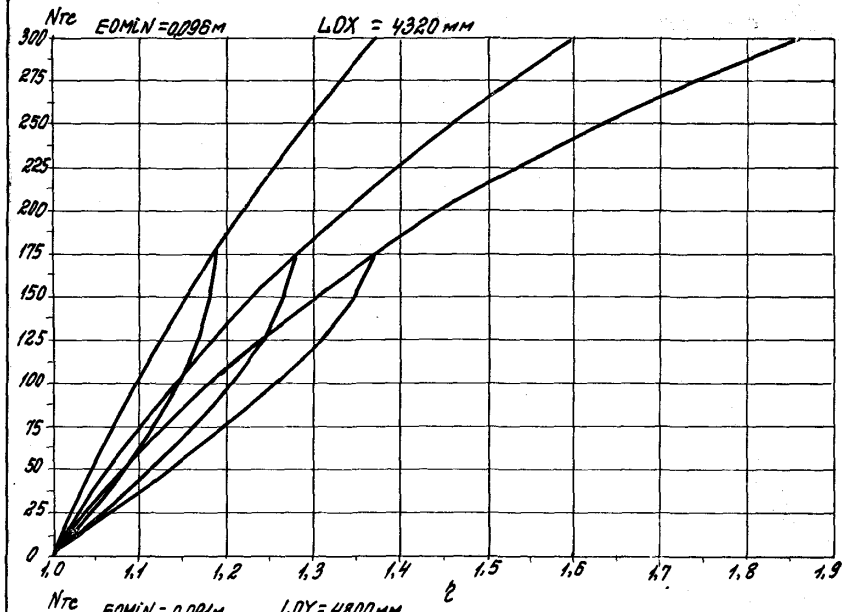



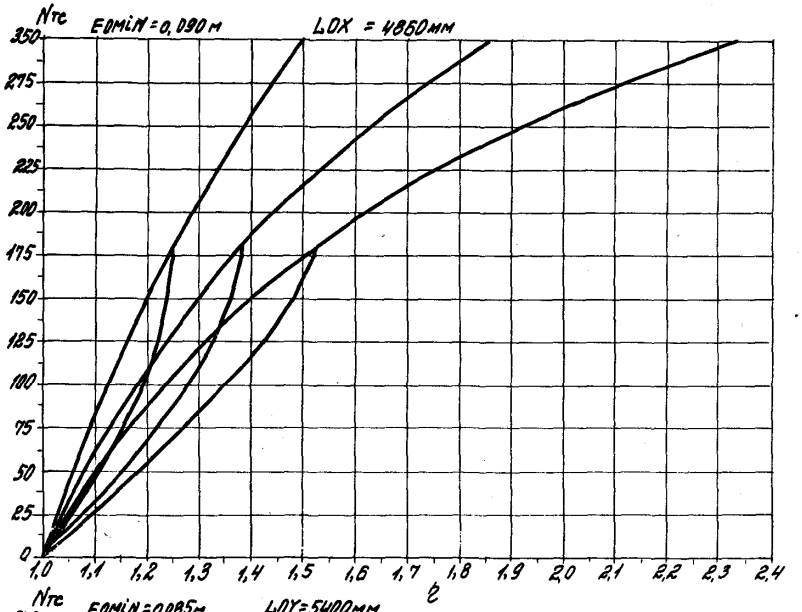



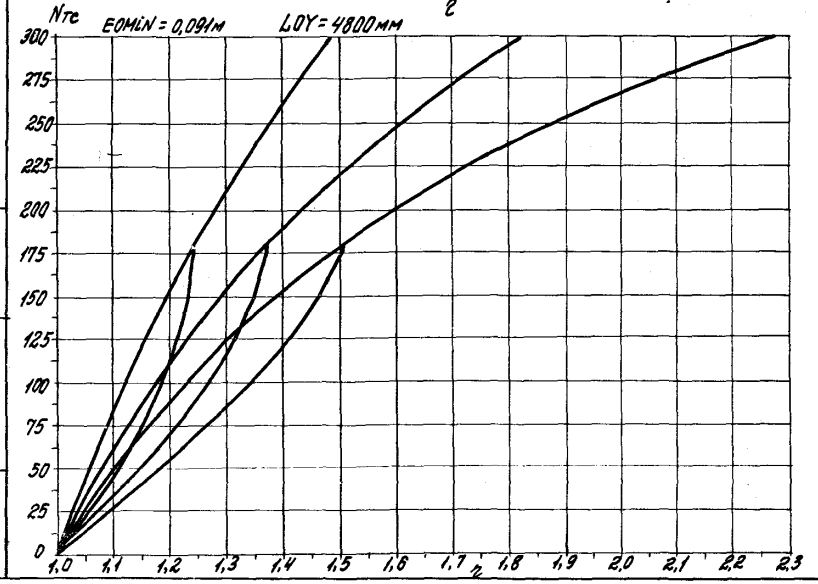



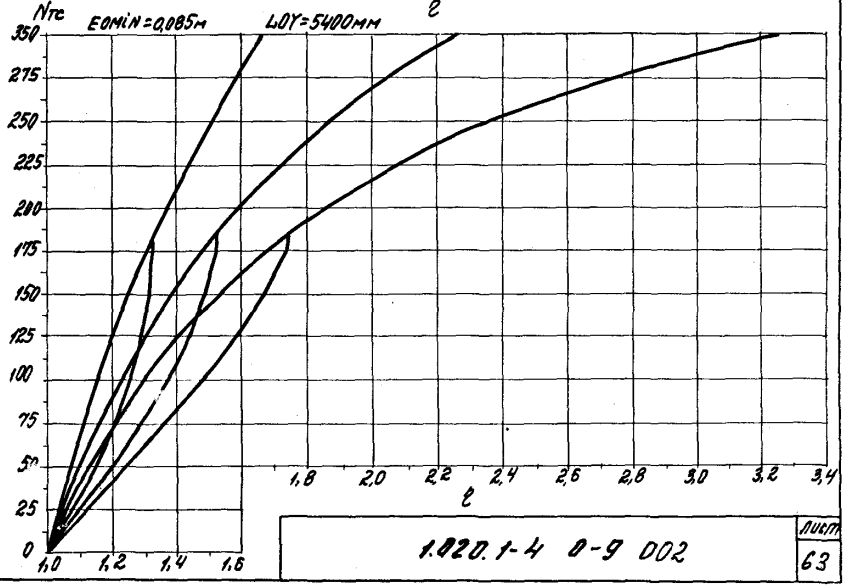

1.020. 1-4 0-9 002

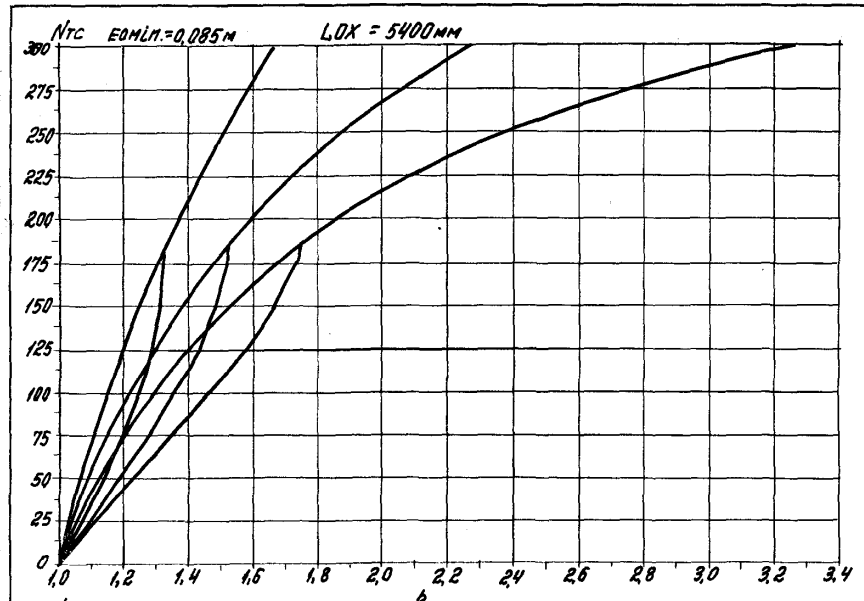
Лист 62

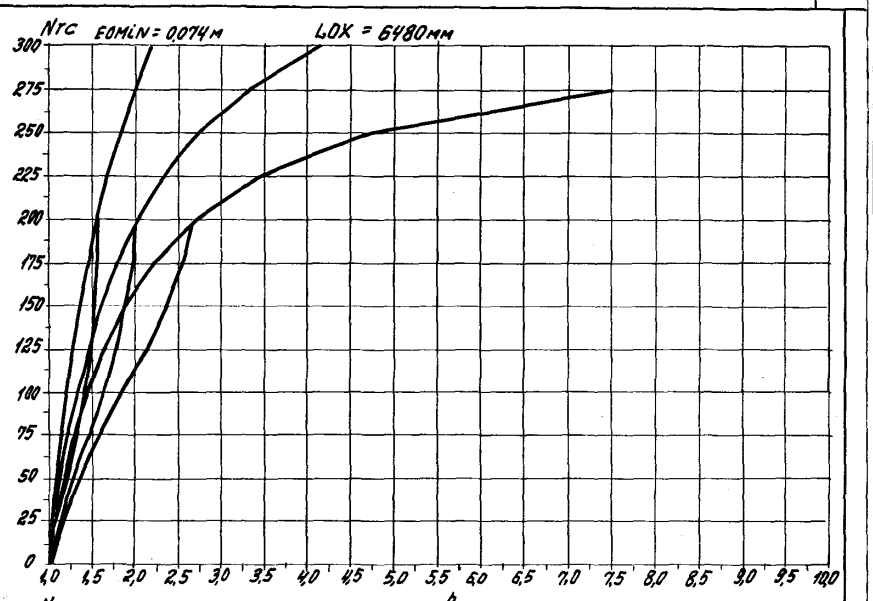

Nгс
E0MiN=0,098м
LOX = 4320мм
300
275
250
225
200
175
150
125
100
75
50
25
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
ℓ

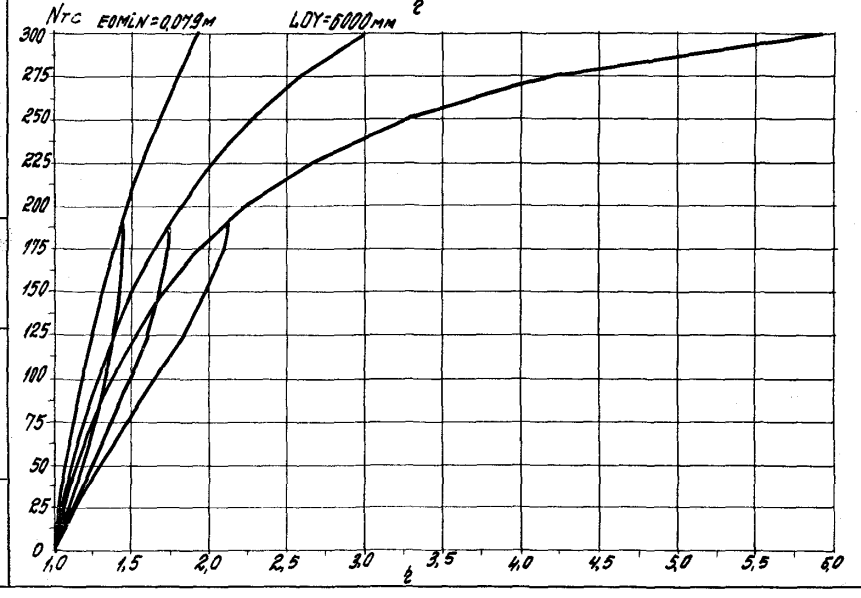

Nгс
E0MiN=0,090м
LOX = 4850мм
350
275
250
225
200
175
150
125
100
75
50
25
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
2,3
2,4
ℓ

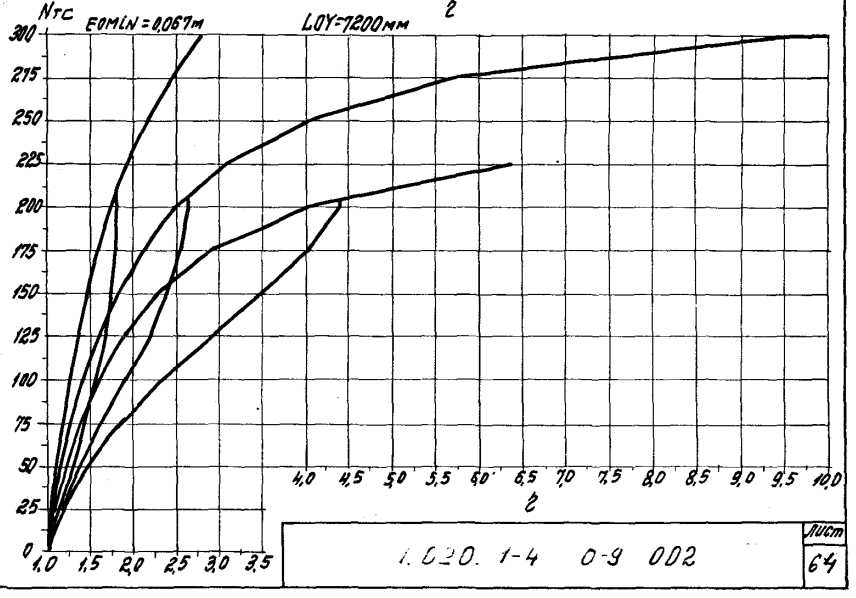

Nгс
E0MiN=0,091м
LOY=4800мм
300
275
250
225
200
175
150
125
100
75
50
25
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
2,1
2,2
2,3
ℓ


Nгс
E0MiN=0,085м
LOY=5400мм
350
275
250
225
200
175
150
125
100
75
50
25
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



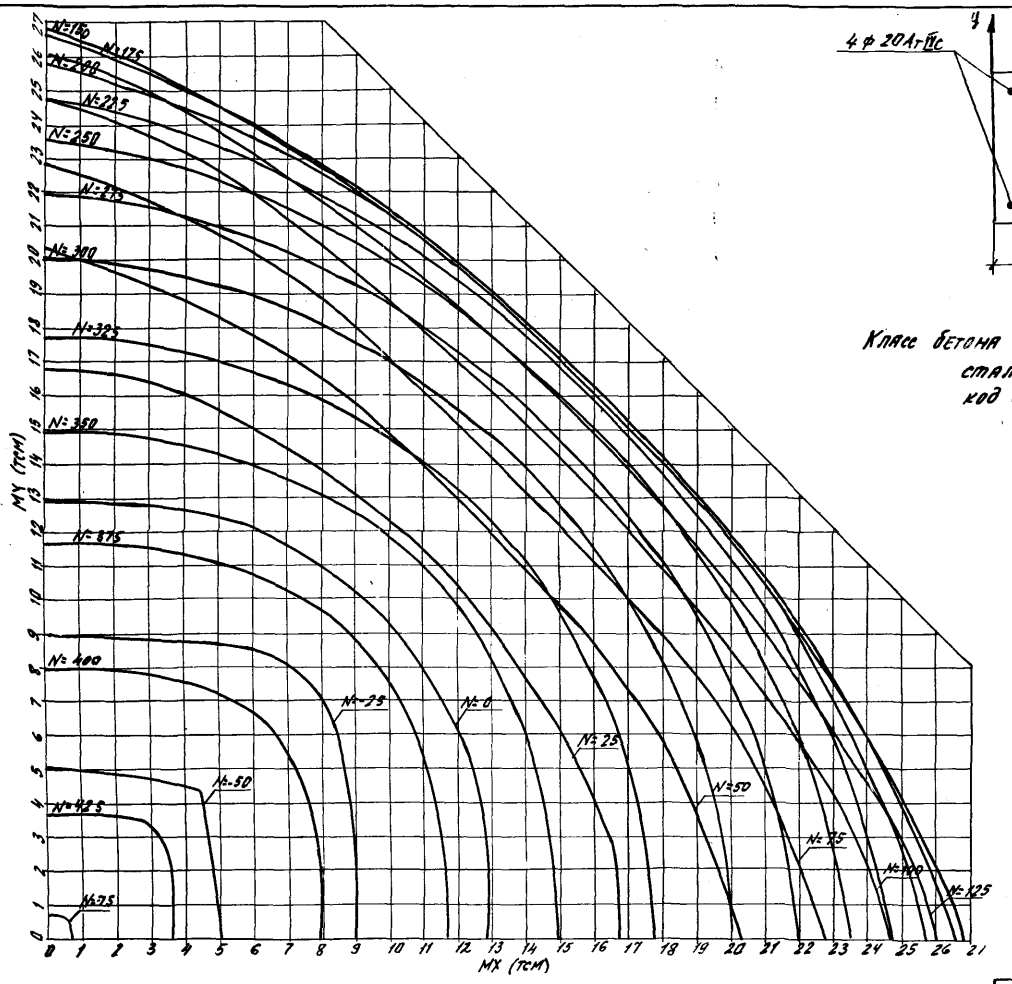



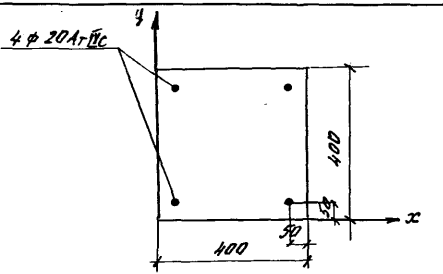




Инв.№ подл. | Подпись и дата | Взам.инв.№

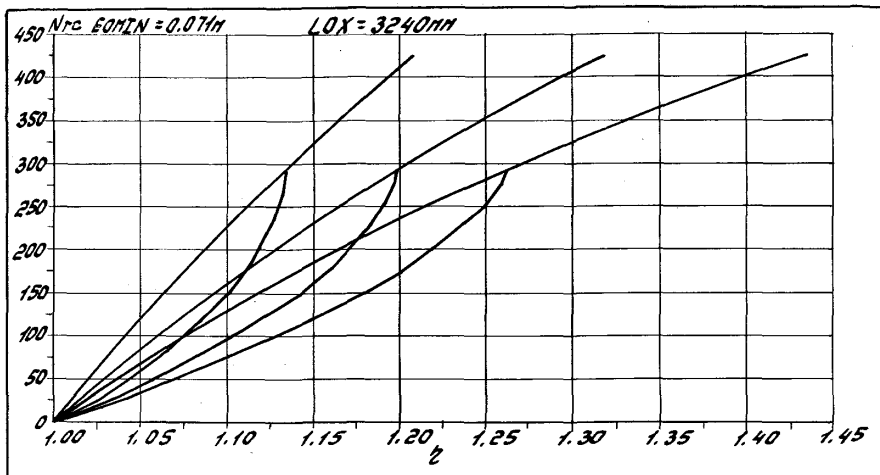
1.020.1-4 0-9 002

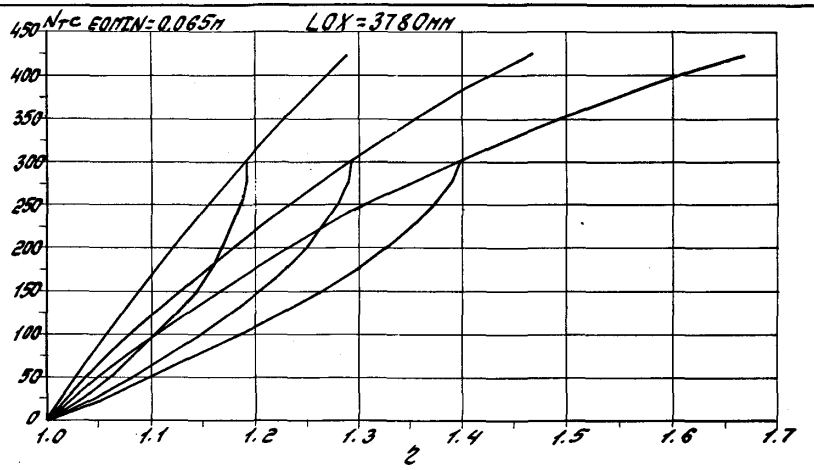
Лист 64

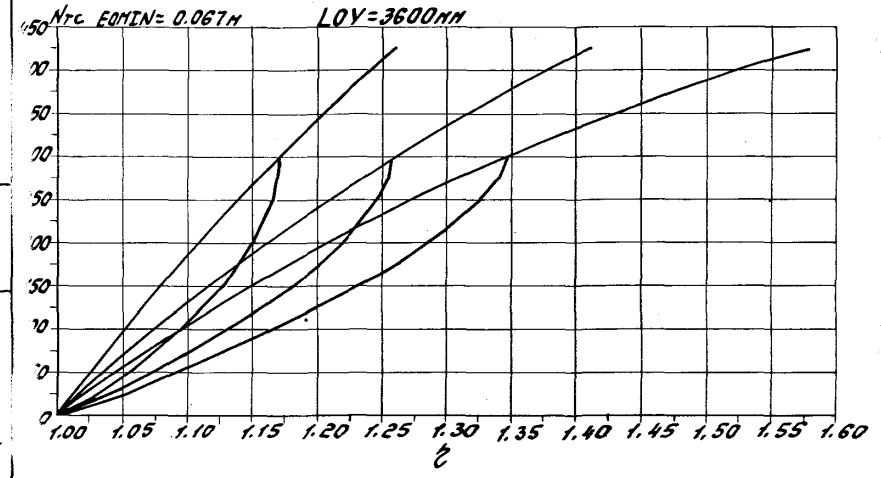


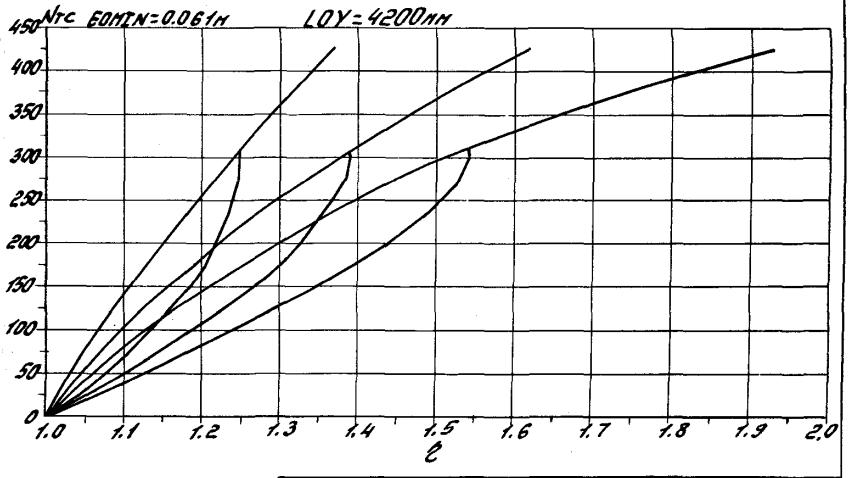




Класс бетона В40.0 ($R_в$ = 24,2 МПа при учете $\gamma_{в2}$ = 1,10)
сталь Ат-IIIс
код сечения – 109а

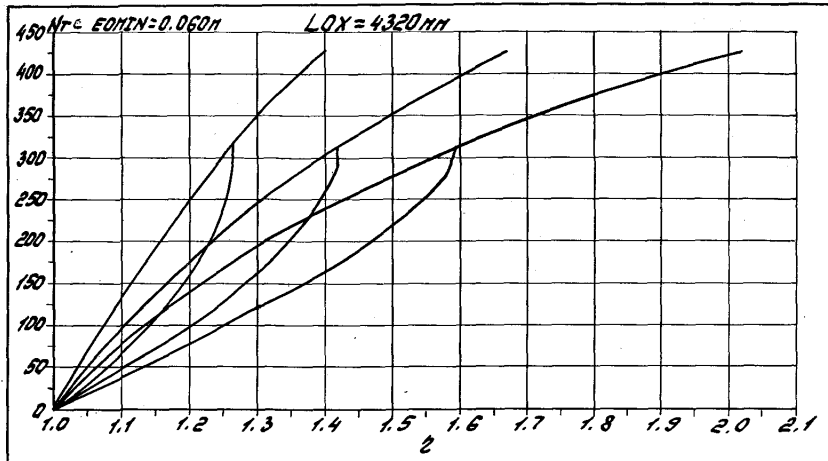


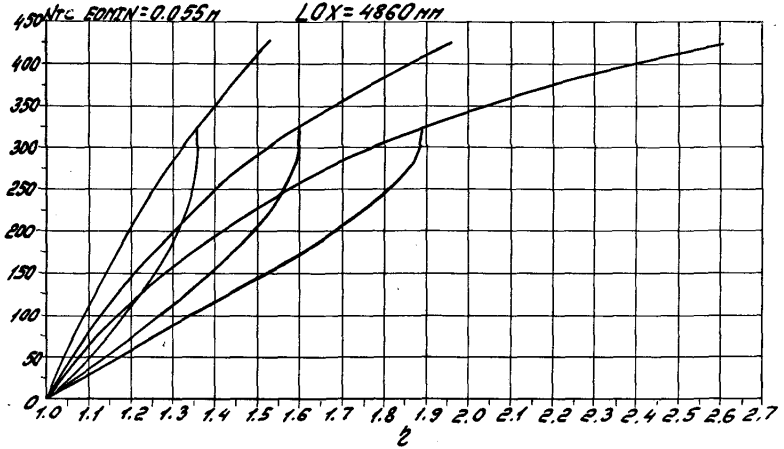



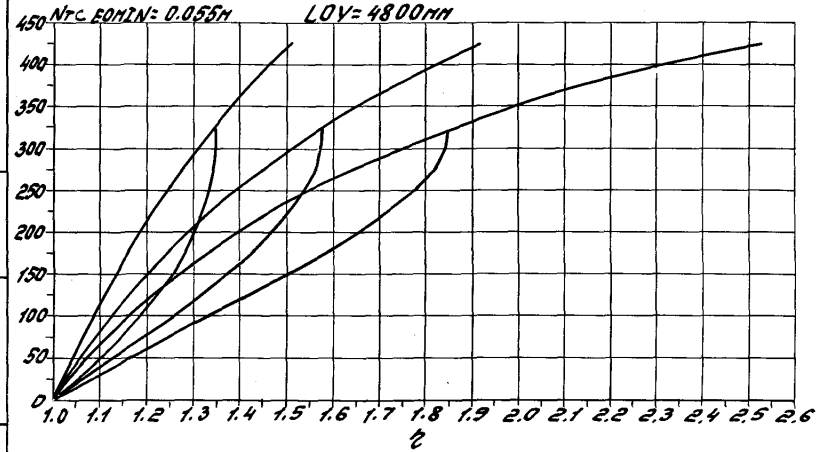



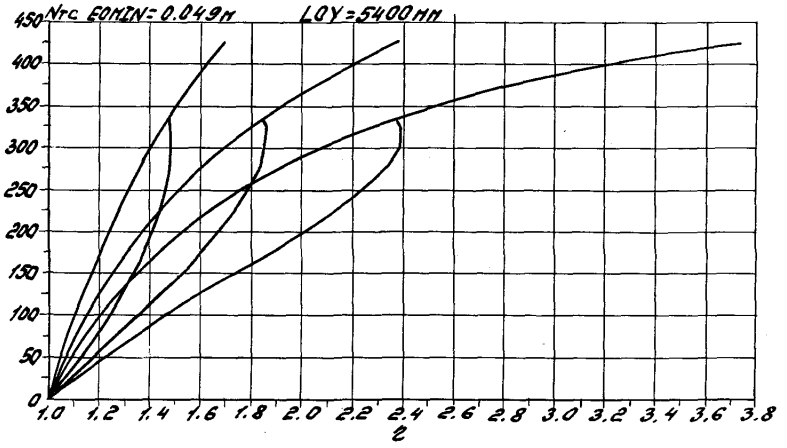




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| 1.020. 1-4. 0-9 002 | Лист 66 |

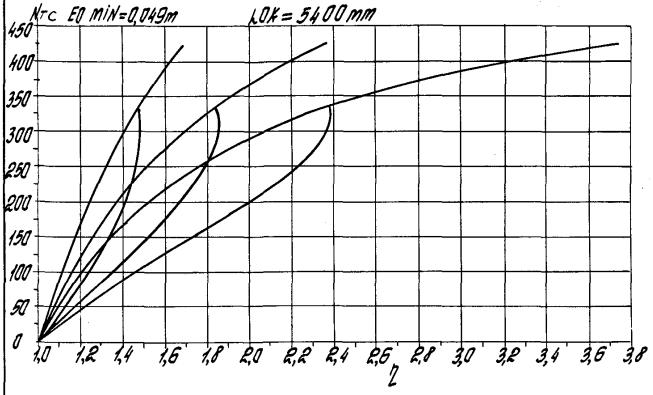


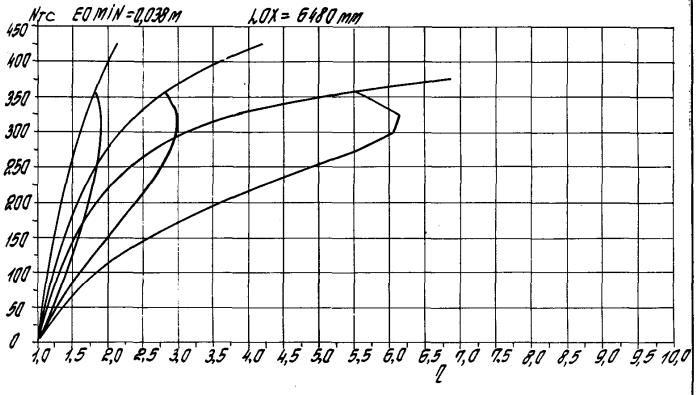



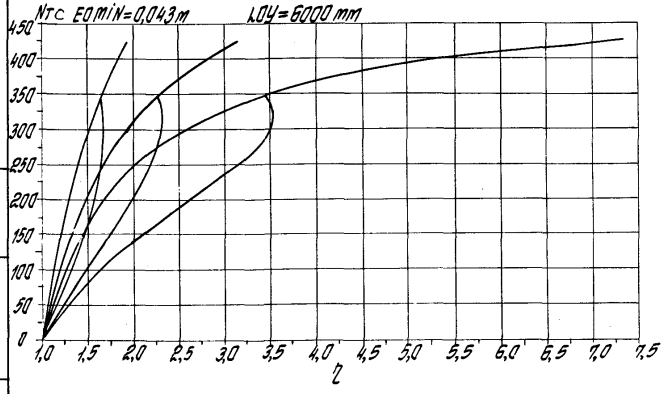



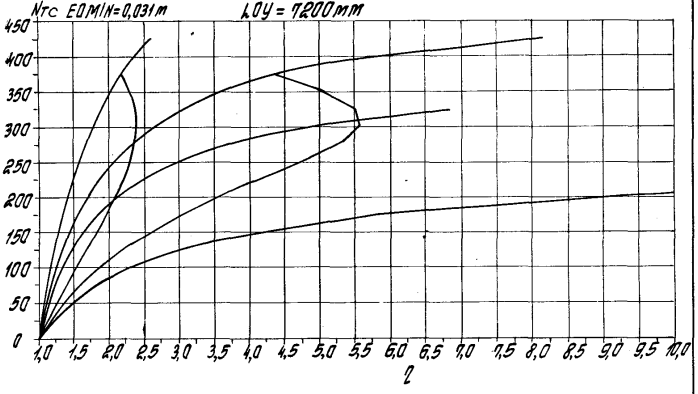




Инв. N подл. | Подпись и дата | Взам. инв. N

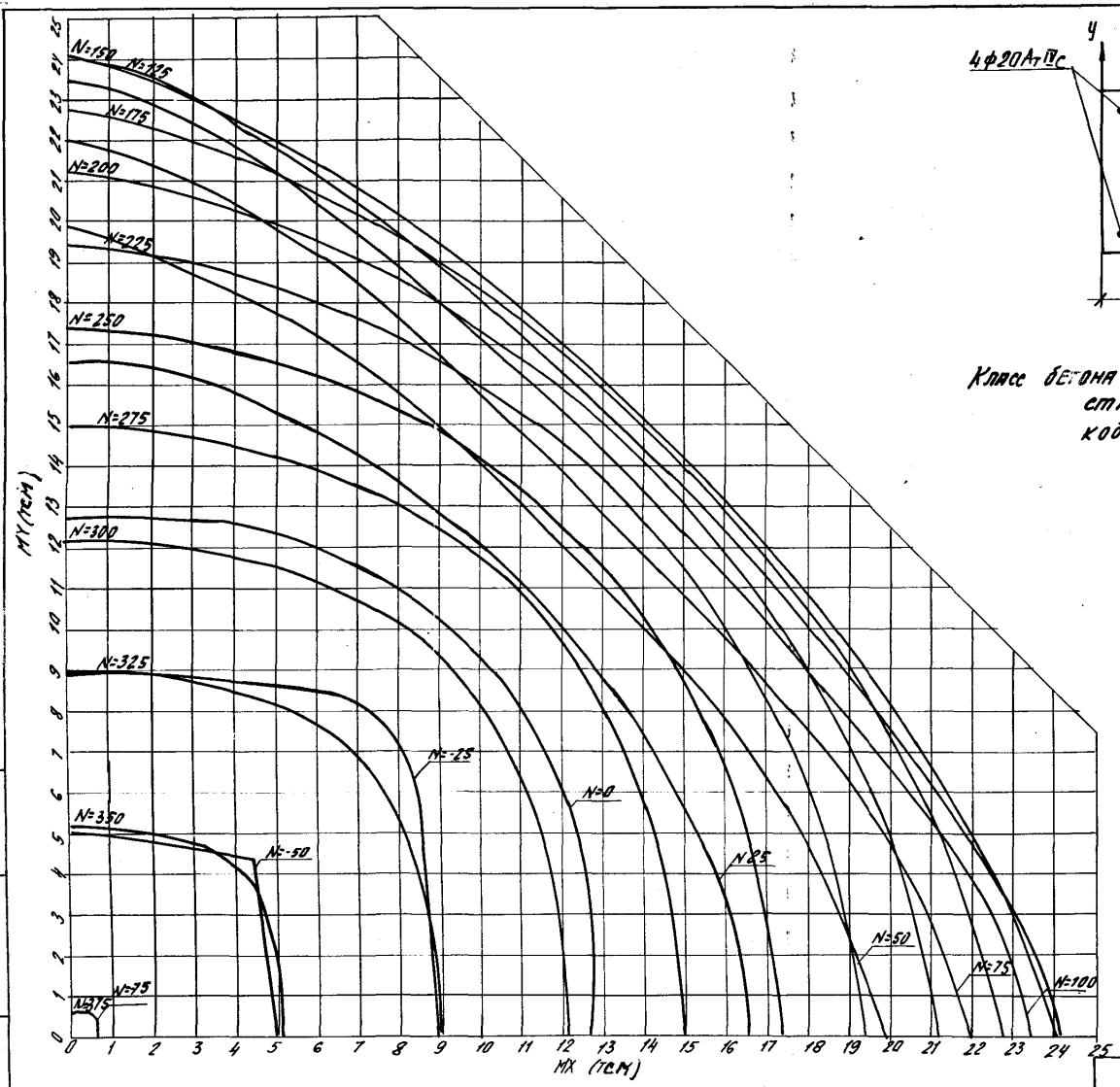


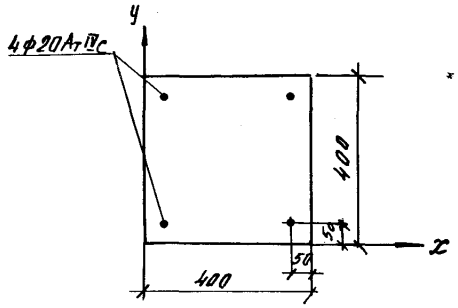




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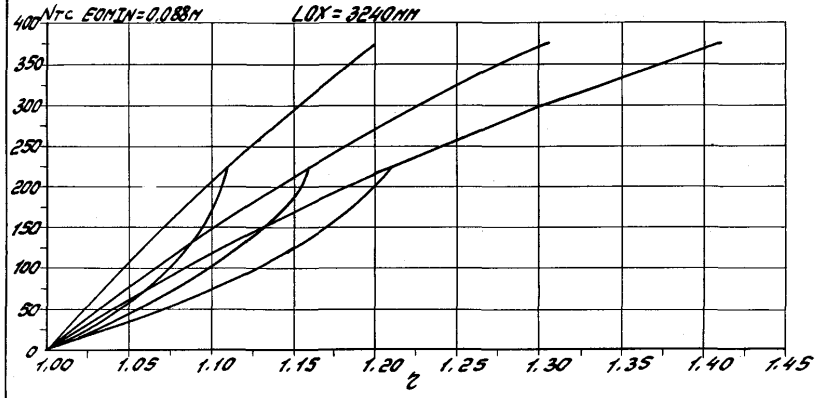


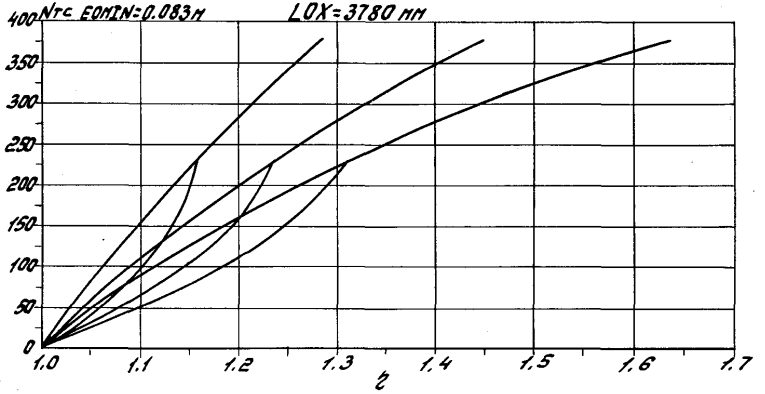



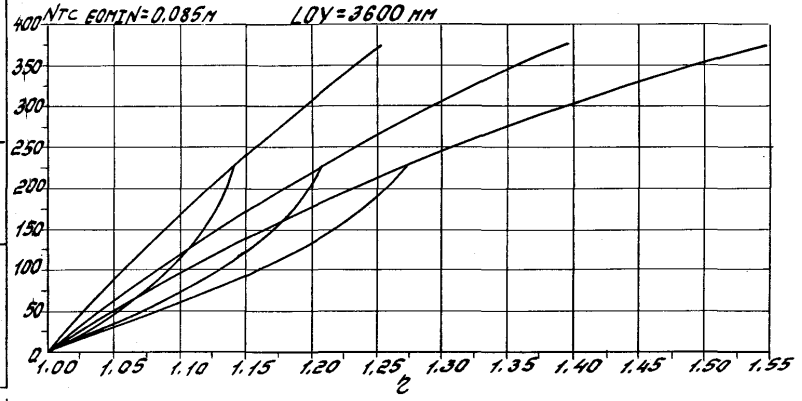

Класс бетона В40.0 ($R_B$ = 19,8 МПа при учете $\gamma_{B2}$ = 0,90)
сталь Ат-IVс
код сечения-1038

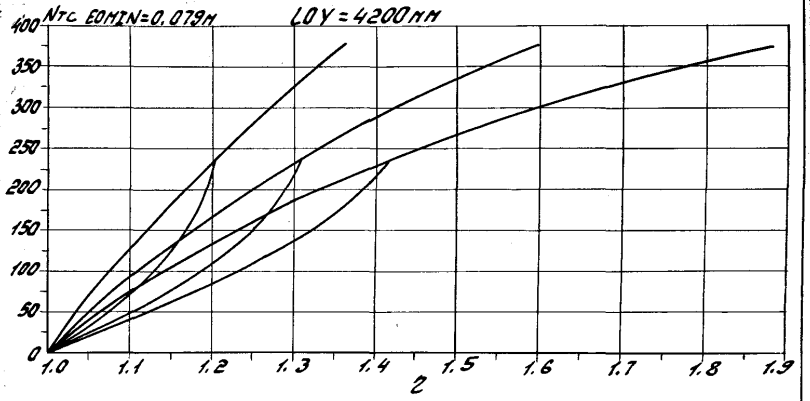
1.020.1-4 0-9 002

Лист 69



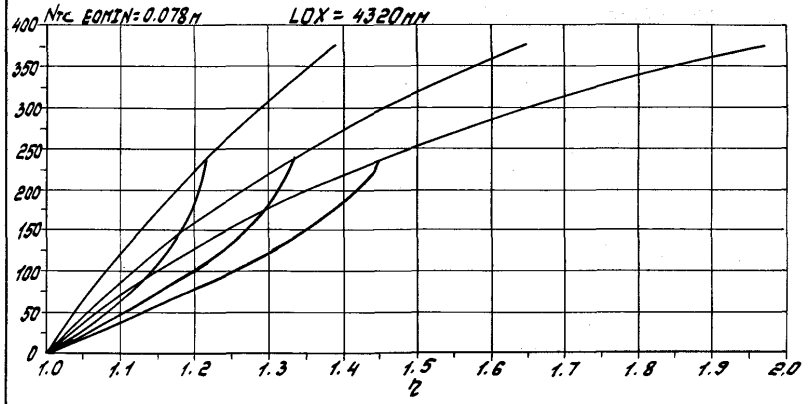



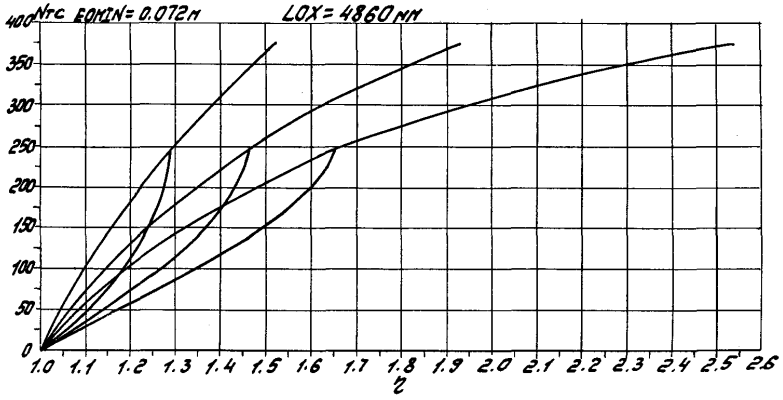



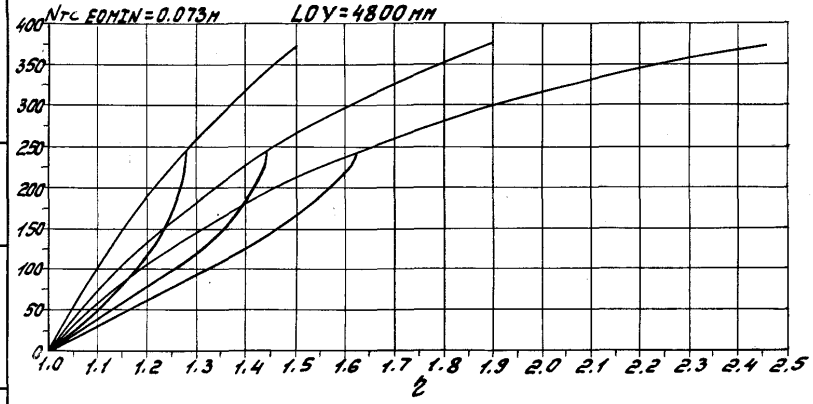

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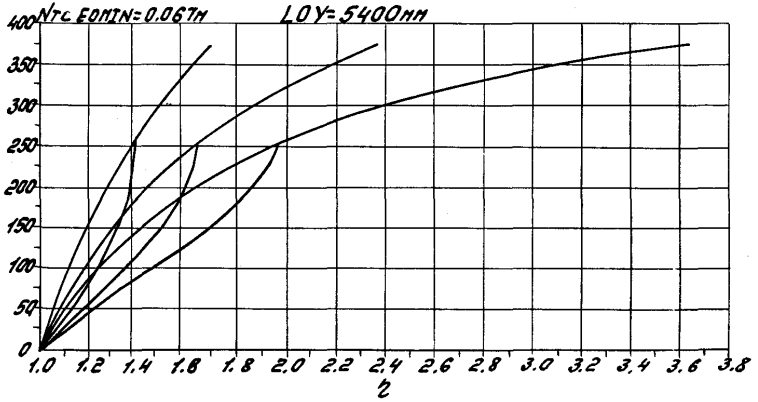
Лист 70

24166-01 ВД



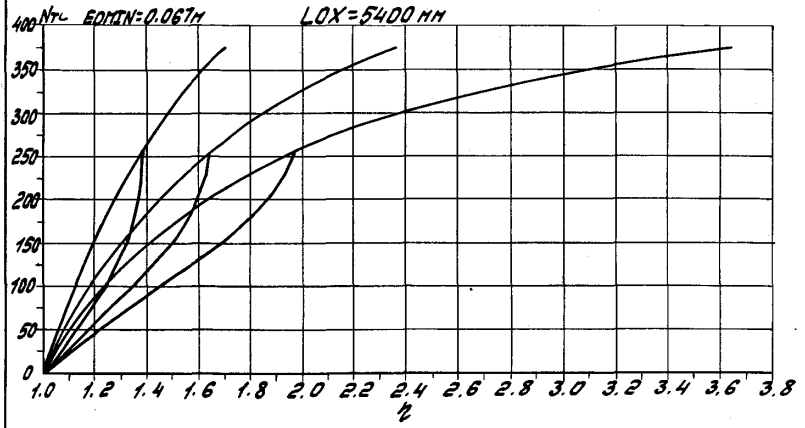



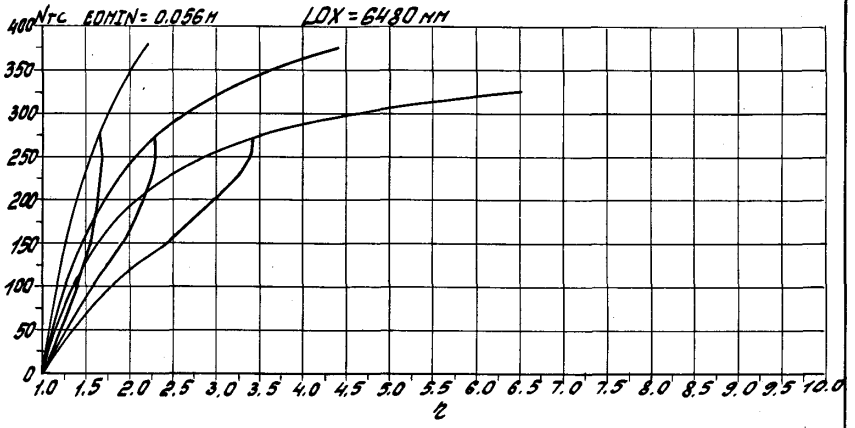

Инв. № подл. | Подпись и дата | Взам. инв. №

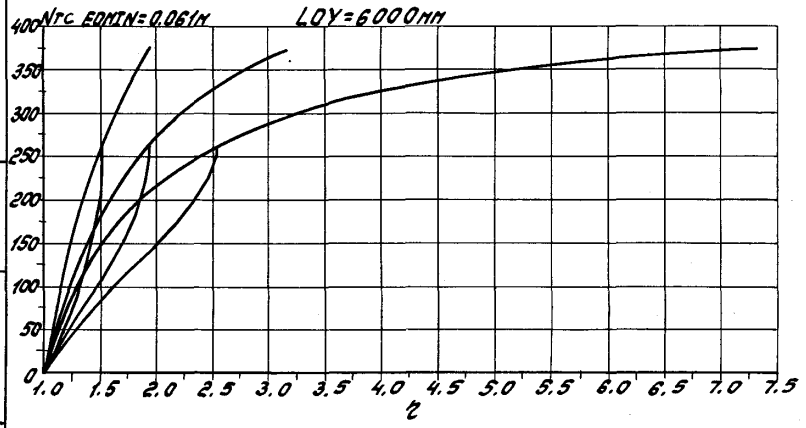
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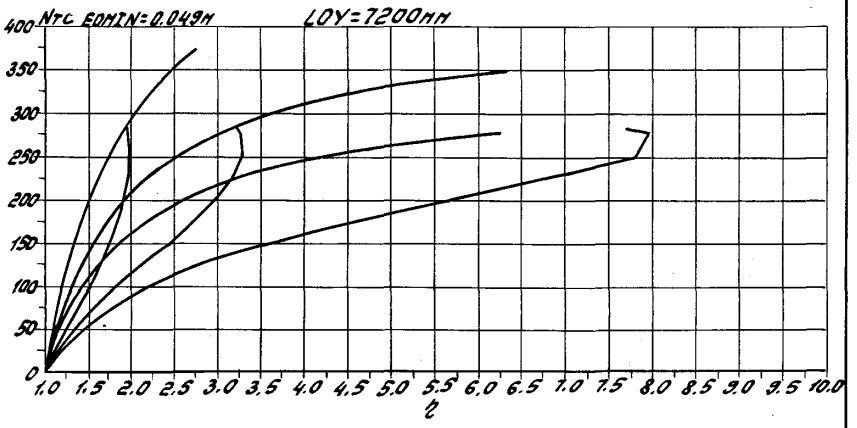
Альбом 11

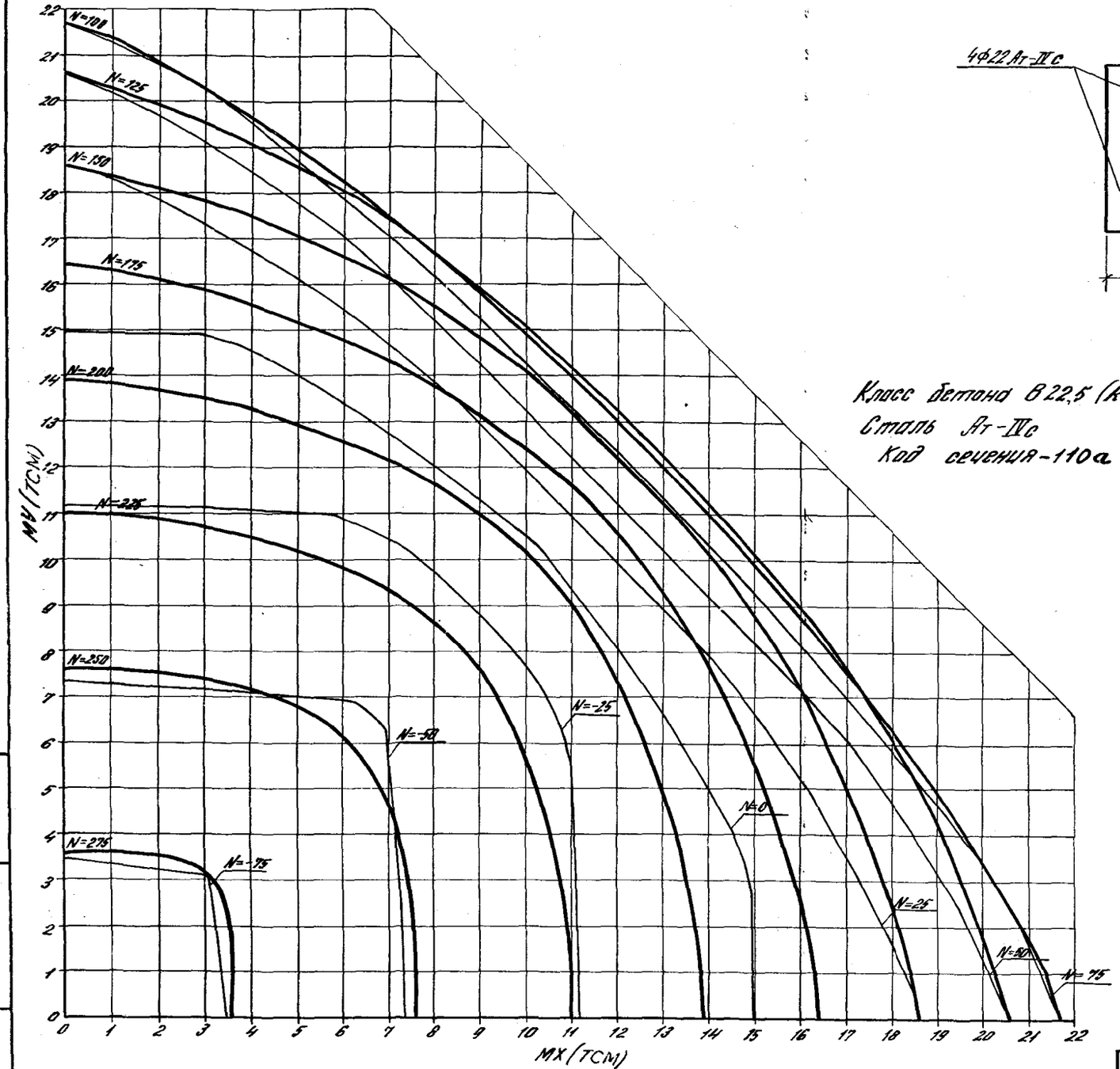
24166-01 89

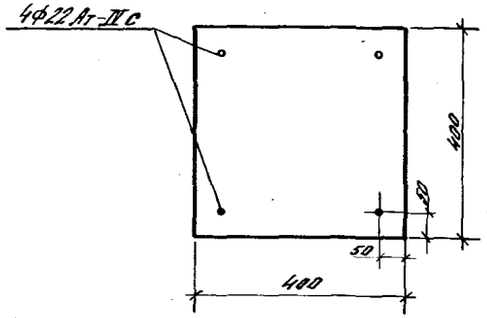

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t


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t


Nтс
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100
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t


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t



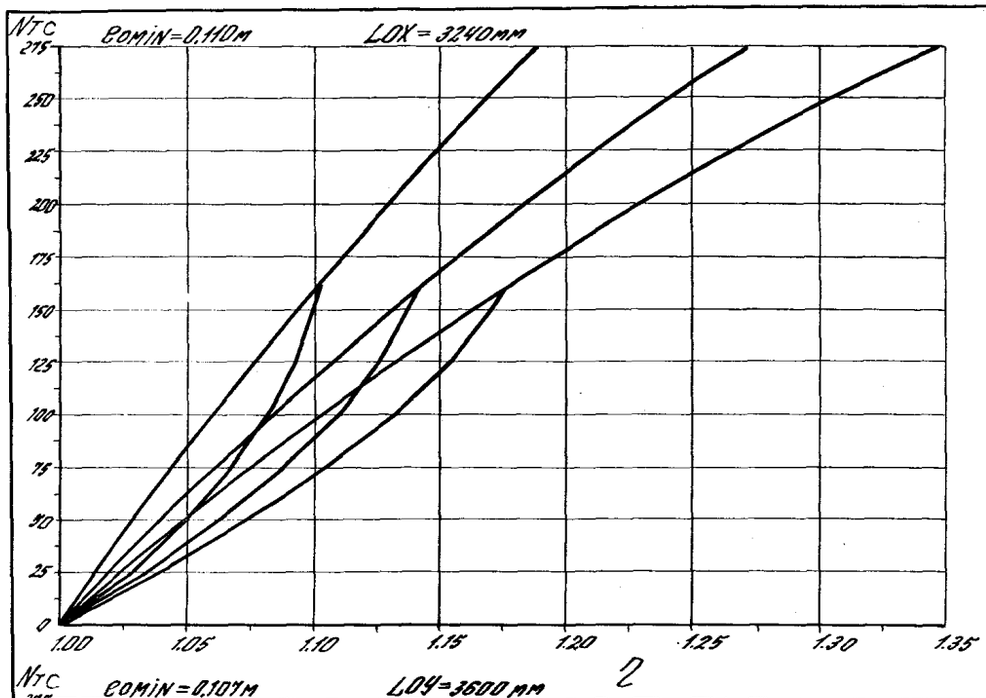

Класс бетона В22,5 ($R_B$ = 14,3 МПа при учете $\gamma_{b2}$ = 1,10)

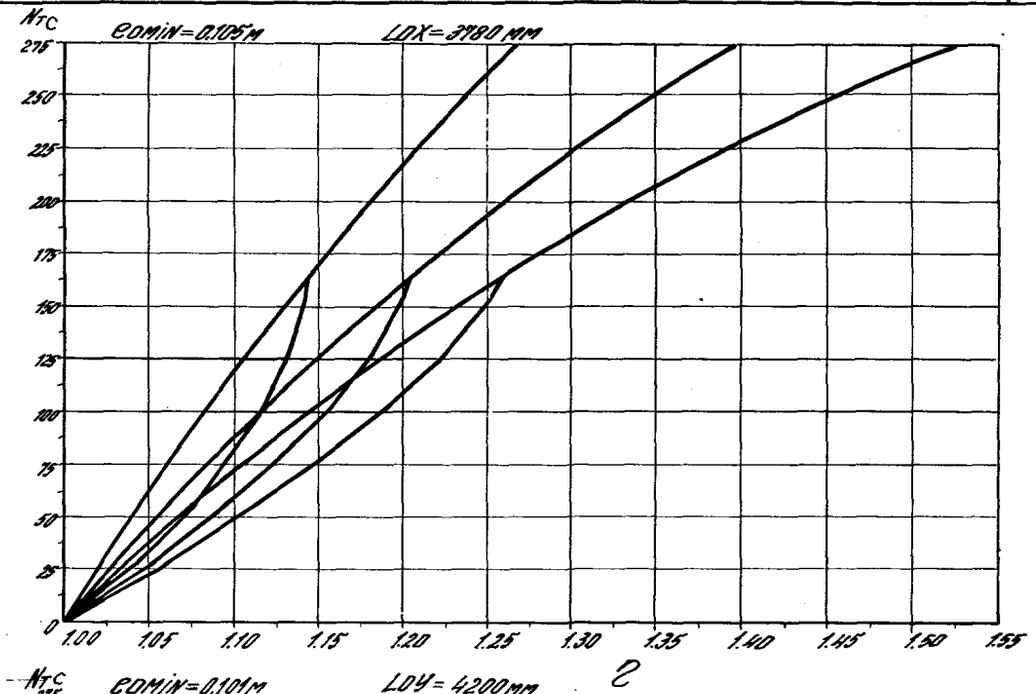
Сталь Ат-IIIс

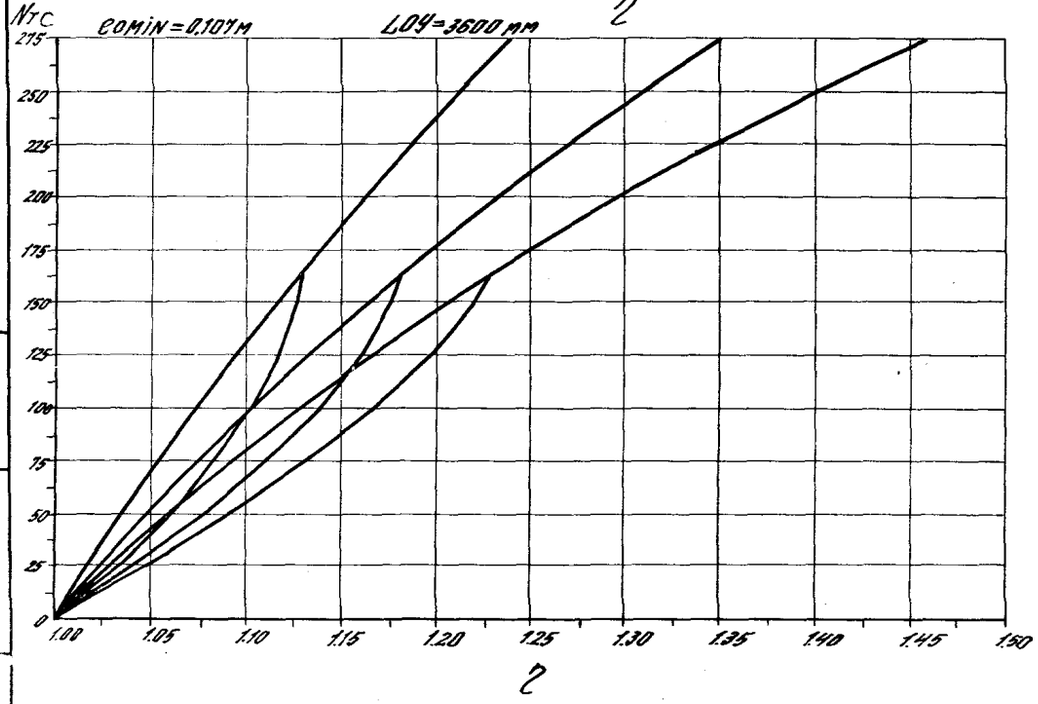
Код сечения-110а

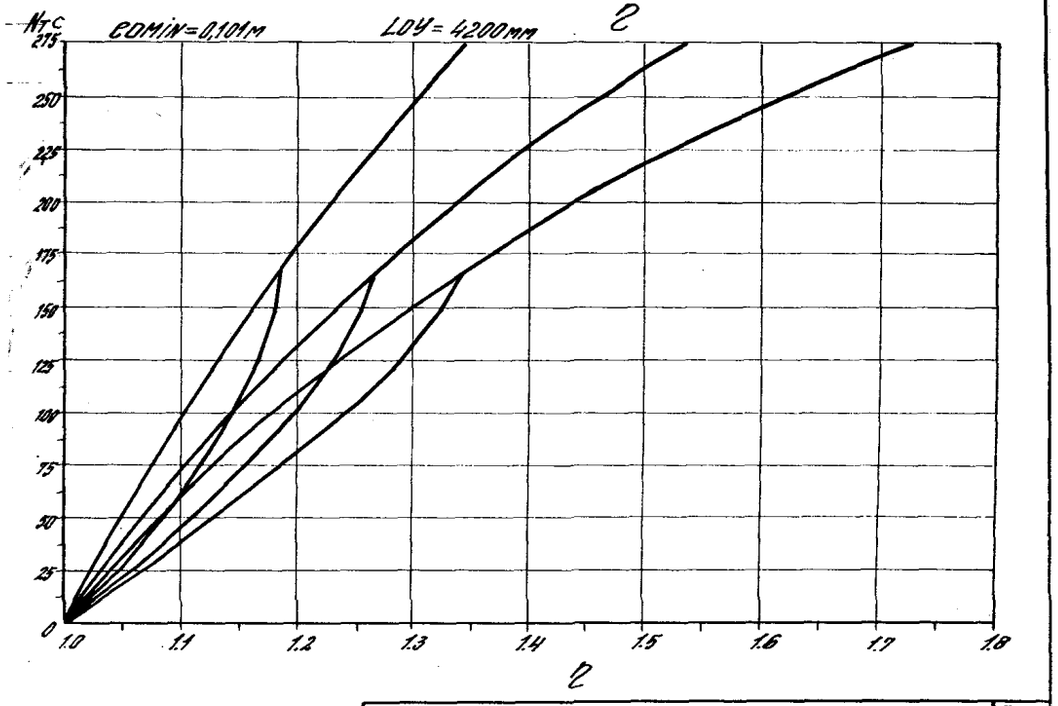


Инв. № подл. | Подпись и дата | Взам. инв. №

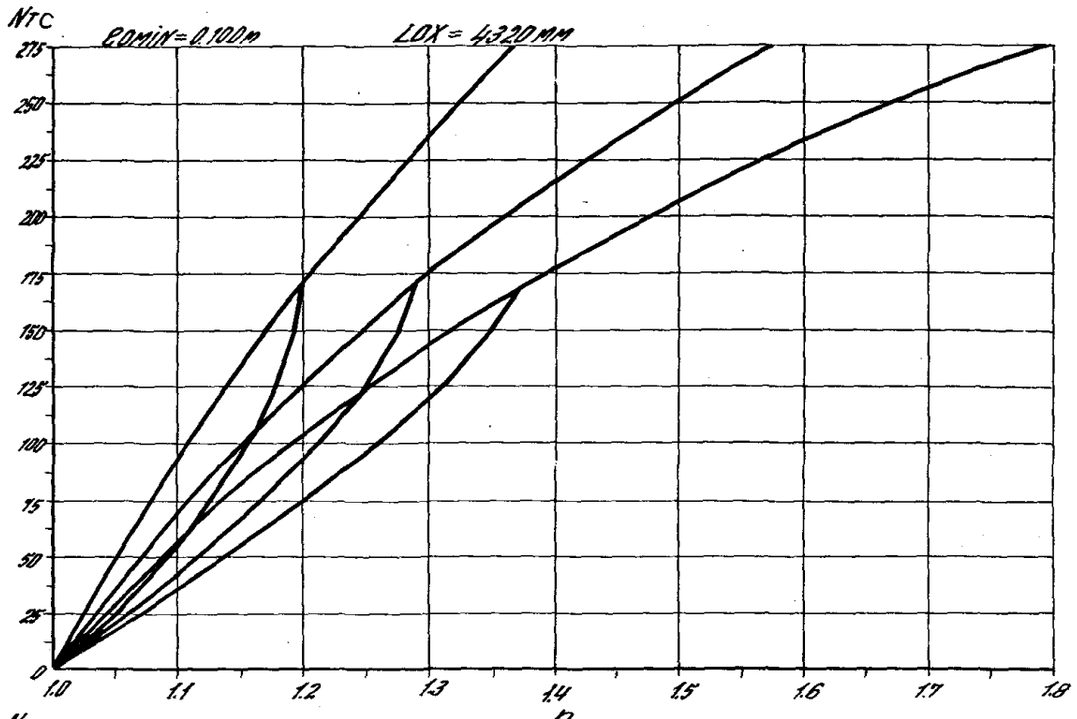


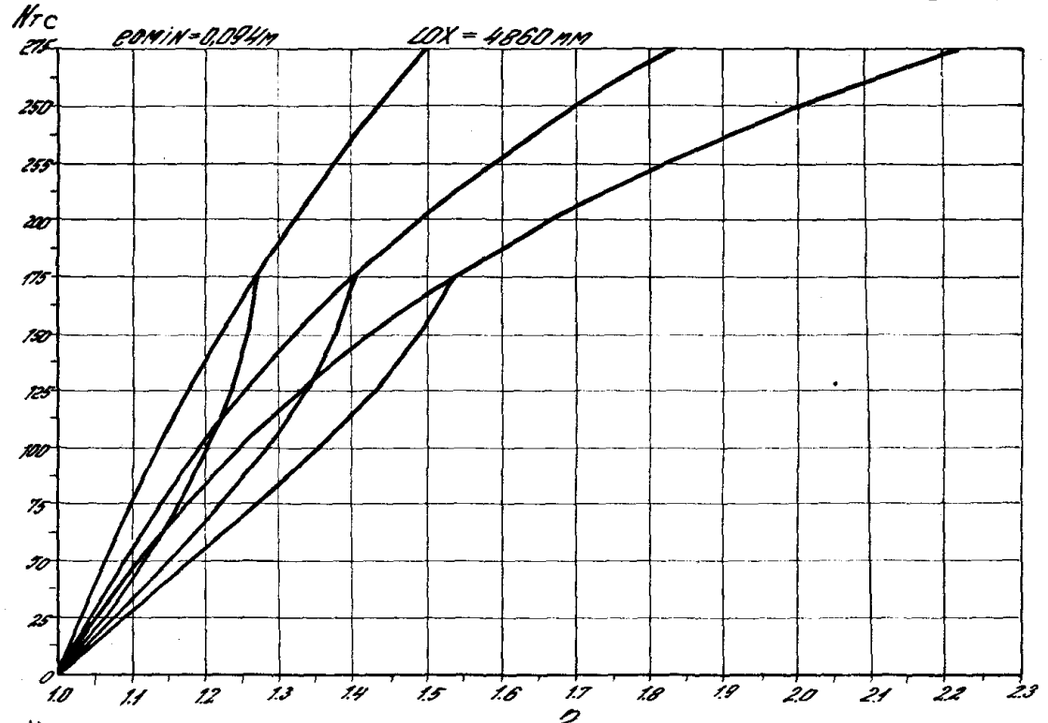



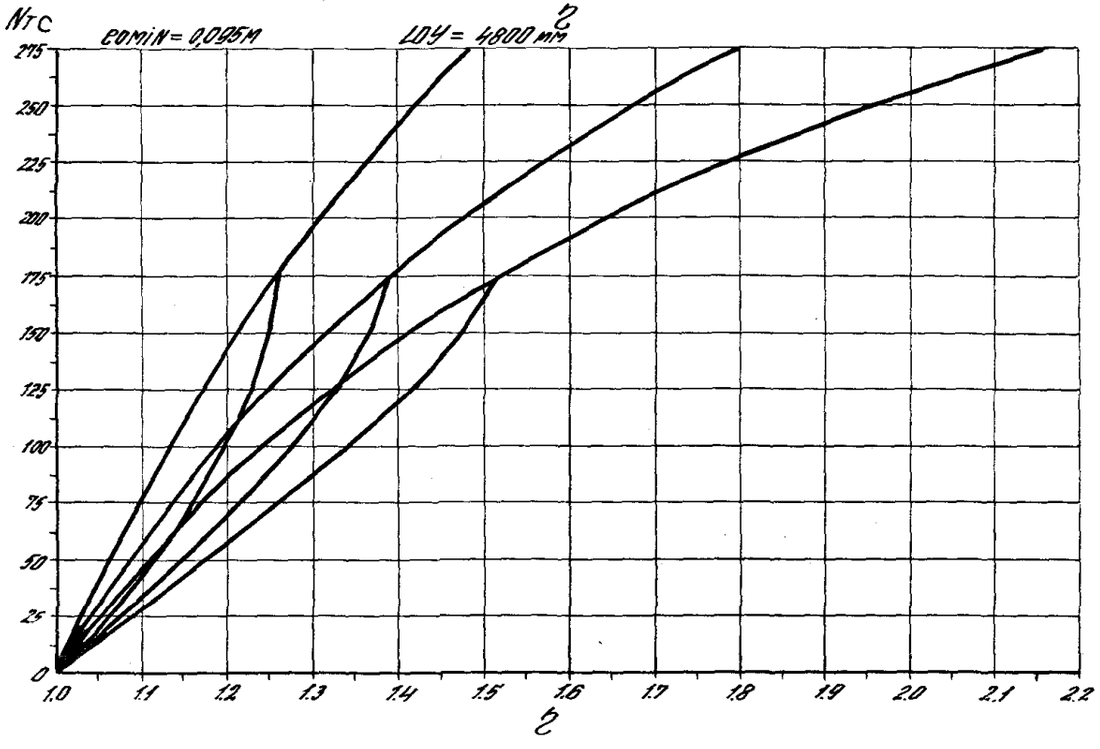



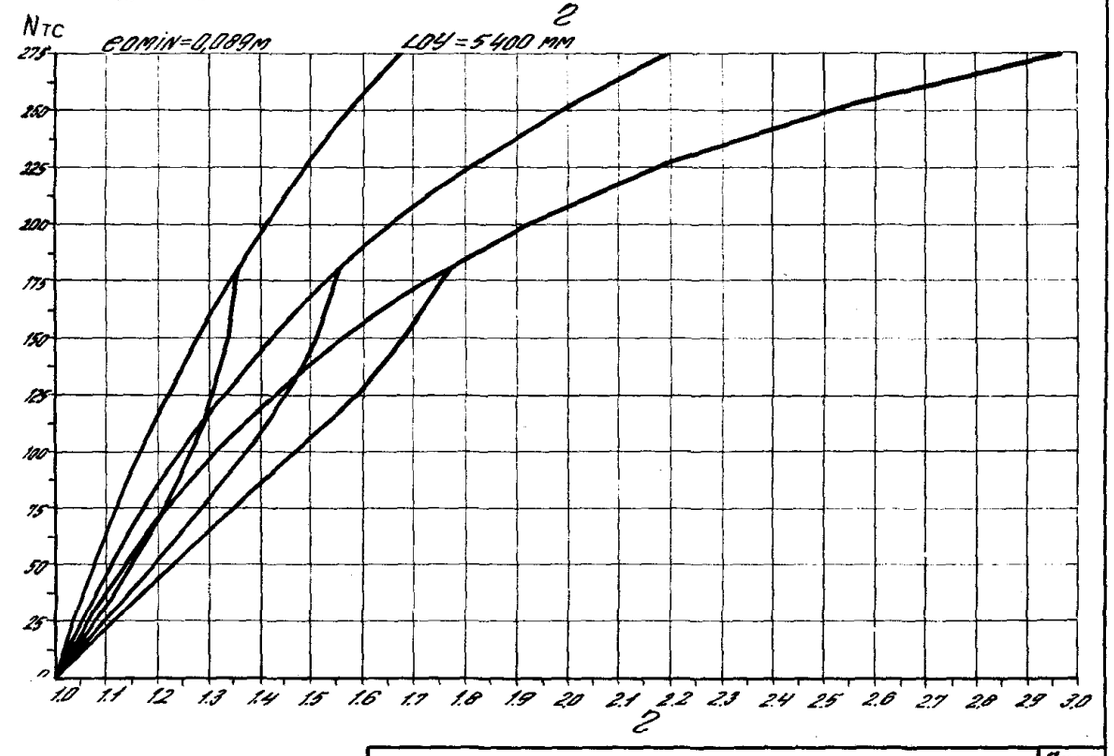



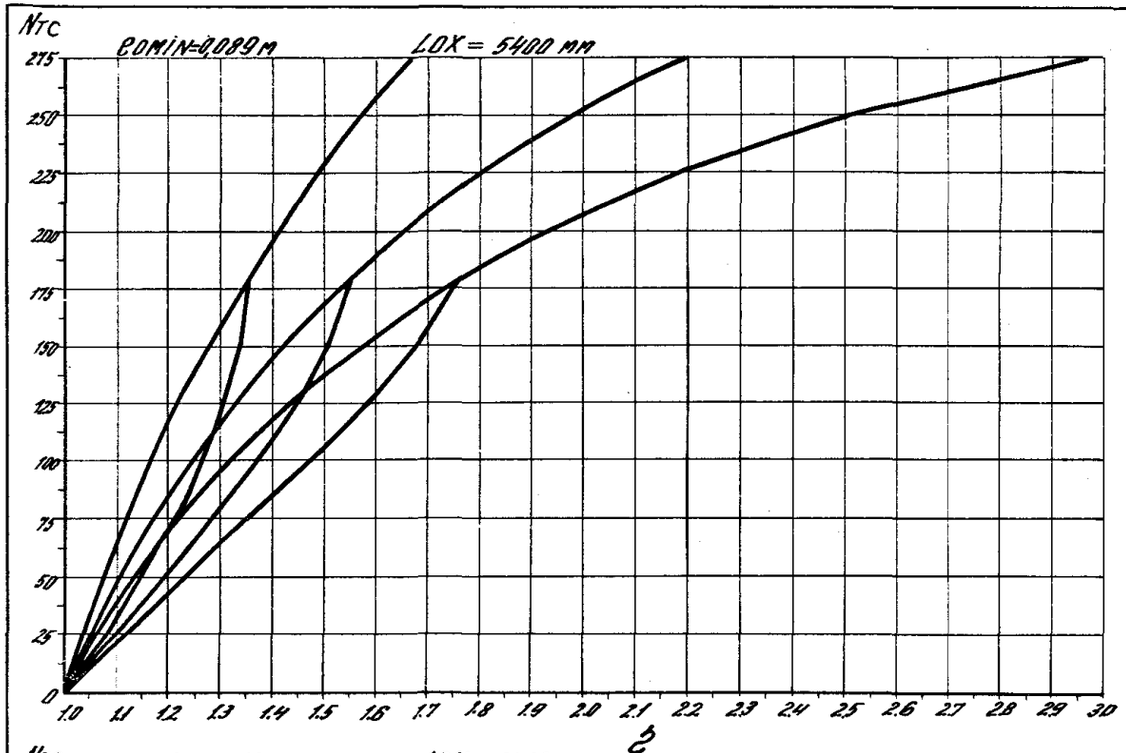

Инв. № подл. | Подпись и дата | Взам. инв. №

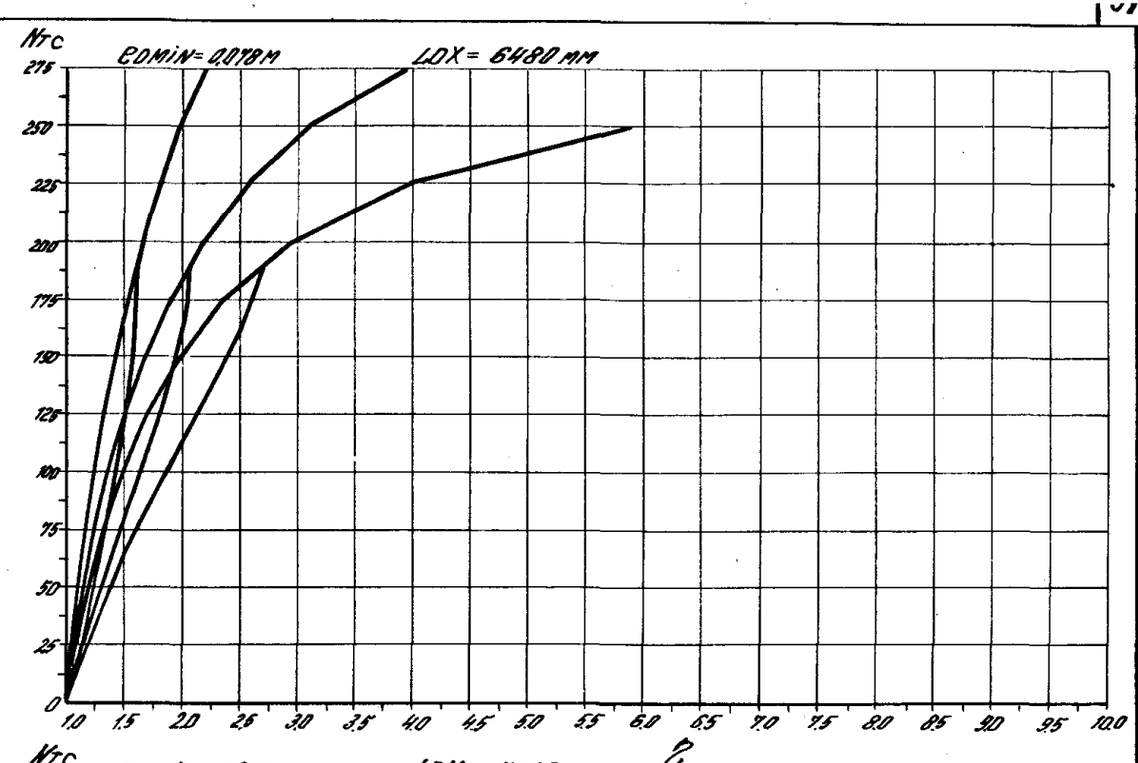

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200
175
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125
100
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1.2
1.3
1.4
1.5
1.6
1.7
1.8
e

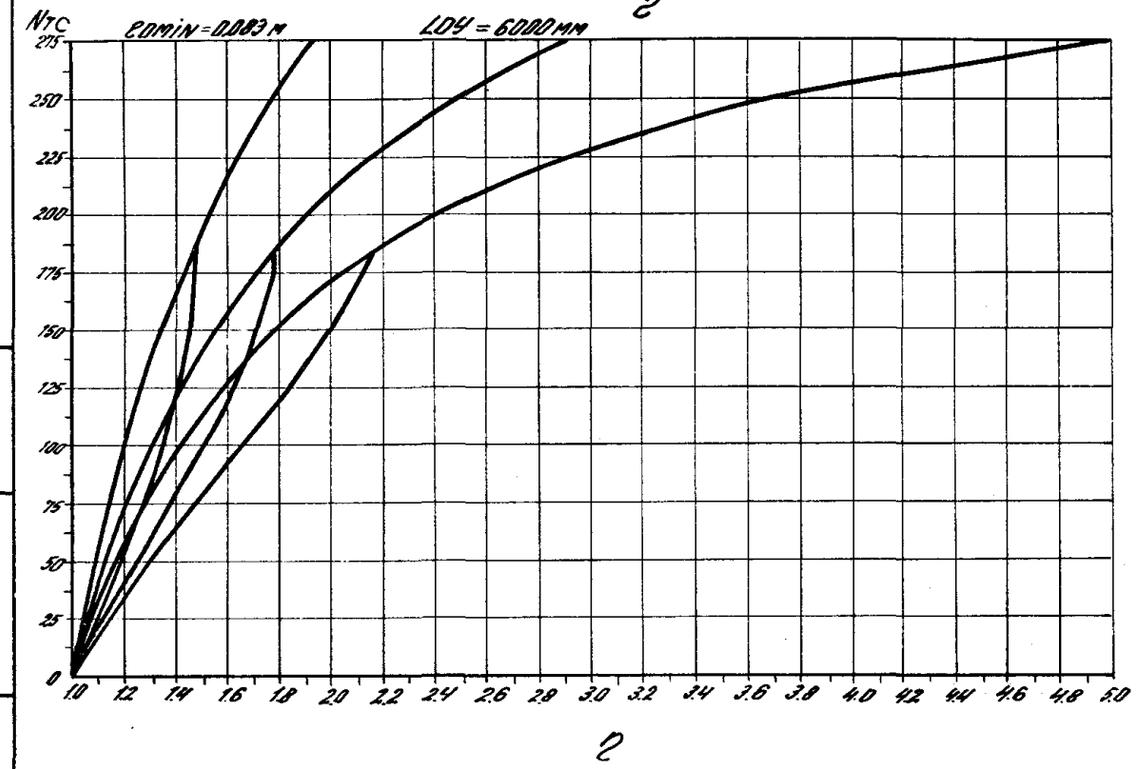

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200
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125
100
75
50
25
0
1.0
1.1
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1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
e

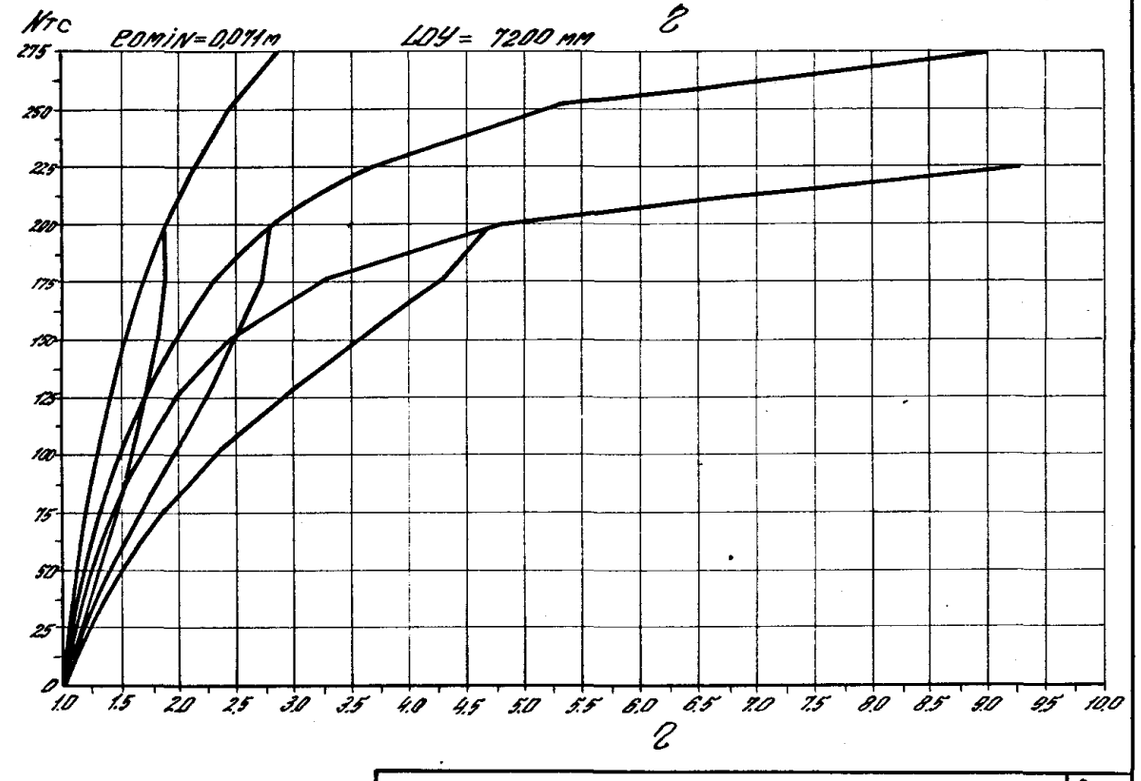

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100
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25
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1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
e


NTC
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LOY = 5400 мм
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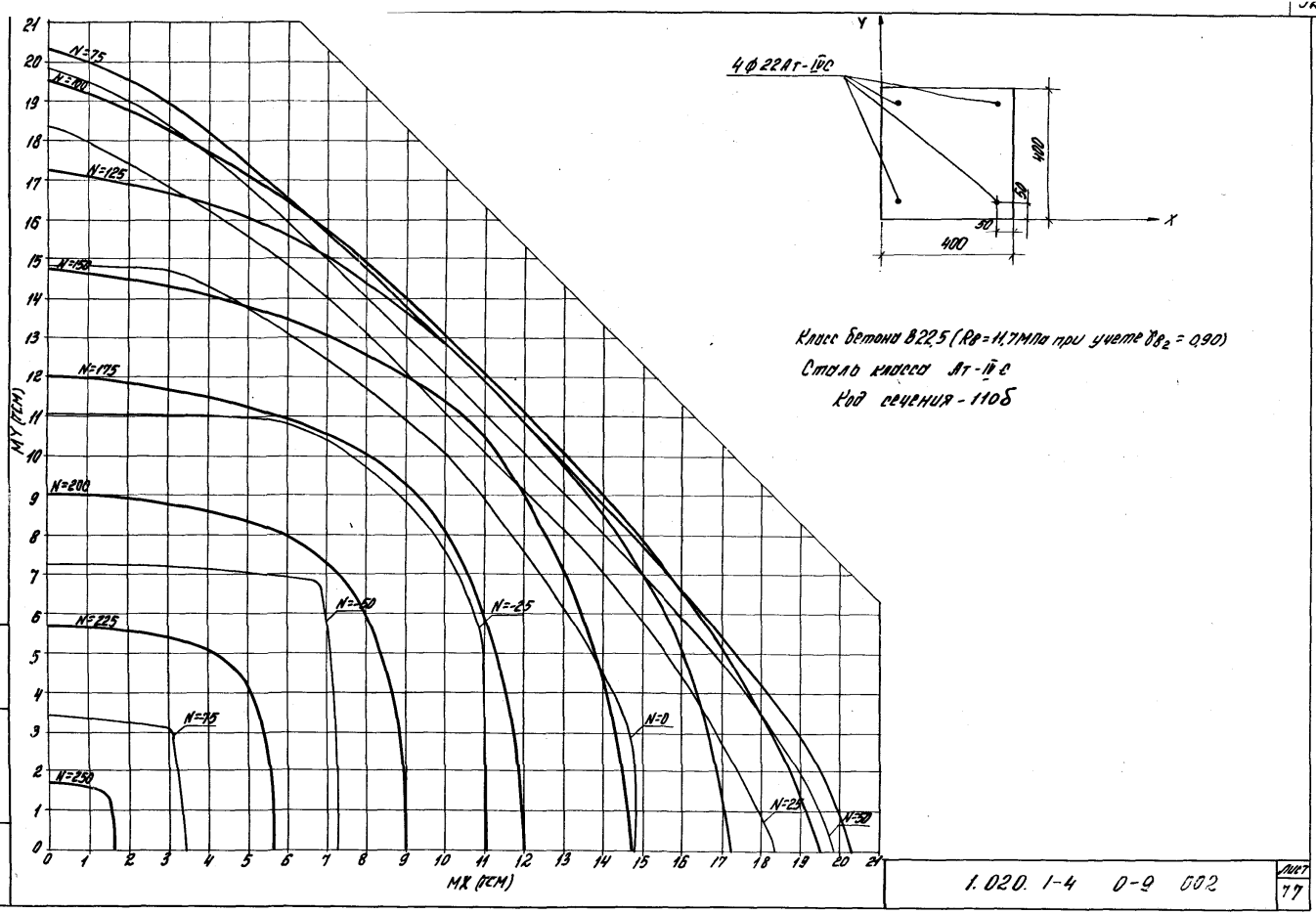




Инв. № подл. | Подпись и дата | Взам. инв. №

| 1.020.1-4 0-9 002 | Лист 76 |
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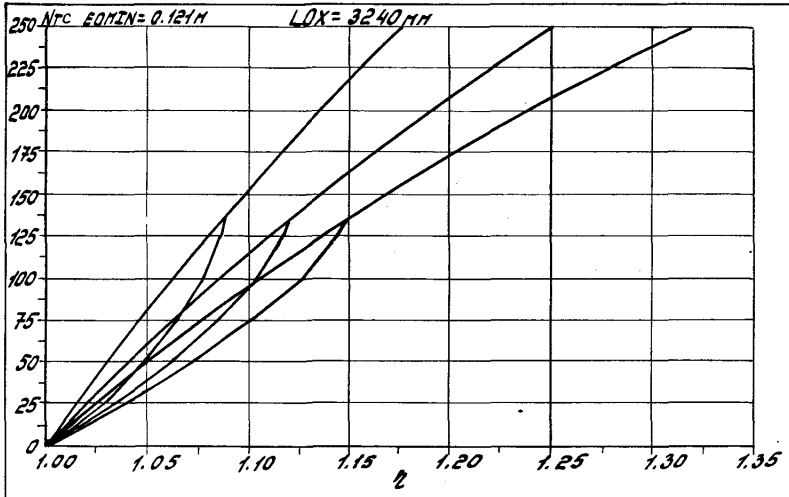


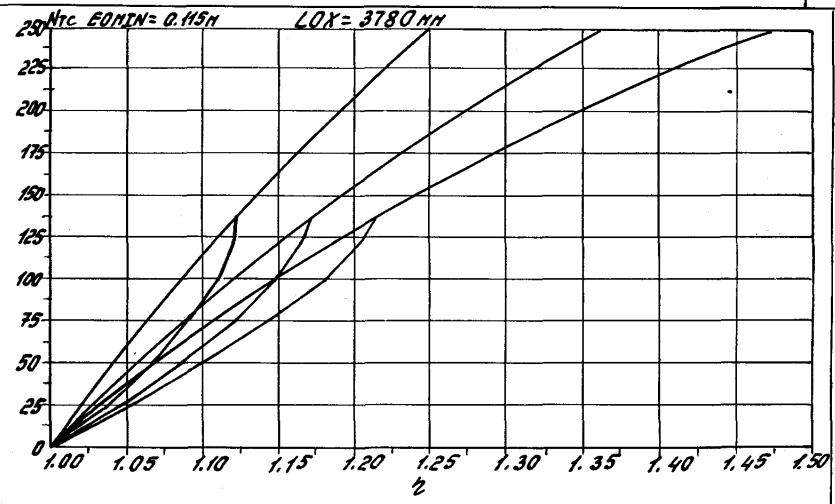


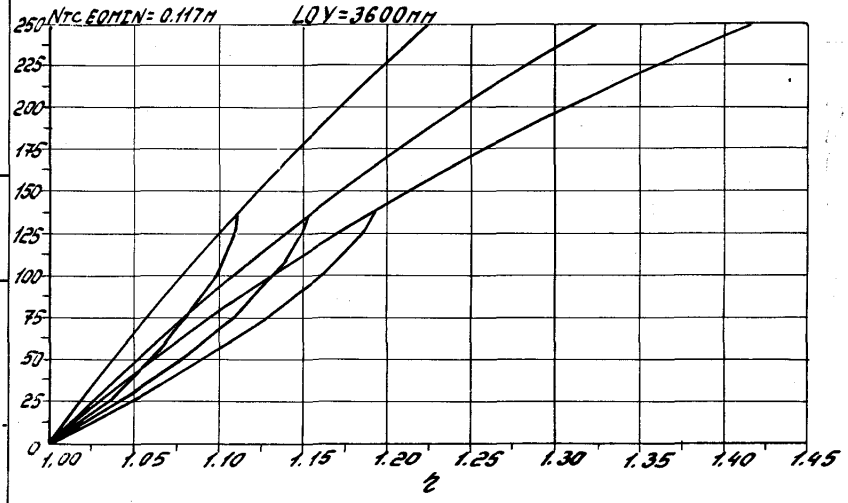
Класс бетона В22,5 ($R_B$ = 11,7 МПа при учете $\gamma_{B_2}$ = 0,90)

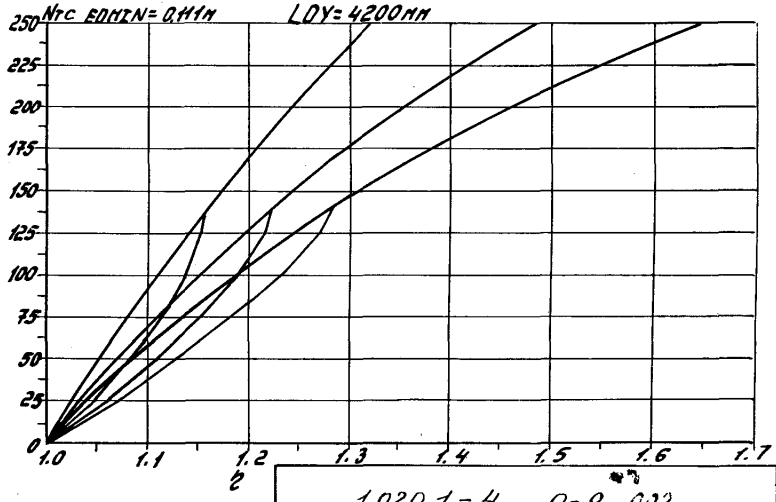
Сталь класса Ат-IIIс

Код сечения - 110Б

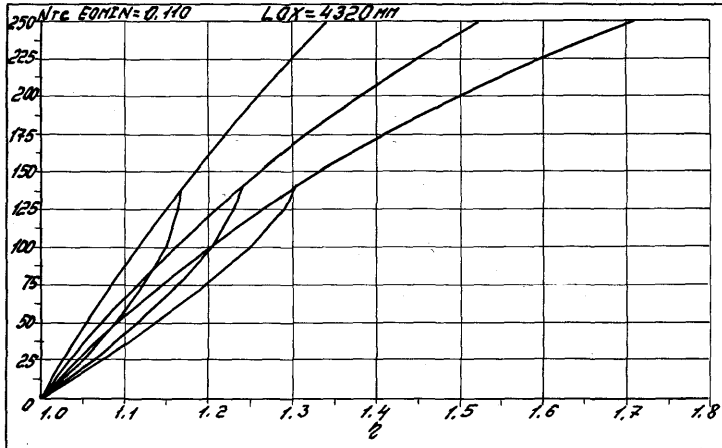


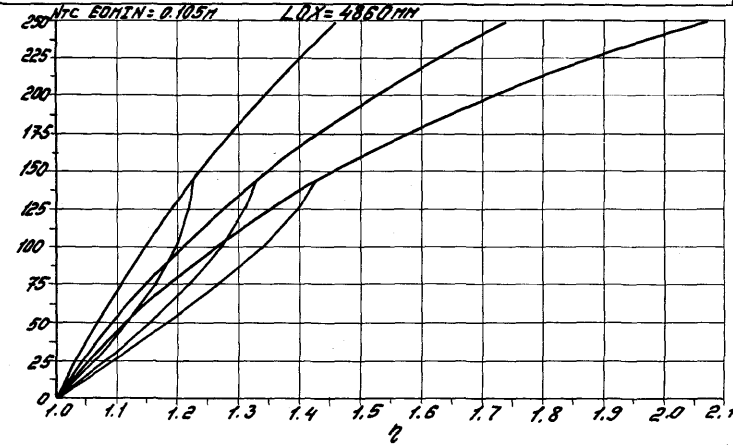



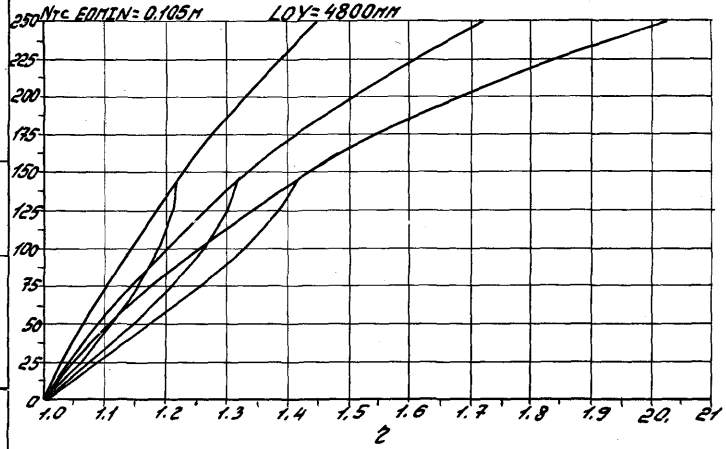



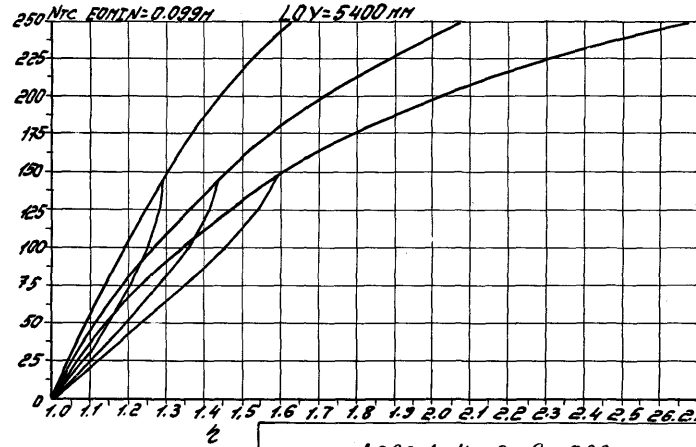



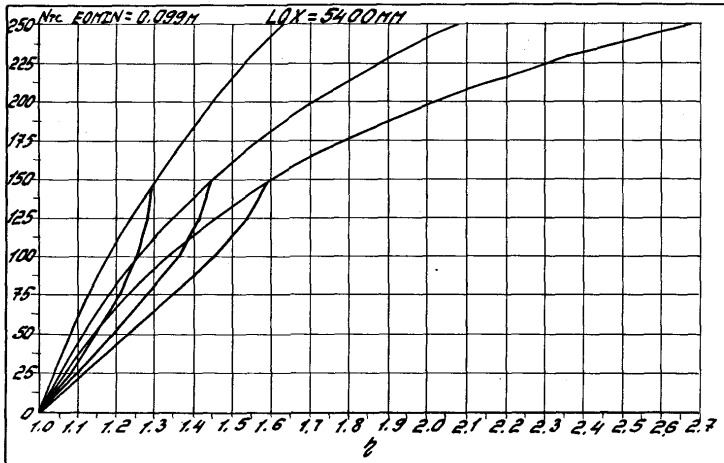

Инв.№ подл. | Подпись и дата | Взам.инв.№

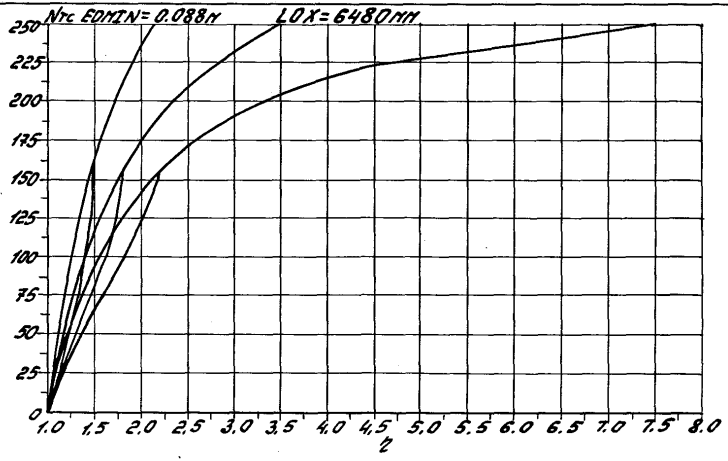

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1.7
1.8
ℓ

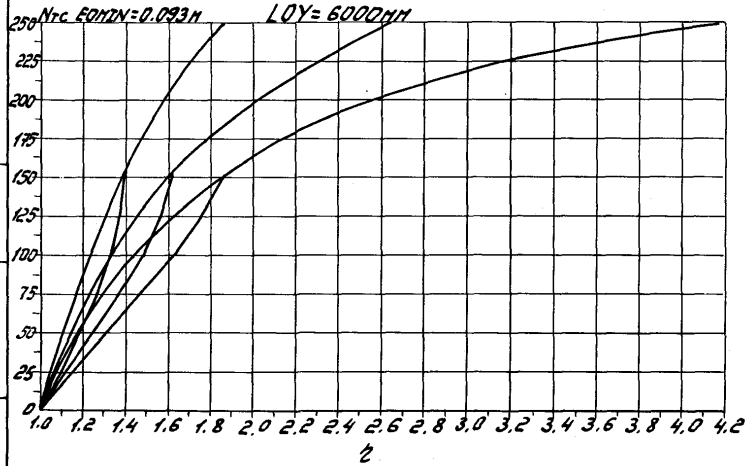

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1.4
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2.1
ℓ

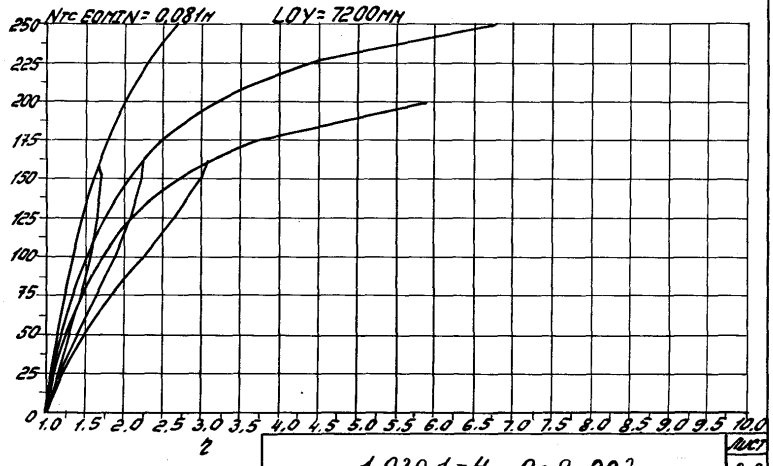

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1.3
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1.5
1.6
1.7
1.8
1.9
20.
21
ℓ


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175
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75
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2.0
2.1
2.2
2.3
2.4
2.5
26.27
ℓ



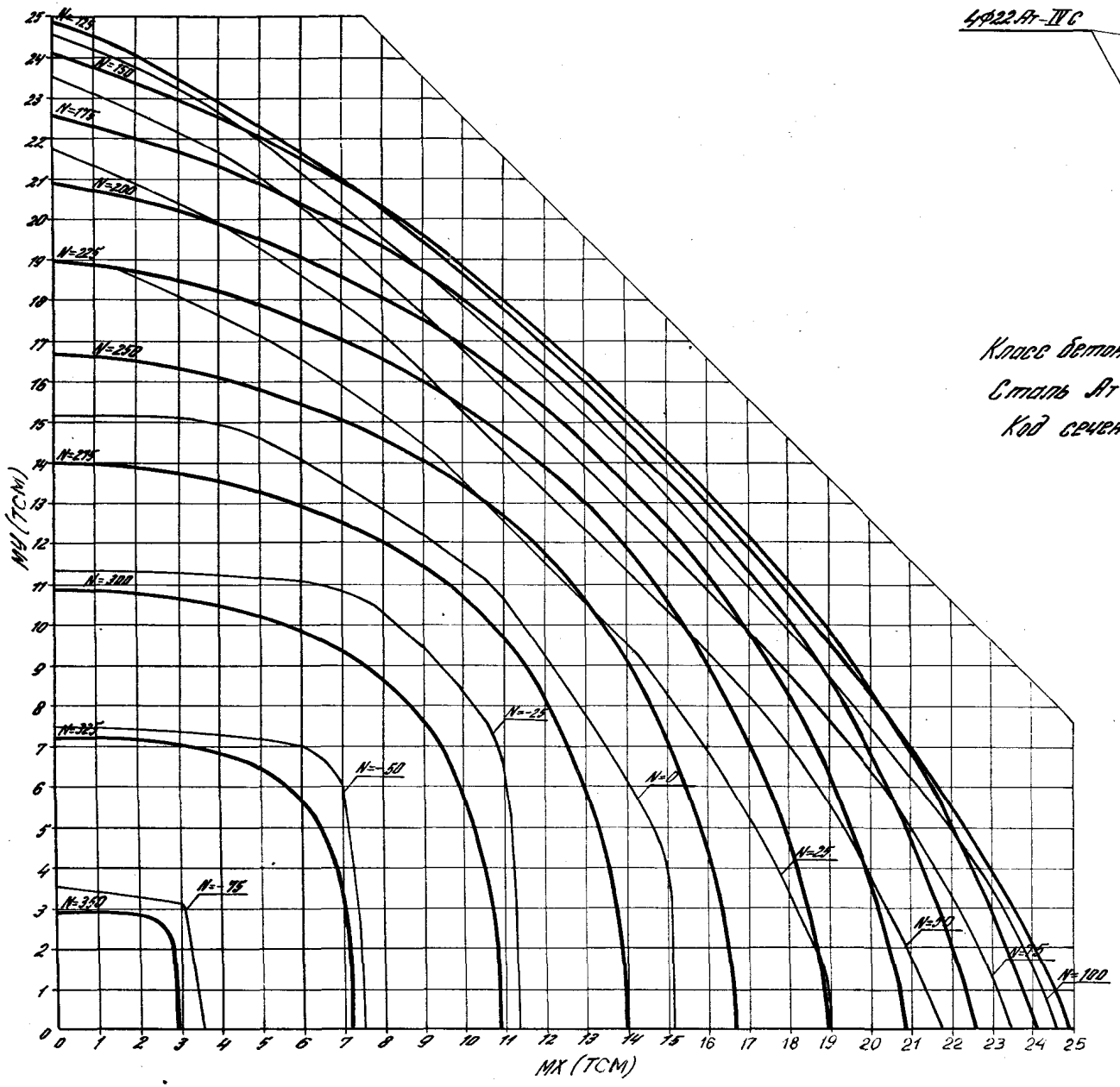



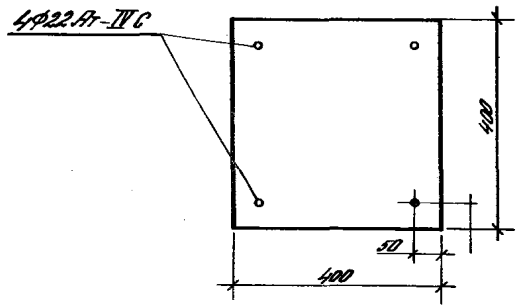




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1.020.1-4 0-9 002

Лист 80




Класс бетона В 30,0 ($R_в$ = 18,7 МПа при учете $\gamma_{в2}$ = 1.10)

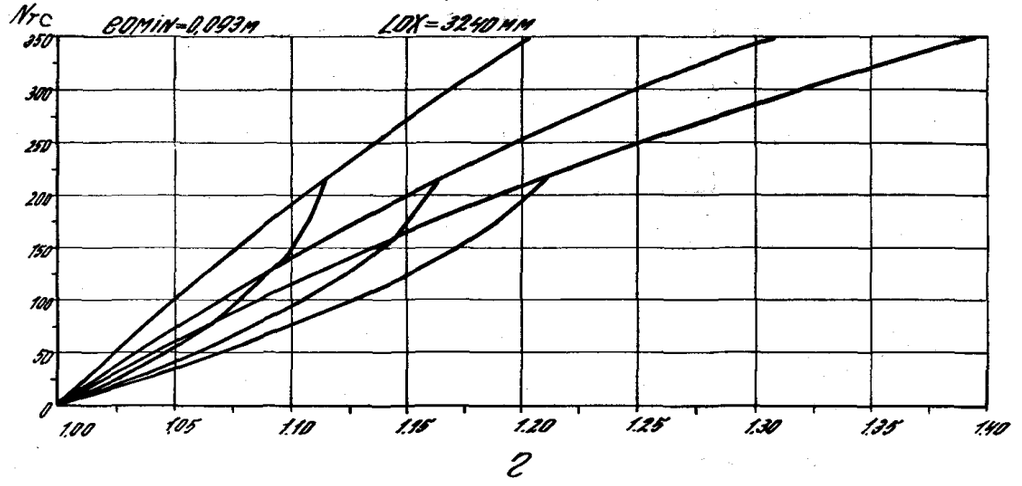
Сталь Ат-IV с

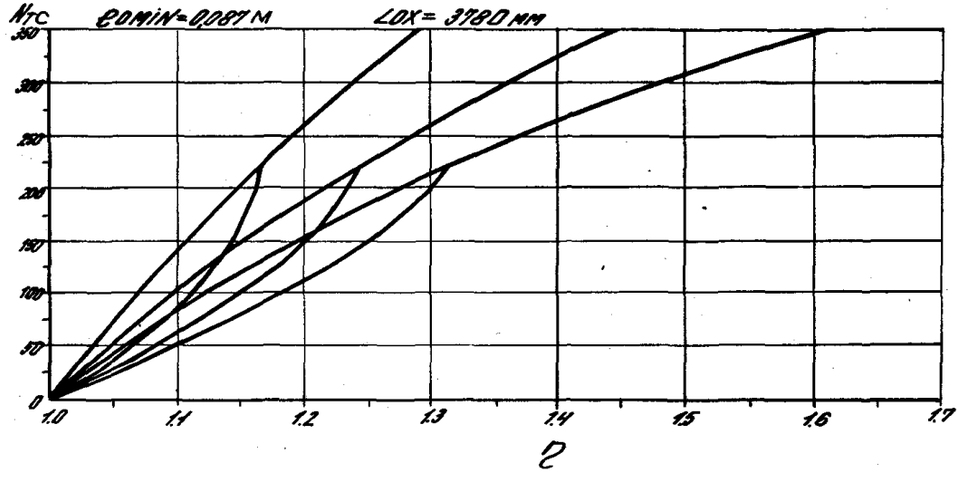
Код сечения - 111а

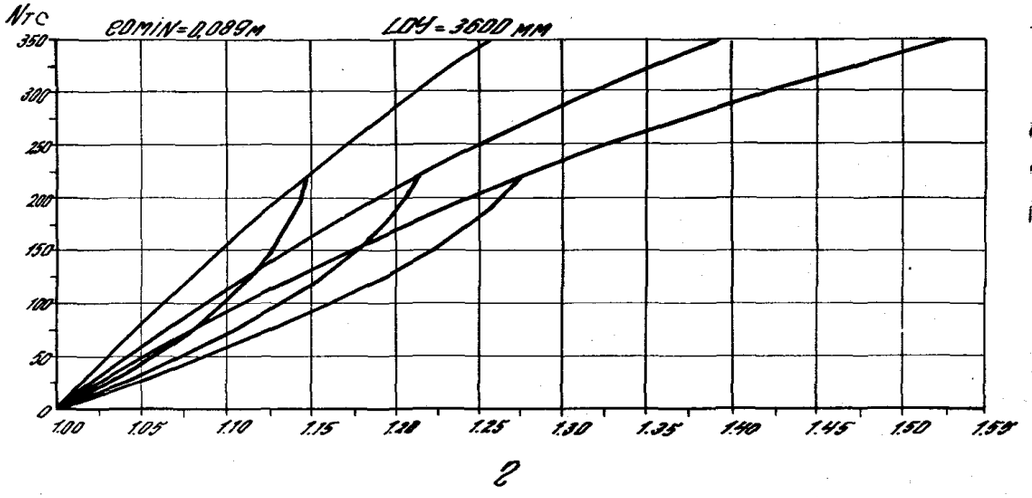
Инв. № подл. | Подпись и дата | Взам. инв. №

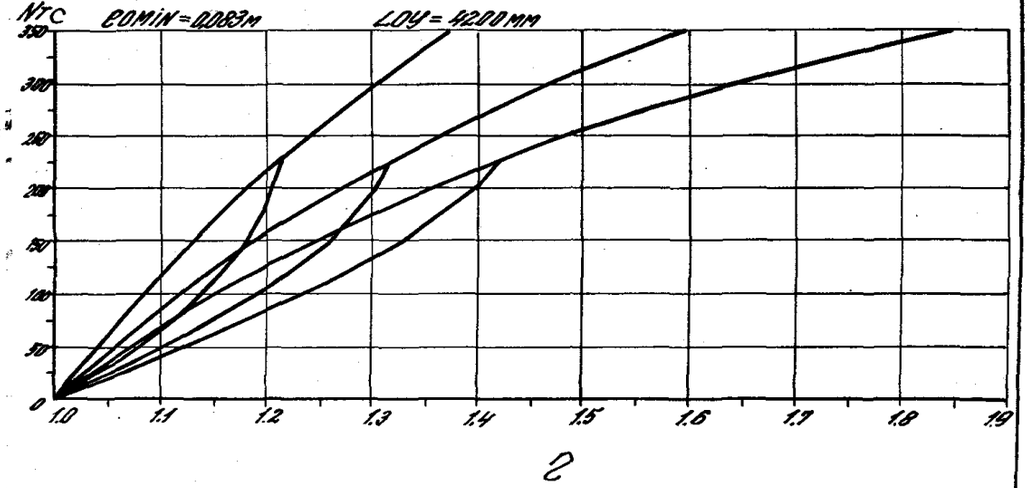
1.020.1-4 0-9 002

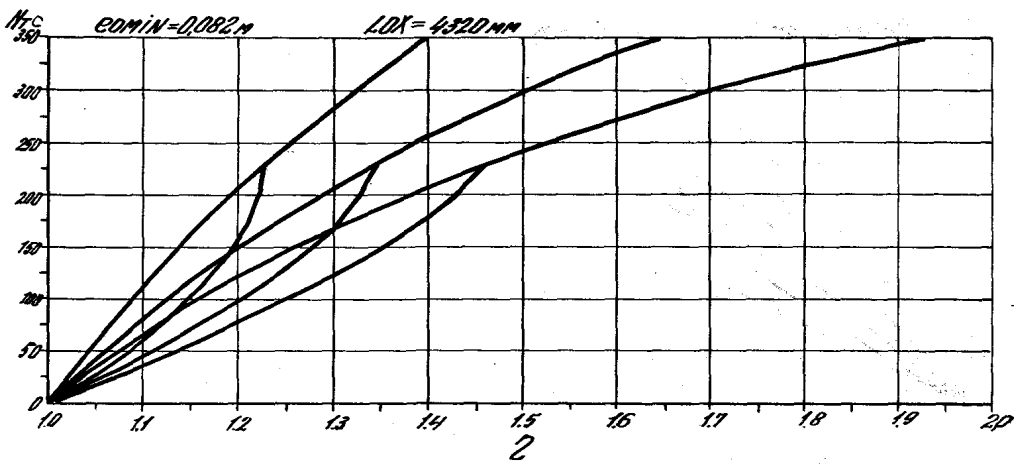
Лист 81

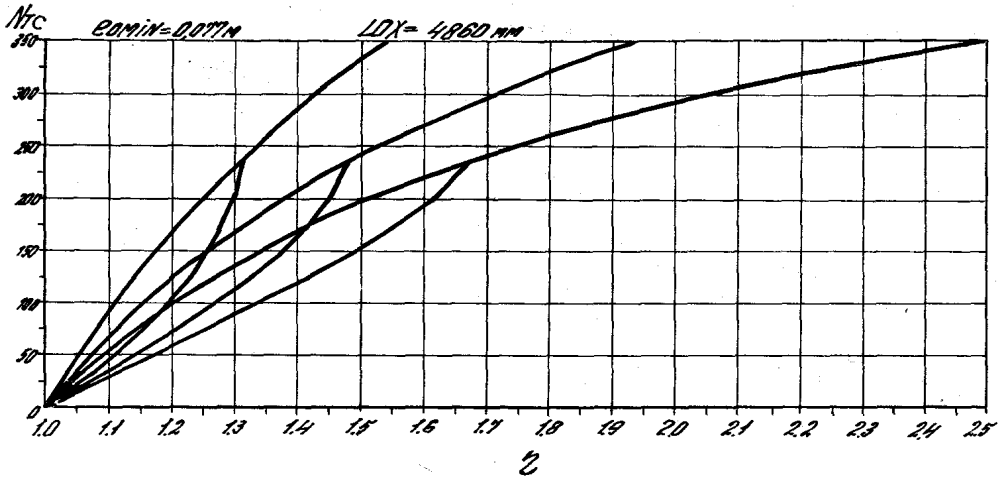

Nтс
e0min=0,093м
l0x=3240мм
350
300
250
200
150
100
50
0
1.00
1.05
1.10
1.15
1.20
1.25
1.30
1.35
1.40
e

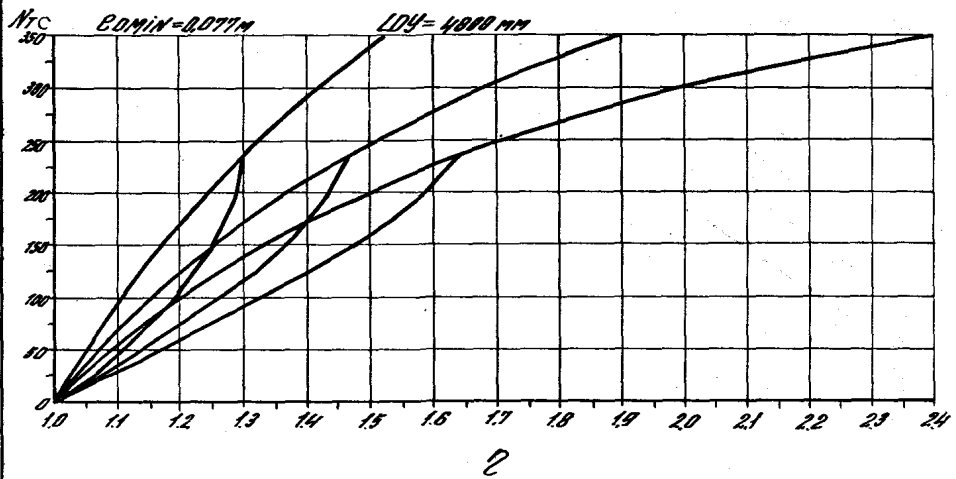

Nтс
e0min=0,087м
l0x=3780мм
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300
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50
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1.1
1.2
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1.4
1.5
1.6
1.7
e

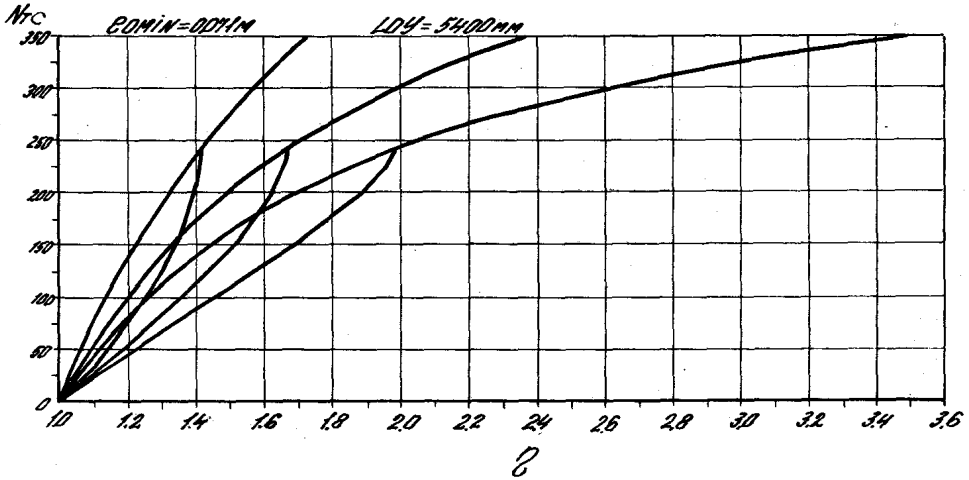

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l0y=3600мм
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300
250
200
150
100
50
0
1.00
1.05
1.10
1.15
1.20
1.25
1.30
1.35
1.40
1.45
1.50
1.55
e

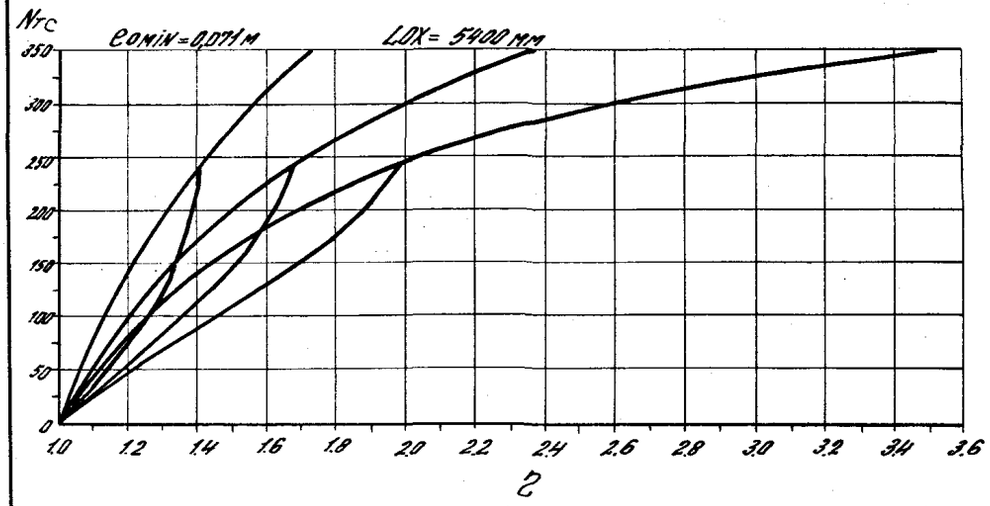

Nтс
e0min=0,083м
l0y=4200мм
350
300
250
200
150
100
50
0
1.0
1.1
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1.5
1.6
1.7
1.8
1.9
e

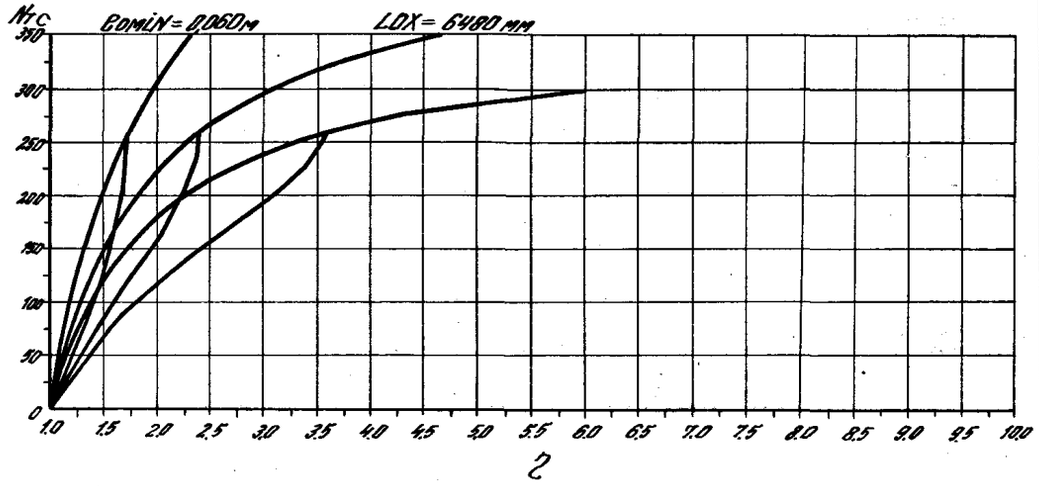

Nтс
e0min=0,082м
L0X=4320мм
350
300
250
200
150
100
50
0
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
e

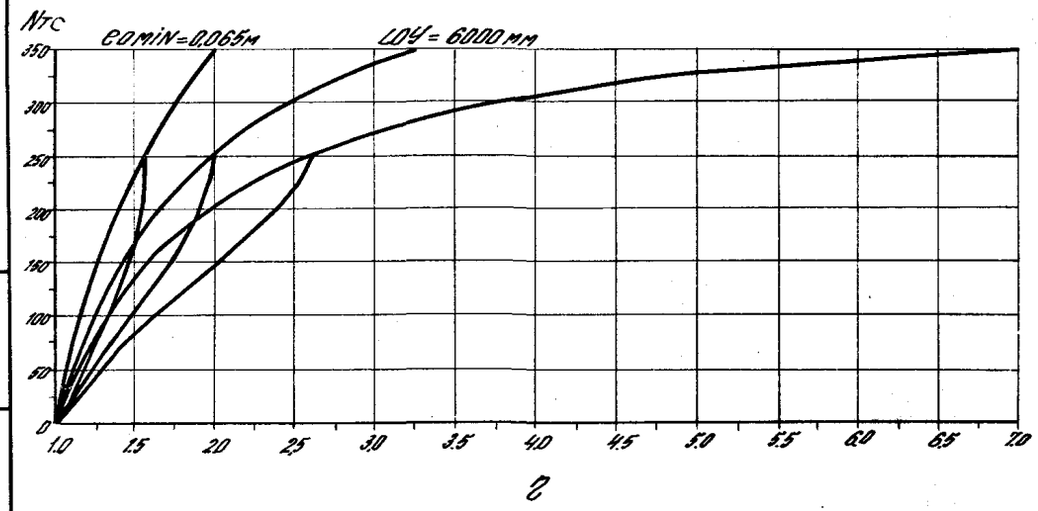

Nтс
e0min=0,077м
L0X=4860мм
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300
250
200
150
100
50
0
1.0
1.1
1.2
1.3
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2.3
2.4
2.5
e

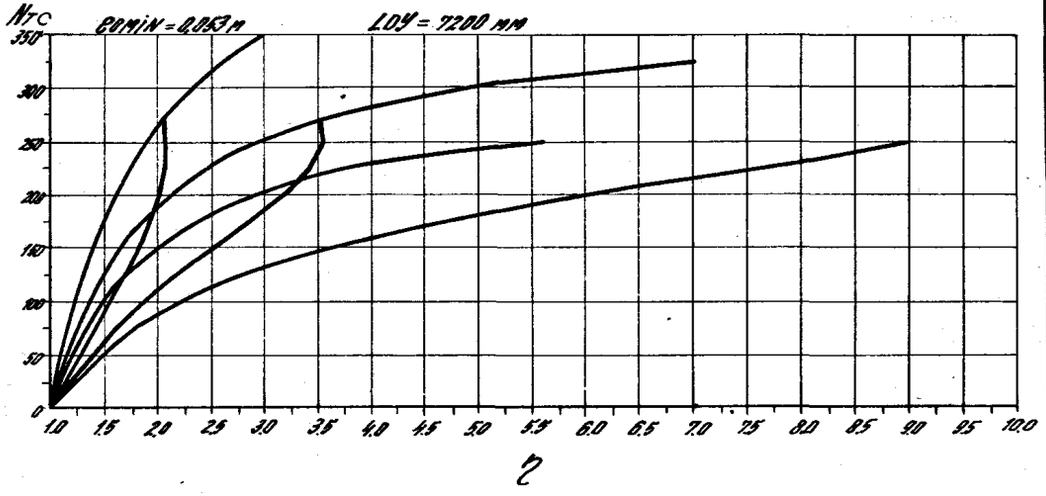

Nтс
e0min=0,077м
L0Y=4860мм
350
300
250
200
150
100
50
0
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
e


Nтс
e0min=0,077м
L0Y=5400мм
350
300
250
200
150
100
50
0
1.0
1.2
1.4
1.6
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2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
e

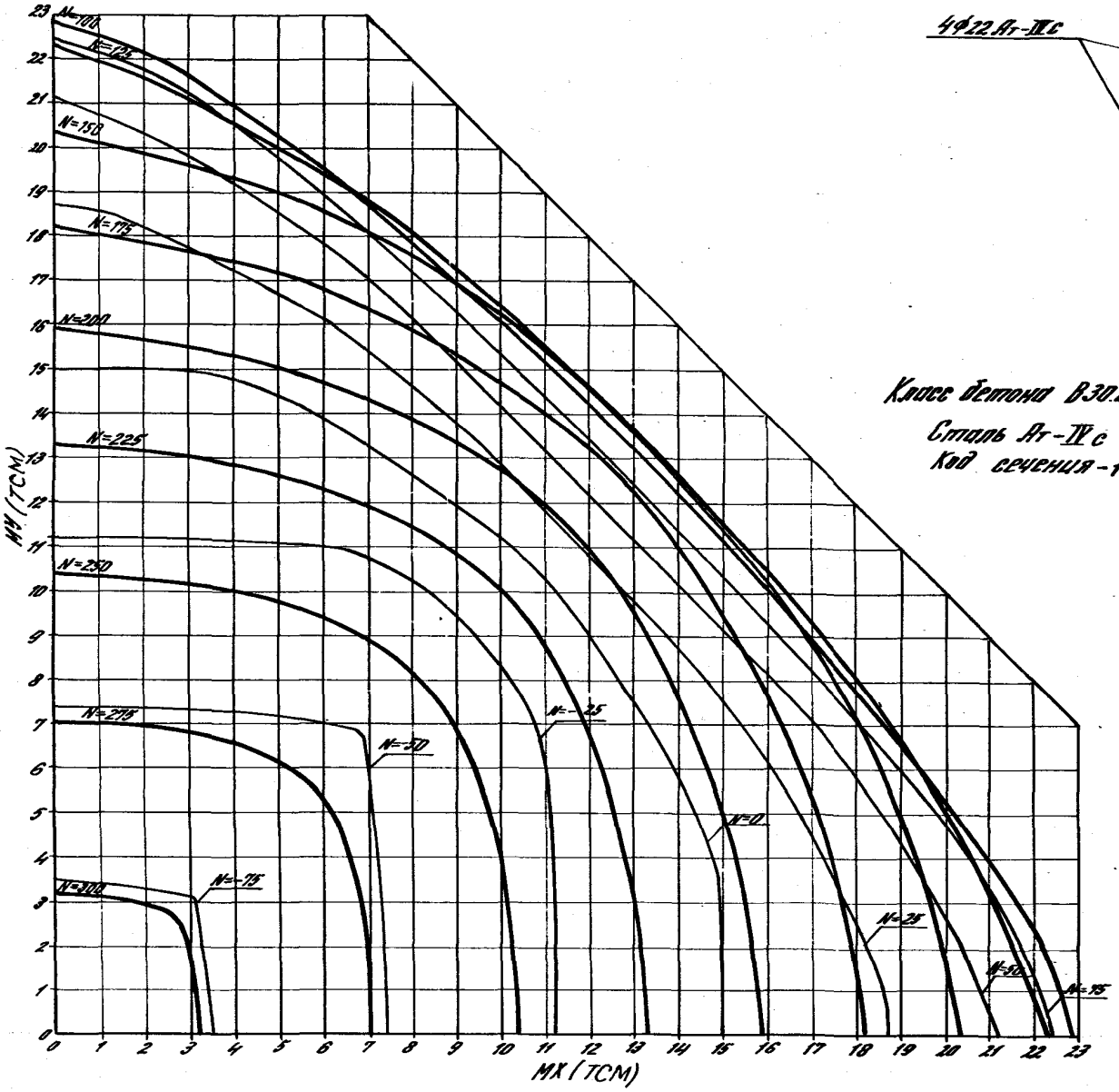


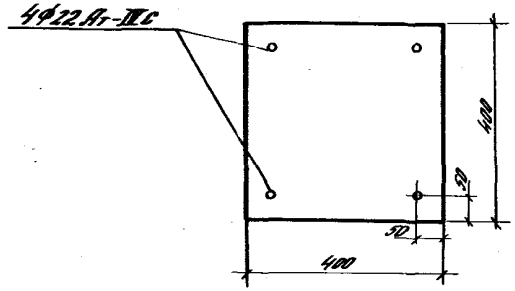




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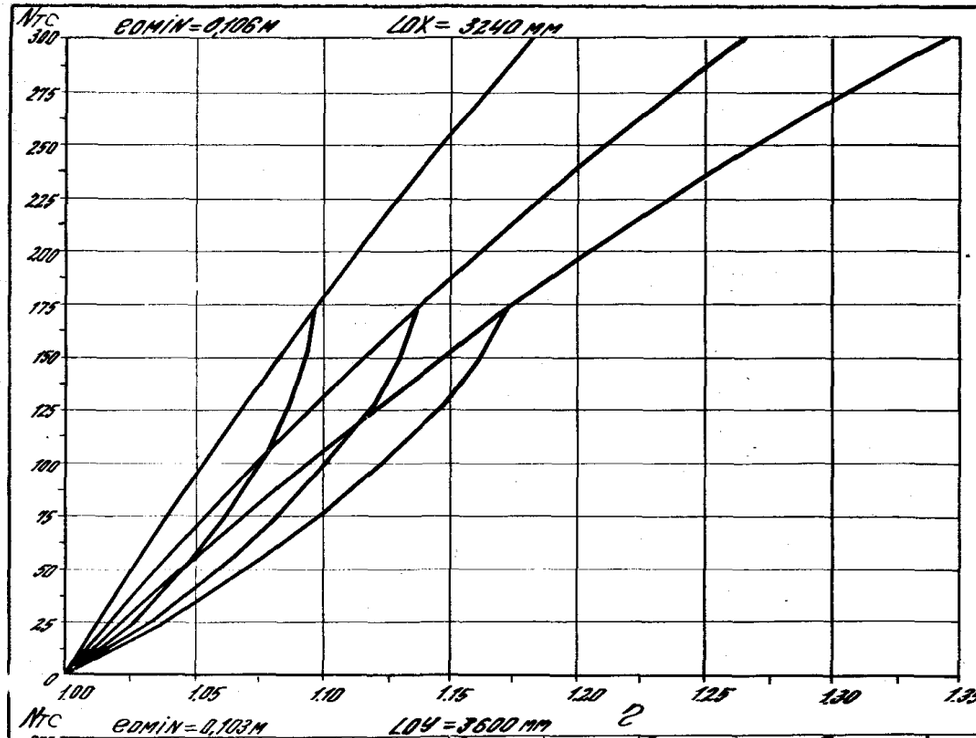

Класс бетона В30.0 (Rв=15.3 МПа при учете $\gamma_{b2}$=0.90)

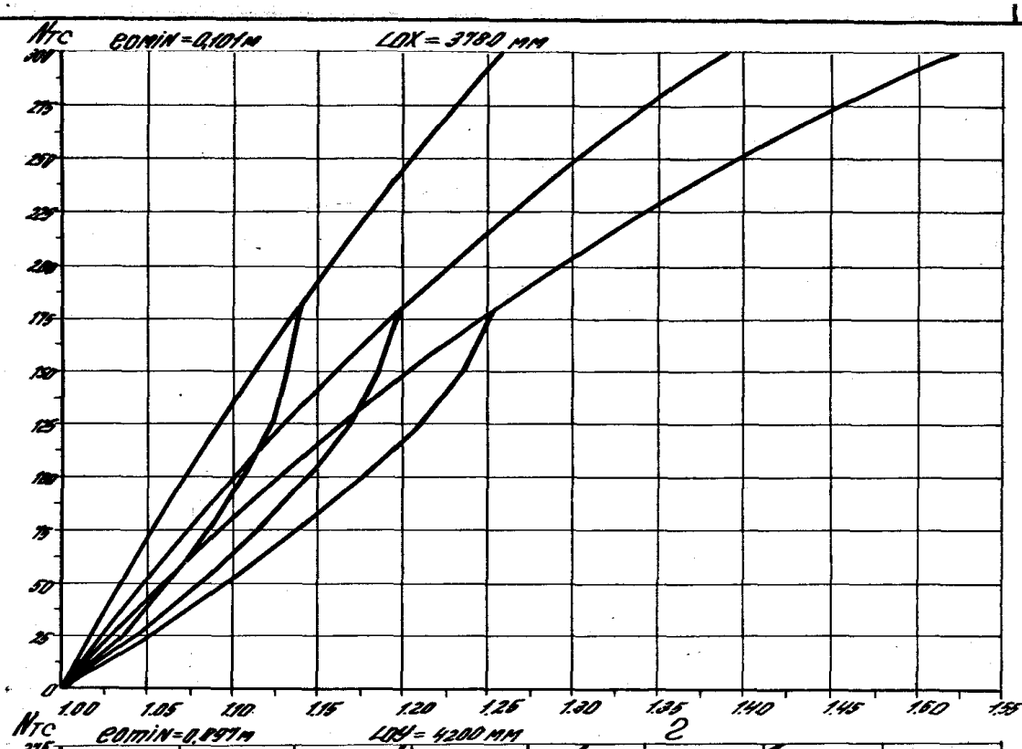
Сталь Ат-IVс

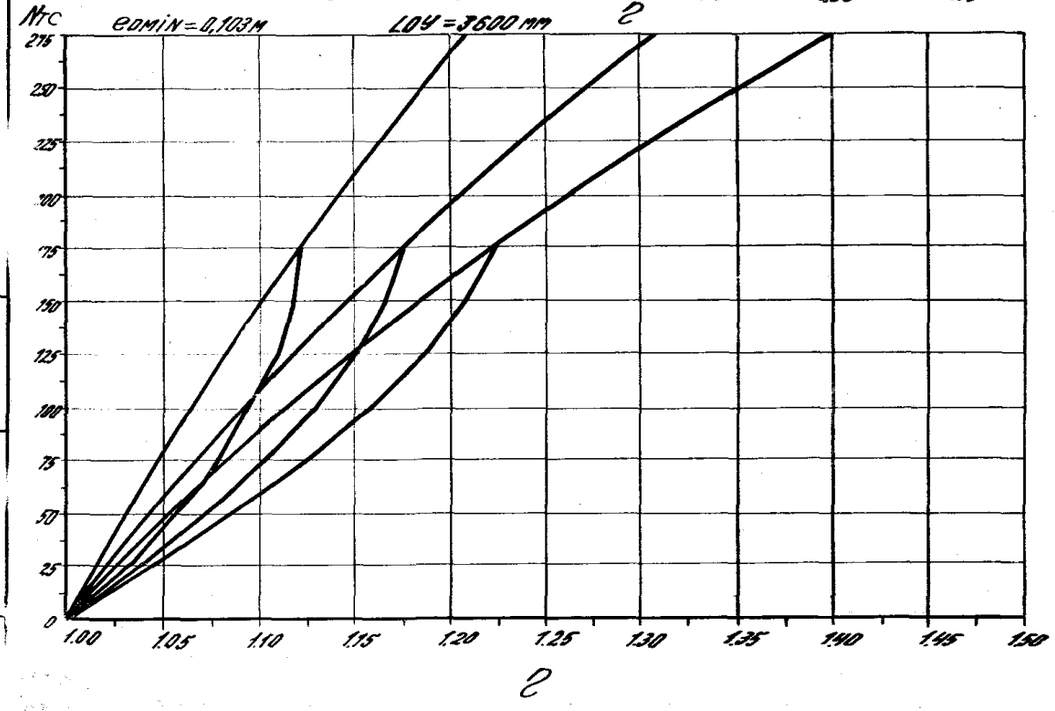
Код сечения - 111б

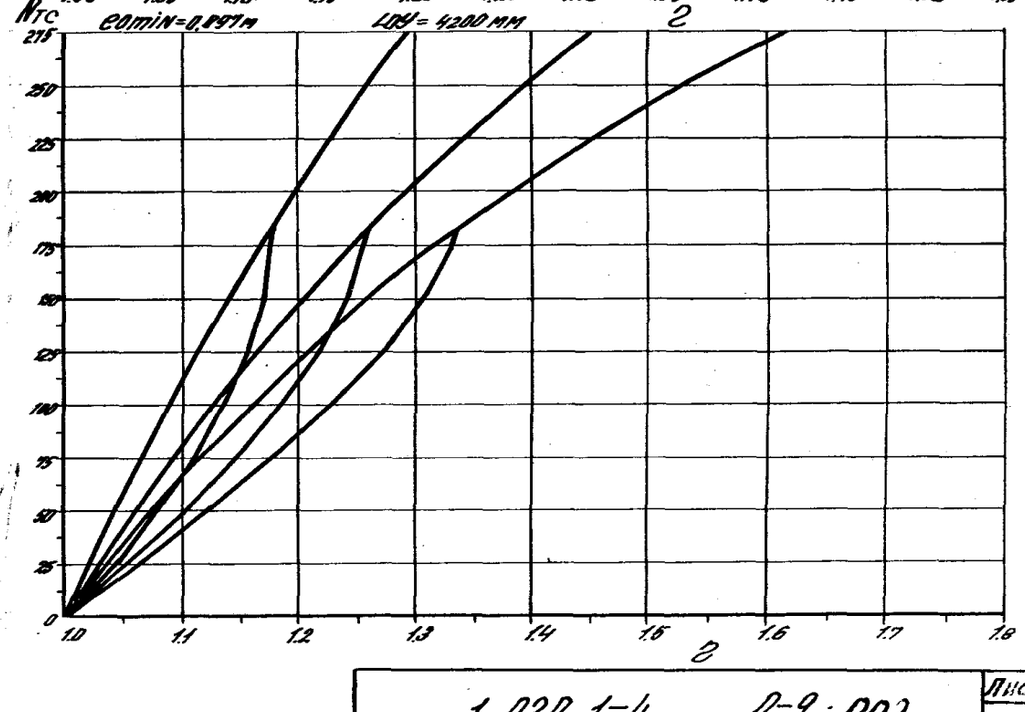
| | | | |
|---|---|---|---|
| 1.020.1-4 | 0-9 002 | Лист | 85 |

Инв.№ подл. | Подпись и дата | Взам.инв.№



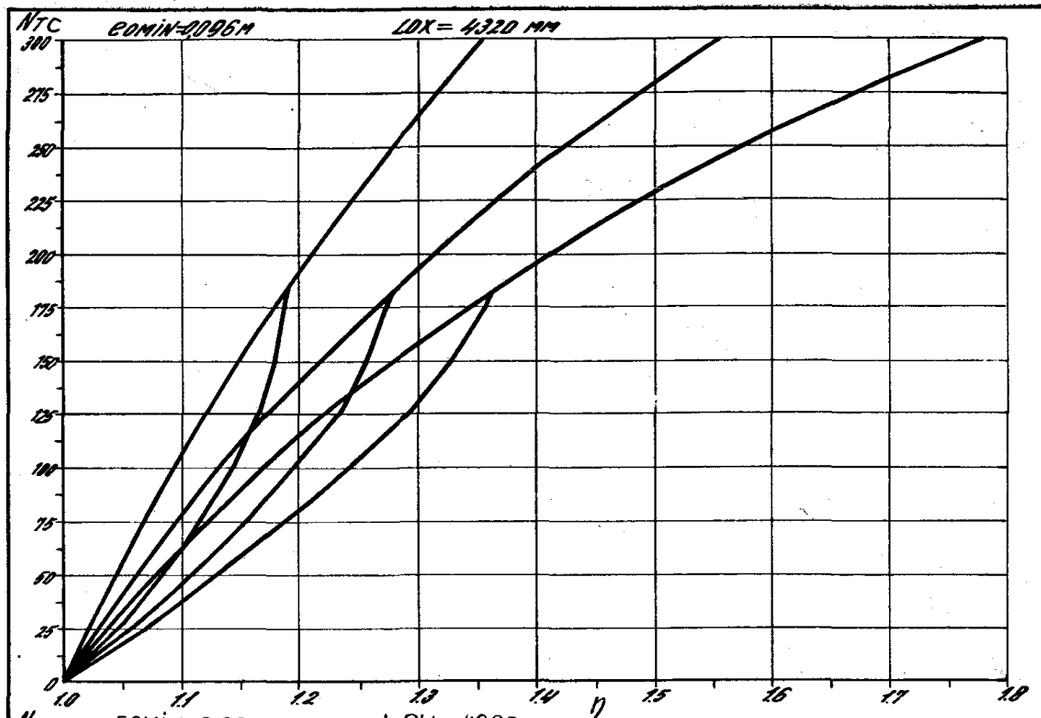



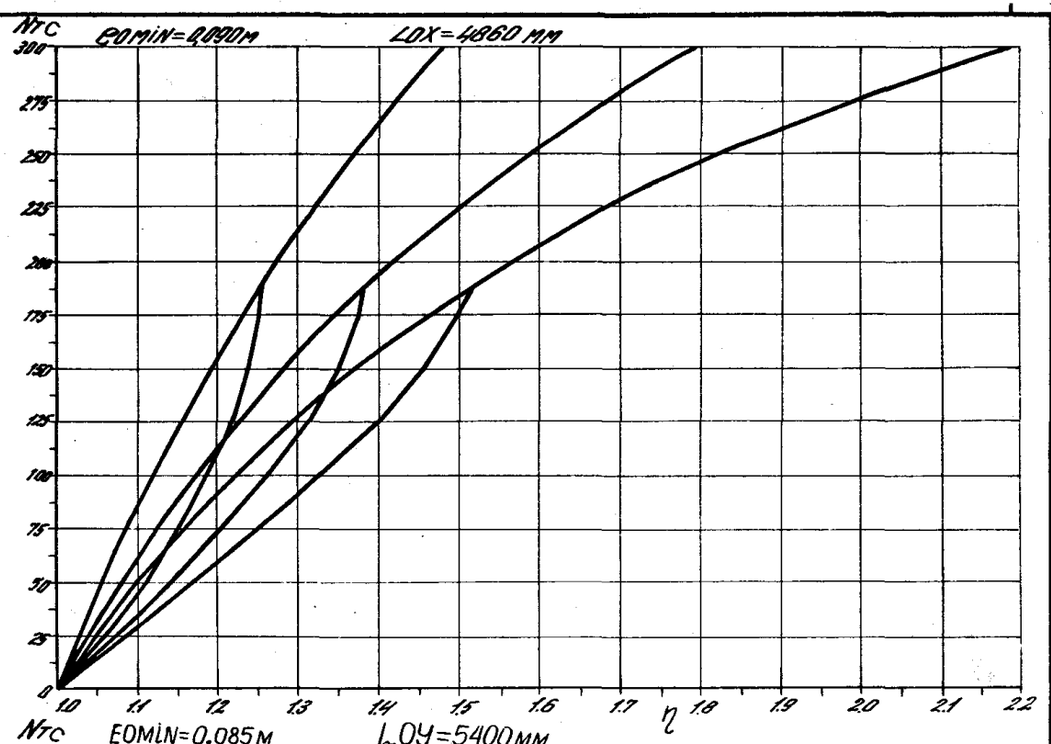



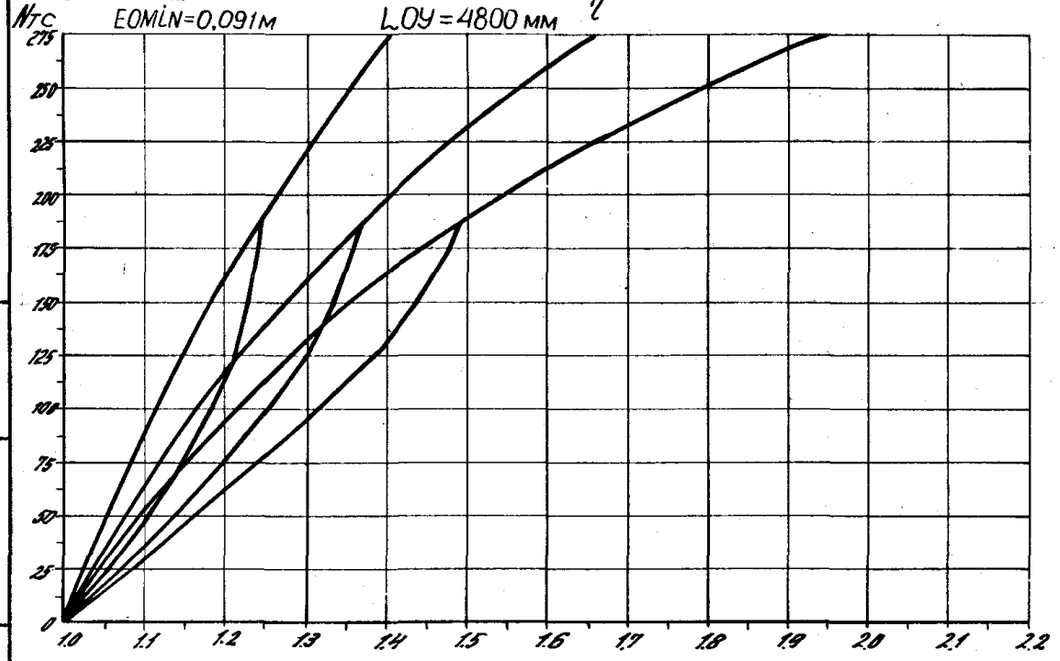



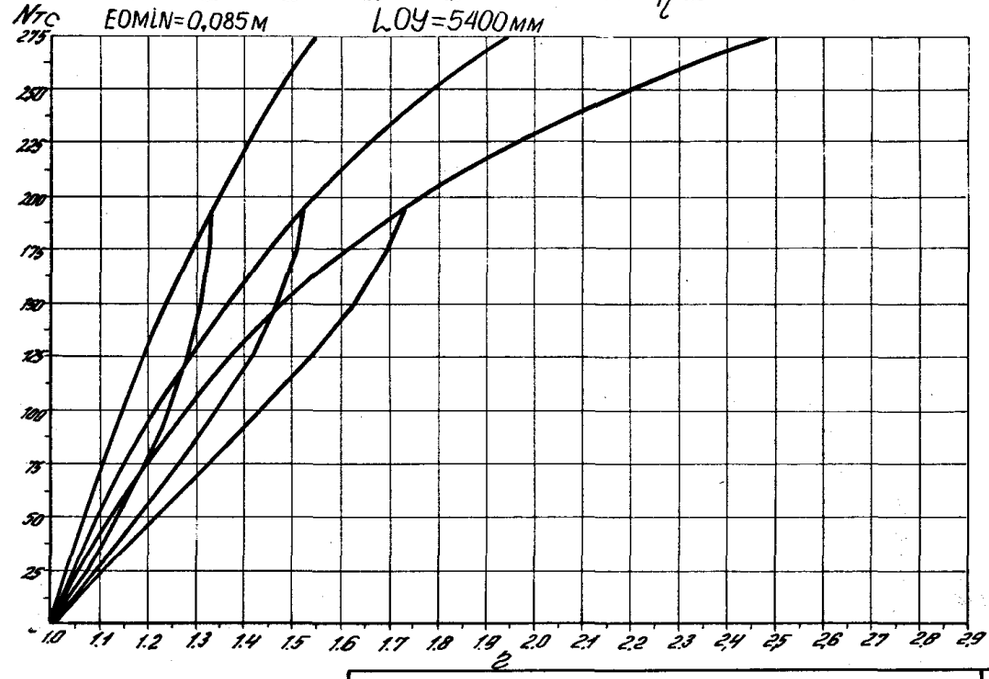

Инв. № подл.

| 1.020.1-4 0-9·002 | Лист 86 |
|---|---|



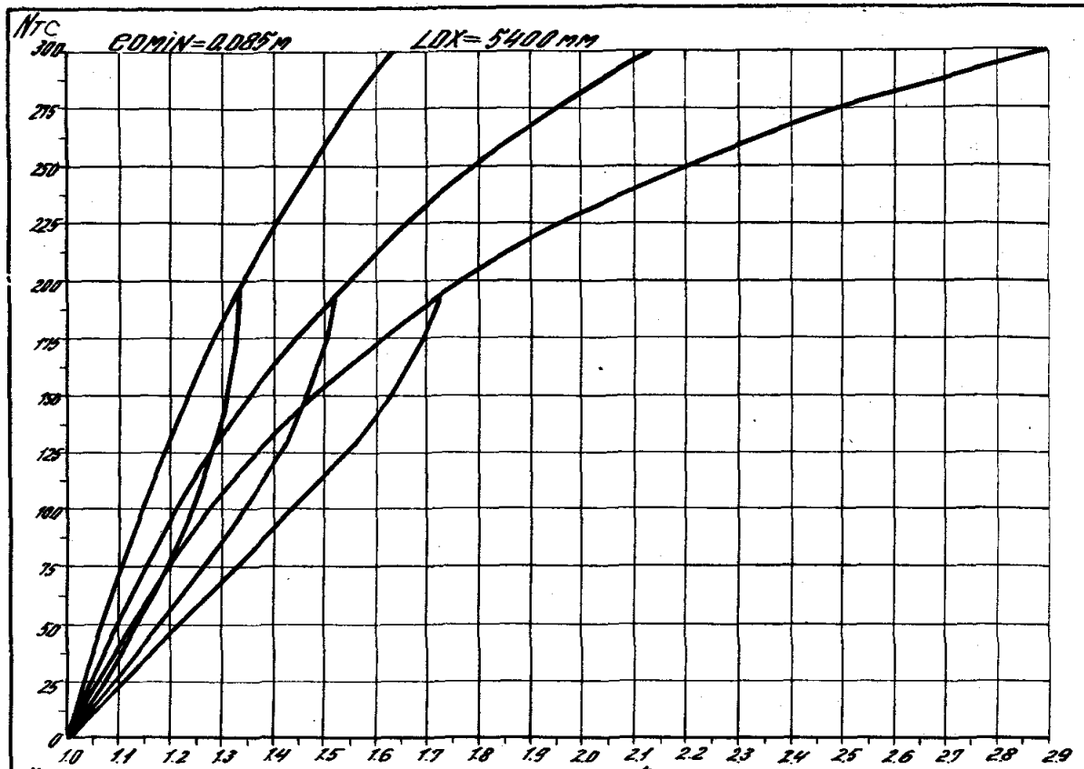



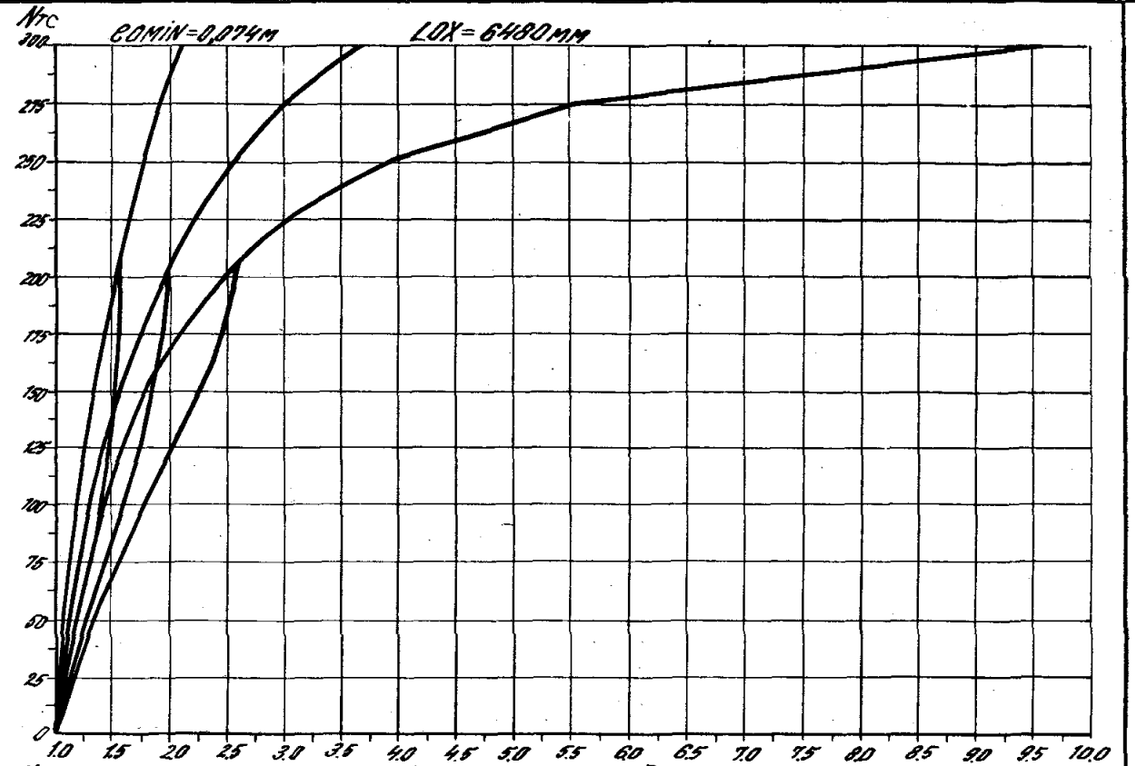



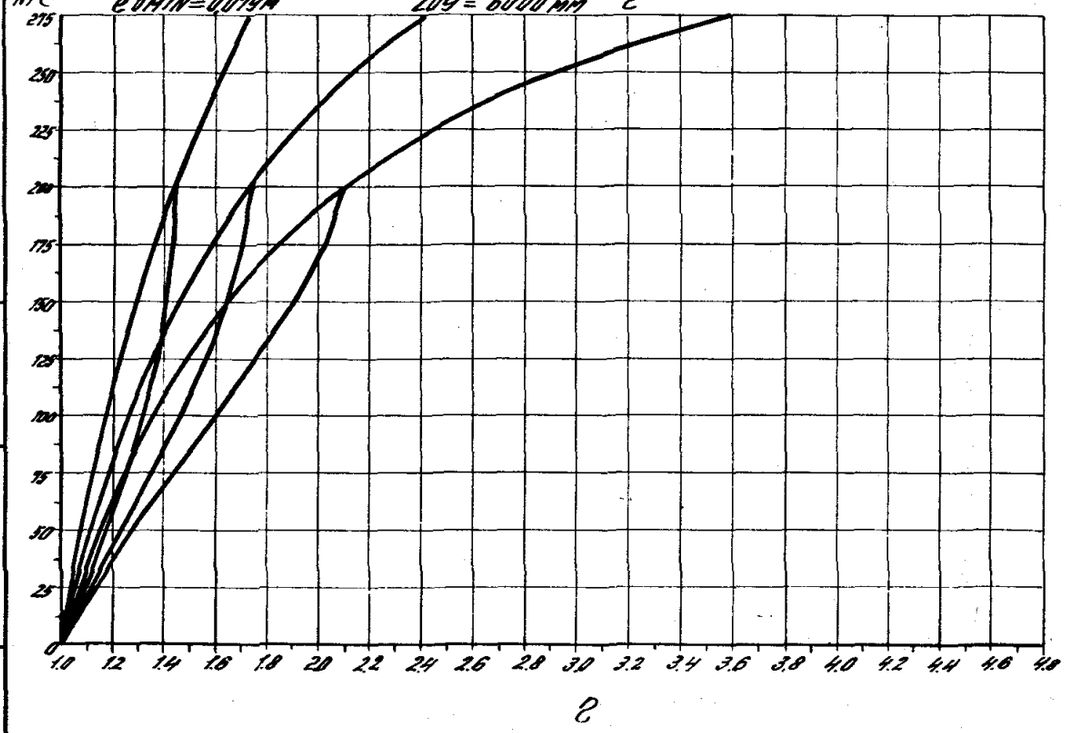

2

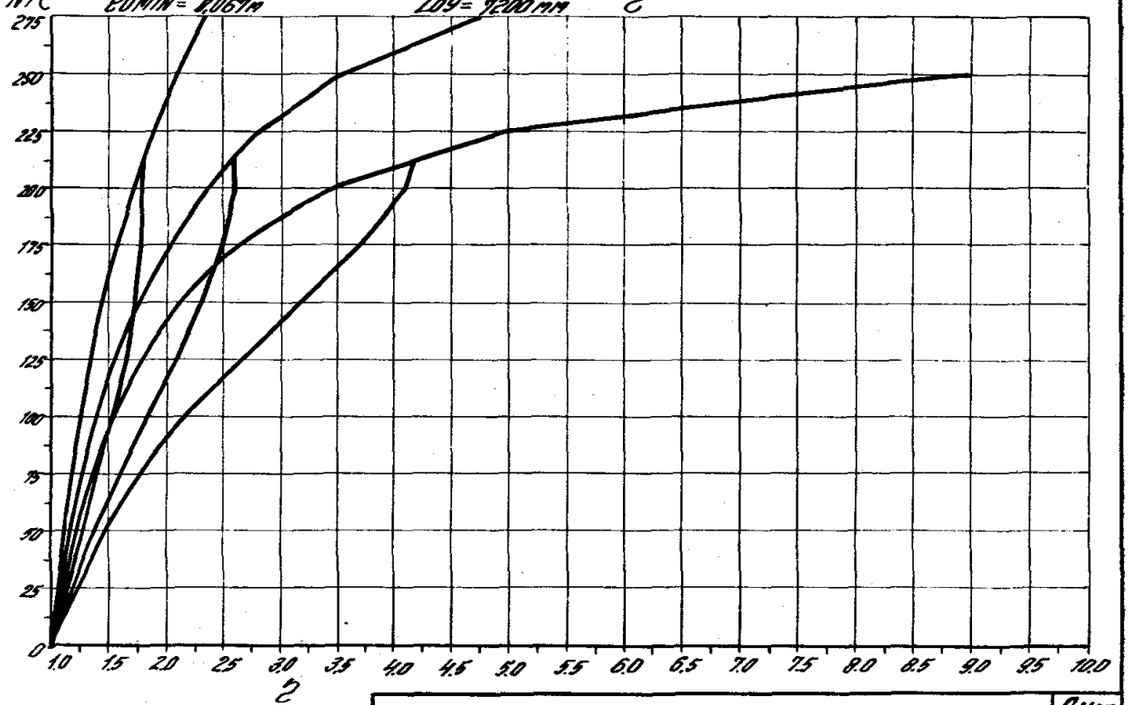
1.020.1-4 0-9 002

Лист 87



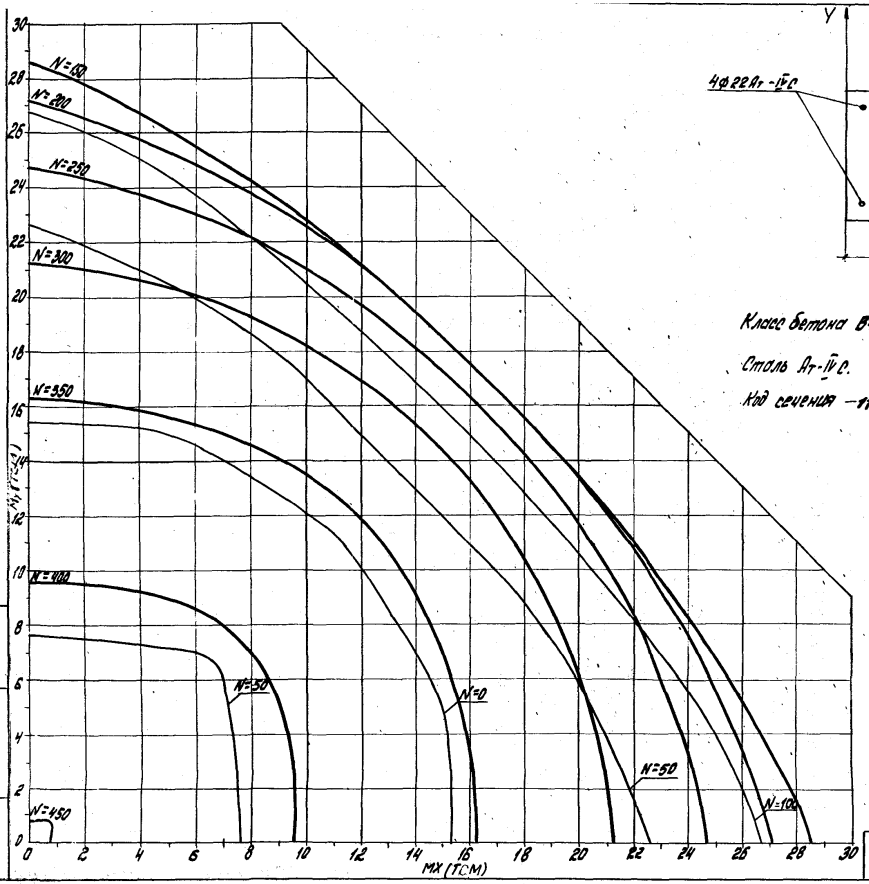



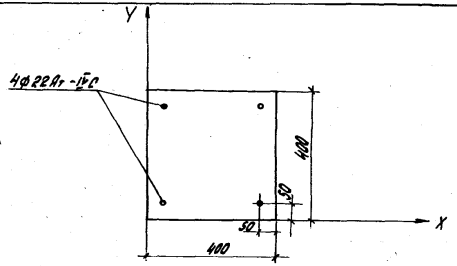




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Лист 88



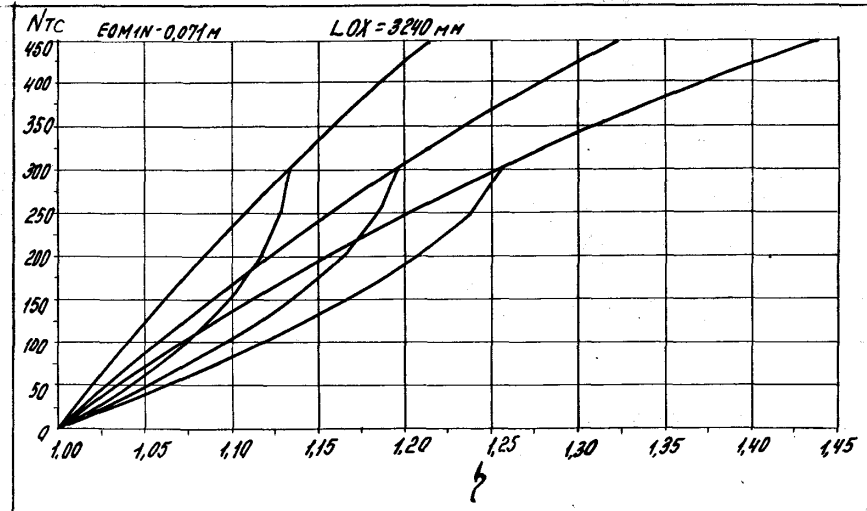



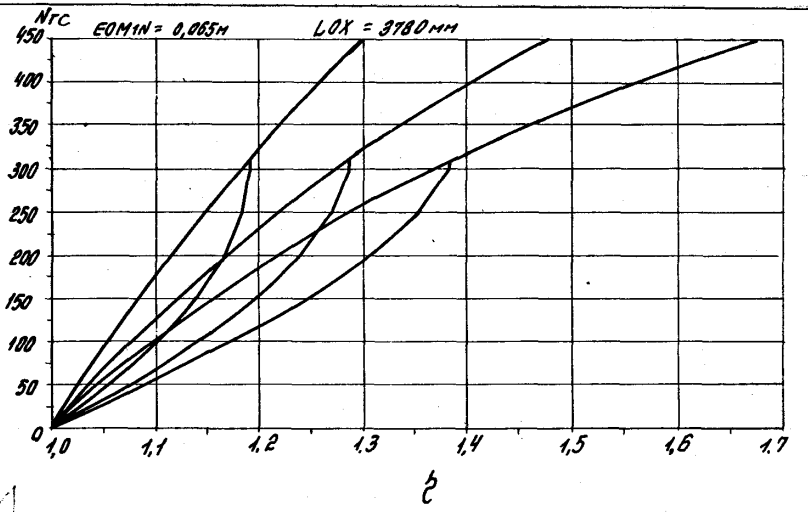

Класс бетона В40,0 ($R_B$ = 24,2 МПа при учете $\gamma_{b2}$ = 1,10)

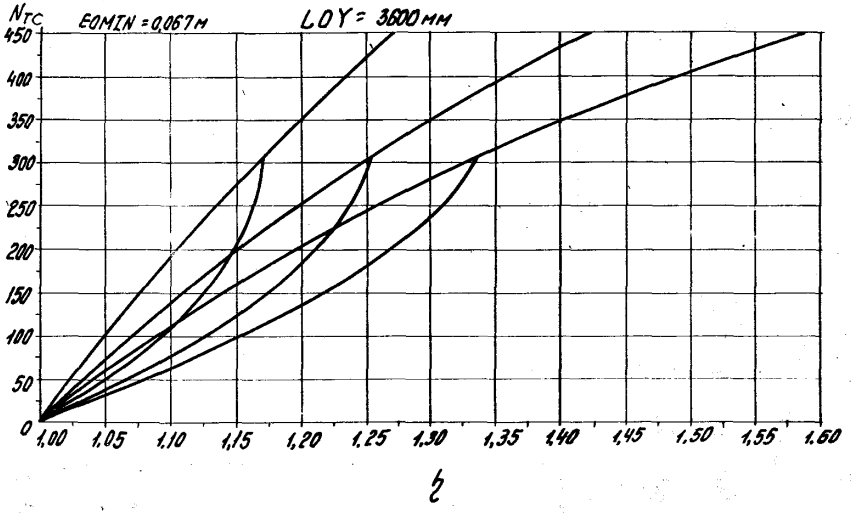
Сталь Ат-IVС.

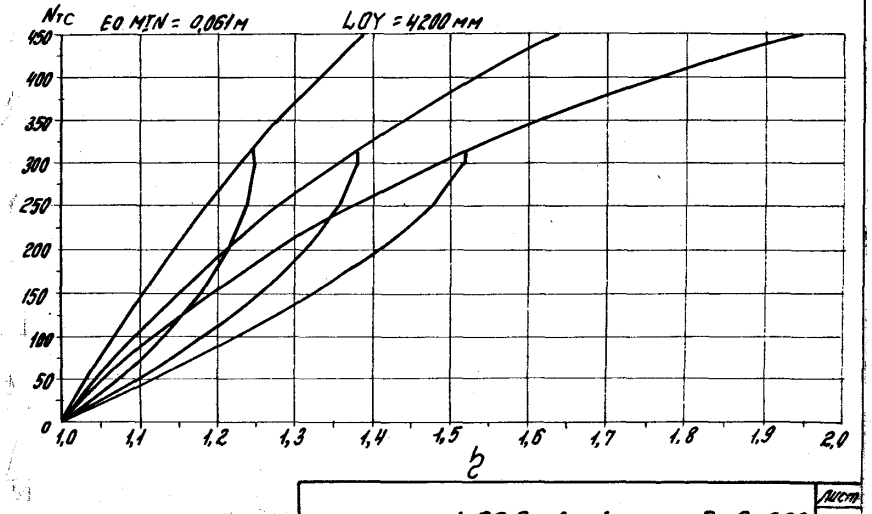
Код сечения – 112а

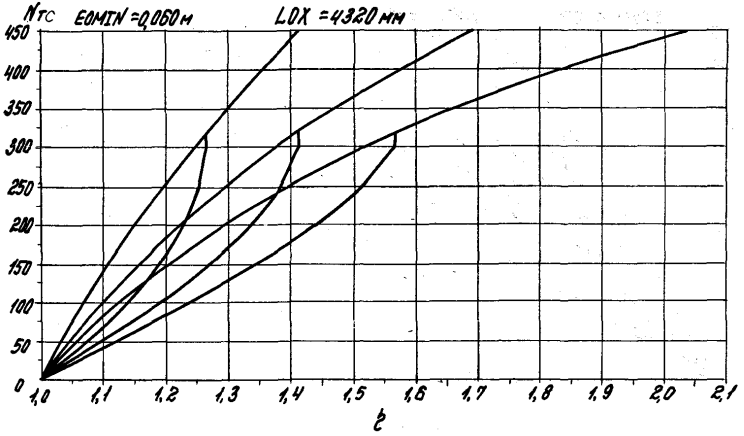
| | | |
|---|---|---|
| 1.020.1-4 | 0-9 002 | Лист 89 |

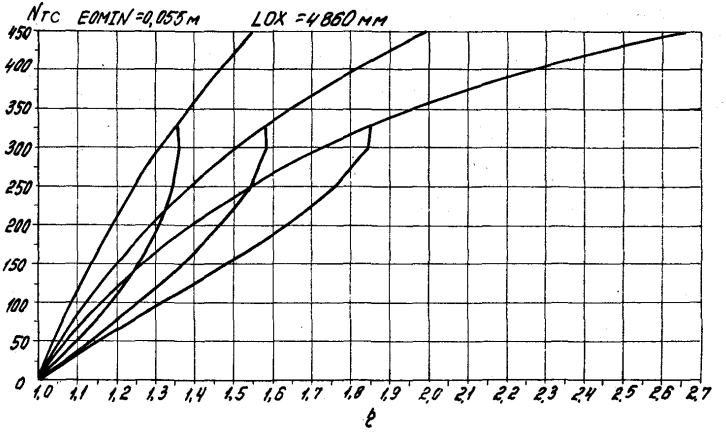

NTC
EOMIN-0,071M
LOX=3240мм
450
400
350
300
250
200
150
100
50
0
1,00
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1,35
1,40
1,45
h

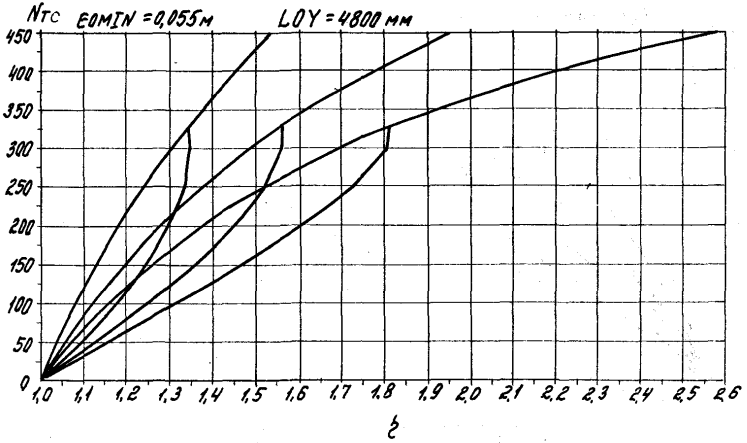

NTC
EOMIN=0,065M
LOX=3780мм
450
400
350
300
250
200
150
100
50
0
1,0
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1,5
1,6
1,7
h

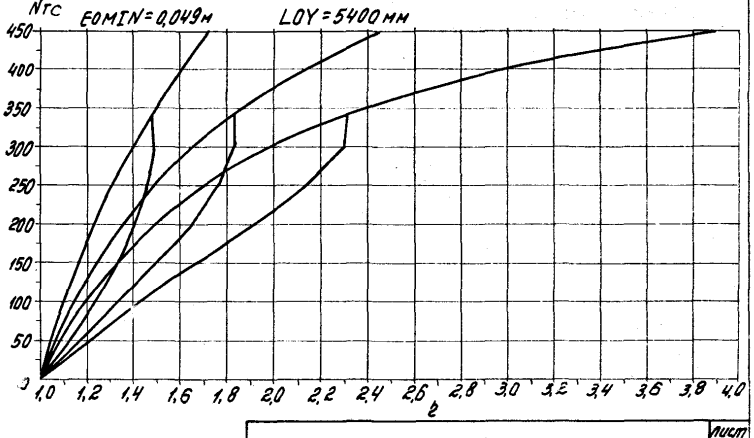

NTC
EOMIN=0,067M
LOY=3600мм
450
400
350
300
250
200
150
100
50
0
1,00
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1,50
1,55
1,60
h

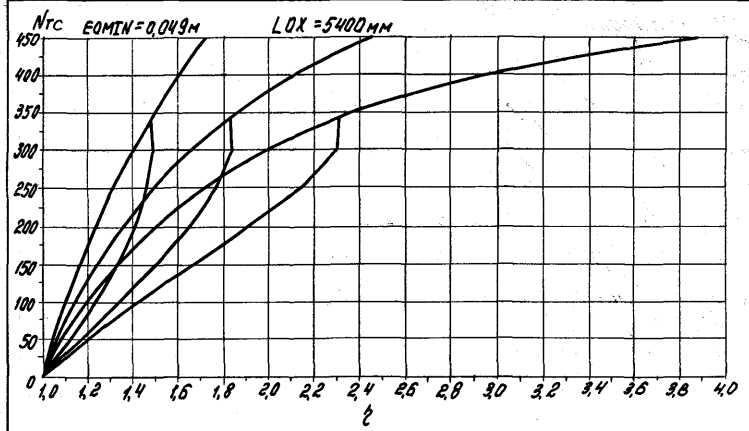

NTC
EO MIN=0,061M
LOY=4200мм
450
400
350
300
250
200
150
100
50
0
1,0
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
2,0
h

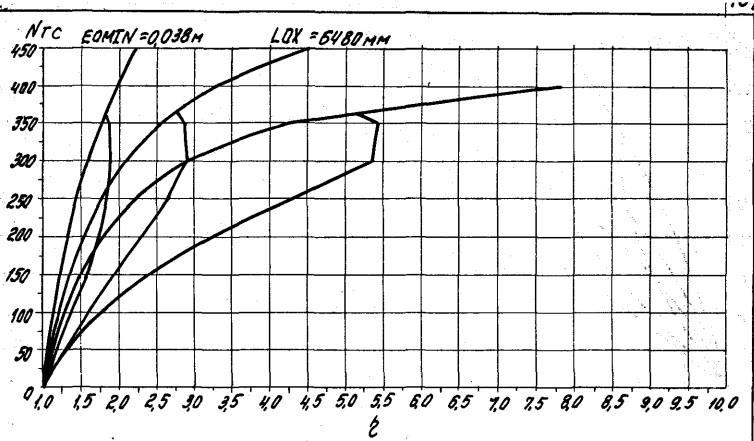

Nтс
e0min=0,060м
Lox=4320мм
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1
ℓ

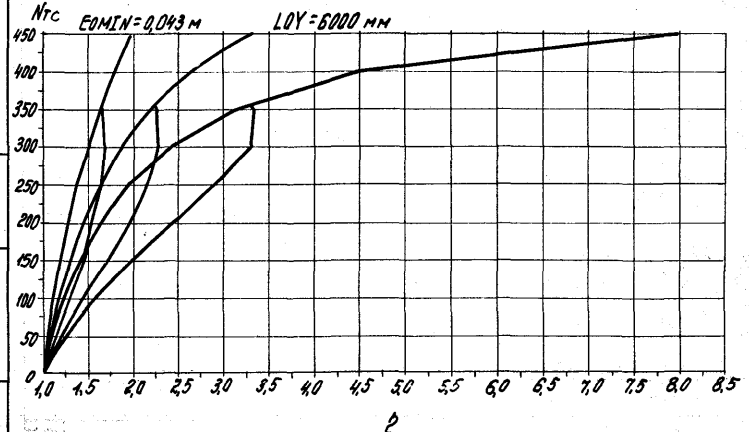

Nтс
e0min=0,055м
Lox=4860мм
450
400
350
300
250
200
150
100
50
0
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ℓ

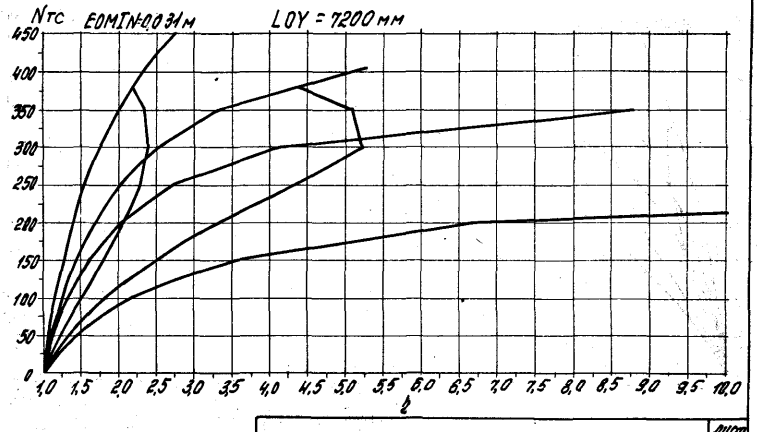

Nтс
e0min=0,055м
Loy=4800мм
450
400
350
300
250
200
150
100
50
0
1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9 2,0 2,1 2,2 2,3 2,4 2,5 2,6
ℓ


Nтс
e0min=0,049м
Loy=5400мм
450
400
350
300
250
200
150
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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

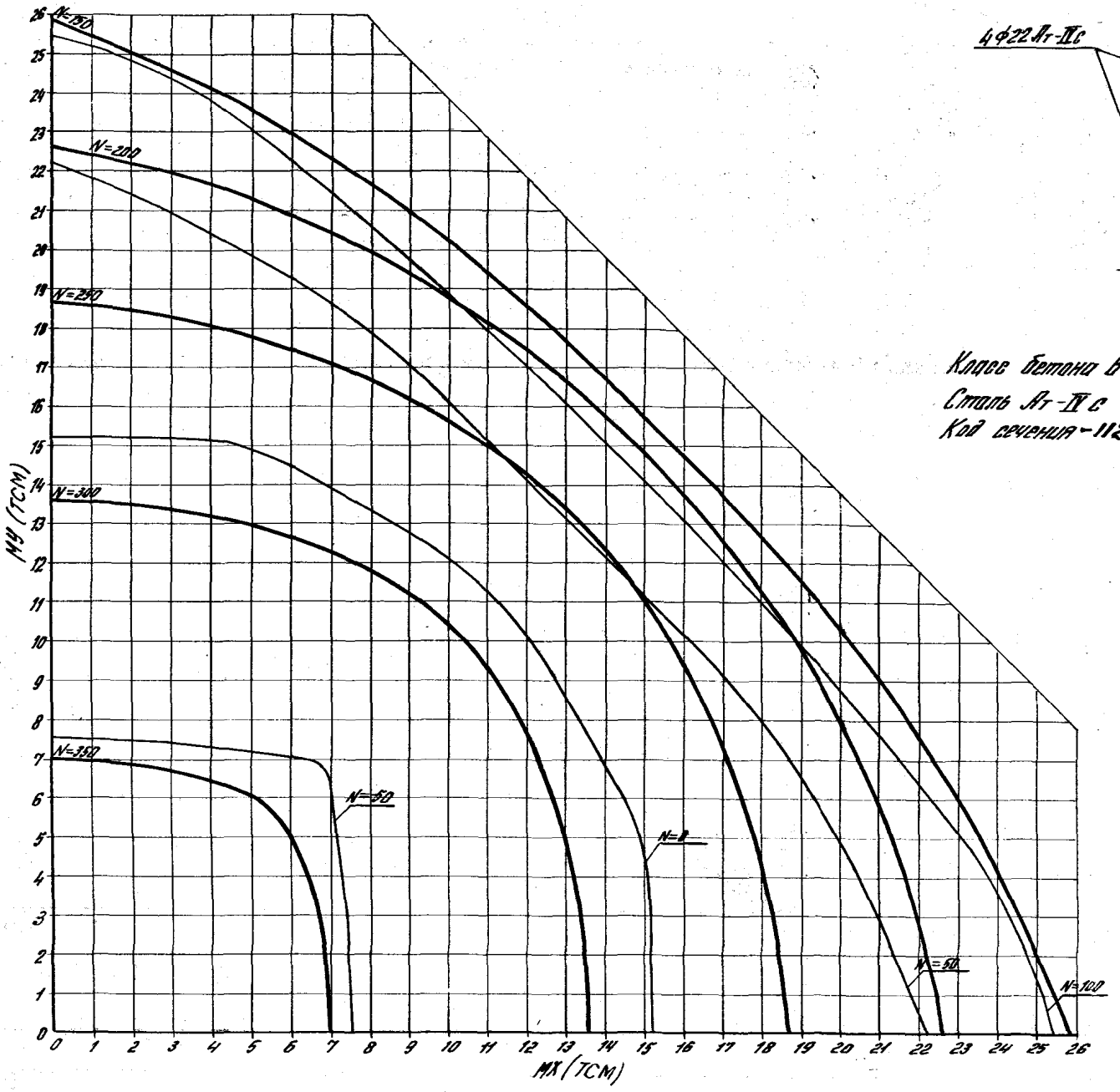


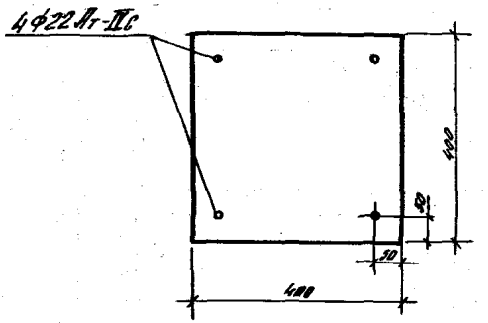




Инв. № подл. | Подпись и дата | Взам. инв. №



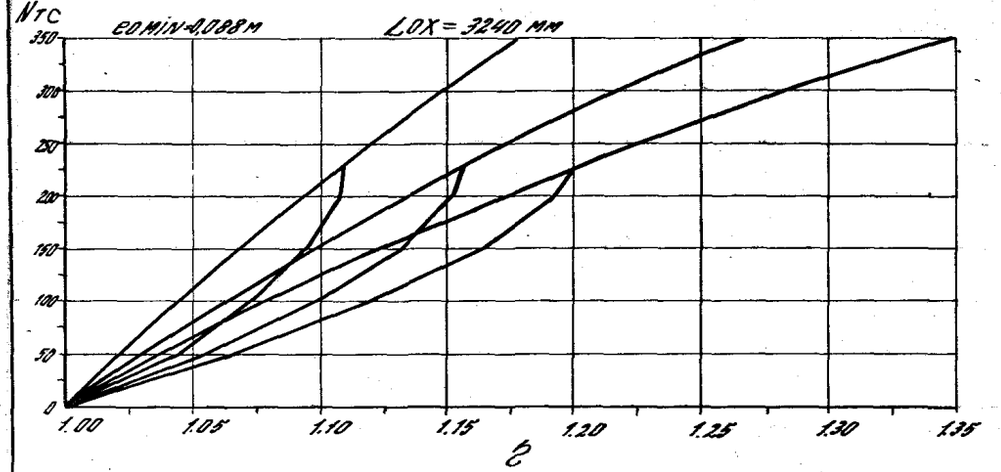

Класс бетона В40,0 ($R_B$ = 19,8 МПа при учете $\gamma_{b2}$ = 0,90)
Сталь Ат-IIIс
Код сечения - 112 б

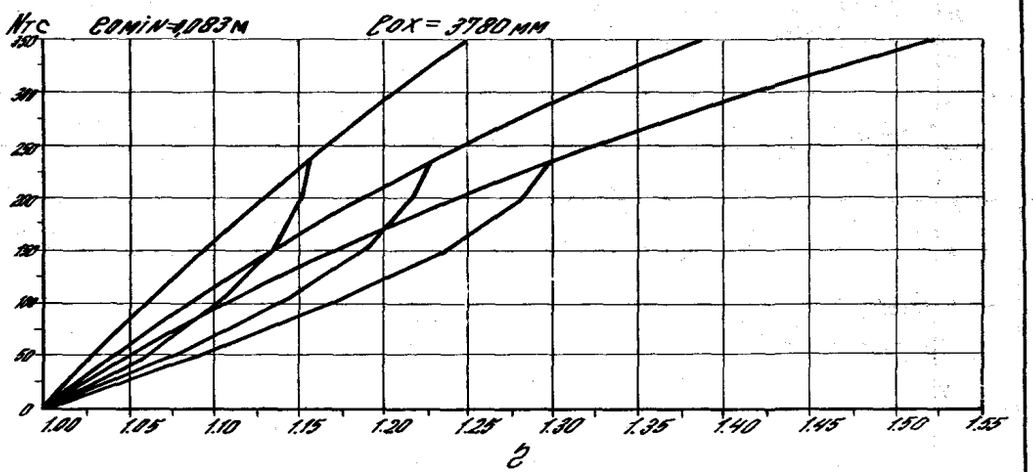
| Инв. № подл. | Подпись и дата | Взам. инв. № |
|---|---|---|

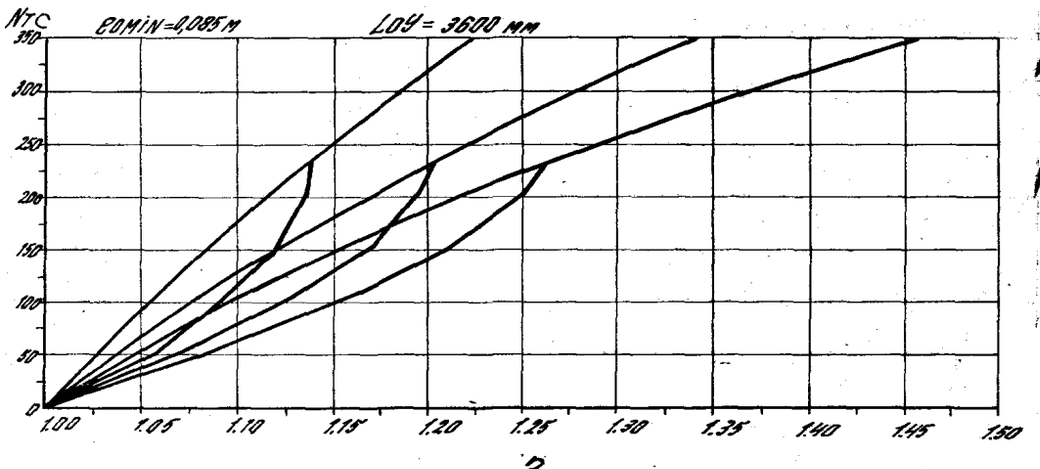
1.020.1-4 0-9 002

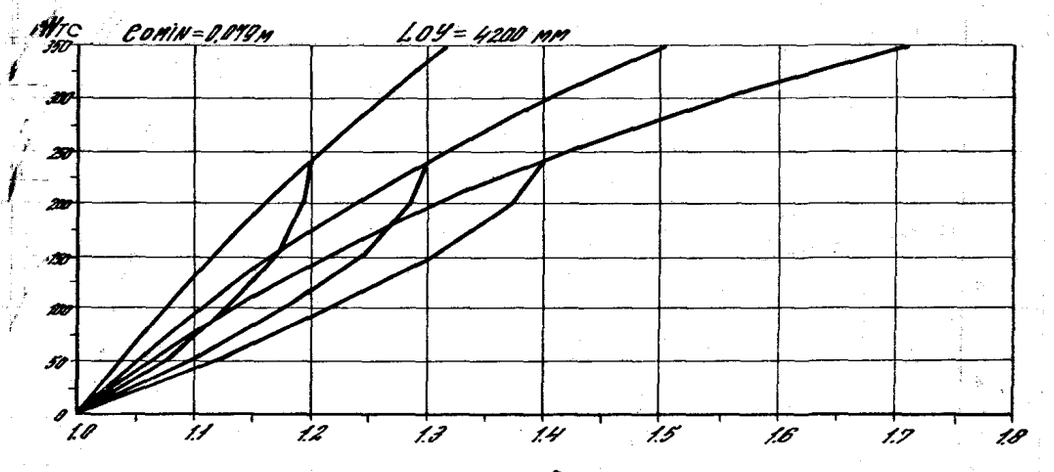
Лист 93

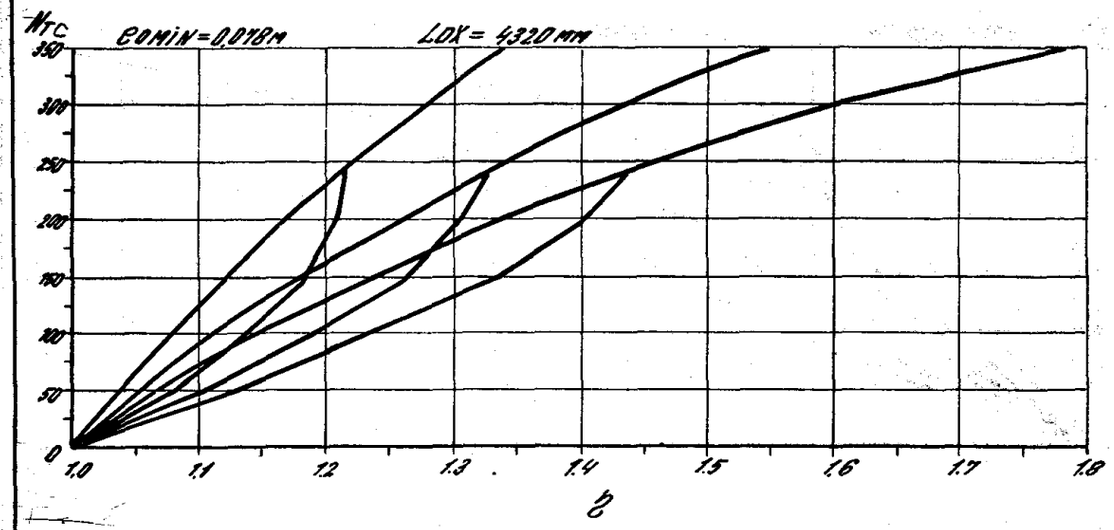
24166-01 100


Nтс
e0min=0,088м
L0x = 3240 мм
350
300
250
200
150
100
50
0
1.00
1.05
1.10
1.15
1.20
1.25
1.30
1.35
e

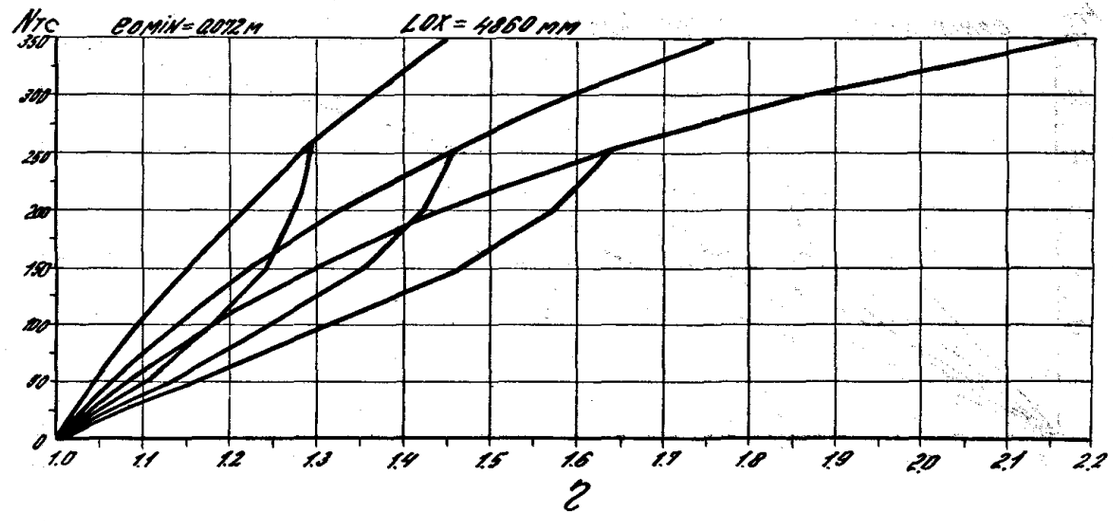

Nтс
e0min=0,083м
L0x = 3780 мм
350
300
250
200
150
100
50
0
1.00
1.05
1.10
1.15
1.20
1.25
1.30
1.35
1.40
1.45
1.50
1.55
e


Nтс
e0min=0,085м
L0y = 3600 мм
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
e

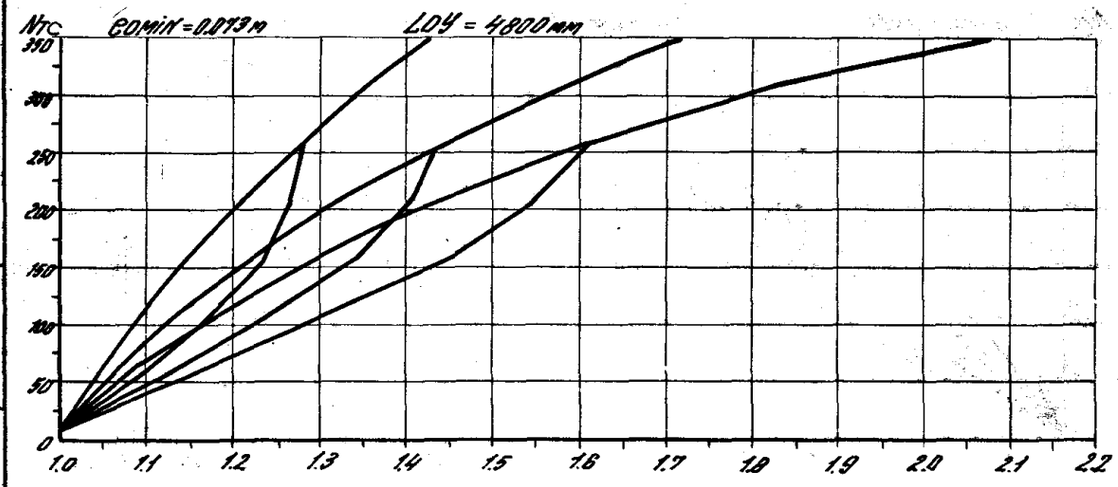

Nтс
e0min=0,079м
L0y = 4200 мм
350
300
250
200
150
100
50
0
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
e


$N_{TC}$
$e_{0min}$=0,018м
$L_{0X}$ = 4320 мм
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

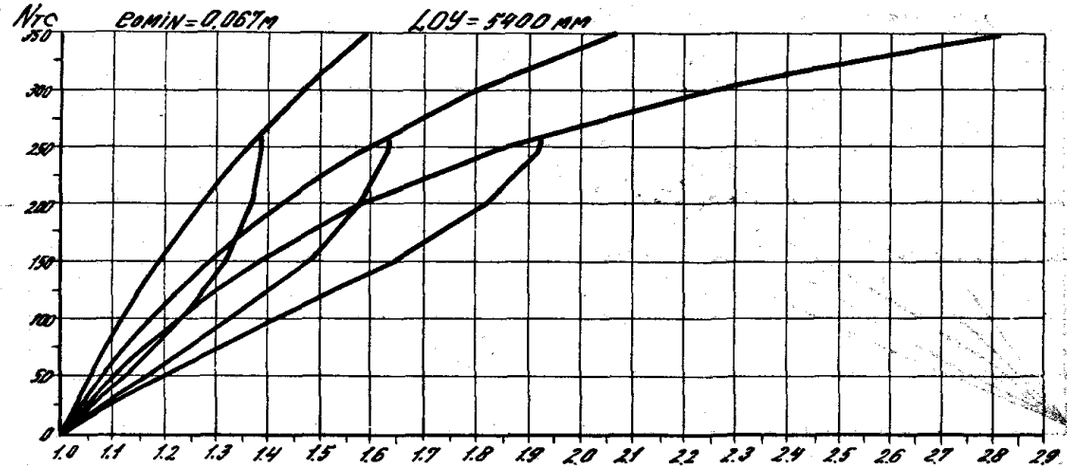
б


$N_{TC}$
$e_{0min}$=0,072м
$L_{0X}$ = 4860 мм
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

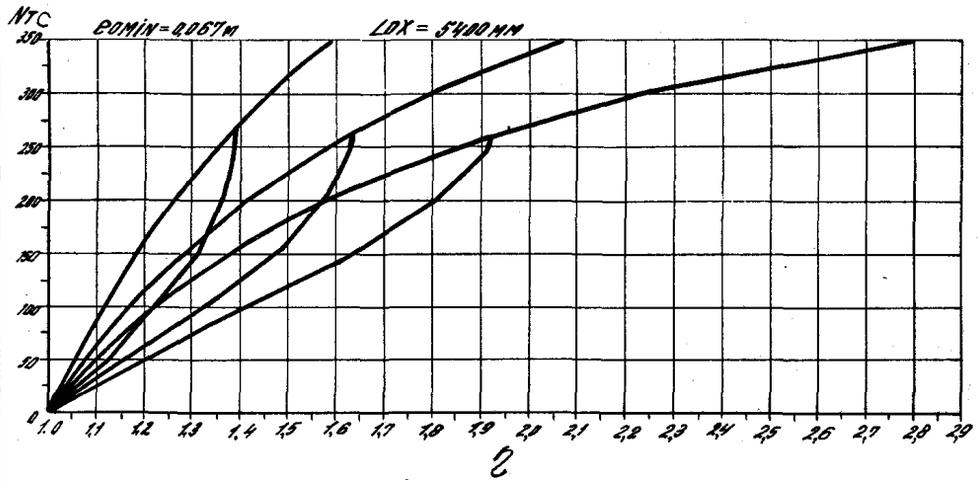
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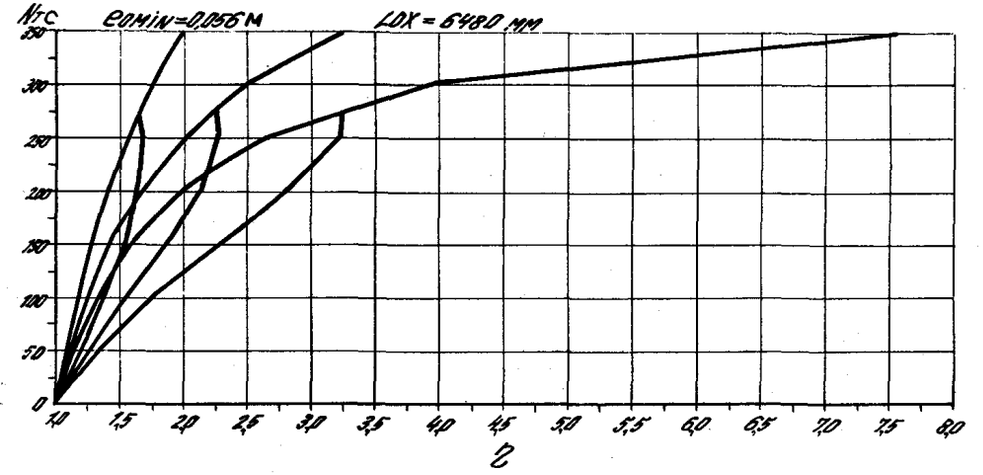

$N_{TC}$
$e_{0min}$=0,073м
$L_{0Y}$ = 4800 мм
350
300
250
200
150
100
50
0
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2

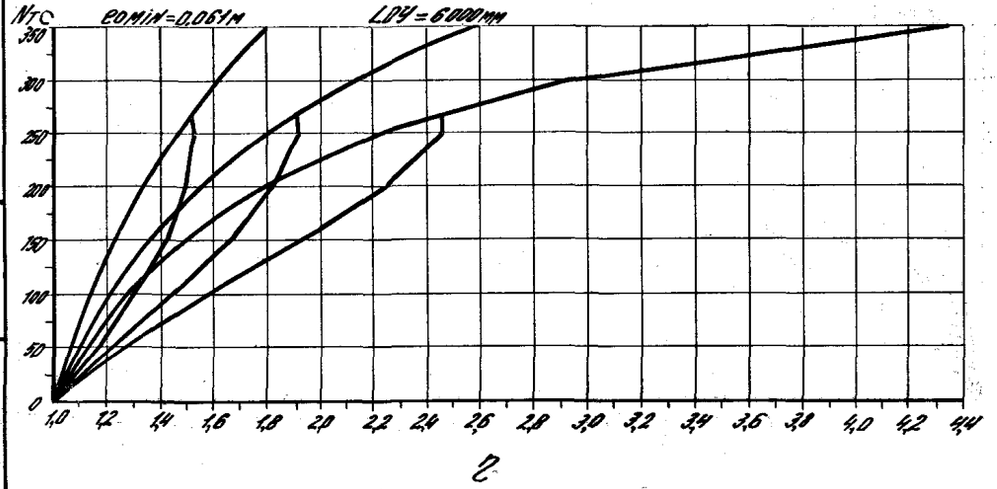
г

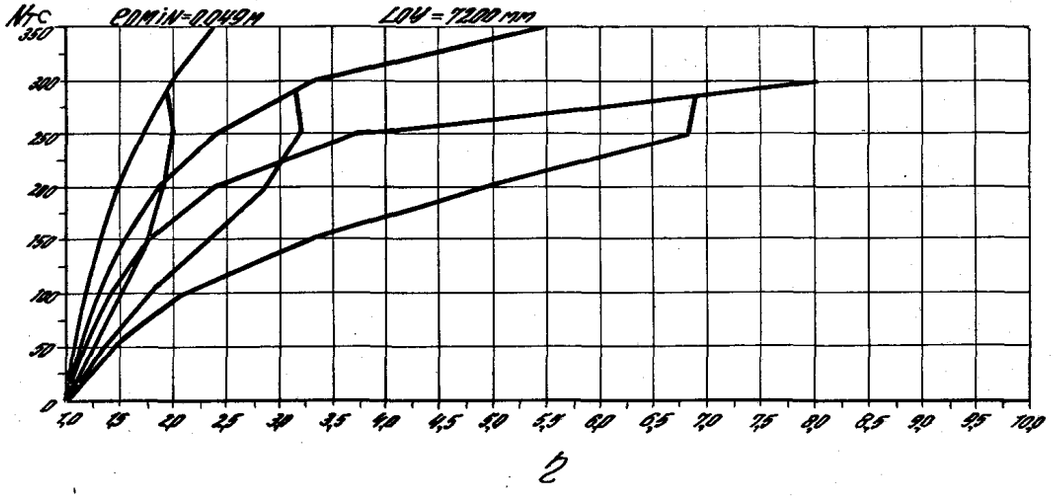

$N_{TC}$
$e_{0min}$=0,067м
$L_{0Y}$ = 5400 мм
350
300
250
200
150
100
50
0
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9

г




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