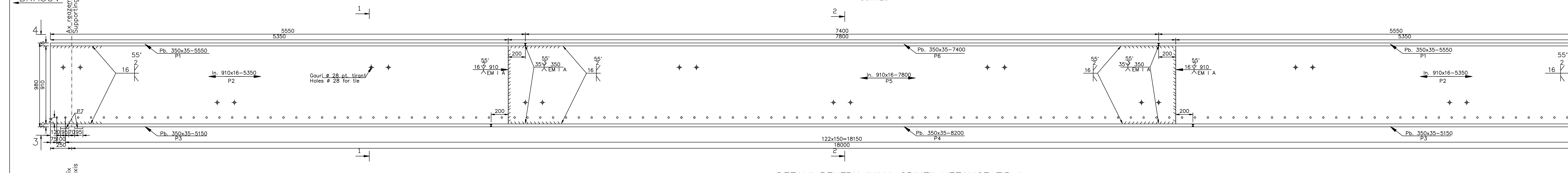
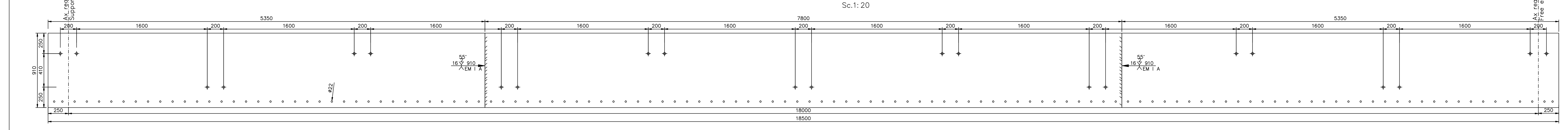
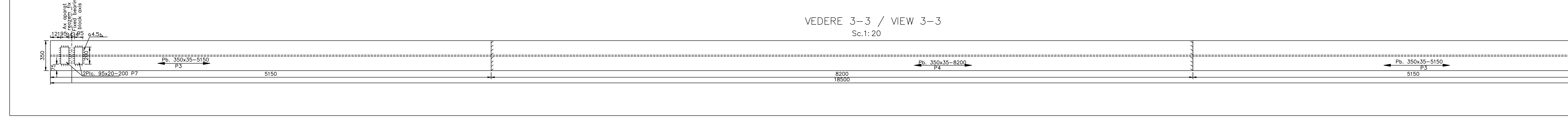
ELEVATIE GRINDA METALICA TIP 1
ELEVATION OF THE METALLIC GIRDER TYPE 1
Sc.1:20

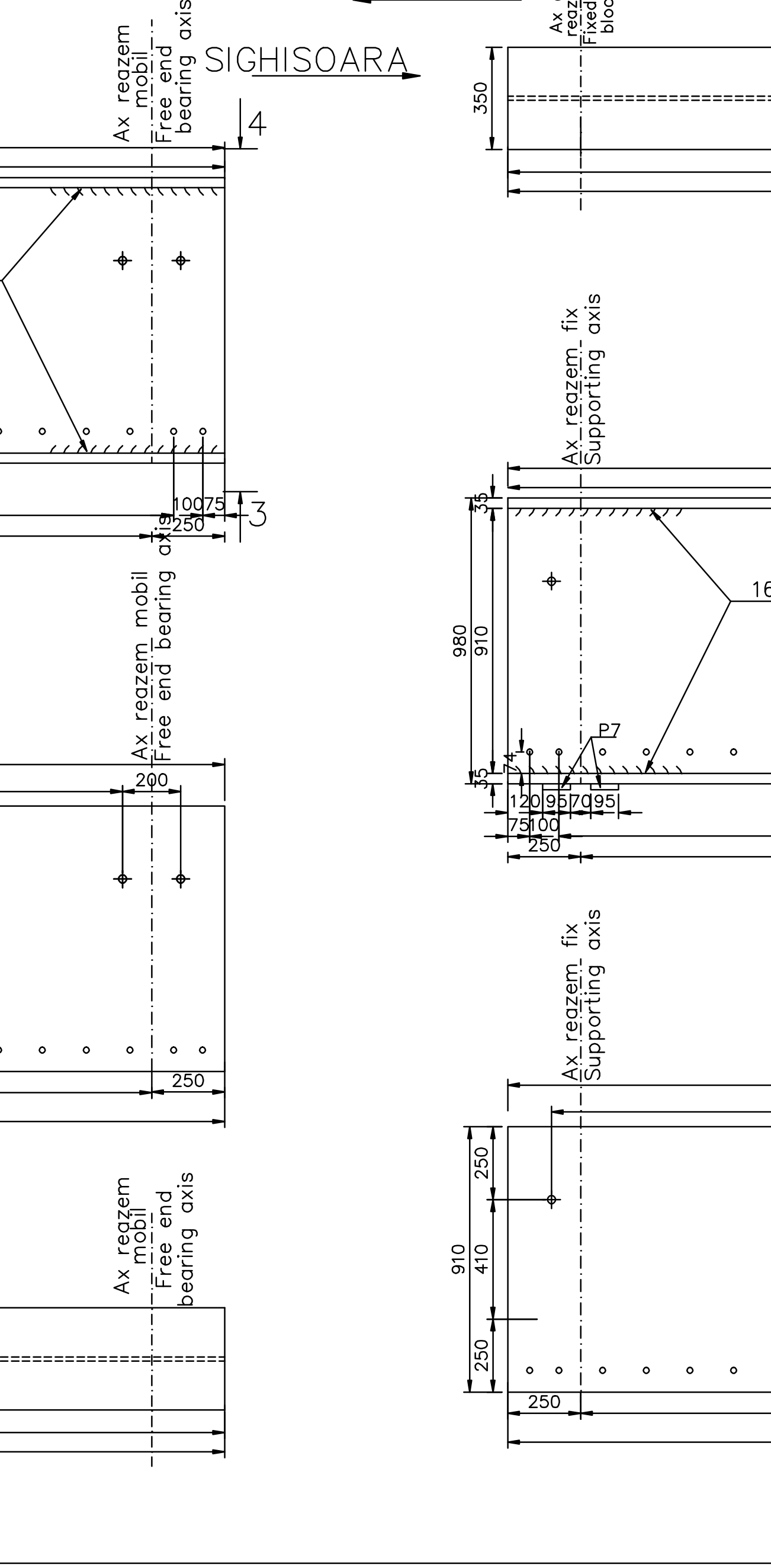

BRASOV
SIGHISOARA
Ax reazem fix
Supporting axis
Ax reazem mobil
Free end bearing axis
5550
5350
7400
7800
Pb. 350x35-5550
P1
Pb. 350x35-7400
P6
In. 910x16-5350
P2
In. 910x16-7800
P5
Gauri ø 28 pt. tirant
Holes ø 28 for tie
Pb. 350x35-5150
P3
Pb. 350x35-8200
P4
P7
55°
16
EM I A
980
910
200
122x150=18150
18000
250
10075

DETALII PENTRU INIMA GRINZII METALICE TIP 1
DETAILS FOR THE METALLIC GIRDER WEB TYPE 1
Sc.1:20

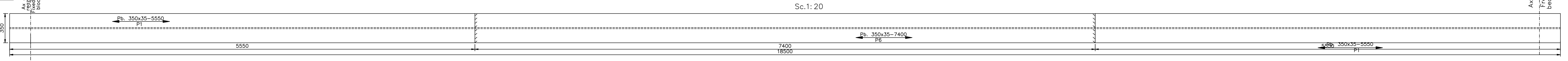

Ax reazem fix
Supporting axis
Ax reazem mobil
Free end bearing axis
5350
7800
1600
200
290
250
410
910
ø22
55°
16
EM I A
18000
18500

VEDERE 3-3 / VIEW 3-3
Sc.1:20

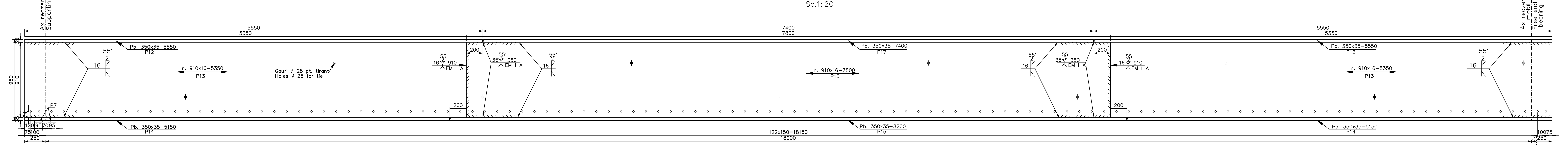

Ax aparat reazem fix
Fixed bearing block axis
Ax reazem mobil
Free end bearing axis
a4.5
2Plc. 95x20-200 P7
Pb. 350x35-5150
P3
Pb. 350x35-8200
P4
5150
8200
18500
350


BRASOV
SIGHISOARA
Ax reazem mobil
Free end bearing axis
Ax reazem fix
Supporting axis
980
910
410
250
290
P7

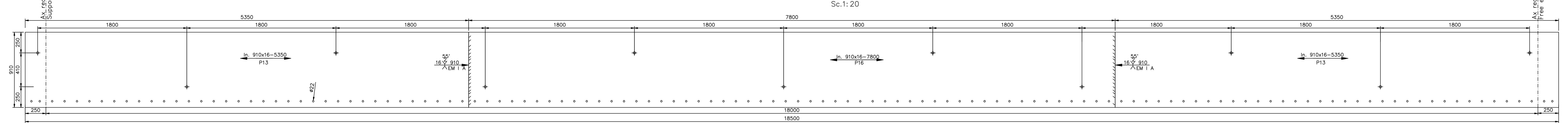
VEDERE 4-4/ VIEW 4-4
Sc.1:20


BRASOV
SIGHISOARA
Ax aparat reazem fix
Fixed bearing block axis
Ax reazem mobil
Free end bearing axis
Pb. 350x35-5550
P1
Pb. 350x35-7400
P6
5550
7400
18500
350

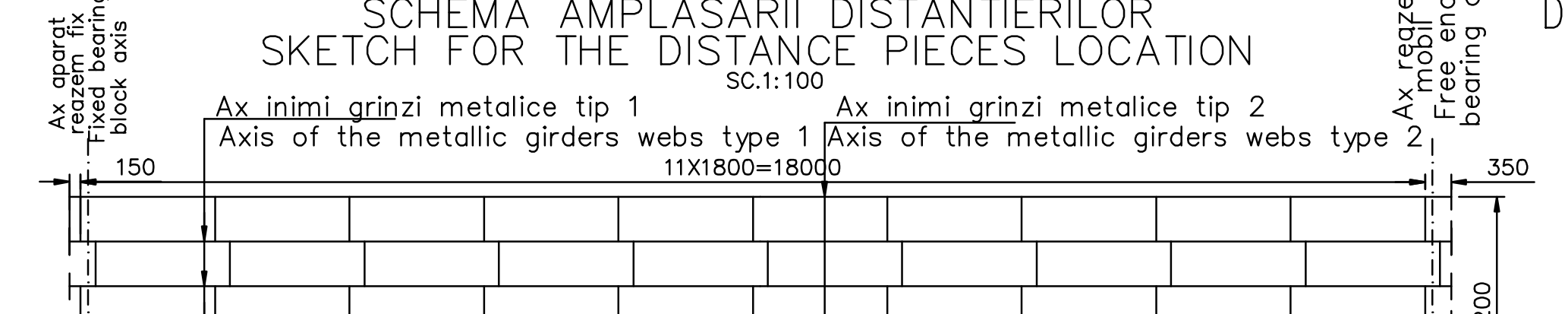
ELEVATIE GRINDA METALICA TIP 2
ELEVATION OF THE METALLIC GIRDER TYPE 2
Sc.1:20


Ax reazem fix
Supporting axis
Ax reazem mobil
Free end bearing axis
5550
5350
7400
7800
Pb. 350x35-5550
P12
Pb. 350x35-7400
P17
In. 910x16-5350
P13
In. 910x16-7800
P16
Gauri ø 28 pt. tirant
Holes ø 28 for tie
Pb. 350x35-5150
P14
Pb. 350x35-8200
P15
P7
55°
16
EM I A
980
910
200
122x150=18150
18000
250
10075

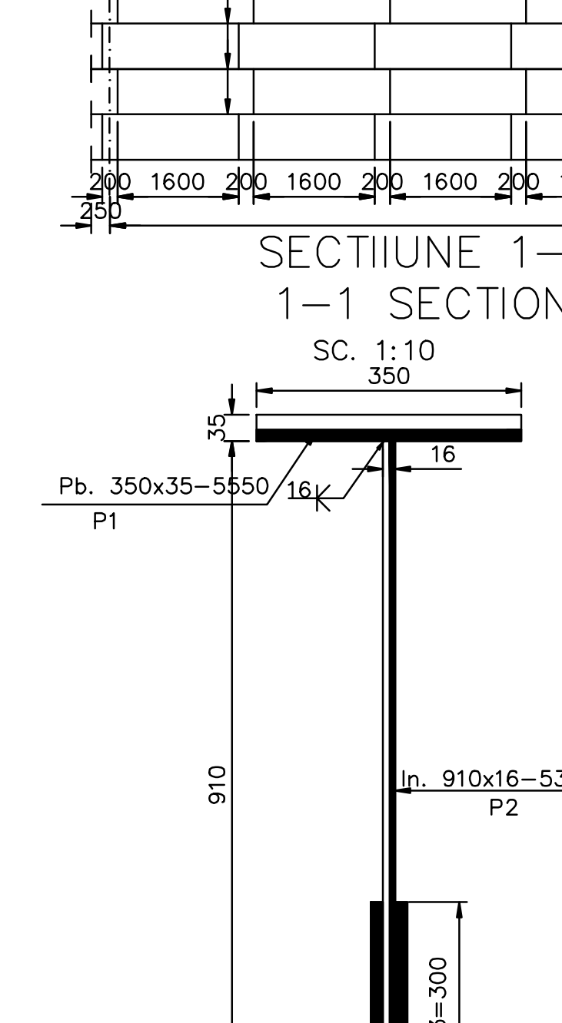
DETALII PENTRU INIMA GRINZII METALICE TIP 2
DETAILS FOR THE METALLIC GIRDER WEB TYPE 2
Sc.1:20


Ax reazem fix
Supporting axis
Ax reazem mobil
Free end bearing axis
5350
7800
1800
In. 910x16-5350
P13
In. 910x16-7800
P16
ø22
55°
16
EM I A
250
410
910
18000
18500

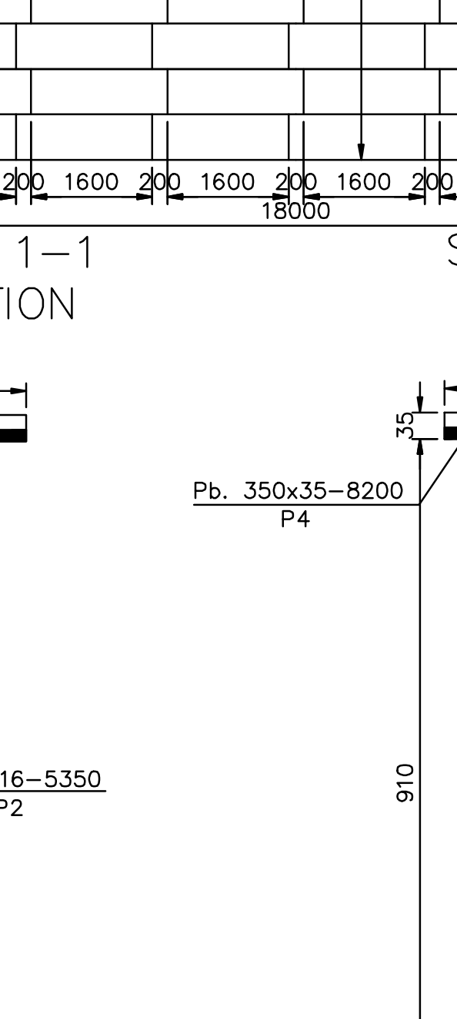
SCHEMA AMPLASARII DISTANTIERILOR
SKETCH FOR THE DISTANCE PIECES LOCATION
SC.1:100


Ax aparat reazem fix
Fixed bearing block axis
Ax inimi grinzi metalice tip 1
Axis of the metallic girders webs type 1
Ax inimi grinzi metalice tip 2
Axis of the metallic girders webs type 2
Ax reazem mobil
Free end bearing axis
150
350
11X1800=18000
7x600=4200
200
1600
250
18000

SECTIIUNE 1-1
1-1 SECTION
SC. 1:10


350
35
16
Pb. 350x35-5550
P1
In. 910x16-5350
P2
910
h_in/3=300
Protectie anticoroziva
Protected against corrosion
Pb. 350x35-5150
P3

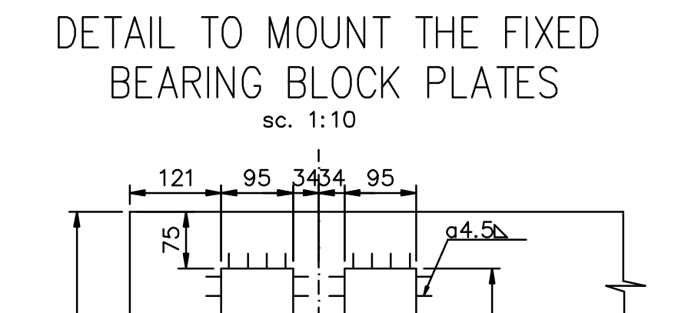
SECTIIUNE 2-2
2-2 SECTION
SC. 1:10


350
35
16
Pb. 350x35-8200
P4
In. 910x16-7800
P5
910
h_in/3=300
Protectie anticoroziva
Protected against corrosion
Pb. 350x35-7400
P6

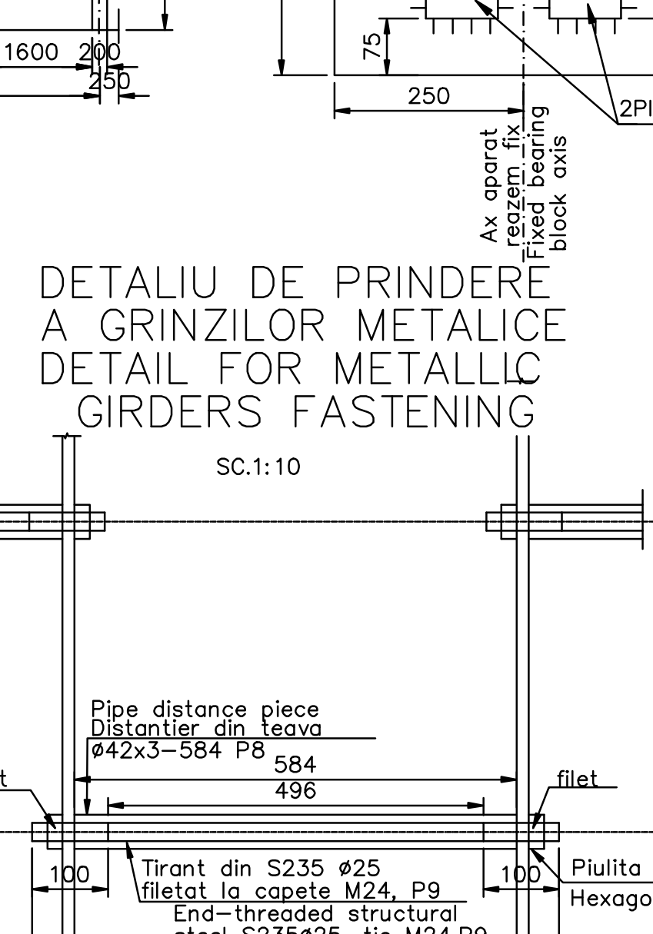
NOTA
Placutele de la aparatele de reazem se vor samfrena cu un unghi de 60°.
Gaurile din inima pentru armatura de rezistenta vor fi alezate.

NOTE
The plates of the bearing blocks will be chamfered at an angle of 60°.
The web holes for the strong reinforcements will be bored.

DETALIU DE MONTARE PLACUTE APARAT DE REAZEM FIX
DETAIL TO MOUNT THE FIXED BEARING BLOCK PLATES
sc. 1:10


121
95
34
95
75
350
200
a4.5
250
2Plc. 95x20-200
P7
Ax aparat reazem fix
Fixed bearing block axis

DETALIU DE PRINDERE A GRINZILOR METALICE
DETAIL FOR METALLIC GIRDERS FASTENING
SC.1:10


Pipe distance piece
Distantier din teava
ø42x3-584 P8
584
496
filet
100
Tirant din S235 ø25
filetat la capete M24, P9
End-threaded structural
steel S235ø25, tie M24,P9
Piulita hexagonala M24, P10
Hexagon nut M24, P10
Inimi grinzi metalice
Webs metallic girders
600
695
410

ELEMENTE DE ASAMBLARE
-Piulita M24 STAS 4971-88 Clasa de precizie 'C'
-Saiba STAS 5200/4-91-24-OL 34

ASSEMBLY ELEMENTS
-Nut M24 STAS 4971-88 Precision class 'C'
-Washer STAS 5200/4-91-24-OL 34

EXTRAS DE MATERIAL PENTRU O GRINDA METALICA OL37-EP TIP 1
MEASURING MATERIAL FOR UNE METALLIC GIRDERS OL37-EP TYPE 1

Poz. Pos.	Denumire Name	Dimensiuni Dimension	Nr. buc. asemenea Pieces	Greutate,Weight S 245 $J_3 G_3$ kg/ml	kg/buc.	Total(kg)
P1	Pb. superioara Upper band steel	350x35-5550	2	96.163	533.705	1068.00
P2	Inima Web	910x16-5350	2	114.30	611.505	1223.01
P3	Pb. inferioara Lower band steel	350x35-5150	2	96.163	495.240	990.50
P4	Pb. inferioara Lower band steel	350x35-8200	1	96.163	788.540	788.540
P5	Inima Web	910x16-7800	1	114.30	891.540	891.540
P6	Pb. superioara Upper band steel	350x35-7400	1	96.163	711.610	711.610
P7	Placute ap.fix	95x20-200	2	14.915	2.983	6.00
					Total partial	5680.00
					Spor 3% pt. sudura	170.00
					Total pt. 1buc. grinda	5850.00

TOTAL PENTRU UN TABLIER: 6 grinzi x 5850kg=35100kg
TOTAL PENTRU 2 TABLIERE: 2 x 6 grinzi x 5850kg=70200kg
TOTAL FOR 1 DECK: 6 girders x 5850kg=35100kg
TOTAL FOR 2 DECKS: 2 x 6 girders x 5850kg=70200kg

EXTRAS DE MATERIAL PENTRU O GRINDA METALICA OL37-EP TIP 2
MEASURING MATERIAL FOR UNE METALLIC GIRDERS OL37-EP TYPE 2

Poz. Pos.	Denumire Name	Dimensiuni Dimension	Nr. buc. asemenea Pieces	Greutate,Weight S 245 $J_3 G_3$ kg/ml	kg/buc.	Total(kg)
P12	Pb. superioara Upper band steel	350x35-5550	2	96.163	533.705	1068.00
P13	Inima Web	910x16-5350	2	114.30	611.505	1223.01
P14	Pb. inferioara Lower band steel	350x35-5150	2	96.163	495.240	990.50
P15	Pb. inferioara Lower band steel	350x35-8200	1	96.163	788.540	788.540
P16	Inima Web	910x16-7800	1	114.30	891.540	891.540
P17	Pb. superioara Upper band steel	350x35-7400	1	96.163	711.610	711.610
					Total partial	5680.00
					Spor 3% pt. sudura	170.00
					Total pt. 1buc. grinda	5850.00

TOTAL PENTRU UN TABLIER: 2 grinzi x 5850kg=11700kg
TOTAL PENTRU 2 TABLIERE: 2 x 2 grinzi x 5850kg=23400kg
TOTAL FOR 1 DECK: 2 girders x 5850kg=11700kg
TOTAL FOR 2 DECKS: 2 x 2 girders x 5850kg=23400kg

EXTRAS DE MATERIAL PENTRU SOLIDARIZAREA GRINZILOR METALICE PENTRU UN TABLIER DE CALE FERATA SIMPLA
TABLE OF MATERIALS TO JOIN THE METALLIC GIRDERS FOR SINGLE TRACK RAILWAY BRIDGE DECK

Poz. Pos.	Denumire Name	Dimensiuni Dimension	Nr. buc. asemenea Pieces	Greutate,Weight S 245 $J_3 G_3$ kg/ml	kg/buc.	Total(kg)
P8	Distantier teava	ø42x3-584	77	2.88	1.70	130.90
P9	Tirant S235	ø25, L=695	77	3.85	2.70	207.90
P10	Piulite	M24	154	-	0.10	15.40
P11	Saibe	M24	154	-	0.023	3.60
					Total (kg)	357.80

TOTAL POD (2 TABLIERE): 2 x 357.80kg=715.60kg
TOTAL BRIDGE (2 DECKS): 2 x 357.80kg=715.60kg

NOTA
1.La executia in uzina a grinzilor metalice sudate se vor respecta cu strictete prevederile STAS 9407-75.
2.In uzina se va aplica o protectie anticoroziva pe talpile inferioare si pe o treime din inima grinzilor metalice.
3.Protectia anticoroziva se va executa dintr-un strat de baza alcatuit dintr-o pelicula de zinc de 80µm grosime si doua straturi de invelis poliuretanic, fiecare de 85µm.
Stratul de baza si un invelis poliuretanic se vor aplica in uzina, urmand ca ultimul strat poliuretanic sa fie aplicat pe santier dupa finalizarea lucrarilor la suprastructura.
4.Pregatirea suprafetelor metalice in vederea aplicarii procedeelor de protectie anticoroziva se face prin:
-Perierea de rugina cu ajutorul unor perii de sarma.
-Spalarea suprafetelor metalice.
-Degresarea cu solventi organici prin stergere sau cu emulsii.
-Dupa degresare se spala cu jet de apa pentru indepartarea urmelor de detergent. Solutia pentru degresare va fi aleasa astfel incat sa nu afecteze mediul.
Curatirea suprafetelor se va face conform gradului SA 1 1/2.

NOTE
1.The prvisions STAS 9407-75 will be stricthy observed when the welded metallic girders are manufactered in the factory.
2.In the plant, corrosion protection will be applied on the lower flanges and on one third of the web of metallic girders.
3.The protection against corrosion will consist in a primary layer made of a zinc membrane (80µm thickness) and two polyurethane covering layer, each of 85µm thickness. The primary layer and the first polyurethane covering layer will be applied in the factory and the second polyurethane layer will be applied on site, after completing the superstructure works.
finalizarea lucrarilor la suprastructura.
4.Preparing the metallic surfaces in order to apply the corrosion-proof procedures shall be made by:
-Rust removal using wire brushes.
-Washing the metallic surfaces.
-Organic solvent degreasing by wiping or using emulsions.
-After degreasing, the surface is washed by water jet to eliminate the detergent stains. The solution selected for degreasing shall not affect the environment. Cleaning the surfaces is made according to the SA 1 1/2.

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Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR
D					
C					
B					
A	11.2011	Revizia 1 1 Revision	Dinu Andreea		

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANŢAT DE UNIUNEA EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT

CLIENT / CLIENT

C.N.C.F. "C.F.R." - S.A.

ITALFERR
GRUPPO FERROVIE DELLO STATO
Joint Venture leader

Scott Wilson

OBERMEYER
PLANEN + BERATEN GmbH

TECNIC
Consulting Engineers

CONSULTANT / CONSULTANT

			Data Date	Semnătură Signature
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Aprobat Approved	Coordonator Secţiune 1 Section 1 Coordinator	C. Gambelli		
Verificat Checked	Expert Cheie Checking Expert	V. Kallidromitis		VK

SUBCONTRACTANT / SUBCONTRACTOR

AREX Lider COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A. Dinulescu Stanciu	08.2011	
Întocmit Elaborated	Proiectant Designer	Dinu Andreea	08.2011	

Reabilitarea liniei de cale ferata Braşov - Simeria, parte componentă a coridorului IV Pan European, pentru circulaţia trenurilor cu viteza maximă de 160 km/h,
Tronsonul : Braşov - Sighişoara
Rehabilitation of the railway line Braşov - Simeria, component Part of the IV Pan-European Corridor, for the trains circulation with maximum speed of 160 km/h,
Section : Braşov - Sighişoara

Proiect/Project
2004/RO/16/P/PA/003

Faza / Phase:
P.Th./T.D.

Denumire desen / Drawing Title :

STATIA FELDIOARA / STATION FELDIOARA
POD Km.193+093.183 L=18.00m/ GRINZI METALICE
BRIDGE Km.193+093.183 L=18.00m/ METALLIC GIRDERS

Codificare / Codification System	Scara / Scale	LOT / LOT	Nr. / No
EA51 01 E 07 BC PV 00 8 3 004 1	1:20;1:10;1:100		01 / 01