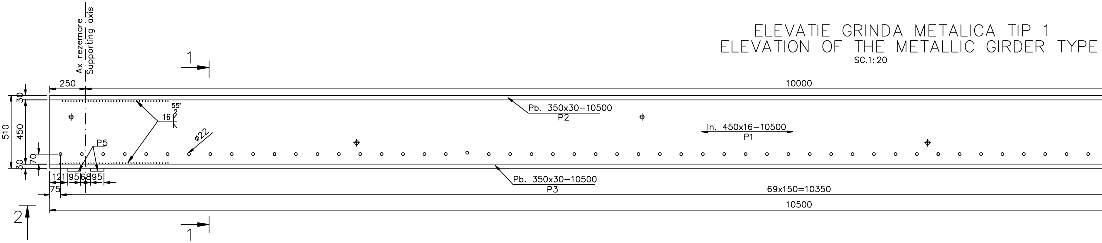
ELEVATIE GRINDA METALICA TIP 1
ELEVATION OF THE METALLIC GIRDER TYPE

SC.1:20


Ax rezemare
Supporting axis
1
1
2
250
10000
30
450
30
510
70
55°
16
2
Pb. 350x30−10500
P2
In. 450x16−10500
P1
ϕ22
P5
121
95
68
95
75
Pb. 350x30−10500
P3
69x150=10350
10500

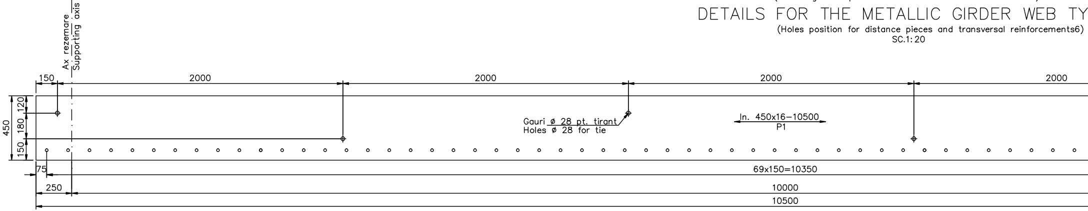
DETALII PENTRU INIMA GRINZII METALICE T

(Pozitia gaurilor pentru distantieri si armaturi transversale)

DETAILS FOR THE METALLIC GIRDER WEB TY

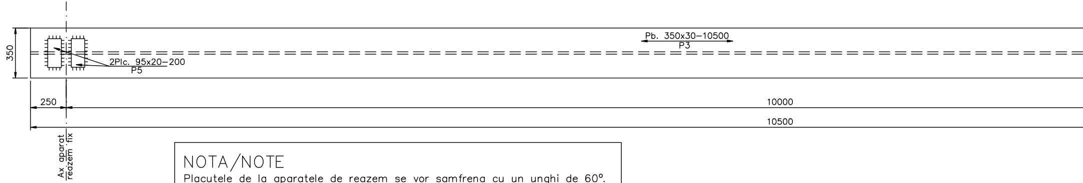
(Holes position for distance pieces and transversal reinforcements6)

SC.1:20


Ax rezemare
Supporting axis
150
2000
2000
2000
2000
450
120
180
150
Gauri ϕ 28 pt. tirant
Holes ϕ 28 for tie
In. 450x16−10500
P1
75
69x150=10350
250
10000
10500

VEDERE 2−2
VIEW 2−2

SC.1:20

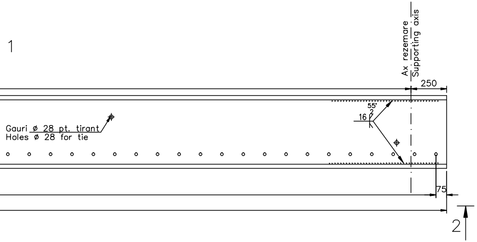

350
Pb. 350x30−10500
P3
2Plc. 95x20−200
P5
250
10000
10500
Ax aparat
reazem fix

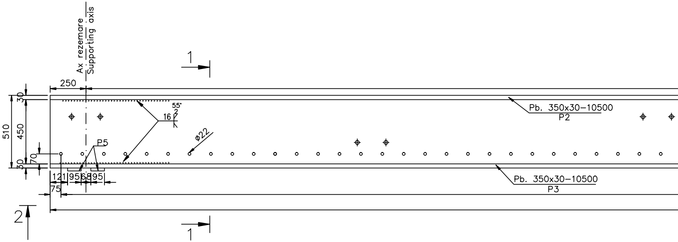
NOTA/NOTE

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

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

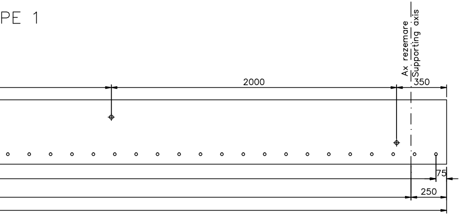
1

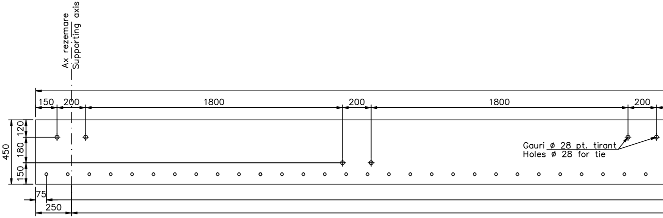

Ax rezemare
Supporting axis
250
Gauri ø 28 pt. tirant
Holes ø 28 for tie
55°
16
2
75
2

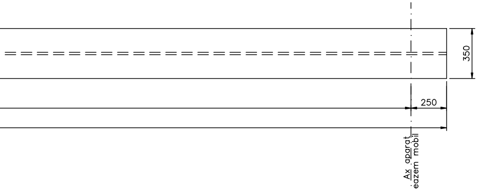

Ax rezemare
Supporting axis
1
250
30
510
450
30
70
55°
16
2
ø22
P5
Pb. 350x30–10500
P2
Pb. 350x30–10500
P3
121
95
68
95
75
2
1

TIP 1

PE 1


Ax rezemare
Supporting axis
2000
350
75
250


Ax rezemare
Supporting axis
150
200
1800
200
1800
200
120
180
150
450
Gauri ø 28 pt. tirant
Holes ø 28 for tie
75
250

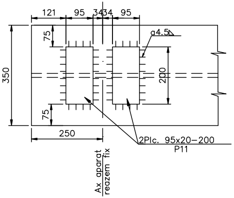

350
250
Ax aparat
reazem mobil

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

DETALIU DE MONTARE PLACUTE APARAT DE REAZEM FIX

DETAIL TO MOUNT THE FIXED BEARING BLOCK PLATES

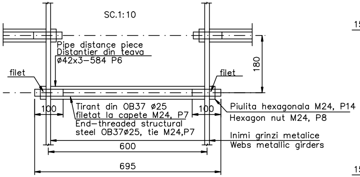
sc. 1:10


121
95
34
34
95
a4.5
75
350
200
75
250
2Plc. 95x20–200
P11
Ax aparat
reazem fix

DETALIU DE PRINDERE A GRINZILOR METALICE

DETAIL FOR METALLIC GIRDERS FASTENING

SC.1:10


Pipe distance piece
Distantier din teava
ø42x3–584 P6
filet
filet
180
Tirant din OB37 ø25
filetat la capete M24, P7
End–threaded structural
steel OB37ø25, tie M24,P7
Piulita hexagonala M24, P14
Hexagon nut M24, P8
Inimi grinzi metalice
Webs metallic girders
100
100
600
695

SCH
SKETC

BRASOV

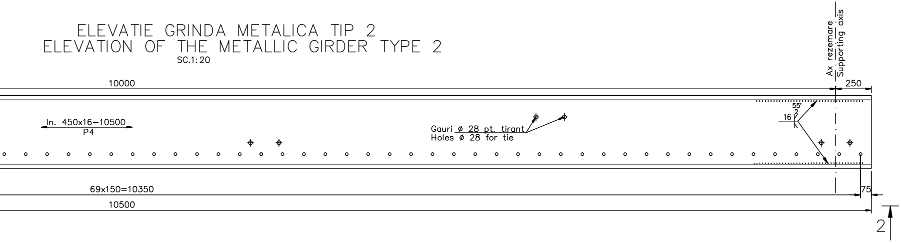
150

150
250

ASSEMBLY ELEMENTS
–Nut M24 STAS 4971–Precision class "C"
–Washer STAS 5200/4–91–24–OL 34

ELEVATIE GRINDA METALICA TIP 2
ELEVATION OF THE METALLIC GIRDER TYPE 2

SC.1:20


Ax rezemare
Supporting axis
10000
250
In. 450x16–10500
P4
Gauri ø 28 pt. tirant
Holes ø 28 for tie
55'
2
16
69x150=10350
10500
75
2

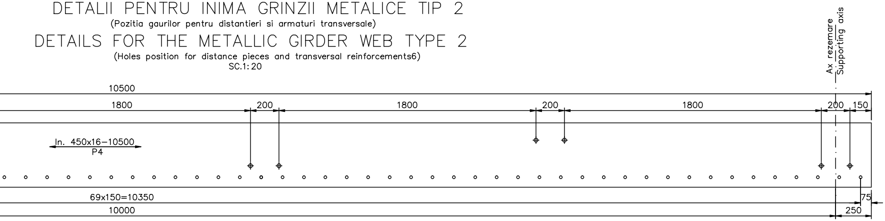
DETALII PENTRU INIMA GRINZII METALICE TIP 2

(Pozitia gaurilor pentru distantieri si armaturi transversale)

DETAILS FOR THE METALLIC GIRDER WEB TYPE 2

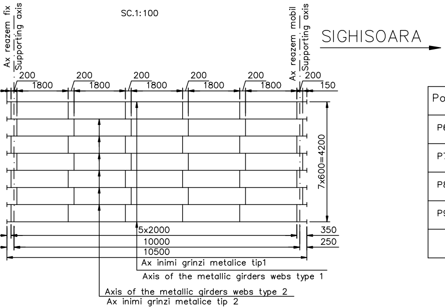
(Holes position for distance pieces and transversal reinforcements6)

SC.1:20


Ax rezemare
Supporting axis
10500
1800
200
1800
200
1800
200
150
In. 450x16–10500
P4
69x150=10350
10000
75
250

HEMA AMPLASARII DISTANTIERILOR
H FOR THE DISTANCE PIECES LOCATION

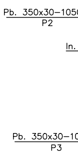
SC.1:100


Ax reazem fix
Supporting axis
Ax reazem mobil
Supporting axis
SIGHISOARA
200
1800
200
1800
200
1800
200
1800
200
1800
200
150
7x600=4200
5x2000
10000
10500
350
250
Ax inimi grinzi metalice tip1
Axis of the metallic girders webs type 1
Axis of the metallic girders webs type 2
Ax inimi grinzi metalice tip 2

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.	Denumire	Dimensiuni	Nr. buc. asemenea	Greutate OL37 EP		
				kg/ml	kg/buc.	Total(kg)
P6	Distantier teava Pipe distance piece	ø42x3–584	42	2.88	1.68	71
P7	Tirant S235 Threaded S235	ø25, L=695	42	3.85	2.68	113
P8	Piulite Nuts	M24	84	–	0.10	8
P9	Saibe Washers	M24	84	–	0.023	2
				Total(kg)		200

TOTAL POD (2 TABLIERE): 2 x 200kg=400kg
TOTAL BRIDGE (2 DECKS): 2 x 200kg=400kg


Pb. 350x30–105
P2
In.
Pb. 350x30–1
P3

MATERIA
(– OL37
– S275

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

Poz.	Denumire	Dimensiuni	Nr. buc. asemenea	Greutate OL37 EP		
				kg/ml	kg/buc.	Total(kg)
P1	Inima	450x16–10500	1	56.53	593.40	595
P2	Platbanda superioara	350x30–10500	1	82.45	865.60	866
P3	Platbanda inferioara	350x30–10500	1	82.45	865.60	866
P5	Placute ap. fixt	95x20–200	2	14.92	2.98	6
				Total(kg)		2333
				Sudura 2%		47
				Total(kg)		2380

TOTAL PENTRU UN TABLIER: 2 grinzi x 2380kg=4760kg
TOTAL PENTRU 2 TABLIERE: 2 x 2 grinzi x 2380kg=9520kg
TOTAL FOR 1 DECK: 2 girders x 2380kg=4760kg
TOTAL FOR 2 DECKS: 2 x 2 girders x 2380kg=9520kg

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

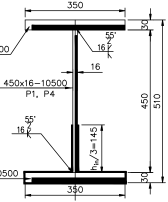
Poz.	Denumire	Dimensiuni	Nr. buc. asemenea	Greutate OL37 EP		
				kg/ml	kg/buc.	Total(kg)
P4	Inima	450x16–10500	1	56.53	593.40	595
P2	Platbanda superioara	350x30–10500	1	82.45	865.60	866
P3	Platbanda inferioara	350x30–10500	1	82.45	865.60	866
P5	Placute ap. fixt	95x20–200	2	14.92	2.98	6
				Total(kg)		2333
				Sudura 2%		47
				Total(kg)		2380

TOTAL PENTRU UN TABLIER: 6 grinzi x 2380kg=14280kg
TOTAL PENTRU 2 TABLIERE: 2 x 6 grinzi x 2380kg=28560kg
TOTAL FOR 1 DECK: 6 girders x 2380kg=14280kg
TOTAL FOR 2 DECKS: 2 x 6 girders x2380kg=28560kg

(TOTAL OL37–EP=38100kg)
TOTAL $S275J_3G_3$=38100kg

SECTIUNE 1–1
1–1 SECTION

sc. 1:10


350
30
55°
2
16
16
00
450x16–10500
P1, P4
450
510
55°
2
16
$h_{in}/3$=145
0500
30
350

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 strictly 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 dorrosion–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.

LE
EP STAS 12187–88 elementele grinzilor metalice.)
J_3G_3 EN 10025/2004

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

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANŢAT DE UNIUNEA EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT

CFR

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

CLIENT / CLIENT

ITALFERR
GRUPPO FERROVIE DELLO STATO
Joint Venture leader

Scott Wilson

OBERMEYER
PLANEN + BERATEN GmbH

TECNIC
Consulting Engineers

CONSULTANT / CONSULTANT

			Data Date	Semnătură Signature
Aprobat Approved	Şef proiect Project manager	R. Liuzza		
Aprobat Approved	Coordonator Secţiune 1 Section 1 Coordinator	C. Gambelli		
Verificat Checked	Expert Cheie Checking Expert	V. Kallidromitis		VK

SUBCONTRACTANT / SUBCONTRACTOR

AREX COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A. Dinulescu Stanciu	08.2011	
Întocmit Elaborated	Proiectant Designer	Campan Maria	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.192+526.157 L=10.00m/GRINZI METALICE-TABLIER 2
BRIDGE Km.192+526.157 L=10.00m/METALLIC GIRDERS-DECK 2

Codificare / Codification System	Scara / Scale 1:20;1:10;1:100	LOT / LOT	Nr. / No 01 / 01

E A 5 1 0 1 E 0 7 B C P V 0 0 7 3 0 0 7 1