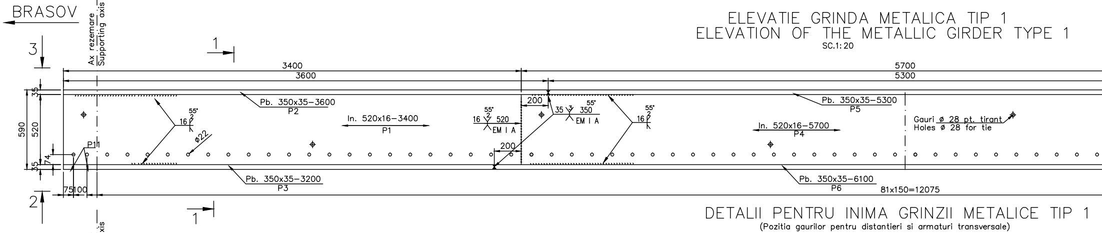
ELEVATIE GRINDA METALICA TIP 1
ELEVATION OF THE METALLIC GIRDER TYPE 1

SC.1:20

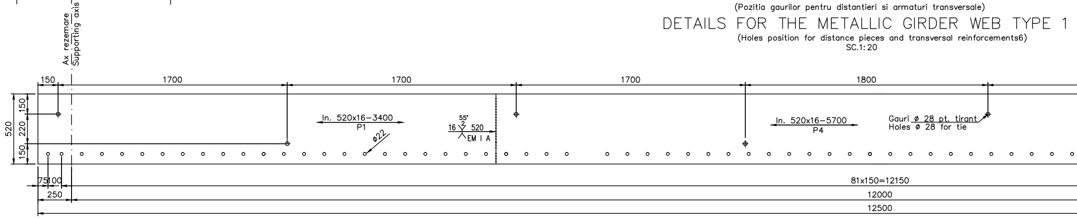


BRASOV
Ax rezemare
Supporting axis
3
1
2
3400
3600
5700
5300
35
590
520
74
35
200
200
Pb. 350x35-3600
P2
In. 520x16-3400
P1
16 55° 2 520 EM I A
35 3 55° 350 EM I A
16 55° 2
Pb. 350x35-5300
P5
In. 520x16-5700
P4
Gauri ø 28 pt. tirant
Holes ø 28 for tie
P11
ø22
Pb. 350x35-3200
P3
Pb. 350x35-6100
P6
81x150=12075
75
100

DETALII PENTRU INIMA GRINZII METALICE TIP 1
(Pozitia gaurilor pentru distantieri si armaturi transversale)

DETAILS FOR THE METALLIC GIRDER WEB TYPE 1
(Holes position for distance pieces and transversal reinforcements6)

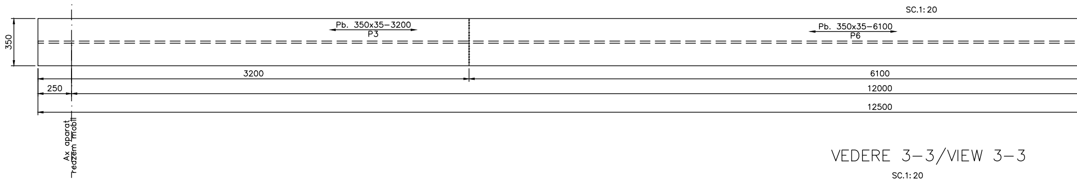
SC.1:20



Ax rezemare
Supporting axis
150
1700
1700
1700
1800
520
150
220
150
In. 520x16-3400
P1
16 55° 2 520 EM I A
ø22
In. 520x16-5700
P4
Gauri ø 28 pt. tirant
Holes ø 28 for tie
75
100
250
81x150=12150
12000
12500

VEDERE 2–2/VIEW 2–2

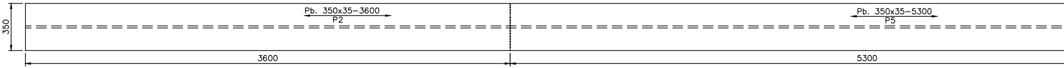
SC.1:20



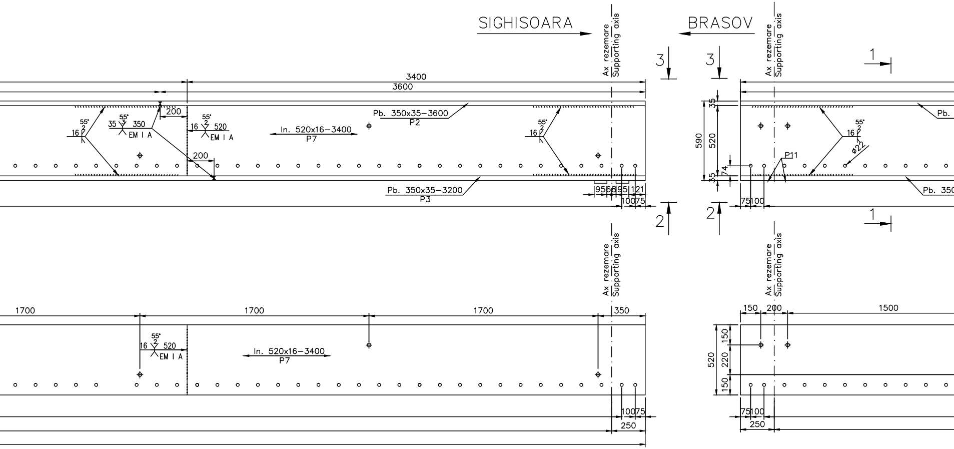
350
Pb. 350x35-3200
P3
Pb. 350x35-6100
P6
3200
6100
250
12000
12500
Ax aparat
reazem mobil

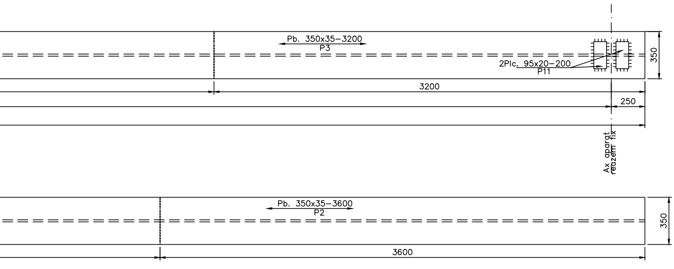
VEDERE 3–3/VIEW 3–3

SC.1:20



350
Pb. 350x35-3600
P2
Pb. 350x35-5300
P5
3600
5300

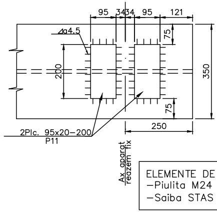

SIGHISOARA
BRASOV
Ax rezemare
Supporting axis
3
3
1
1
2
2
3400
3600
200
200
55°
16
2
35
3
350
EM I A
55°
16
2
520
EM I A
In. 520x16-3400
P7
Pb. 350x35-3600
P2
Pb. 350x35-3200
P3
95
68
95
121
100
75
590
520
35
35
74
P11
ø22
75
100
Pb.
Pb. 350
1700
1700
1700
350
150
200
1500
520
150
220
150
250
250
100
75


Pb. 350x35-3200
P3
2Plc. 95x20-200
P11
350
3200
250
Ax aparat
reazem fix
Pb. 350x35-3600
P2
350
3600

DETALIU DE MONTARE PLACUTE APARAT DE REAZEM FIX

DETAIL TO MOUNT THE FIXED BEARING BLOCK PLATES

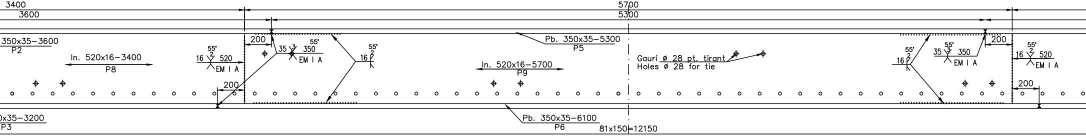
sc. 1:10


95
34
34
95
121
4.5
75
200
350
75
250
2Plc. 95x20-200
P11
Ax aparat
reazem fix

ELEMENTE DE ASAMBL
-Piulita M24 STAS 49
-Saiba STAS 5200/4-

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

SC.1: 20


3400
3600
5700
5300
350x35–3600
P2
ln. 520x16–3400
P8
55°
16 2 520
EM I A
200
35 3 350
EM I A
Pb. 350x35–5300
P5
ln. 520x16–5700
P9
Gauri ø 28 pt. tirant
Holes ø 28 for tie
200
x35–3200
P3
Pb. 350x35–6100
P6
81x150=12150

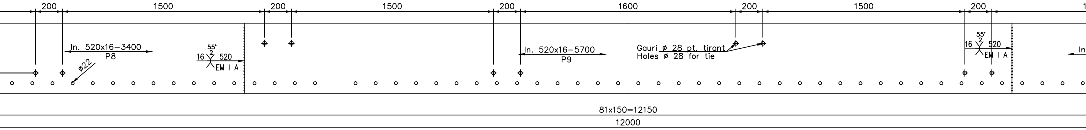
DETALII PENTRU INIMA GRINZII METALICE TIP 2

(Pozitia gaurilor pentru distantieri si armaturi transversale)

DETAILS FOR THE METALLIC GIRDER WEB TYPE 2

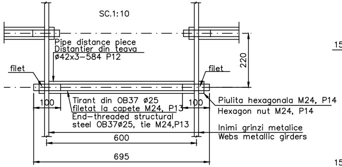
(Holes position for distance pieces and transversal reinforcements)

SC.1: 20


200
1500
200
1500
200
1600
200
1500
200
ln. 520x16–3400
P8
ø22
55°
16 2 520
EM I A
ln. 520x16–5700
P9
Gauri ø 28 pt. tirant
Holes ø 28 for tie
ln
81x150=12150
12000

DETALIU DE PRINDERE A GRINZILOR METALICE
DETAIL FOR METALLIC GIRDERS FASTENING

SC.1: 10

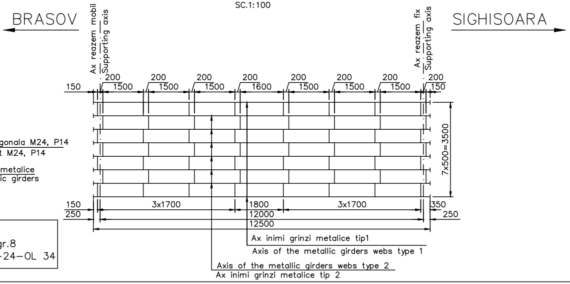

Pipe distance piece
Distantier din teava
ø42x3–584 P12
220
filet
filet
100
100
Tirant din OB37 ø25
filetat la capete M24, P13
End–threaded structural
steel OB37ø25, tie M24,P13
Piulita hexagonala M24, P14
Hexagon nut M24, P14
Inimi grinzi metalice
Webs metallic girders
600
695

ARE
971–88 gr.8
–91–24–OL 34

ASSEMBLY ELEMENTS
–Nut M24 STAS 4971–88 gr.8
–Washer STAS 5200/4–91–24–OL 34

SCHEMA AMPLASARII DISTANTIERILOR
SKETCH FOR THE DISTANCE PIECES LOCATION

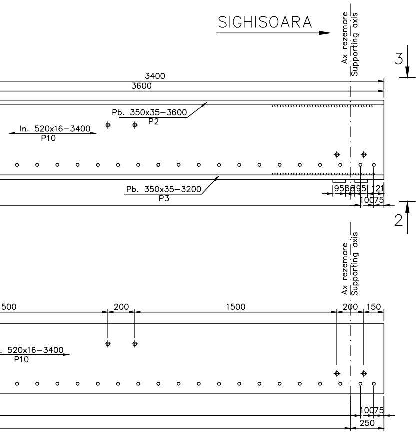
SC.1:100


BRASOV
SIGHISOARA
Ax reazem mobil
Supporting axis
Ax reazem fix
Supporting axis
150
200
1500
200
1500
200
1500
200
1600
200
1500
200
1500
200
1500
200
150
7x500=3500
150
250
3x1700
1800
12000
12500
3x1700
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 MATERIA
SOLIDARIZAREA GRINZI
PENTRU UN TABLIER DE
TABLE OF MATERIALS
METALLIC GIRDERS FOR
RAILWAY BRIDGE DI

Poz.	Denumire	Dimensiuni	Nr. buc asemen
P12	Distantier teava Pipe distance piece	ø42x3–484	56
P13	Tirant OB37 Threaded OB37	ø25, L=595	56
P14	Piulite Nuts	M24	112
P15	Saibe Washers	M24	112

TOTAL POD (2 TABLIERE):
TOTAL BRIDGE (2 DECKS):


SIGHISOARA
Ax rezemare
Supporting axis
3
3400
3600
Pb. 350x35–3600
P2
In. 520x16–3400
P10
Pb. 350x35–3200
P3
95
68
95
121
100
75
2
Ax rezemare
Supporting axis
500
200
1500
200
150
. 520x16–3400
P10
100
75
250

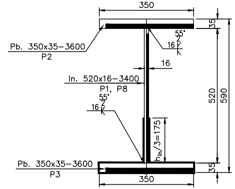
L PENTRU
LOR METALICE
CALE FERATA SIMPLA
TO JOIN THE
SINGLE TRACK
ECK

c. nea	Greutate OL37 EP		
	kg/ml	kg/buc.	Total(kg)
	2.88	1.40	80
	3.85	2.29	130
	–	0.10	11
	–	0.023	3
	Total(kg)		230

2 x 230kg=460kg
2 x 230kg=460kg

SECTIUNE 1–1
1–1 SECTION

sc. 1:10


350
35
Pb. 350x35–3600
P2
55°
2
16
16
In. 520x16–3400
P1, P8
55°
2
16
520
590
$h_{in}/3=175$
Pb. 350x35–3600
P3
35
350

MATERIALE
(– OL37 EP STAS 12187–88 elementele grinzilor metalice.)
– $S275J_3G_3$ EN 10025/2004

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	520x16–3400	1	65.35	222.20	223
P2	Platbanda superioara	350x35–3600	2	96.16	346.20	692
P3	Platbanda inferioara	350x35–3200	2	96.16	307.70	615
P4	Inima	520x16–5700	1	65.35	372.50	373
P5	Platbanda superioara	350x35–5300	1	96.16	509.70	510
P6	Platbanda inferioara	350x35–6100	1	96.16	586.60	587
P7	Inima	520x16–3400	1	65.35	222.20	223
P11	Placute ap. fixt	95x20–200	2	14.92	2.98	6
					Total(kg)	3229
					Sudura 2%	65
					Total(kg)	3300

TOTAL PENTRU UN TABLIER: 2 grinzi x 3300kg=6600kg
TOTAL PENTRU 2 TABLIERE: 2 x 2 grinzi x 3300kg=13200kg
TOTAL FOR 1 DECK: 2 girders x 3300kg=6600kg
TOTAL FOR 2 DECKS: 2 x 2 girders x 3300kg=13200kg

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.

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.

EXTRAS
O GRIND
MEASURI
METALLIC

Poz.	Denumire
P8	Inima
P2	Platbanda superioar
P3	Platbanda inferioar
P9	Inima
P5	Platbanda superioar
P6	Platbanda inferioar
P10	Inima
P11	Placute ap. fixt

TOTAL
TOTAL
TOTAL
TOTAL

NOTE

1.The prvisions
welded metal
2.In the plant,
flanges and o
3.The protectio
made of a zi
covering layer,
The primary l
applied in the
applied on sit
finalizarea luc
4.Preparing the
dorrosion–pr
–Rust removal
–Washing the
–Organic solve
–After degreas
jet to elimina
selected for
Cleaning the

DE MATERIAL PENTRU
A METALICA TIP 2 OL37–EP
NG MATERIAL FOR UNE
C GIRDERS TYPE 2 OL37–EP

	Dimensiuni	Nr. buc. asemenea	Greutate OL37 EP		
			kg/ml	kg/buc.	Total(kg)
		1	65.35	222.20	223
ra	350x35–3600	2	96.16	346.20	692
a	350x35–3200	2	96.16	307.70	615
	520x16–5700	1	65.35	372.50	373
ra	350x35–5300	1	96.16	509.70	510
a	350x35–6100	1	96.16	586.60	587
	520x16–3400	1	65.35	222.20	223
	95x20–200	2	14.92	2.98	6
			Total(kg)		3229
			Sudura 2%		65
			Total(kg)		3300

PENTRU UN TABLIER: 6 grinzi x 3300kg=19800kg
PENTRU 2 TABLIERE: 2 x 6 grinzi x 3300kg=39600kg
FOR 1 DECK: 6 girders x 3300kg=19800kg
FOR 2 DECKS: 2 x 6 girders x 3300kg=39600kg

(TOTAL OL37–EP=52800kg)
TOTAL $S275J_3G_3$=52800kg

STAS 9407–75 will be stricthy observed when the
lic girders are manufactered in the factory.
corrosion protection will be applied on the lower
n one third of the web of metallic girders.
n against corrosion will consist in a primary layer
nc membrane (80µm thickness) and two polyurethane
each of 85µm thickness.
ayer and the first polyurethane covering layer will be
factory and the second polyurethane layer will be
e, after completing the superstructure works.
rarilor la suprastructura.
e metallic surfaces in order to apply the
oof procedures shall be made by:
using wire brushes.
metallic surfaces.
nt degreasing by wiping or using emulsions.
ing, the surface is washed by water
te the detergent stains. The solution
degreasing shall not affect the environment.
surfaces is made according to the SA 1 1/2.

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D					
C					
B					
A	12.2011	Revizia 1 1 Revision	Campan Maria		
Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR

UVERNUL ROMANIEI
MANIAN 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
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		

SUBCONTRACTANT / SUBCONTRACTOR

AREX Lider COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A. Dinulescu Stanciu	11.2011	
Întocmit Elaborated	Proiectant Designer	Campan Maria	11.2011	

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:
D.E. / E.D.

Denumire desen / Drawing Title : **INTERVAL / SECTION ARCHITA - VANATORI**

POD / BRIDGE Km 267+963.152 D=12.00m+35.00m+12.00m

GRINZI METALICE TABLIER 1 SI TABLIER 3
METALLIC GIRDERS DECK 1 AND DECK 3

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

E A 5 1 | 0 1 | E | 1 6 | B C | P V | 0 4 | 0 | 3 | 0 0 8 | 1

297x1750