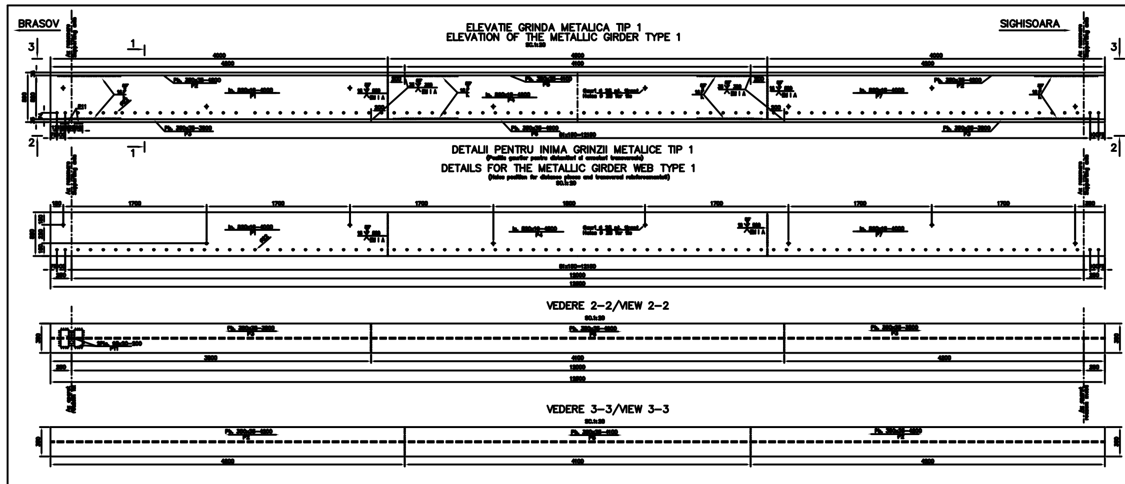
BRASOV — SIGHISOARA

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

DETALII PENTRU INIMA GRINZII METALICE TIP 1
DETAILS FOR THE METALLIC GIRDER WEB TYPE 1

VEDERE 2-2/VIEW 2-2

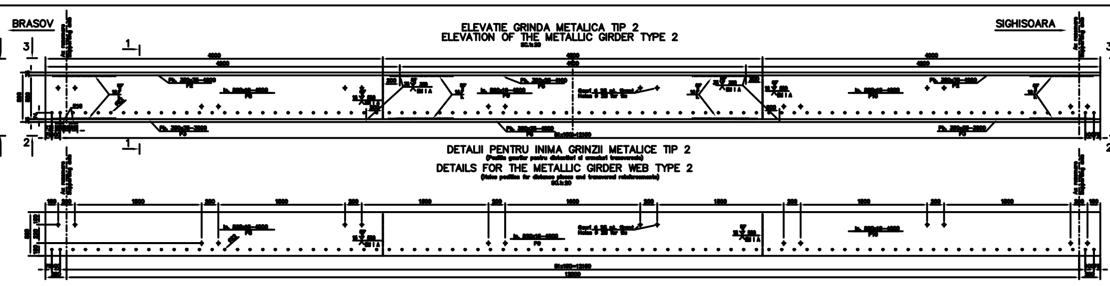
VEDERE 3-3/VIEW 3-3



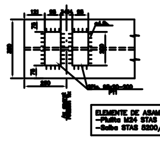
BRASOV — SIGHISOARA

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

DETALII PENTRU INIMA GRINZII METALICE TIP 2
DETAILS FOR THE METALLIC GIRDER WEB TYPE 2

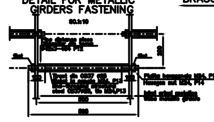


DETALIU DE MONTARE PLACUTE APARAT DE REAZEM FIX
DETAIL TO MOUNT THE FIXED BEARING BLOCK PLATES



ELEMENTE DE ASAMBLARE
- Piulite M24 STAS 4071-89 gr.8
- Saibe STAS 5200/4-91-24-OL 34

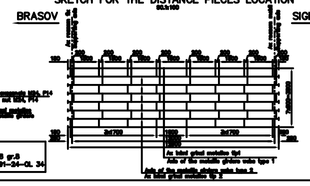
DETALIU DE PRINDERE A GRINZILOR METALICE
DETAIL FOR METALLIC GIRDERS FASTENING



ASSEMBLY ELEMENTS
- Nut M24 STAS 4071-89 gr.8
- Washer STAS 5200/4-91-24-OL 34

SCHEMA AMPLASARII DISTANTIERILOR
SKETCH FOR THE DISTANCE PIECES LOCATION

BRASOV — SIGHISOARA

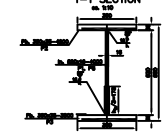


EXTRAS DE MATERIAL PENTRU SOLIDARIZAREA GRINZILOR METALICE PENTRU UN TABLIER DE CALE FERATA SIMPLA
TABLE OF MATERIALS TO JOIN THE METALLIC GIRDERS FOR SINGLE TRACK RAILWAY BRIDGE DECK

Poz.	Denumire	Dimensiuni	Nr. buc. asemenea	Greutate OL37 EP kg/ml	kg/buc.	Total(kg)
P12	Distantier teava / Pipe distance piece	ø42x3-484	56	2.88	1.40	80
P13	Tirant OB37 / Threaded OB37	ø26, L=555	56	3.85	2.20	130
P14	Piulite / Nuts	M24	112	–	0.10	11
P15	Saibe / Washers	M24	112	–	0.025	3
					Total(kg)	230

TOTAL POD (2 TABLIERE): 2 x 230kg=460kg
TOTAL BRIDGE (2 DECKS): 2 x 230kg=460kg

SECTIUNE 1-1
1-1 SECTION
sc. 1:10



MATERIALE
(- OL37 EP STAS 12187-88 elementele grinzilor metalice)
- S275J2G3 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	[illegible]	1	66.35	281.40	282
P2	Platbanda superioara	[illegible]	2	96.16	403.90	808
P3	Platbanda inferioara	[illegible]	2	96.16	355.41	731
P4	Inima	[illegible]	1	66.35	294.08	294
P5	Platbanda superioara	[illegible]	1	96.16	394.30	394
P6	Platbanda inferioara	[illegible]	1	96.16	471.18	472
P7	Inima	[illegible]	1	66.35	281.40	282
P11	Placute ap. fixt	[illegible]	2	14.92	2.98	6
					Total(kg)	3259
					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

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)
P8	Inima	[illegible]	1	66.35	281.40	282
P2	Platbanda superioara	[illegible]	2	96.16	403.90	808
P3	Platbanda inferioara	[illegible]	2	96.16	355.41	731
P9	Inima	[illegible]	1	66.35	294.08	294
P5	Platbanda superioara	[illegible]	1	96.16	394.30	394
P6	Platbanda inferioara	[illegible]	1	96.16	471.18	472
P10	Inima	[illegible]	1	66.35	281.40	282
P11	Placute ap. fixt	[illegible]	2	14.92	2.98	6
					Total(kg)	3259
					Sudura 2%	65
					Total(kg)	3300

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

(TOTAL OL37-EP=52800kg)
TOTAL S275J2G3=52800kg

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:
- Periarea 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 provisions STAS 9407-75 will be strictly observed when the welded metallic girders are manufactured 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.

NOTA/NOTE

Placutele de la aparatele de reazem se vor samfrena cu un unghi de 60°.
Gaurile din inima pentru armature 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.

Se interzice copierea, difuzarea, imprumutarea sau utilizarea in alte scopuri, fara permisiunea AREX Lider Company ca proprietar al desenului.
This drawing is forbidden to be copied, lent or used in other purposes than those previously approved by AREX Lider Company as its owner.

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

GUVERNUL ROMANIEI / ROMANIAN GOVERNMENT
PROIECT FINANTAT DE UNIUNEA EUROPEANĂ / EUROPEAN UNION FINANCED PROJECT

CLIENT / CLIENT: C.N.C.F. "C.F.R." - S.A.

CONSULTANT / CONSULTANT: Italferr (Joint Venture leader), OBERMEYER PLANEN + BERATEN GmbH, TECNIC Consulting Engineers

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

SUBCONTRACTANT / SUBCONTRACTOR

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: D.E. / E.D.

Denumire desen / Drawing Title :
INTERVAL / SECTION FELDIOARA - APATA
POD Km.198+511.930 L=12.00m/ GRINZI METALICE
BRIDGE Km.198+511.930 L=12.00m/METALLIC GIRDERS

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

EA51 01 E 08 BC PV 01 2 3 005 1