

OVER S.r.L.

MONTAGGI INDUSTRIALI

Via Matteotti, 16

24050 GRASSOBBIO (BG)

Date : 31.08.2012

Doc.N°. 62F6

INSPECTION BOOK N°. 62F6

WORKSHOP JOB N°. : 2F11

CUSTOMER : BALLESTRA S.p.A. Milano

JOB : 2F11

ORDER N°. : 121280

Item : 62F6

Description : RECOVERED SLURRY FILTER

OVER S.r.l.
F. Lipretti

BALLESTRA S.p.A.

Inspector

Gatti Davide

7/3/12

OVER S.r.L.

MONTAGGI INDUSTRIALI
Via Matteotti, 16
24050 GRASSOBBIO (BG)

Date : 31.08.2012

Doc N° 62F6

HYDROSTATIC TEST REPORT

Customer	BALLESTRA S.P.A.
Customer Order No.	121280
Job	2F11
Item	62F6
Description	RECOVERED SLURRY FILTER
Data sheet	2F11.35.109
Constructive Dwg.	SB.PRS.00307

Pressure (alternatively) on :

TIME HELD (hours)

SHELL SIDE	bar(g)	1,5
TUBE SIDE	bar(g)	
JACKET	bar(g)	1,5
COIL	bar(g)	

1
1

Pressure gauges serial N° 825

Dial range : 0 - 5

Vessel position : HORIZONTAL

Dichiariamo che la prova idraulica è stata eseguita utilizzando acqua potabile alle pressioni e tempi indicati in tabella ed ha avuto esito positivo.

We certify that the hydrostatic test with water of drinking quality has been performed, at the conditions and times above indicated, with satisfactory result.

OVER S.r.L. Grassobbio (Bg)

F.Libretti

CUSTOMER INSPECTOR

7/3/12
Catt Davide
W only pocket

OVER S.r.l.
MONTAGGI INDUSTRIALI
Via Matteotti, 16
24050 GRASSOBBIO (BG)

Date : 31.08.2012

Doc. No. : 62F6

WHITE PICKLING REPORT
(For apparatus in Stainless steel with parts in Carbon steel)
QUALITY CONTROL PLAN No. : 62F6

Customer	BALLESTRA S.P.A.
Customer Order No.	121280
Job	2F11
Item	62F6
Description	RECOVERED SLURRY FILTER
Data sheet	2F11.35.109
Constructive Dwg.	SB.PRS.00307

Il decapaggio esterno è stato eseguito in accordo alla specifica Ballestra No SB-ATI-SP002/4 utilizzando pasta decapante DECABLITZ DR5 per un' ora e risciacquando accuratamente con acqua potabile.

The external white pickling treatment has been performed, according to the Ballestra's specification No. SB-ATI-SP002/4 with paste DECABLITZ DR5 for one hour and thoroughly rinsed with water of drinking quality.

Il ciclo di verniciatura su superfici esterne è stato eseguito in accordo alla specifica Ballestra No. SB-ATI-SP002/4 utilizzando antiruggine COSMALVER TIPO BW0136
The external painting cycle has been performed, according to the Ballestra's specification No. SB-ATI-SP002/4 with antirust COSMALVER TYPE 0136

Le parti interne sono state pulite per mezzo di solvente EMULCLEAR M.

The internal parts have been cleaned by means of solvent EMULCLEAR M.


OVER S.r.l. - GRASSOBBIO (BG)

CUSTOMER INSPECTOR


BALLESTRA S.p.A.
Dipartimento Controllo Interno
Gatti Davide

**OVER S.r.l.**

MONTAGGI INDUSTRIALI

Via Matteotti, 16

24050 GRASSOBBIO (BG)

Workshop Job n° 2F11

N°. C0 12C61

CERTIFICATO CONTROLLO DIMENSIONALE**DIMENSIONAL TEST REPORT****CUSTOMER : BALLESTRA S.p. A.**

JOB N°. 2F11

Purchase Order N°. 121280

Doc. N°. Sheet 1 of 1 Rev. 0

ITEM :

62F6

Description :

RECOVERED SLURRY FILTER

DATA SHEET N°.

2F11.35.109

Constructive Dwg. N°.

SB.PRS.00307

**SI CERTIFICA CHE L' APPARECCHIO E' STATO SOTTOPOSTO A
CONTROLLO DIMENSIONALE IN ACCORDO AI DISEGNI :**

**BALLESTRA S.p.A. : DATA SHEET N°. 2F11.35.109
BALLESTRA S.p.A. : COSTRUTTIVO N°. SB.PRS.00307**

ED ALLE SPECIFICHE RICHIAMATE SUGLI STESSI

**TUTTE LE MISURAZIONI EFFETTUATE SONO CONFORMI
ALLE TOLLERANZE INDICATE A DISEGNO
ED ALLE SPECIFICHE IN ESSI RICHIAMATE.
E' STATO ESEGUITO CONTROLLO SPESSORI**

**WE CERTIFY THAT THE ITEM HAS BEEN CONTROLLED
DIMENSIONALLY ACCORDING TO DRAWINGS :**

**BALLESTRA S.p.A. : DATA SHEET N°. 2F11.35.109
BALLESTRA S.p.A. : CONSTRUCTIVE N°. SB.PRS.00307**

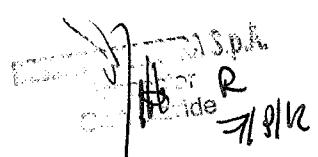
**AND TO THE SPECIFICATIONS NOTED IN
THE ABOVE MENTIONED DRAWINGS.**

**ALL THE MEASUREMENTS PERFORMED RESULT WITHIN
DRAWINGS TOLERANCES
AND TO THE SPECIFICATIONS NOTED IN
THE ABOVE MENTIONED DRAWINGS.
THICKNESS CHECK HAS BEEN PERFORMED**

RISULTATO / Result : SODDISFALENTE / Satisfactory

Stamp: BALLESTRA S.p.A.
Signature: [Signature]
Date: 1/3/12
Language: English

1	F. Libretti						
0	OVER SrL	31.08.2012					
Rev.	Issued by	Date	Checked by	Date	Approved by	Date	Description
REV.	Emesso da	Data	Controllato da	Data	Approvato da	Data	Descrizione

OVER S.r.L. Via Matteotti,16 Tel. 035 -525256 Fax 035 - 526467 Workshop Job N° 2F11 N°.: CO 12C61		CERTIFICATO DI CONFORMITA' <i>CERTIFICATE OF COMPLIANCE</i> CUSTOMER : BALLESTRA S.p.A. JOB N°. 2F11 Purchase Order N°. : 121280	
ITEM :	62F6	Description :	RECOVERED SLURRY FILTER
DATA SHEET N°.			2F11.35.109
Constructive Dwg. N°.	SB.PRS.00307	QUALITY CONTROL PLAN :	
<p style="text-align: center;">SI CERTIFICA CHE IL MATERIALE RISULTA CONFORME A QUANTO RICHIESTO DAI DISEGNI, DALL' ORDINE ED ALLE SPECIFICHE IN ESSI RICHIAMATI.</p> <p style="text-align: center;">WE HEREBY CERTIFY THAT THE MATERIAL IS IN COMPLETELY ACCORDANCE WITH THE DRAWINGS, THE ORDER AND THE SPECIFICATIONS NOTED IN ABOVE MENTIONED DOCUMENTS.</p> <p style="text-align: right;">  OFF. OVER S.R.L. GRASSOBBIO (BG) </p>			

1	F. Lipietti						
0	OVER	31.08.2012					
Rev.	Issued by	Date	Checked by	Date	Approved by	Date	Description
REV.	Emesso da	Data	Controllato da	Data	Approvato da	Data	Descrizione

CERTIFICATO DI COLLAUDO DIN 50049/31 - EN 10204/3.1



ONER

Valvole & raccordi

Sede di 21042 CARONNO PERTUSella (Varese)

Via Asti 60 - Telefax 02.9657200

Telefono 02.965741 (r.a.) - 02.9656438 - 02.9656464

MATERIALE: - MATERIAL: - MATERIEL:

ASTM A 105 N

INSPECTION CERTIFICATE CERTIFICAT DE RECEPTION

ENI QUALITY

N° CER-7368/12

DATE 04/07/2012

BOLLA DI CONSEGNA -

DELIVERY NOTE - BORDEREAU LIVRAISON

N° 6415

04/07/2012 pag. 1

ANALISI CHIMICA: - CHEMICAL COMPOSITION - COMPOSITION CHIMIQUE

Colata Coulée	QUANT. SCH. STD	DESCRIZIONE PRODOTTO PRODUCT DESCRIPTION DESCRIPTION DU PRODUIT		C %	Si %	Mn %	S %	P %	Ni %	Cr %	Mo %	Al %	N %	Cu %	Ti %	V %	Nb %	C.Eq.
		FLANGE	ASTM A 105 ANSI 150 WN RF 1 1/2"															
3352-12	50	FLANGE	ASTM A 105 ANSI 150 WN RF 1 1/2"	0.184	0.20	0.96	0.007	0.009	0.13	0.11	0.048	0.026	0.0090	0.14	0.000	0.002	0.002	0,394
9995-11	50	FLANGE	ASTM A 105 ANSI 150 WN RF 1 1/2"	0.194	0.16	0.88	0.010	0.005	0.08	0.13	0.031	0.020	0.010	0.11	0.001	0.002	0.002	0,385
1106025	50	FLANGE	ASTM A 105 ANSI 150 SO RF 1"	0.183	0.18	0.96	0.005	0.004	0.15	0.15	0.050	0.020	0.010	0.15	0.000	0.000	0.000	0,403
2228-11	4	FLANGE	ASTM A 105 ANSI 150 SO RF 1/2"	0.187	0.21	0.83	0.005	0.005	0.14	0.10	0.050	0.015	0.009	0.11	0.000	0.002	0.002	0,372

CARATTERISTICHE MECCANICHE - MECHANICAL TESTS - ESSAIS MECANIQUES

Acciaieria Steel manifactory	Colata Heat Coulée	Rottura Tensile str. N/mm²	Svavamento Yield point N/mm²	Allungamento Elongation % Allongement %	Contrazione Red of area Contraction %	Durezza Hardness HB	Resilienza - Impact Value - Resilience - Joule/cm²				
							Tipo Type	1.	2.	3.	Media °C
OLIFER-ACP S.p.a.	3352-12	518	296	33	73	169-171	KV	41	45	48	+0
OLIFER-ACP S.p.a.	9995-11	551	377	25.0	60.0	172-174	KV	57	61	63	+0
Oliifer ACP -Spa-	1106025	542	375	27.8	56.1	172-175	KV	53	55	57	+0
OLIFER-ACP S.p.a.	2228-11	514	331	30	65.0	172-174	KV	59	62	62	+0

FERRAMENTA INDUSTRIALE BONACINA SRL

Viale Europa 21042 TREVISO (TV)

TRATTAMENTO TERMICO HEAT TREATMENT - TRAITEMENT TERMIQUE
NORMALIZED AT 920°C
COOLED IN STILL AIR

Note:
FOR FLANGES ANSI: DIMENSION IN ACCORDANCE TO ASME/ANSI B16.5
ACCORDING TO NACE MR 01-75

CONTROL VISIVO E DIMENSIONALE VISUAL AND DIMENSIONAL CONTROL SATISFACTORY UFFICIO CONTROLLO QUALITA' QUALITY CONTROL DEPARTMENT
ENTE COLLAUDATORE (RESPONSABILE COLLAUDO) INSPECTION AUTHORITY (INSPECTOR)

Copia 1A

SALA PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT

 SEDE AMMINISTRATIVA E STABILIMENTO:
 23861 CESANA BRIANZA (LC) - Italy
 Via G. Parini, 28
 Tel. +39 031.655441
 Fax +39 031.655449
 quality.mff@farmas.com

COMPANY WITH QUALITY MANAGEMENT
 SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =

		CERTIFICATO DI COLLAUDO SECONDO EN 10204 - 3.1 INSPECTION CERTIFICATE									
		Certif. N. 3326					Dell/Dated 03.07.2012				
		DDT / Del Note N. 2688					Dell/Dated 02.07.2012				
		VIALE EUROPA, 2G - FRAZ. CURNASCO	FERRAMENTA INDUSTRIALE BONACINA SRL					24048	TREVISO	BG	IT
		Pag. 5 - 13									

METALFAR

SIDE AMMINISTRATIVA E STABILIMENTO:
23061 CISANNA BRIANZA (LC) - Italy
Via G. Parini, 28
Tel. +39 031.955411
Fax +39 031.605149
quality@itmsa.com

PRODOTTI INDUSTRIALI S.p.A.

SHAPED TO CALDO DI ACCIAI COMUNI - LEGGI E INODDIBILI

COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =

SALA PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT

CERTIFICATO DI COLLAUDO SECONDO EN 10204 - 3.1 INSPECTION CERTIFICATE																	
		Certif. N. 5048		Dell/Dated 22.11.2011		Fattura/Invoice N.		Del/Dated									
		DDT / Del Note N. 4305		Dated 22.11.2011		Ns.Ord./ Our ref. N.		Del/Dated									
		FERRAMENTA INDUSTRIALE BONACINA SRL		SYSTEM CERTIFIED BY DNV		= ISO 9001:2008 =											
		VIALE EUROPA, 22 - FRAZ. CURNASCO		24048 TREVIOLO		BG IT											
		PAG. 1 - 10															
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	
REINTEGRO C.TO DEPO...																	
REINTEGRATION C.T.O. DEPO...																	
COD. COL. 1073800	COLATA HEAT CODE HEAT	POS. ITEM	V.S.ORDINE YOUR REFERENCE	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DIMENS. VIS. & DIMENS.	VISIVO E DIMENS. VIS. & DIMENS.								
002	002		REINTEGRO C.TO DEPO...	30,00	SIQ150RF1 A105N	ASME/ANSI B16.5 -2009	ASME/ANSI B16.5 -2009	SATISFACTORY	SATISFACTORY								
ASTM A 105																	
MATERIALE / MATERIAL																	
PROGETTA / TEST SPECIMEN FORMA SHAPE																	
SEZ. mm² LUNG. mm LENGTH mm																	
0,190	0,220	1,040	0,008	0,015	0,120	0,060	0,010	0,016	0,200								
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	
REINTEGRO C.TO DEPO...																	
COD. COL. 1032887	COLATA HEAT CODE HEAT	POS. ITEM	V.S.ORDINE YOUR REFERENCE	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DIMENS. VIS. & DIMENS.	VISIVO E DIMENS. VIS. & DIMENS.								
003	003		REINTEGRO C.TO DEPO...	30,00	S/O 150 RF 2"	A105N	ASME/ANSI B16.5 -2009	ASME/ANSI B16.5 -2009	SATISFACTORY	SATISFACTORY							
ASTM A 105																	
MATERIALE / MATERIAL																	
PROGETTA / TEST SPECIMEN FORMA SHAPE																	
SEZ. mm² LUNG. mm LENGTH mm																	
0,195	0,230	1,080	0,010	0,014	0,130	0,060	0,010	0,015	0,110								
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	
REINTEGRO C.TO DEPO...																	
COD. COL. 1032887	COLATA HEAT CODE HEAT	POS. ITEM	V.S.ORDINE YOUR REFERENCE	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DIMENS. VIS. & DIMENS.	VISIVO E DIMENS. VIS. & DIMENS.								
003	003		REINTEGRO C.T.O. DEPO...	30,00	S/O 150 RF 2"	A105N	ASME/ANSI B16.5 -2009	ASME/ANSI B16.5 -2009	SATISFACTORY	SATISFACTORY							
ASTM A 105																	
MATERIALE / MATERIAL																	
PROGETTA / TEST SPECIMEN FORMA SHAPE																	
SEZ. mm² LUNG. mm LENGTH mm																	
0,195	0,230	1,080	0,010	0,014	0,130	0,060	0,010	0,015	0,110								
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	
REINTEGRO C.T.O. DEPO...																	
COD. COL. 1032887	COLATA HEAT CODE HEAT	POS. ITEM	V.S.ORDINE YOUR REFERENCE	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DIMENS. VIS. & DIMENS.	VISIVO E DIMENS. VIS. & DIMENS.								
003	003		REINTEGRATION C.T.O. DEPO...	30,00	S/O 150 RF 2"	A105N	ASME/ANSI B16.5 -2009	ASME/ANSI B16.5 -2009	SATISFACTORY	SATISFACTORY							
ASTM A 105																	
MATERIALE / MATERIAL																	
PROGETTA / TEST SPECIMEN FORMA SHAPE																	
SEZ. mm² LUNG. mm LENGTH mm																	
0,195	0,230	1,080	0,010	0,014	0,130	0,060	0,010	0,015	0,110								
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	
REINTEGRATION C.T.O. DEPO...																	
COD. COL. 1032887	COLATA HEAT CODE HEAT	POS. ITEM	V.S.ORDINE YOUR REFERENCE	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DIMENS. VIS. & DIMENS.	VISIVO E DIMENS. VIS. & DIMENS.								
003	003		REINTEGRATION C.T.O. DEPO...	30,00	S/O 150 RF 2"	A105N	ASME/ANSI B16.5 -2009	ASME/ANSI B16.5 -2009	SATISFACTORY	SATISFACTORY							
ASTM A 105																	
MATERIALE / MATERIAL																	
PROGETTA / TEST SPECIMEN FORMA SHAPE																	
SEZ. mm² LUNG. mm LENGTH mm																	
0,195	0,230	1,080	0,010	0,014	0,130	0,060	0,010	0,015	0,110								
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	
REINTEGRATION C.T.O. DEPO...																	
COD. COL. 1032887	COLATA HEAT CODE HEAT	POS. ITEM	V.S.ORDINE YOUR REFERENCE	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DIMENS. VIS. & DIMENS.	VISIVO E DIMENS. VIS. & DIMENS.								
003	003		REINTEGRATION C.T.O. DEPO...	30,00	S/O 150 RF 2"	A105N	ASME/ANSI B16.5 -2009	ASME/ANSI B16.5 -2009	SATISFACTORY	SATISFACTORY							
ASTM A 105																	
MATERIALE / MATERIAL																	
PROGETTA / TEST SPECIMEN FORMA SHAPE																	
SEZ. mm² LUNG. mm LENGTH mm																	
0,195	0,230	1,080	0,010	0,014	0,130	0,060	0,010	0,015	0,110								
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	
REINTEGRATION C.T.O. DEPO...																	
COD. COL. 1032887	COLATA HEAT CODE HEAT	POS. ITEM	V.S.ORDINE YOUR REFERENCE	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DIMENS. VIS. & DIMENS.	VISIVO E DIMENS. VIS. & DIMENS.								
003	003		REINTEGRATION C.T.O. DEPO...	30,00	S/O 150 RF 2"	A105N	ASME/ANSI B16.5 -2009	ASME/ANSI B16.5 -2009	SATISFACTORY	SATISFACTORY							
ASTM A 105																	
MATERIALE / MATERIAL																	
PROGETTA / TEST SPECIMEN FORMA SHAPE																	
SEZ. mm² LUNG. mm LENGTH mm																	
0,195	0,230	1,080	0,010	0,014	0,130	0,060	0,010	0,015	0,110								
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	
REINTEGRATION C.T.O. DEPO...																	
COD. COL. 1032887	COLATA HEAT CODE HEAT	POS. ITEM	V.S.ORDINE YOUR REFERENCE	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DIMENS. VIS. & DIMENS.	VISIVO E DIMENS. VIS. & DIMENS.								
003	003		REINTEGRATION C.T.O. DEPO...	30,00	S/O 150 RF 2"	A105N	ASME/ANSI B16.5 -2009	ASME/ANSI B16.5 -2009	SATISFACTORY	SATISFACTORY							
ASTM A 105																	
MATERIALE / MATERIAL																	
PROGETTA / TEST SPECIMEN FORMA SHAPE																	
SEZ. mm² LUNG. mm LENGTH mm																	
0,195	0,230	1,080	0,010	0,014	0,130	0,060	0,010	0,015	0,110								
ASTM/ASME A 105/SA 105 M - 10 ASME CODE SECT. II, PART A, ED. 2010																	
NORMALIZED AT 920 C - COOLED IN STILL AIR																	



Inšpekčný certifikát
Inspection certificate
EN 10204:1991/3.1.B, DIN 50849/3.1.B

Číslo 39255/1/2005
Number

Č. ext. obj. - External order No. : 051537

List č. - Sheet No. : 1 / 2

Číslo položky - Article number : 3

Č. obj. prij. - Consignee order No. :
OF-050097

Číslo základky výrobcu - Manufacturer's works order number :
Dv 60334/2/2 6523008

Číslo dopravného prostriedku - Wagon No. :
BR 858 AK BR-838 YA

Číslo ložného lísta - Loading Bill No. : 671270

Číslo avíza - Dispatch note : 654626

Výrobok - Product :

Rúry oceľové bezošvé, tiahane za studena - naftovodné rúry
Seamless cold-drawn steel tubes - line pipes

Vnútorný priemer - Outside diameter : 13200 mm

Hĺbka steny - Wall thickness :

Dĺžka - Length :

Počet kusov - Number of pieces :

Celková dĺžka - Total length :

Celková hmotnosť - Total mass :

Materiál - Material :

X42/PSL 1 API Spec. SL/2004/, B/PSL 1 API Spec. SL/2004/,

Grade B ASTM A 53 / A 53M/2004/, Grade B ASTM A 106/2004/,

Grade B ASME SA-106/2004/, Grade B ASME SA-53/2004/

Stav dodania - Products as delivered condition : NBK

Techické predpisy - Technical requirements/Demand :

ASTM A 106/A 106M-04b, ASTM A 53/A 53M-04a, ASME SA-106 E2004, ASME SA-53/SA-53M E2004, API Spec.5L/2004,

ASTM A530/A530M-04a, ASME SA530/SA530M-99, TAL.TS-01 REV 3, ASME B 36.10M

Zákazník/Prijemca - Customer/Consignee :

T.A.L. S.P.A.
VIA G.DI VITTORIO-ZONA INDUSTRIALE
29017 FIORENZUOLA DARDA(PC)
ITALY

IL PRESENTE CERTIFICATO E' STAMPATO PER
CLIENTE FERRAMENTA INDUSTRIALE
ORDINE N° BONACINA s.r.l.
Viale Europa, 10 - TREVISO (BG)
Tel. 035-201208 - Fax 035-201208
Cod. Fisc. e P.IVA 00727710162
FERRAMENTA INDUSTRIALE
BONACINA s.r.l. IL

Číslo tavby Cast number	Počet kusov Number of pieces	Dĺžka Length [m]	Hmotnosť Mass [kg]	Druh tvorby Steaming process
51192	223	1339	869	E
54025	35	210	135	E

Druh ocele - Steel grade : úplne uhlíkodrená ocel - fully killed steel

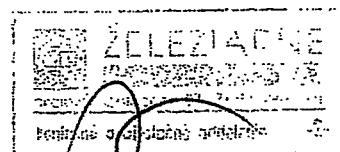
Chemické zloženie - Chemical composition :

Číslo tavby Cast number	Predpisy - Requirements :											
	min.	max.	0.15	0.35	0.020	0.010	0.30	0.30	0.40	0.015	0.12	0.040
51192	0.13	0.64	0.23	0.006	0.007	0.22	0.07	0.09	0.012	0.02	0.002	0.004
54025	0.12	0.65	0.22	0.008	0.009	0.18	0.06	0.07	0.011	0.01	0.001	0.006

Miesto
Location
v Podbrezovej

Dátum 10.10.2005
Date

Vedúci kontrolného a alestačného oddelenia Ing. Vojtás Miroslav
Engineering inspection official



ŽELEZIARNE PODBREZOVA, a. s., 976 81 Podbrezová, SLOVAKIA

Telefón / Phone: +421 48 645 40 70, 645 40 71, Fax: +421 48 645 40 72, www.oceľovury.sk, www.steeltube.sk

IČO 31 562 141, IČ DPH / VAT N°: SK2020458704, Bankové spojenie / Bank account: VÚB Banská Bystrica, N° 1909-312/0200

Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S

List č. - Sheet No. : 2 / 2

Číslo tavby Cast number	Nb	CEV
	[%]	[%]
	Predpis - Requirements :	
	min.	
	max.	
51192	0.019	0.40
54025	0.003	0.28
54025	<0.001	0.26

CEV : C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Výrobková analýza - Product analysis :

Číslo tavby Cast number	C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	
51192	1	0.14	0.63	0.22	0.007	0.006	0.23	0.07	0.09	0.010	0.02	0.001	0.004
51192	2	0.14	0.64	0.23	0.007	0.006	0.22	0.07	0.09	0.011	0.02	0.001	0.003
54025	1	0.13	0.65	0.22	0.008	0.009	0.18	0.06	0.07	0.011	0.01	0.002	0.006
54025	2	0.13	0.65	0.22	0.008	0.009	0.18	0.06	0.07	0.011	0.01	0.002	0.006

Číslo tavby Cast number	Nb [%]
51192	1 <0.001
51192	2 <0.001
54025	1 <0.001
54025	2 <0.001

Skúška ľahom - Tensile test : 20 °C

C. Nr.	Číslo tavby Cast number	Medz. kízu Yield point - Proof stress	Pevnosť v ľahom Tensile strength	Tažnosť Elongation Rm/ MPa	Ls= 2"/ 5%
		ReH/ MPa			
		Predpis - Requirements : min. max.	290	415	30.0
1	51192		334	470	49.0
2	54025		346	464	36.6

 Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections. 207 bar 5 sec

 Skúška ohýbom vyhovela.
Bend test without objections.

 Skúška vŕivými príďmi vyhovela
Eddy current test without objections ASTM E-309 100 %

 Výrobky splňajú základné požiadavky na materiály pre ľahkovýrobu uvedené v Prílohe I Smernice pre ľahkovýrobu (PED) 97/23 EC.
The products are in compliance with the material basic requirements according to the Pressure Equipment Directive (PED) 97/23 EC, Annex I.

NACE MR 01-75-2003, HRC max.22.

NACE MR 01-75-2003, HRC max.22.

Potvrdzujeme, že minimálne hodnoty medze kízu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze kízu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.

We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II, part D, table Y1.

Skúška rázom v ohýbe nebola vykonaná z dôvodu nedostatočného rozmeru rúry, ktorý nedovoľuje prípraviť príslušné teliesko na jej vykonanie.

Impact test has been not performed due to insufficient pipe size that doesn't permit obtaining suitable impact specimen.

Všetky výrobky vyhovujú uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in order.

Vizuálna kontrola a rozmery vyhoveli (100 %).

Visual inspection and dimensional check without objections (100 %).

FERRAMENTA INDUSTRIALE
 BOLOGNA S.p.A.
 Viale Europa, 10/A - 40137 BOLOGNA (BO)
 Tel. 051-201260 - Fax: 051-201268
 Cod. Fisc. e P. IVA 00727710162

 Miesto
Location v Podbrezovej
e

Dátum Date 10.10.2005

 Vedúci kontrolného a astečačného oddelenia Ing. Vojtás Miroslav
 Engineering inspection official

ŽELEZIARNE PODREZOVÁ, a. s., 976 81 Podbrezová, SLOVAKIA
 Telefón / Phone: +421 48 645 40 70, 645 40 71, Fax: +421 48 645 40 72, www.ocelovenery.sk, www.steeltube.sk
 IČO 31 562 141, IC DPH / VAT N°: SK2020458704, Bankové spojenie / Bank account: VUB Banská Bystrica, N° 1909-312/0200
 Spoločnosť je zapísaná v Obchodnom registre Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S





**Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1**

Číslo
Number

42884/1/2011

List č. - Sheet No.: 1 / 3

Č. ext. obj. - External order No.:
OB0974

Číslo položky - Item number:
1

Č. obj. prij. - Consignee order No.:
1000057

Číslo základky výrobcu - Manufacturer's works order number:
Dv 116938/1/3 2123412

Číslo dopravného prostriedku - Transport No.:
LV338BF LV641YA

Číslo ložného listu - Loading Bill No.:
357369

Číslo avíza - Dispatch note:
3124279

Výrobok - Product:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé
Seamless hot finished steel tubes - pipelines for combustible fluids

Zákazník/Prijemca - Customer/Consignee:

**FERRO TUBI E DERIVATI S.R.L.
VIA GUIDO ROSSA 1
20061 CARUGATE
ITALY**

IL PRESENTE CERTIFICATO E' VALIDO PER

*Ferramenta Industriale Bonacina S.r.l.
Ferro Derivati S.r.l.*

Vonkajší priemer - Outside diameter:

219,0 mm

Hrúbka steny - Wall thickness:

2,770 mm

Dĺžka - Length:

6000,000 mm [-0 +100] mm

Počet kusov - Number of pieces:

1098

Celková dĺžka - Total length:

6589,00 m

Celková hmotnosť - Total mass:

8464,00 kg

**FERRAMENTA/INDUSTRIALE BONACINA SRL
Viale Europa 2/BG - 20061 TREVIOLLO (BG)
Tel. 035 201266 - Fax 035 201268
C. F. e P. IVA 00727710162**

Materiál - Material:

**B/PSL1 API Spec. 5L / ISO 3183 /2008/, Grade B ASTM A 53/A 53M-07 /2007/,
Grade B ASME SA-53/SA-53M E10 /2010/, Grade B ASTM A 106/A 106M -08 /2008/,
Grade B ASME SA-106/SA-106M E10 /2010/**

Trieda - Class: **PSL1**

Technické predpisy - Technical requirements/Demand:

**API Spec. 5L / ISO 3183 /2008/, ASME SA-106/SA-106M E10 /2010/, ASME SA-53/SA-53M E10 /2010/,
ASTM A 106/A 106M -08 /2008/, ASTM A 53/A 53M-07 /2007/**

Číslo tavby Cast number	Počet kusov Number of pieces	Dĺžka Length [m]	Hmotnosť Mass [kg]	Druh tavenia Steelmaking process
14356	1098	6589	8464	E

Drahocenne - Steel grade:

úplne ukudnenené oceľ - fully killed steel

Úprava povrchu - Surface protection:

Bez úpravy povrchu (neolejované) - Without surface treatment (without oil)

Miesto v Podbrezovej
Location koll

Dátum 06.09.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtěch Miroslav



ŽELEZIARNE PODBREZOVÁ, a.s. 976 81 Podbrezová, SLOVAKIA

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IČO 31 562 141, IČ DPH/VAT N°: SK2020458704. Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 2601940300/8130

Spoločnosť je zapísaná v Obchodnom registre Okresného súdu Banská Bystrica, oddiel Sa., vložka číslo 69/S

Chemické zloženie - *Chemical composition:*

Číslo tavby Cast number		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Mo [%]	Ti [%]	V [%]	Nb [%]	Exp.1 [%]
	<i>Predpis - Requirements</i>													
	min. max.	0.28	0.29 1.06	0.10	0.030	0.030	0.40	0.40	0.40	0.15		0.080		0.150
14356		0.15	0.45	0.23	0.012	0.008	0.20	0.04	0.07	0.01	0.002	0.002	0.000	0.004

Exp.1 = V + Nb + Ti

Číslo tavby Cast number		Exp.2 [%]
	min. max.	0.060
14356		0.002

Exp.2 = V + Nb

Výrobková analýza - *Product analysis:*

Číslo tavby Cast number		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
14356	1	0.16	0.46	0.23	0.012	0.010	0.20	0.05	0.07	0.01	0.001	0.002	0.001
14356	2	0.16	0.46	0.23	0.012	0.010	0.19	0.05	0.07	0.01	0.001	0.001	<0.001

Skuška ľahom - *Tensile test :* 20 °C

C. Nr	Číslo tavby Cast number	Vzorka č. Test No.	Rozmery Dimensions [mm]	Smer odberu vzorky Direction of the test piece	Medzaklzu Yield point - Proof stress		Pevnosť v ľahre Tensile strength	Tažnosť Elongation
					ReH [MPa]	Rm [MPa]		
			Predpis - Requirements:	min. max.	245	415		30.0
					---	---		---
1	14356	A039393/11	21.30x2.63	L	422	514		47.0
2	14356	A039394/11	21.28x3.10	L	413	497		48.0
3	14356	A039395/11	21.29x3.11	L	411	496		48.2

Skuška ohybom vyhovela.

Bend test without objections.

Skuška vodným tlakom vyhovela.

Hydraulic pressure test without objections.

17.2 MPa 5.00 sec

Výrobky splňajú základné požiadavky na materiály pre tlakové zariadenia uvedené v Prílohe I Smernice pre tlakové zariadenia (PED) 97/23 EC.
The products are in compliance with the material basic requirements according to the Pressure Equipment Directive (PED) 97/23 EC, Annex I.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.

All products meet requirements of above mentioned standards and requirements specified in the order.

Vizuálna kontrola a rozmery vyhoveli (100 %).

Visual inspection and dimensional check without objections (100 %).

Poznámky - *Remarks*

Miesto v Podbrezovej
Location kde

Dátum 06.09.2011
Date

Vedúci kontrolného a zvestačného oddelenia
Engineering inspection official

Ing. Vojtás Miroslav

FERRAMENTA INDUSTRIALE DONACINA SRL
Viale Europa 246 - 34040 TREVISO (BG)
Tel. 035 3012651 - Fax 035 201268
C.F. e P. IVA 00727710162



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IČO 31 562 147, IČ.DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 2001940300/8130

Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Cíllo
Number

42884/1/2011

List č. - Sheet No.: 3 / 3

CHEMICAL PROPERTIES CONFORM TO GRADE B ACCORDING TO ASTM A795



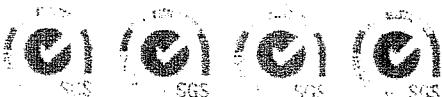
FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 2/G - 24046 TREVIOLO (BG)
Tel. 035 201208 - Fax 035 201268
C. P. e P. IVA 00727710162

Miesto v Podbrezovej
Location koll

Dátum 06.09.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtěch Miroslav



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IČO 31 562 141, IC DPHVAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 2001940300/9130

Spoločnosť je zapisaná v Obchodnom registre Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S

**Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1**

Cíle
Number

11029/1/2011

List č. - Sheet No.: 1 / 3

Č. ext. obj. - External order No.:
0B0359

Číslo položky - Item number:
1

Č. obj. prij. - Consignee order No.:
002 OKRAM

Číslo základky výrobcu - Manufacturer's works order number:
114684/1/1 2113230

Číslo dopravného prostriedku - Transport No.:
BB336CI BB524YE

Číslo ložného listu - Loading Bill No.:
354375

Výrobok - Product:
Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé medien
Seamless hot finished steel tubes - pipelines for combustible fluids

Vonkajší priemer - Outside diameter: **32.400 mm**

Hĺbka steny - Wall thickness: **2.000 mm**

Dĺžka - Length: **6000.000 mm [-0 +100] mm**

Počet kusov - Number of pieces: **88**

Celková dĺžka - Total length: **528.00 m**

Celková hmotnosť - Total mass: **1325.00 kg**

Ferramenta Industriale
BONACINA s.r.l.
S. Silvia Santini

FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 3/3 - 24010 TREVIOLO (BG)
Tel. 035 217233 - Fax 035 201268
C. F. e P. IVA 03727710162

Materiál - Material:

**B/PSL1 API spec.5L/ISO 3183/2008/, X42/PSL1 API spec.5L/ISO 3183/2008/, P265GH - TC1 EN 10216-2+A2/2007/,
Grade B ASTM A 53 / A 53M/2007/, Grade B ASTM A 106/2008/, Grade B ASME SA-106/SA-106M/2010/,
Grade B ASME SA-53/SA-53M/2010/**

Technické predpisy - Technical requirements/Demand:

**EN 10216-2+A2:2007, ASTM A 53/A 53M-07, ASTM A106/A106M-08, ASME SA-106/SA-106M E10,
ASME SA-53/SA-53M E10, API spec. 5L/ISO 3183/08, ASTM A530/A530M-04a, ASME SEC.II PART A**

Číslo tavby Cast number	Počet kusov Number of pieces	Dĺžka Length [m]	Hmotnosť mass [kg]	Druh tavenia Steelmaking process
10639	88	528	1325	E

Druh ocele - Steel grade:

úplne ukľudnená ocel - fully killed steel

Úprava povrchu - Surface protection:

Bez úpravy povrchu (neolejované) - Without surface treatment (without oil)

Miesto v Pôdbrezevej
Location sna

Dátum 01.03.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtěch Miroslav



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IČO 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s., N° 2001940300/8130

Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa., vložka číslo 69/S.

**Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1**

Cislo
Number

11029/1/2011

List č. - Sheet No.: 2 / 3

Chemické zloženie - Chemical composition:

Číslo tavby Cast number	C	Mn	Si	P	S	Cu	Cr	Ni	Al	Mo	Ti	V	Nb
	Predpis - Requirements												
	min.	0.29	0.10	0.025	0.010	0.30	0.30	1.00	0.020	0.08	0.040	0.020	0.010
10639	0.15	0.49	0.23	0.013	0.006	0.18	0.04	0.06	0.023	0.01	0.001	0.003	0.001

Číslo tavby Cast number		Exp.1 [%]	Exp.2 [%]	Exp.3 [%]
	Predpis - Requirements			
	min. max.	0.40	0.150	0.060
10639		0.26	0.005	0.004

$$\text{Exp.1} = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15$$

$$\text{Exp.2} = V + Nb + Ti$$

$$\text{Exp.3} = V + Nb$$

Výrobková analýza - Product analysis:

Číslo tavby Cast number	C	Mn	Si	P	S	Cu	Cr	Ni	Al	Mo	Ti	V	Nb
	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]
10639	1	0.16	0.49	0.23	0.013	0.007	0.17	0.05	0.06	0.024	0.02	0.002	0.003 <0.001
10639	2	0.16	0.50	0.23	0.013	0.008	0.17	0.05	0.06	0.023	0.02	0.002	0.003 <0.001

Skuška ľahom - Tensile test : 20 °C

C. Nr	Číslo tavby Cast number	Vzorka č. Test No.	Rozmery Dimensions [mm]	Smer odberu vzorky Direction of the test piece	Medza kazu Yield point - Proof stress	Pevnosť v ľahu Tensile strength	Tažnosť Elongation	
							Lo= A5,65 [%]	Lo= 2" [%]
1	10639	A006224/11	12.41x3.42	L	290 —	415 570	23.0 ---	*

* Tažnosť - Elongation : min. $(1944 \cdot S_0^{**} 0.2) / (R_m^{**} 0.9)$

Skuška stlačením vyhovela.

Flattening test without objections.

Skuška rozširovaním vyhovela.

Flaring test without objections.

Skuška chybom vyhovela.

Bend test without objections.

Skuška vodným tlakom vyhovela.

Hydraulic pressure test without objections.

Skuška virivými prídmami vyhovela
Eddy current test without objections

STN EN 10246-3/E4H 100.00 %

Skuška virivými práciami vyhovela
Eddy current test without objections

ASTM E-309 100.00 %

FERRAMENTA INDUSTRIALE BONACINA SRL

Viale Europa 2/G - 24040 TREVIOL (BG)

Tel. 035 20 1286 - Fax 035 201268

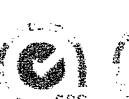
G. F. e P. IVA 06727710162

Miesto v Podbrezovej
Location sna

Dátum 01.03.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtás Miroslav



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IČO: 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 2001940300/8130

Spoločnosť je zapisaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Číslo
Number

11029/1/2011

List č. - Sheet No.: 3 / 3

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všešky zvýšené teploty, ktoré sú predpísané normou ASTM A520 tabuľka I.

We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM A520 table N.1

Systém kvality výrobcu bol podrobnený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 97/23 EC). Certifikát vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2014. Rozsah platnosti certifikátu zahrňa pre dmetné výrobky. The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 97/23 EC. The certificate with the validity till 02/2014 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.

NACE MR 01-75-2003, HRC max.22.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.

All products meet requirements of above mentioned standards and requirements specified in the order.

Vizuálna kontrola a rozmerov vyhoveli (100 %).

Visual inspection and dimensional check without objections (100 %).



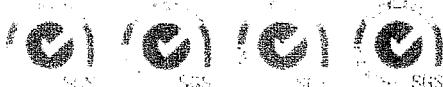
FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 2/G - 24043 TREVIOLO (BG)
Tel. 035 201206 - Fax 035 201206
C. F. e P. IVA 06727710162

Miesto v Podbrezovej
Location sna

Dátum 01.03.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtás Miroslav



ŽELEZIARNE PODBREZOVÁ, a.s., 976 81 Podbrezová, SLOVAKIA

Telefon/Phone: +421 48 645 40 70, 645 40 72, Fax: +421 48 645 40 72, www.oceieverury.sk, www.steeltube.sk

IČO 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 2001940300/8130

Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S



MITTAL

A02 Inspection certificate "3.1" (EN 10 204)

A03 Document No.: 20629/06

A07	Customer's Order (P.O.) No./Item No.: 17-04-06							A08	Manufacturer's Works Order No.: 58588/06								
A11	Supplier's Order No.: 15607896							A10	Advice - Note No.: 149759								
B08, B12/13	Quantity delivered: pcs mtrs kgs			B13 Actual mass 110 1232.461 24550				A06	Customer / Consignee: INCOS SPOL. S R.O. KARLOVO NAMĚSTI 17/288 120 00 PRAHA 2								
B09-11	Dimensions: 168,3 x 4,78 mm																
B02	Steel designation: B/X42																
B01, B03, B04	Product, conditions and terms of delivery: Seamless steel pipes acc. to ASME B 36.10M-04, API 5L-43 edit.04-PSL1 / ASTM A106M-04b / ASME SA106-04 / ASTM A53M-05/ ASME SA53M-04 / ASTM A 530M-04 / ASME SA530M-04, ASME II part.D table Y1 / NACE MR0175/ISO 15156-2/03. Not oiled as rolled. - Tubes are hot finished. - Steel fully killed.																
Z99	<input type="checkbox"/>							continues on appendix									
A04, Z04	Marking: Manufacturer's mark, mill inspector's stamp 1 2							MATERIAL DELIVERED WITH INV. N° 645 DTD 12.4. INCOS, S.R.O. TAL									
C71-92	Heat and product chemical analyses (%)							Steel made by basic oxygen process, fully killed, strand cast.									
B07	Heat No.:	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V	Ti	Al	Nb	Ceq		
	58322K	0.17	0.60	0.226	0.014	0.007	0.04	0.02	0.02	0.004	0.004	<0.003	0.029	<0.003	0.28		
		0.17	0.60	0.221	0.014	0.005	0.04	0.02	0.03	0.003	0.003	<0.003	0.028	<0.003	0.28		
		0.17	0.61	0.222	0.014	0.005	0.04	0.02	0.04	0.003	0.003	<0.003	0.029	<0.003	0.28		
Z99	<input type="checkbox"/>							continues on appendix									
B07	Test results: Heat No. 58322K Specimen No. B			c11 Yield Point min. 240 min. 290		c12 Tensile Strength min. 415 min. 414		c13 Elongation min. 23,0 min. 23,0		c14-15 Impact Test Ø		HRB C50-52 Hardness max. 99					
C04	Requirements: X42			364 351		500 483		33,1 30,1				76					
Z99	<input type="checkbox"/>							continues on appendix									
D01	Visual and dimensional inspection with satisfactory results							<input checked="" type="checkbox"/>	Hydraulic test - min. test pressure MPa / s 12.4 / 5 and test pressure duration								
C50	Flattening test - satisfactory							<input checked="" type="checkbox"/>	The pipes tested on tightness by NDT - in acc. to								
C51	Expanding test - satisfactory							<input type="checkbox"/>									
C52	Bending test - satisfactory							<input type="checkbox"/>									
C53	Ring expanding test (DIN EN 10236) - satisfactory							<input type="checkbox"/>	Nondestructive Electromagnetic Testing								
C54	Ring tensile test (DIN EN 10237) - satisfactory 22 HRC = 99 HRB max.							<input type="checkbox"/>									
Tubes are in compliance with the requirements on the certification PED 97/23 Annex 1 par. 4.3.																	
Z01	All pipes conform to the above mentioned standards and ordering requirements and agreements.														Mittal Steel Ostrava a.s.		
Z02	Date of issue 21.7.2006/Vo							Tel. +420 595682644 / Fax: +420 595682062							Vratimovská 689, 707 02 Ostrava-Kunčice		
																	
Rouravny Jakost 044																	
Dipl. Ing. Pekar																	
Work's Inspector																	
Z02 Validation																	
E.z. 2574/16/15/P																	

A01 Mittal Steel Ostrava a.s.
A05 Tube Mills QA Dept.
Vratimovská 689
707 02 Ostrava-Kunčice
Czech Republic

S.I.T.I.M. s.r.o.
di Faccihetti Antonio & C.
Via Mattei 13/A - 24040 Madone (BG)
Tel. 035/994420 - Fax 035/993867
Cod. Fisc. e P. Iva 01786140168
e-mail: [sitim.faccihetti@tascalinet.it](mailto:sitim.faccihetti@tiscalinet.it)

COPIA CONFORME ALL'ORIGINALE



RAUTARUUKKI
STEEL

**VASTAANOTTOTODISTUS INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION**

A 3/14

EN 10 204-3.1.B

Tilaja Purchaser Beststeller Acheteur

ACCIAI DI QUALITA

I-16121 GENOVA ITALY

Vastaanottaja Consignee Empfänger Destinataire

ACCIAI DI QUALITA

ALESSANDRIA, ITALY

Päivämäärä Date Datum Date

14.10.2010

C

TOIMITUSERÄ DELIVERY LIEFERUNG LIVRAISON

Tilaja Order
Bestellung Commande
Markki Mark
Zeichen Marque
Tilausvahvistus Order Confirmation
Auftragbestätigung Accuse de réception
Laivaus Shipping
Verschiffung Embarkement
Toimitustyyppi Delivery type
Verzandart Type de livraison
Todistus Certificate
Zeugnis Certificat

WAP 4855
1598/1
12534
VLIEBORG
PART DELIVERY
3B7

Lastuleimas Quality Stamping

Markenbezeichnung Qualité

SA516GR60MTLTV

2562/01

Suistus nro levy nro Cast No. plate No.
Schmelzen Nr. Walztafel Nr. Coulee No. tole No.
Valmistajan merkki Mark of the Manufacturer
Zeichen des Herstellers Signe du producteur
Tarkastajan leima Stamp of work's Inspector
Stempel des Werkstattverantwortlichen Pointom de contrôle
Vastaanottajan leima Stamp of Surveyor
Stempel des Sachverständigen Pointom d'expert
Muut leimaukset Other Stamps
Andere Stempelung Les autres repères poignçonnées



AM

Tuote Product

Erikoispiirros Produkt

Laitos Quality

Werkstoff Qualität

Laitoslaatuviety Quality Specification

Qualitätspezifikation Specification de qualité

HEAVY PLATES

ASME SA-516 GR. 60

Toleranssi Tolerance Tolerances Tolerances

EN 10029/1991 CLASS B

ASME SA-516-01

PRESS.VESSEL STEEL ED.2001 OF ASME CODE SEC II SA20

Tekniset vaatimukset Technical terms of
ja/tai viralliset
määritykset.
Lisätiedotuungen
und/oder ammattile
Vorschriften:
prescriptions officielles

SI- AND AL-KILLING

Positio	Mittat. mm	Merkki	Kpl	Paino kg	Suistus levy nro	Koe nro
Item.	Dimensions mm	Mark	Pcs	Weight kg	Cast plate No.	Test No
Post.	Aihmerrytys mm	Zeichen	Stück	Gewicht kg	Schmelz Walztafel Nr.	Proof No

NORMALIZED STEEL PLATES

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC.ADJQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

007	20.00 X 2000	X	8000 A 1598/1	2	5120	62424 012 012
007	20.00 X 2000	X	8000	2	5120	62424 013 013
007	20.00 X 2000	X	8000	3	7680	62424 021 021
007	20.00 X 2000	X	8000	3	7680	62443 012 012

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC.ADJQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

008	20.00 X 2500	X	12000 A 1598/1	1	4800	62300 041 041
008	20.00 X 2500	X	12000	2	9600	62481 012 012
008	20.00 X 2500	X	12000	2	9600	62481 032 032

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC.ADJQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

009	30.00 X 2500	X	12000 A 1598/1	1	7200	62424 022 022
009	30.00 X 2500	X	12000	1	7200	62424 024 024
009	30.00 X 2500	X	12000	1	7200	62424 031 031
009	30.00 X 2500	X	12000	1	7200	62424 032 032
009	30.00 X 2500	X	12000	1	7200	62424 033 033

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC.ADJQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

010	40.00 X 2500	X	12000 A 1598/1	1	9600	62481 011 011
010	40.00 X 2500	X	12000	1	9600	62481 021 021
010	40.00 X 2500	X	12000	1	9600	62481 022 022

RAUTARUUKKI STEEL

Testaus ja tarkastus Testing and Inspection
Prüfung und Kontrolle Essais et Contrôle

Tilja todistanne, että toimitus on

tilausvaatimusten mukainen.

We hereby certify that the material described above has been

tested and complies with the terms of the order contract.

Es wird bestätigt, dass die Lieferung geprüft wurde und

den Vereinbarungen bei der Bestellannahme entspricht.

Nous certifions que la livraison est conforme aux

stipulations de l'acceptation de la commande.

H. Valkama

MINNA VALKAMA
Valtuutettu tarkastaja Authorized Inspector
Wertschaftsverantwortlicher Inspecteur autorisé

RAUTARUUKKI STEEL
Tekninen palvelu Tech. Serivices

Yhtiön nimi Company Name

RAUTARUUKKI OYJ

Osoite Address

PL 93, P.O. Box 93

FIN-92101 RAAHE, FINLAND

Kotipaikka Registered Office

HELSINKI

Puhelin Telephone

(08) 84911

+358 8 84911

Y-tunnus Business ID

0113276-9

Telekopio Telefax

(08) 849 2738

+358 8 849 2738

Y-tunnus Business ID

32312 steel fl

Acciaieria Arvedi S.p.A.

Sede Legale:
Via Donizetti, 20
20122 Milano

Sede Amministrativa e Stabilimenti:
Via Acquaviva, 18
26100 Cremona - Italia
Tel. +39 0372 4781
Fax +39 0372 478259

Via Alberto da Giussano, 11
20011 Corbetta - MI
Tel. +39 02 972351

Cap.Soc. 30.000.000 EUR i.v.
Società interamente controllata
da Finarvedi S.p.A.

Part. IVA IT 11852670154
Cod.fisc. 00910070192
Reg.Imp.MI 00910070192
REA MI 1497770

e-mail vendite@ast.arvedi.it
www.arvedi.it

AcciaieriaArvedi**Certificato di collaudo**

**Spett.le FRANCHINI LAMIERE S.P.A.
VIA IV NOVEMBRE**

25010 SAN ZENO NAVIGLIO

BS

Numero	2012 / 895	data	13/01/2012	EN 10204	3.1
Rif. conferma ordine	2011 / A / 23160 / 10			Vostro ordine	11-139
Prodotto fornitore	Coil NERO	1300x100	S235JR	Marca acciaio	S235JR
spess.	4			larg.	1500
norma	UNI EN 10025-2				

Prove meccaniche e tecnologiche

Prova	Rm N/mm ²	Al%	Re N/mm ²
minimo	360,	24,	235,
massimo	510,		

lotto	colata	qtà	spedizione	valori								
				TON	24,78	2012/VE/34001237/	Rm N/mm ²	376,4	Al%	35,2	Re N/mm ²	307,4
-722012103	220121		900001									

Analisi chimica

elemento	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
minimo												
massimo	0,17	1,4	0,03	0,035	0,035				0,55			0,37
colata	valori											
220121	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
	0,0424	0,1985	0,015	0,0055	0,0021	0,0741	0,0912	0,0215	0,2461	0,0093	0,0295	0,1172

Note

- Certifichiamo che:
- 1- L'acciaio usato è elaborato al forno elettrico (E) e ha grado di disossidazione FF
 - 2- I prodotti sopra elencati sono conformi alle specifiche dell'ordine
 - 3- Il controllo della marcatura, dell'identificazione, dell'aspetto della superficie, della forma e delle caratteristiche dimensionali è soddisfacente.
 - 4- Nelle prove di trazione sono state usate solo provette prismatiche.



Firma

NS. N. MATRICOLA
Bo087

FRANCHINI LAMIERE SPA
COPIA CONFORME ALL'ORIGINALE
CLIENTE QVIA SMI
ORDINE N° 468
COMMESSA N° QUANTITA' E FORMATI COME DA
Ns B.A.M. 1/2/2008
..... 1/2/2008



1608

Arvedi

Cert.n.1608 CPD P054

Acciaieria Arvedi S.p.A.

Sede Legale:
Via Donizetti, 20
20122 Milano

Sede Amministrativa e Stabilimenti:
Via Acquaviva, 18
26100 Cremona - Italia
Tel. +39 0372 4781
Fax +39 0372 478259

Via Alberto da Giussano, 11
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Cod.fisc. 00910070192
Reg.Imp.MI 00910070192
REA MI 1497770

e-mail vendite@ast.arvedi.it
www.arvedi.it

AcciaieriaArvedi**Certificato di collaudo**

Spett.le **FRANCHINI LAMIERE S.P.A.**
VIA IV NOVEMBRE

25010 SAN ZENO NAVIGLIO

BS

Numero 2011 / 32645 data 01/06/2011 EN 10204 3.1

Rif. conferma ordine	2011 / A / 18063 / 10	Vostro ordine	11-057
Prodotto fornitore	Coil NERO 1500x3,00 S235JR	Marca acciaio	S235JR
spess.	3	larg.	1500
norma	UNI EN 10025-2		

Prove meccaniche e tecnologiche

Prova	Rm N/mm ²	Al%	Re N/mm ²
minimo	360,	24,	235,
massimo	510,		

lotto	colata	qtà	spedizione	valori					
-712294206	122942	TON 24,74	2011/VE/3438647/9	Rm N/mm ²	382,2	Al%	35,1	Re N/mm ²	308,1
		00002							

Analisi chimica

elemento	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
minimo												
massimo	0,17	1,4	0,03	0,035	0,035				0,55			0,37

colata	valori											
122942	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
	0,0401	0,2701	0,0275	0,0099	0,0015	0,0818	0,0779	0,0151	0,1733	0,0083	0,0356	0,1216

Note

- Certifichiamo che:
- L'acciaio usato è elaborato al forno elettrico (E) e ha grado di disossidazione FF
 - I prodotti sopra elencati sono conformi alle specifiche dell'ordine
 - Il controllo della marcatura, dell'identificazione, dell'aspetto della superficie, della forma e delle caratteristiche dimensionali è soddisfacente.
 - Nelle prove di trazione sono state usate solo provette prismatiche.



METALLURGIA QUALITÀ

Firma

FRANCHINI LAMIERE SPA
COPIA CONFORME ALL'ORIGINALE
CLIENTE *Eduardo Sm*
ORDINE N° *2011/VE/3438647/9*
COMMESSA N°
QUANTITA' E FORMATI COME DA
Disegni *1000x3,00*
..... *00/93/n*

NS. N. MATRICOLA
<i>A08082</i>
.....
.....



Acciaieria Arvedi S.p.A.

Sede Legale:
Via Donizetti, 20
20122 Milano

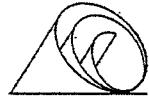
Sede Amministrativa e Stabilimenti:
Via Acquaviva, 18
26100 Cremona - Italia
Tel. +39 0372 4781
Fax +39 0372 478259

Via Alberto da Giussano, 11
20011 Corbetta - MI
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Cod.fisc. 00910070192
Reg.Imp.MI 00910070192
REA MI 1497770

e-mail vendite@ast.arvedi.it
www.arvedi.it

AcciaieriaArvedi**Certificato di collaudo**

**Spett.le FRANCHINI LAMIERE S.P.A.
VIA IV NOVEMBRE**

25010 SAN ZENO NAVIGLIO

BS

Numero 2011 / 51611 data 16/09/2011 EN 10204 3.1

Rif. conferma ordine	2011 / A / 20442 / 10	Vostro ordine	11-101
Prodotto fornitore	Coil NERO 1500x2,00 S235JR	Marca acciaio	S235JR
spess.	2	larg.	1500
norma	UNI EN 10025-2		

Prove meccaniche e tecnologiche

Prova	Rm N/mm2	Al%	Re N/mm2
minimo	360,	19,	235,
massimo	510,		

lotto	colata	qtà	spedizione	valori					
				Rm N/mm2	382,1	AI%	28,5	Re N/mm2	316
-712478705	124787	TON 24,98	2011/VE/3460931/9 00001						

Analisi chimica

elemento	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
minimo												
massimo	0,17	1,4	0,03	0,035	0,035				0,55			0,37

colata	valori											
124787	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
	0,045	0,1927	0,0197	0,0053	0,0014	0,0321	0,0634	0,0143	0,1707	0,0087	0,04	0,1021

Note

- Certifichiamo che:
- 1- L'acciaio usato è elaborato al forno elettrico (E) e ha grado di disossidazione FF
 - 2- I prodotti sopra elencati sono conformi alle specifiche dell'ordine
 - 3- Il controllo della marcatura, dell'identificazione, dell'aspetto della superficie, della forma e delle caratteristiche dimensionali è soddisfacente.
 - 4- Nelle prove di trazione sono state usate solo provette prismatiche.

METALLURGIA QUALITA'

FRANCHINI LAMIERE SPA
COPIA CONFORME ALL'ORIGINALE

Firma

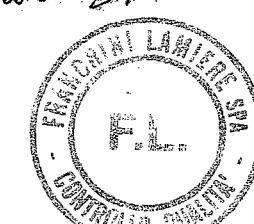
CLIENTE

ORDINE N°

COMMESA N° QUANTITA' E FORMA COME DA

Ns B.A.M.

.....



NS. N. MATRICOLA
<i>A1107X</i>

OVER S.r.L.

MONTAGGI INDUSTRIALI

Via Matteotti, 16

24050 GRASSOBBIO (BG)

Date : 31.08.2012

Doc.N°. 63F2A

INSPECTION BOOK N°. 63F2A

WORKSHOP JOB N°. : 2F11

CUSTOMER : BALLESTRA S.p.A. Milano

JOB : 2F11

ORDER N°. : 121280

Item : 63F2A

Description : 1St. SLURRY FEEDING FILTER

OVER S.r.l.
F. Lopetti

DESMET BALLESTRA S.p.A.
Inspector
Giovanni Guidi
11/8/12

OVER S.r.L.
MONTAGGI INDUSTRIALI
Via Matteotti, 16
24050 GRASSOBBIO (BG)

Date : 31.08.2012

Doc.N° 63F2A

HYDROSTATIC TEST REPORT

Customer	BALLESTRA S.P.A.
Customer Order No.	121280
Job	2F11
Item	63F2A
Description	1St. SLURRY FEEDING FILTER
Data sheet	2F11.35.123
Constructive Dwg.	SB.PRS.00069

Pressure (alternatively) on :

TIME HELD (hours)

SHELL SIDE	bar(g)	1,5
TUBE SIDE	bar(g)	
JACKET	bar(g)	0,75
COIL	bar(g)	

1
1

Pressure gauges serial N° 294

Dial range : 0 - 5

Vessel position : HORIZONTAL

Dichiariamo che la prova idraulica è stata eseguita utilizzando acqua potabile alle pressioni e tempi indicati in tabella ed ha avuto esito positivo.

We certify that the hydrostatic test with water of drinking quality has been performed, at the conditions and times above indicated, with satisfactory result.

OVER S.r.L. Grassobbio (Bg)

F.Libetti

CUSTOMER INSPECTOR

21/08/12
Inspector
Gatti Davide w only jacket

MOD. 8.2.4-05 rev. 0 "Prova idraulica"

OVER S.r.l.
MONTAGGI INDUSTRIALI
Via Matteotti, 16
24050 GRASSOBBIO (BG)

Date : 31.08.2012

Doc. No. : 63F2A

WHITE PICKLING REPORT
(For apparatus in Stainless steel with parts in Carbon steel)
QUALITY CONTROL PLAN No. : 63F2A

Customer	BALLESTRA S.P.A.
Customer Order No.	121280
Job	2F11
Item	63F2A
Description	1St. SLURRY FEEDING FILTER
Data sheet	2F11.35.123
Constructive Dwg.	SB.PRS.00069

Il decapaggio esterno è stato eseguito in accordo alla specifica Ballestra No SB-ATI-SP002/4 utilizzando pasta decapanante DECABLITZ DR5 per un' ora e risciacquando accuratamente con acqua potabile.

The external white pickling treatment has been performed, according to the Ballestra's specification No. SB-ATI-SP002/4 with paste DECABLITZ DR5 for one hour and thoroughly rinsed with water of drinking quality.

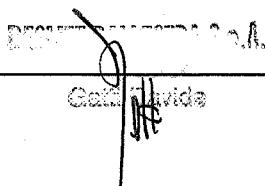
Il ciclo di verniciatura su superfici esterne è stato eseguito in accordo alla specifica Ballestra No. SB-ATI-SP002/4 utilizzando antiruggine COSMALVER TIPO BW0136
The external painting cycle has been performed, according to the Ballestra's specification No. SB-ATI-SP002/4 with antirust COSMALVER TYPE 0136

Le parti interne sono state pulite per mezzo di solvente EMULCLEAR M.

The internal parts have been cleaned by means of solvent EMULCLEAR M.


OVER S.r.l. - GRASSOBBIO (BG)

CUSTOMER INSPECTOR


Dott. Giacomo Gatti
Gatti Giacomo

OVER S.r.l. Via Matteotti,16 Tel. 035 -525256 Fax 035 - 526467 Workshop Job N° 2F11 N°.: CO 12C61	CERTIFICATO DI CONFORMITA' CERTIFICATE OF COMPLIANCE CUSTOMER : BALLESTRA S.p.A. JOB N°. 2F11 Purchase Order N°. : 121280
---	--

ITEM :	63F2A	1st. SLURRY FEEDING FILTER	2F11.35.123
Description :			
DATA SHEET N°.			
Constructive Dwg. N°.	SB.PRS.00069	QUALITY CONTROL PLAN :	

**SI CERTIFICA CHE IL MATERIALE RISULTA CONFORME
A QUANTO RICHIESTO DAI DISEGNI,
DALL' ORDINE ED ALLE SPECIFICHE IN ESSI RICHIAMATI.**

**WE HEREBY CERTIFY THAT THE MATERIAL IS IN COMPLETELY
ACCORDANCE WITH THE DRAWINGS,
THE ORDER AND THE SPECIFICATIONS NOTED IN ABOVE
MENTIONED DOCUMENTS.**

OFF. OVER S.R.L. GRASSOBBIO (BG)

1	F.Libretti						
0	OVER	31.08.2012					
Rev.	Issued by	Date	Checked by	Date	Approved by	Date	Description
REV.	Emesso da	Data	Controllato da	Data	Approvato da	Data	Descrizione



OVER S.r.l.
MONTAGGI INDUSTRIALI
Via Matteotti, 16
24050 GRASSOBBIO (BG)
Workshop Job n° 2F11
N°. C0 12C61

CERTIFICATO CONTROLLO DIMENSIONALE

DIMENSIONAL TEST REPORT

CUSTOMER : BALLESTRA S.p. A.
JOB N°: 2F11
Purchase Order N°: 121280
Doc. N°: Sheet 1 of 1 Rev. 0

ITEM : **63F2A**

Description : **1st. SLURRY FEEDING FILTER**

DATA SHEET N°.

Constructive Dwg. N°. **SB.PRS.00069**

2F11.35.123

SI CERTIFICA CHE L' APPARECCHIO E' STATO SOTTOPOSTO A
CONTROLLO DIMENSIONALE IN ACCORDO AI DISEGNI :

BALLESTRA S.p.A. : DATA SHEET N° 2F11.35.123

BALLESTRA S.p.A. : COSTRUTTIVO N° SB.PRS.00069

ED ALLE SPECIFICHE RICHIAMATE SUGLI STESSI

TUTTE LE MISURAZIONI EFFETTUATE SONO CONFORMI
ALLE TOLLERANZE INDICATE A DISEGNO
ED ALLE SPECIFICHE IN ESSI RICHIAMATE.
E' STATO ESEGUITO CONTROLLO SPESSORI

WE CERTIFY THAT THE ITEM HAS BEEN CONTROLLED
DIMENSIONALLY ACCORDING TO DRAWINGS :

BALLESTRA S.p.A. : DATA SHEET N° 2F11.35.123

BALLESTRA S.p.A. : CONSTRUCTIVE N° SB.PRS.00069

AND TO THE SPECIFICATIONS NOTED IN
THE ABOVE MENTIONED DRAWINGS.

ALL THE MEASUREMENTS PERFORMED RESULT WITHIN
DRAWINGS TOLERANCES
AND TO THE SPECIFICATIONS NOTED IN
THE ABOVE MENTIONED DRAWINGS.
THICKNESS CHECK HAS BEEN PERFORMED

*DESIGN BALLESTRA S.p.A.
Inspector
Catt Davide W
7/3/12*

RISULTATO / Result : SODDISFACENTE / Satisfactory

1	<i>F. Libretti</i>						
0	<i>OVER Srl</i>	31.08.2012					
Rev.	Issued by	Date	Checked by	Date	Approved by	Date	Description
REV.	Erpresso da	Data	Controllato da	Data	Approvato da	Data	Descrizione

Bulloneria Trevi srl
Via C. Porta, 7
24047 Treviglio (BG)

INSPECTION CERTIFICATE

N° 800172 DATE 17/09/08

OVER srl
VIA MATTEOTTI, 16

24050 GRASSOBBIO (BG)

ROLLED BAR ANSI B1.1 A/SA 193 3/4"-10UNCX1000
ZINC PLATING WHITE

Qty 5 Order FAX Date 06/08/08 Heat AR3583 LOT 1060623 RDC 814834
Item Heat treatment QUENCHED AND TEMPERED 593°C

The material is conforming to the following specifications:

ASTM A193/A193M-04b B7-ASME II PART "A" ED.2004 SA 193 B7

Mechanical Properties

	R Mpa	Rs 0.2 Mpa	A%	Z%	HB	HB 24h	Impact test min med	Temp °C	Proof Load min med J	Impact test Temp °C
Required	MIN 860	MIN 720	MIN 16	MIN 50	MAX 321					
Actual	970	921	21.0	60.4	294-311					

Chemical Properties Actual C Mn Si P S Ni Cr Mo V Ti Al B

VISUAL AND DIMENSIONAL TESTS SATISFACTORY. WE STATE THAT THE BOLTING MATERIAL WERE MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND ANY SUPPLEMENTARY REQUIREMENTS OR OTHER REQUIREMENTS DESIGNATED IN THE PURCHASE ORDER OR CONTACT AND WAS FOUND TO MEET THOSE REQUIREMENTS.

HEAVY HEX NUT h=D ANSI B18.2.2 Tab 9 A/SA 194 3/4"-10UNC Order FAX Date 06/08/08 Heat 34855 LOT 1046284 RDC

Qty 100 Item

Heat treatment QUENCHED AND TEMPERED 455°C

The material is conforming to the following specifications:

ASTM A194/A194-04a GR.2H-ASME II PART "A" ED.2004 SA 194 2H

Mechanical Properties

	R Mpa	Rs 0.2 Mpa	A%	Z%	HB	HB 24h	Impact test min med	Temp °C	Proof Load min med J	Impact test Temp °C
Required	MIN 248 MAX 327	MIN 179/540°C								
Actual	279-294	259								

Chemical Properties Actual C Mn Si P S Ni Cr Mo V Ti Al B

VISUAL AND DIMENSIONAL TESTS SATISFACTORY. WE STATE THAT THE BOLTING MATERIAL WERE MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND ANY SUPPLEMENTARY REQUIREMENTS OR OTHER REQUIREMENTS DESIGNATED IN THE PURCHASE ORDER OR CONTACT AND WAS FOUND TO MEET THOSE REQUIREMENTS.

Quality Control Department

bulloneria Trevi srl



Flanges & Fittings Italia S.p.A.
COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY BVL ISO 9001:2000

SEDE LEGALE
22036 ERBA [Como] Italy
Via Volontari della Libertà, 1
SEDE AMMINISTRATIVA E STABILIMENTO
22044 INVERIGO [Como] Italy
Via Magni, 113 [Fraz. Carpanea]
Tel. +39 031 359110
Fax +39 031 605767
R.E.A. COMO 0163943
quality.cff@farmas.com

I risultati delle analisi chimiche e prove meccaniche sono una copia conforme all'originale del certificati 3.1 emessi dal produttore e/o fornitore

Pag. 2 - 3

COD. COL.	COLATA	POS.	VS.ORDINE	Q.TA'	DESCRIZIONE	DIM. IN ACC. A	VISIVO E DIMENS.												
COD. COL.	COLATA	POS.	MATERIALE	C%	SI%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	ALTRI
53F21063-1 53B01062	34260 JOL1A57	013 014	FAX FAX	4,00 4,00	WPL6 ELBOWS 90LR 1 SCH:160 WPL6 CONC.RED 8X6 SCH:STD	SA420 SA420	VEDI NOTE VEDI NOTE	SODDISFALENTE											
MR5 MP5	73040 78995	015 016	FAX FAX	4,00 5,00	WPL6 ELBOWS 90LR 4 SCH:STD	SA420	VEDI NOTE VEDI NOTE	SODDISFALENTE											
ML4	73216 22065B	018 019	FAX FAX	5,00 2,00	A105N COUPLING 1/2 3000 NPT 346L 1/2 COUPLINGS 1/2 3000 NPT	A105N COUPLING 1/4 3000 NPT 316L 1/2 COUPLINGS 1/2 3000 NPT	VEDI NOTE VEDI NOTE	SODDISFALENTE											
MG3	843083 982454	020 021	FAX FAX	1,00 1,00	316L COUPLING 1/4 3000 NPT 304L 1/2 COUPLINGS 1/2 3000 NPT	A105N COUPLING 1/4 3000 NPT A105N HEXAGONAL HEAD PLUG 1	VEDI NOTE VEDI NOTE	SODDISFALENTE											
K52 NK	903807 78995 1629	022 023 024	FAX FAX FAX	7,00 18,00 18,00	304L 1/2 COUPLINGS 1/2 3000 NPT A105N HEXAGONAL HEAD PLUG 1 A105N 1/2 COUPLINGS 1/2 3000 NPT	A105N 1/2 COUPLINGS 1/2 3000 NPT A105N HEXAGONAL HEAD PLUG 1	VEDI NOTE VEDI NOTE VEDI NOTE	SODDISFALENTE SODDISFALENTE SODDISFALENTE											
COD. COL.	COLATA	POS.	TRATT. TERM.	FORMING	SLM	SNERVIAMENTO	ROTTURA	ALLUNGAMENTO	CONTRAZIONE	DUREZZA HBW	RESILIENZA - JOULE	NS.Rif.	UFFICIO CONTROLLO QUALITA'	ENTE UFFICIALE DI COLLAUDO	COLLAUDO ESTERNO				
53F21063-1 53B01062	314860 34265 JOL1A57	013 014 015	HOT HOT	SMLS SMLS SMLS	369,0 308,0 325,0	538,0 442,0 472,0	26,5 0,0 42,0	0,0 135,0 - 150,0 0,0	161,0 - 167,0 128,0 - 139,0 168,0 - 174,0	KV KV KV	-50 -46 -46	54 67 110	41 58 100	42 58 100	21 22 23	F22-56 F25-10 F22-74			
MR5 MP5	73040 78995	016 017	HOT	SMLS	320,0 314,0	532,0 526,0	31,5 31,0	56,0 57,0	160,0 - 164,0 158,0 - 162,0	KV KV	-10 -10	68 78	70 72	61 74	N10137 996063				
ML4	22065B	018	HOT	SMLS	321,0 266,0	528,0 578,0	30,0 51,4	52,0 73,0	168,0 - 177,0 160,0 - 169,0	KV KV	-10 -10	210 215	201 220	201 220	101143 091479				
MG3	843083 903807	020 021	HOT	SMLS	261,0 360,0	555,0 588,0	58,0 47,0	75,6 69,5	160,0 - 169,0 168,0 - 172,0	KV KV	-10 -10	210 208	208 208	201 201	101049 N101350				
K52 NK	78995 1629	023 024	HOT	SMLS	297,0 303,0	605,0 520,0	56,0 31,8	74,0 55,0	180,0 - 186,0 155,0 - 162,0	KV KV	-10 -10	78 73	71 74	71 74	N10137				

NOTE ASME/ANSI - MSS SP - NACE MR075/03 - PED 97/23/EC - NACE MR0103/07 - MATERIALE FORNITO

SECONDO I REQUISITI LE SPECIFICHE DELL'ORDINE - SUPPLIED MATERIAL MEETS
SPECIFICATIONS AND P.O. REQUIREMENTS

NOTE MAT ACC ASTM/MASME A234-10/S-A234-07 AND ADD

TERMINI DI SERVIZIO
QUALITY CONTROL
DEP

(*) 1=Prodotto a caldo tra 620°-980° 2=Tratt. di distensione 3=Normalizzato 4=Normalizzato e rinfornito
5=Temprato e rinfornito 6=Solubilizzato 7=Vedi descrizione

METALFAR

PRODOTTI INDUSTRIALI S.p.A.

SAL A PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT

SEDE AMMINISTRATIVA E STABILIMENTO:
23061 CESANA BRIANZA (LC) - Italy
Via G. Parini, 28
Tel. +39 031.655441
Fax +39 031.655449
quality@farnes.com

COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =

VIALE EUROPA, 2G - FRAZ. CURNASCO
24048 TREVIOLO BG IT

STAMPAGNO A CALDO DI ACCIAI COMUNI - LEGGI E INESSORIBILI

VS.ORDINE
POS.
ITEM
REINTEGRO C.T.O DEPO...

Q.TA'
DESCRIZIONE
DESCRIPTION

ASTM A105N

A105N

VS.ORDINE

REINTEGRO C.T.O DEPO...

30,00

VS.ORDINE

REINTEGRO C.T.O DEPO...

CERTIFICATO DI COLLAUDO DIN 50049/31 - EN 10204/3.1



OVER

Valvole & raccordi

Sede di: 21042 CARONNO PERTUSSERA (Varese)
Via Asiago, 1880 - Telex 02.96567200
Telefono 02.96551141 (r.a.) - 02.9656438 - 02.9656464

MATERIALE: - MATERIAL: - MATERIEL:

ASTM A 105 N

ORDINE - ORDER - COMMANDE
ORD.82, ORD.88, ORD.93

VALE EUROPA 2/12 FRAZ. CURNASCO
TREVIOLI

SIGLA PRODUITORE FLANGE
MARK
SIGLE

NOV

N° CER-7368/12
DATE 04/07/2012
BOLLA DI CONSEGNA -
DELIVERY NOTE - BORDEREAU LIVRAISON
N° 6415
04/07/2012 pag. 1

ANALISI CHIMICA: - CHEMICAL COMPOSITION - COMPOSITION CHIMIQUE

Colata Heat Coulée	QUANT.	DESCRIZIONE PRODOTTO PRODUCT DESCRIPTION DESCRIPTION DE PRODUIT	C	Si	Mn	S	P	Ni	Cr	Mo	Al	N	Cu	Ti	V	Nb	C.Eq.
3352-12	50	FLANGE ASTM A 105 ANSI 150 WN RF 1"	0.184	0.20	0.96	0.007	0.009	0.13	0.11	0.048	0.026	0.0090	0.14	0.000	0.002	0.002	0,394
9995-11	50	FLANGE ASTM A 105 ANSI 150 WN RF 1.1/2"	0.194	0.16	0.88	0.010	0.005	0.08	0.13	0.031	0.020	0.010	0.11	0.001	0.002	0.002	0,385
1106025	50	FLANGE ASTM A 105 ANSI 150 SO RF 1"	0.183	0.18	0.96	0.005	0.004	0.15	0.15	0.050	0.020	0.010	0.15	0.000	0.000	0.000	0,403
2228-11	4	FLANGE ASTM A 105 ANSI 150 SO RF 1.1/2"	0.187	0.21	0.83	0.005	0.005	0.14	0.10	0.050	0.015	0.009	0.11	0.000	0.002	0.002	0,372

CARATTERISTICHE MECCANICHE - MECHANICAL TESTS - ESSAIS MECANIQUES

Acciaieria Steel manifactory Fournisseur	Colata Heat Coulée	Rottura Tensile str. N/mm²	Sforzamento Yield point N/mm²	Allungamento Elongement %	Contrazione Red of area Contraction %	Durezza Hardness HB	Resilienza - Impact Value - Resilience - Joule/cm²
OLIFER-ACP S.p.a.	3352-12	518	296	33	73	169-171	KV 41 45 48
OLIFER-ACP S.p.a.	9995-11	551	377	25.0	60.0	172-174	KV 57 61 63 +0
Olifer ACP SpA	1106025	542	375	27.8	56.1	172-175	KV 53 55 57 +0
OLIFER-ACP S.p.a.	2228-11	514	331	30	65.0	172-174	KV 59 62 62 +0

FERRAMENTA INDUSTRIALE BONACINA SRL

Ferramenta Industriale

Note:
FOR FLANGES ANSI : DIMENSION IN ACCORDANCE TO ASME/ANSI B16.5
ACCORDING TO NACE MR 01-75

Viale Europa 2/30 - 20043 TREVISO (BG)

TRATTAMENTO TERMICO HEAT TREATMENT - TRAITEMENT TERMIQUE
NORMALIZED AT 920°C
COOLED IN STILL AIR

C. F. e P. IT 02977710162

CONTROLLO VISIVO E DIMENSIONALE VISUAL AND DIMENSIONAL CONTROL SATISFACTORI UFFICIO CONTROL DEPARTMENT
ENTE COLLAUDATORE (RESPONSABILE COLLAUDO) INSPECTION AUTHORITY (INSPECTOR)

Copia



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Číslo
Number

42884/1/2011

List č. - Sheet No.: 1 / 3

Č. ext. obj. - External order No.:

0B0974

Číslo položky - Item number:

1

Č. obj. prij. - Consignee order No.:

1000057

Číslo základky výrobcu - Manufacturer's works order number:

Dv 116938/1/3 2123412

Číslo dopravného prostriedku - Transport No.:

LV338BF LV641YA

Číslo ložného listu - Loading Bill No.:

357369

Číslo avíza - Dispatch note:

3124279

Výrobok - Product:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé
Seamless hot finished steel tubes - pipelines for combustible fluids

Vonkajší priemer - Outside diameter:

21.300 mm

Hrubá stena - Wall thickness:

1.720 mm

Dĺžka - Length:

6000.000 mm [-0 +100] mm

Počet kusov - Number of pieces:

1098

Celková dĺžka - Total length:

6589.00 m

Celková hmotnosť - Total mass:

8464.00 kg

Materiál - Material:

B/PSL1 API Spec. 5L / ISO 3183 /2008/, Grade B ASTM A 53/A 53M-07 /2007/,

Grade B ASME SA-53/SA-53M E10 /2010/, Grade B ASTM A 106/A 106M -08 /2008/,

Grade B ASME SA-106/SA-106M E10 /2010/

Trieda - Class: PSL1

Technické predpisy - Technical requirements/Demand:

API Spec. 5L / ISO 3183 /2008/, ASME SA-106/SA-106M E10 /2010/, ASME SA-53/SA-53M E10 /2010/,

ASTM A 106/A 106M -08 /2008/, ASTM A 53/A 53M-07 /2007/

FERRAMENTA INDUSTRIALE BONACINA SRL
 Viale Europa 300 - 24040 TREVIOLO (BG)
 Tel. 035 201266 - Fax 035 201268
 C. F. e P. IVA 00727710162

Číslo tavby Cast number	Počet kusov Number of pieces	Dĺžka Length [m]	Hmotnosť Mass [kg]	Druh tavenia Steelmaking process
14356	1098	6589	8464	E

Druh ocele - Steel grade:

úplne ukľudnená oceľ - fully killed steel

Úprava povrchu - Surface protection:

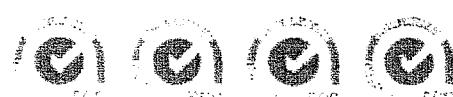
Bez úpravy povrchu (nelejované) - Without surface treatment (without oil)

Miesto v Podbrezovej
Location koll

Dátum 06.09.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtěch Miroslav



ŽELEZIARNE PODBREZOVA, s.r.o., 976 81 Podbrezová, SLOVAKIA

Telefón/Phone +421 48 645 40 70, 645 40 71, Fax: +421 48 645 40 72, www.oecloveniny.sk, www.steeltube.sk

IČO 31 562 141, IC DPH/VAT N: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s., N° 2001940300/8130

Spoľačnosť je zapísaná v Obchodnom registri Okresného súdu Banska Bystrica, odbiel Sa, vložka číslo 69/S



INŠPEKČNÝ CERTIFIKÁT
Inspection certificate
EN 10204:2004/3.1

Číslo
Number

42384/1/2011

List č. - Sheet No.: 2 / 3

Chemické zloženie - Chemical composition:

Číslo tavby Cast number	C	Mn	Si	P	S	Cu	Cr	Ni	Mo	Ti	V	Nb	Exp.I
	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]
	min.	0.28	0.29	0.10	0.030	0.030	0.40	0.40	0.40	0.15	0.080	0.002	0.150
14356	0.15	0.45	0.23	0.012	0.008	0.20	0.04	0.07	0.01	0.002	0.002	0.000	0.004

Exp.1 = V + Nb + Ti

Číslo tavby Cast number	Exp.2
	[%]
14356	0.060

Exp.2 = V + Nb

Výrobková analýza - Product analysis:

Číslo tavby Cast number	C	Mn	Si	P	S	Cu	Cr	Ni	Mo	Ti	V	Nb	
14356	1	0.16	0.46	0.23	0.012	0.010	0.20	0.05	0.07	0.01	0.001	0.002	0.001
14356	2	0.16	0.46	0.23	0.012	0.010	0.19	0.05	0.07	0.01	0.001	0.001	<0.001

Skúška ľahom - Tensile test : 20 °C

C. Nr	Číslo tavby Cast number	Vzorka č. Test No.	Rozmery Dimensions	Smer odberu vzorky Direction of the test piece	Medza klz Yield point - Proof stress	Pevnosť v ľahm Tensile strength	Tažnosť Elongation	ReH [MPa]	Rm [MPa]	Lo= 2" [%]
								min.	max.	---
								245	415	30.0
				Predpis - Requirements:				---	---	---
1	14356	A039393/11	21.30x2.63	L	422	514	47.0			
2	14356	A039394/11	21.28x3.10	L	413	497	48.0			
3	14356	A039395/11	21.29x3.11	L	411	496	48.2			

Skúška ohybom vyhovela.

Bend test without objections.

Skúška vodným tlakom vyhovela.

Hydraulic pressure test without objections.

17.2 MPa 5.00 sec

Výrobky splňajú základné požiadavky na materiály pre tlakové zariadenia uvedené v Prílohe I Smernice pre tlakové zariadenia (PED) 97/23 EC.
The products are in compliance with the material basic requirements according to the Pressure Equipment Directive (PED) 97/23 EC, Annex I.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.

All products meet requirements of above mentioned standards and requirements specified in the order.

Vizuálna kontrola a rozmery vyhoveli (100 %).

Visual inspection and dimensional check without objections (100 %).

Poznámky - Remarks

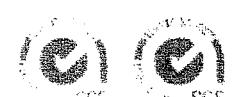
Miesto v Podbrezovej
Location koll

Dátum 06.09.2011
Date

Vedúci kontrolného a mestáčného oddelenia
Engineering inspection official

Ing. Vojtás Miroslav

FERRAMENTA INDUSTRIAL E BONACINA SRL
Viale Europa 2/B - 24040 TREVIOLO (BG)
Tel. 035 201266 - Fax 035 201268
C. F. e P. IVA 00727710162



ŽELEZIARNE PODBREZOVA, a.s., 976 81 Podbrezová, SLOVAKIA

Telefón/Phone: +421 48 645 40 70, 645 40 71. Fax: +421 48 645 40 72, www.oceloverury.sk, www.steeltube.sk

IČO 31 562 143, JČ DPH/VAT N°: SK2620458704. Bankové spojenie/Bank account: Citibank (Slovakia) a.s., N° 2001940300/8130

Spoločnosť je zapisaná v Obchodnom registri Okresného súdu Banská Bystrica, odbiel Sa, vložka číslo 69-S



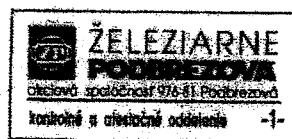
Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Cíllo
Number

42884/1/2011

List č. - Sheet No.: 3 / 3

CHEMICAL PROPERTIES CONFORM TO GRADE B ACCORDING TO ASTM A795



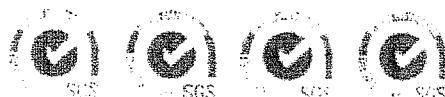
FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 2/Q - 24048 TREVIOLO (BG)
Tel. 035 201266 - Fax 035 201268
C. P. e P. IVA 00727710162

Miesto v Podbrezovej
Location kelt

Dátum 06.09.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtás Miroslav



ŽELEZIARNE PODBREZOVA, a.s. 976 81 Podbrezová, SLOVAKIA

Telefón/Phone: +421 48 645 40 70, 645 40 71; Fax: +421 48 645 40 72; www.oceloverury.sk, www.steeltube.sk

IČO 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s., N° 2001940300/8130

Spoločnosť je zapisaná v Obchodnom registre Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/5



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Cílko
Number

11029/1/2011

List č. - Sheet No.: 1 / 3

Č. ext. obj. - External order No.:

0B0359

Číslo položky - Item number:

1

Č. obj. príj. - Consignee order No.:

002 OKRAM

Číslo základky výrobcu - Manufacturer's works order number:

114684/1/1 2113230

Číslo dopravného prostriedku - Transport No.:

BB836C1 BBS24YE

Číslo ložného listu - Loading Bill No.:

354375

Výrobok - Product:

Rúry oceľové bezos्वé, valcované za tepla - rúry pre potrubia pre horľavé medienka
Seamless hot finished steel tubes - pipelines for combustible fluids

Vonkajší priemer - Outside diameter:

200.00 mm

Hĺbka steny - Wall thickness:

3.00 mm

Dĺžka - Length:

6000.000 mm [-0 +100] mm

Počet kusov - Number of pieces:

88

Celková dĺžka - Total length:

528.00 m

Celková hmotnosť - Total mass:

1325.00 kg

Materiál - Material:

B/PSL1 API spec.5L/ISO 3183/2008/, X42/PSL1 API spec.5L/ISO 3183/2008/, P265GH - TC1 EN 10216-2+A2/2007/,
Grade B ASTM A 53 / A 53M/2007/, Grade B ASTM A 106/2008/, Grade B ASME SA-106/SA-106M/2010/,
Grade B ASME SA-53/SA-53M/2010/

Technické predpisy - Technical requirements/Demand:

EN 10216-2+A2:2007, ASTM A 53/A 53M-07, ASTM A106/A106M-08, ASME SA-106/SA-106M E10,
ASME SA-53/SA-53M E10, API spec. 5L/ISO 3183/08, ASTM A530/A530M-04a, ASME SEC.II PART A

Cílko tavby Cast number	Počet kusov Number of pieces	Dĺžka Length [m]	Hmotnosť mass [kg]	Druh tavenia Steelmaking process
10639	88	528	1325	E

Druh ocele - Steel grade:

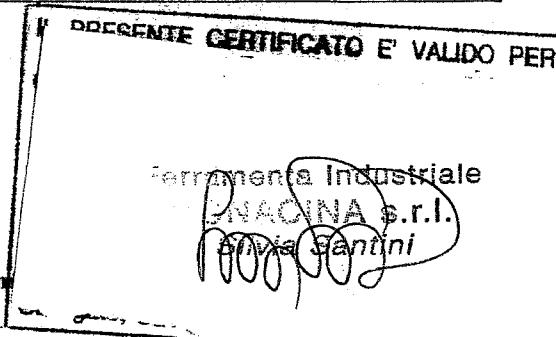
úplne ukľudnená ocel - fully killed steel

Uprava povrchu - Surface protection:

Bez úpravy povrchu (neolejované) - Without surface treatment (without oil)

Ferramenta Industriale
BONACINA s.r.l.
di via Santini
[Signature]

FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 2/G - 24018 TREVIOLO (BG)
Tel. 035 271230 - Fax 035 201268
C. F. e P. IVA 00727710162



Miesto v Pôdbrezovej
Location sna

Dátum 01.03.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vejtas Miroslav



ŽELEZIARNE PODBREZOVÁ, a.s. 976 81 Pôdbrezová, SLOVAKIA

Telefón/Phone: +421 48 645 40 70, 645 40 71, Fax: +421 48 645 40 72, www.ocelovenury.sk, www.steeltube.sk

IČO 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s., N° 2001940300/8130

Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa., vložka číslo 69/S

Chemické zloženie - Chemical composition:

Číslo tavby Cast number	C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
	Predpis - Requirements												
	min. max.	0.29 0.18	0.10 1.06	0.40 0.025	0.010 0.013	0.30 0.006	0.30 0.18	1.00 0.04	0.020 0.06	0.08 0.023	0.040 0.01	0.020 0.001	0.010 0.003
10639	0.15	0.49	0.23	0.013	0.006	0.18	0.04	0.06	0.023	0.01	0.001	0.003	0.001

Číslo tavby Cast number	Exp.1 [%]	Exp.2 [%]	Exp.3 [%]
	Predpis - Requirements		
	min. max.	0.40 0.150	0.060
10639	0.26	0.005	0.004

$$\text{Exp.1} = \text{C} + \text{Mn}/6 + (\text{V} + \text{Mo} + \text{Cr})/5 + (\text{Ni} + \text{Cu})/15$$

$$\text{Exp.2} = \text{V} + \text{Nb} + \text{Ti}$$

$$\text{Exp.3} = \text{V} + \text{Nb}$$

Výrobková analýza - Product analysis:

Číslo tavby Cast number	C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
	1	0.36	0.49	0.23	0.013	0.007	0.17	0.05	0.06	0.024	0.02	0.002	0.003
10639	2	0.16	0.50	0.23	0.013	0.008	0.17	0.05	0.06	0.023	0.02	0.002	0.003

Skúška ľahom - Tensile test : 20 °C

C. Nr	Číslo tavby Cast number	Vzorka č. Test No.	Rozmery Dimensions [mm]	Smer odberu vzorky Direction of the test piece	Medza klzu Yield point - Proof stress		Pevnosť v ľahu Tensile strength		Tažnosť Elongation	
					Rt0,5 [MPa]	Rm [MPa]	Lo=	Lo= 2" [%]		
1	10639	A006224/11	12.41x3.42	L	290	415	23.0	*	---	---

* Tažnosť - Elongation : min. (1944*So**0.2)/(Rm**0.9)

Skúška stlačením vyhovela.

Flattening test without objections.

Skúška rozširovaním vyhovela.

Flaring test without objections.

Skúška ohybom vyhovela.

Bend test without objections.

Skúška vodným tlakom vyhovela.

Hydraulic pressure test without objections.

207.0 bar 5.00 sec

Skúška virivými prúdmí vyhovela

STN EN 10246-3/E4H 100.00 %

Skúška virivými prúdmí vyhovela

ASTM E-309 100.00 %

FERRAMENTA INDUSTRIALE BONACINA SRL

Viale Europa 2/G - 24048 TREVICOLO (BG)

Tel. 035 201266 - Fax 035 201268

C. F. e P. IVA 06727710162

 Miesto v Podbrezovej
Location

sna

 Dátum 01.03.2011
Date

 Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtás Miroslav



ŽELEZIARNE PODBREZOVA, a.s., 976 81 Podbrezová, SLOVAKIA

Telefon/Phone: +421 48 645 40 70, 645 40 71, Fax: +421 48 645 40 72, www.oceloverury.sk, www.steeltube.sk

IČO: 31 561 141, IČ DPH/VAT N°: SK2020458704, Bankové spejenie/Bank account: Cinbank (Slovakia) a.s. N° 2801940300/8130

Spoločnosť je zapísaná v Obchodnom registre Okresného súdu Banská Bystrica, oddiel Sr. vložka číslo 69/S



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Cíllo:
Number

11029/1/2011

List č. - Sheet No.: 3 / 3

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všešky zvýšené teploty, ktoré sú predpísané normou ASTM A520 tabuľka I.

We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM A520 table N.1

Systém kvality výrobcu bol podrobnený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 97/23 EC). Certifikát vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2014. Rozsah platnosti certifikátu zahŕňa pre dmetné výrobky. The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 97/23 EC. The certificate with the validity till 02/2014 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.

NACE MR 01-75-2003, HRC max.22.

Všetky výrobky vyhovujú výšie uvedeným normám a požiadavkám v objednávke.

All products meet requirements of above mentioned standards and requirements specified in the order.

Vizuálna kontrola a rozmerov vyhoveli (100 %).

Visual inspection and dimensional check without objections (100 %).



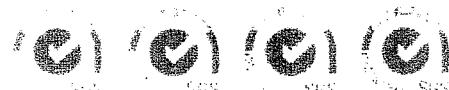
FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 2/6 - 24043 TREVIOLO (BG)
Tel. 035 201266 - Fax 035 201268
G. F. e P. IVA 06727710162

Miesto v Podbrezovej
Location sna

Dátum 01.03.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vejtas Miroslav



ŽELEZIARNE PODBREZOVÁ, a.s., 976 81 Podbrezová, SLOVAKIA

Telefón/Phone: +421 48 645 40 70, 645 40 72, Fax: +421 48 645 40 72, www.oceloverury.sk, www.steeltube.sk

IČO 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 20019403008130

Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Ša, vložka číslo 69/S



RIVECO GENERALSIDER SPA

P. SOC. 15.390.000 EURO I.V. - R.E.A. n° 54649 - P.I., C.F. E REG. IMP. 00091170696 www.rivecogeneralsider.it

CERTIFICATO DI COLLAUDO UNI EN 10204/05 3.1 N° 1386/11 del 07.07.11

CLIENTE:

INTERSIDER NORD-EST S.r.l.
Viale delle Industrie, 31/33/35
20040 CAMBIAGO (MI)

Vs. Ord.: RIF. ORDINE TEL. ODIERNO
 Ns. C.O.: n° 1003 del 28.06.11
 Ns. D.D.T.: n° 03/3260 del 07.07.11
 Destinazione: Cambiago (MI)

COPIA CONFORME
ALL'ORIGINALE

DESCRIZIONE: Tubi saldati longitudinalmente "HFI W" in acciaio L360GA per condotte metano conformi alla norma UNI EN 10208.1 e al D.M. 24.11.84 e successivo aggiornamento dei D.M. 16.11.99, D.M. 16.04.08 e D.M. 17.04.08.
 Internamente ed esternamente grezzi, scordonati, estremità smussate.
 Si dichiara che la fornitura è conforme alla norma EN 10208-1.

Pos.	Colata n°	Dn. mm	Spess. mm	Lungh. m	Q.tà Kg.	ANALISI CHIMICA					
						C % <.240	Mn % <1.55	Si % <.600	P % <.035	S % <.035	Al % >.010 <.065
1	631668	437.0	6,3	6,0	1.680	.142	.69	.294	.017	.001	.029

CARATTERISTICHE MECCANICHE							Resilienza			Acc. Tipo	
Pos.	Rs N/mm ² ≥ 360	R N/mm ² ≥ 460 ≤ 620	Rs/R ≤ 0.85	A % ≥ 20	R (Sald.) N/mm ² ≥ 460 ≤ 620	Prova Idraulica Bar	Resilienza				
							1	2	3		
1	416	547	---	31,0	559	78	---	---	---	L360GA	

Controllo visivo e dimensionale : secondo norma
Prova di schiaccio : secondo norma
Prova idraulica : esito favorevole sul 100% dei tubi - Tempo di Prova : 10 sec.
Controllo non distruttivo (CND) su saldatura e testate secondo EN10208-1:esito favorevole sul 100% dei tubi

FEDERALIMENTA INDUSTRIALE
BONACCINA S.r.l.
Viale Europa, 20-TREVIOLO (Bg)
Tel. 035-201266 Fax 035-201266
C.F. e P.IVA 00727710122

Riveco General Sider S.p.A.
Servizio Qualità
[Signature]

SEDE LEGALE E AMMINISTRATIVA:
66100 CHIETI SCALO (CH)
VIA MARINO CARBONI, 1
TEL. +39 0871 563345
FAX +39 0871 552300

SEDE OPERATIVA:
66100 CHIETI SCALO (CH)
VIA MARINO CARBONI, 1
TEL. +39 0871 563345
FAX +39 0871 560959 / 552300

SEDE OPERATIVA:
86035 LARINO (CB)
C.DA PIANE DI LARINO
TEL. +39 0871 563345
FAX +39 0874 820011

RIVCO S.p.A.

GENERALSIDER ITALIANA S.p.A.

GENERALSIDER S.p.A.

FEDERALIMENTA INDUSTRIALE
BONACCINA S.r.l.
VIA MARINO CARBONI, 1
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ArcelorMittal South Africa Limited
Tubular Products
 Gen. Henrigo rd
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 South Africa

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 Fax +27 (0)16 422 4906

BONACINA S.r.l.
 Viale Europa, 26 - TREVIOLO (BG)
 Tel. 035-201266 - Fax 035-201268
 Cod. Fisc. e P. IVA 00727710162

MATERIAL TEST CERTIFICATE

SEAMLESS STEEL TUBE
 CERTIFICATE DE RECEPTION - TUBES D'ACIER SANS Soudure
 WAHLERHÜTUNGS - WAHLLOSE STAHLSCHLAUCHE



ArcelorMittal

Customer:
 Client
 Kunden
 No. de commande: Minut
 Minut-Nummmer:
 Certificate Reference No:

Order No:
 4000007511
 040001458574

FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES

ISO3183:2007/API 5L:2007 L245L290B/X42 PSL1 ASTM A106, A106B ASME SA106B 168.300 (6.626) 6.350 (0.250) 11.800 (38.700) L245B L290/X42 PSL1

Customer Order/Contract No: SIT4127032
 No. de commande client
 Kundenummern-Nr.
 Material No:
 No de matière:
 Werkstoff-Nr.
 Cast/Ideal No:
 Guss/Nr.:
 Schmelze-Nr.
 Page Number:
 Page:
 Blatt:
 1 of 3

General Information

Information General

Information General

Quantity Quantity Kilogram	Mass Poids Gewicht	Dimensions			Total Length Longeur Länge
		Tube OD Diameter Durchmesser	Thickness Epaisseur Sklar	Length Longeur Länge	
65	19,451,250(kg)	168,00 mm	6,3500 mm	11.800(m)	767,000(m)
	42,882,226(lb)	6.626(")	0.250(")	38,700 (ft)	2,515,500(ft)

Steel making process
 Procédé de fabrication du
 Fertigung
 Stahlherstellungsweg

Final Rolling Operation
 Fin de laminage / Walzende
 Finale Walzschwelle

Electric Arc
 Arc électrique
 Elektroden
 Final hot rolling operation finished above
 860°C and cooled in still air.

Element (%)	C	Si	Mn	S	P	Cr	Ni	Mo	Cu	V	Al	Ti	Sn	Ca	N	Per cent. Seimbrennbar		
																Per cent. Seimbrennbar	Per cent. Seimbrennbar	Per cent. Seimbrennbar
Minimum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maximum	0,200	-	1,30	0,030	0,030	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat	0,169	0,29	0,80	0,004	0,008	0,06	0,07	0,022	0,100	0,002	0,023	0,001	0,007	0,0039	0,0086	0,0004	0,0010	0,33
Product	0,17	0,29	0,80	0,004	0,008	0,06	0,07	0,022	0,100	0,002	0,023	0,001	0,007	0,0039	0,0086	0,0004	0,0010	0,33
Product (ADD)	0,17	0,29	0,80	0,004	0,008	0,06	0,07	0,022	0,100	0,002	0,023	0,001	0,007	0,0039	0,0086	0,0004	0,0010	0,33

TAL SPA

THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ArcelorMittal South Africa Limited
Tubular Products
Gen. Herzog rd.
P O Box 48 Vereeniging 1930
South Africa

Telephone +27 (0)16 450 4220
 Fax +27 (0)16 423 4906

MATERIAL TEST CERTIFICATE

SEAMLESS STEEL TUBE
CERTIFICATE DE RECEPTION - TUBES D'ACIER SANS Soudure
WAHRENGÜTUNGS - MAHLZEUG-STAHLOHRE

Licensed under
 API Spec 5L and 5CT
 SL - 0319
 DE-355997 QM



ISO 9001: 2000
 SCT - 0419
 Test Certificate Type 2A
 En vertaksel Typ 2A

ArcelorMittal

TUBI ACCIAIO LOMBARDA

Customer Order/Contract No: SIT4 127032
 N° de commande/Ref. Kundenbestell-Nr.

Order No.: 4000007511
 N° de commande/Mat. Num.: 4000001458574

Material No.: 89100810
 N° de matière: 89100810

Cert/Ident No.: 3 of 3
 Certificat/Nr.: 3 of 3

Customer No.:
 Kunden-Nr.:
 Schmiede-Nr.:
 Schmiede-Nr.:
 Seite:
 Seite:

Page Number:
 Page:
 Seite:
 Seite:

Product:
 Produit:
 Produkt:
 Product:

Specification:
 Spécification:
 Spezifikation:
 Specificazione:

FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES
 ARCELORMITTAL SA ISO3183/Spec 5L-0319 MONOGRAM 08-00 ASTM A106B ASME SA106B 168.300 (6.626) 6.350 (0.250) 11.800 (38.700) L245/L290/K42 PSL1

ISO3183/2007/API 5L:2007 L245/L290/BX42 PSL1 ASTM A106.06B/SA130.04 ASME SA106.06B/SA130.04

SWLS TESTED 20.7 MPa (3000 psi) CAST NO:8998810 PROD/O NO: T504075110A

Remarks:

Remarques:

Bemerkungen:

Notas:

Date of Issue: 30.07.2009

Certified by: R. Bester

Chief Sales Service de l'assurance de qualité:

Qualitätsleiterungsverantwortlicher:

We hereby certify that the steel grade and quality level of all products are in conformity with the order and comply fully with specification requirements. No changes, amendments or additions may be made in this document. Any changes which are effected shall invalidate this certificate.

Nous certifions que la qualité et le niveau de qualité de tous les produits sont en conformité avec l'ordre et respectent entièrement les exigences de spécification. Il est interdit de modifier ce document ou d'y ajouter quoi que ce soit. Toute changement invalide cette certification.

Wir bestätigen, daß die Stahlqualität und das Qualitätsniveau aller Produkte mit der Spezifikation konform sind. Diese Urkunde darf in keiner Weise geändert, abgeändert oder ergänzt werden. Jede Änderung wird die Gültigkeit dieser Urkundung aufheben.

TAL SPA

- THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL



RAUTARUUKKI
STEEL

VASTAANOTTOTODISTUS INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION

A 3/14

EN 10 204-3.1.B

Tiltaja Purchaser Beststeller Acheteur

ACCIAI DI QUALITA

I-16121 GENOVA ITALY

Vastaanottaja Consignee Empfänger Destinataire

ACCIAI DI QUALITA

ALESSANDRIA, ITALY

Päivämäärä Date Datum Date

14.10.2010

C

TOIMITUSERÄ DELIVERY LIEFERUNG LIVRAISON

Tiltaja Order Bestellung Commande Merkki Mark Zeichen Marque Tilavuusvahvistus Order Confirmation Auftragbestätigung Accuse de réception Laivaus Shipping Verschiffung Embaumement Toimitustyyppi Delivery type Verzadard Type de livraison Todistus Certificate Zespruit Certificat

WAP 4855
1598/1
12534
VLIEBORG
PART DELIVERY
3B7

Lastuleimaus Quality Stamping

Merknbezeichnung Qualité

SA516GR60MTLTV

2562/01

Sulatus nro levy nro Cast No. plate No.
Schmelzen Nr. Walztafel Nr. Coulee No tôle No
Vainmatajan merkki Mark of the Manufacturer
Zeichen des Herstellers Signe du producteur
Tarkastajan leima Stamp of work's Inspector
Stempel des Werkstattverantwortlichen Poincon de contrôle
Vastaanottajan leima Stamp of Surveyor
Stempel des Sachverständigen Poincon d' l'expert
Muut leimaukset Other Stamps
Andere Stempelung Les autres repères poinçonnées

XXXXXX XX XX



AA

Tuote Product

Erzeugnisform Produkt

Laste Quality

Werktarif Qualität

Lässivisylitys Quality Specification

Qualitätspezifikation Specification de qualité

HEAVY PLATES

ASME SA-516 GR 60

Toleranssi Tolerances Toleranzen Tolerances

EN 10029/1991 CLASS B

ASME SA-516-01

PRESS.VESSEL STEEL ED.2001 OF ASME CODE SEC II SA20

Tekniikat vestintäkset ja/tai viralliset määritykset.
Liederbedingungen und/oder amtliche Vorschriften:
SI-AND AL-KILLING

Technical terms of delivery and/or Official Regulations
Stipulations de la commande et/ou prescriptions officielles

Postin	Mittat mm	Merkki	Kpl	Paino kg	Sulatus levy nro	Koe nro
Item:	Dimensions mm	Mark	Pcs	Weight kg	Cast plate No.	Test No
Post:	Abmessungen mm	Zeichen	Stück	Gewicht kg	Schmelz Walztafel Nr.	Prüf No

NORMALIZED STEEL PLATES

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC.ADQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

007	20.00 X 2000	X	8000 A 1598/1	2	5120	62424 012 012
007	20.00 X 2000	X	8000	2	5120	62424 013 013
007	20.00 X 2000	X	8000	3	7680	62424 021 021
007	20.00 X 2000	X	8000	3	7680	62443 012 012

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC.ADQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

008	20.00 X 2500	X	12000 A 1598/1	1	4800	62300 041 041
008	20.00 X 2500	X	12000	2	9600	62481 012 012
008	20.00 X 2500	X	12000	2	9600	62481 032 032

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC.ADQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

009	30.00 X 2500	X	12000 A 1598/1	1	7200	62424 022 022
009	30.00 X 2500	X	12000	1	7200	62424 024 024
009	30.00 X 2500	X	12000	1	7200	62424 031 031
009	30.00 X 2500	X	12000	1	7200	62424 032 032
009	30.00 X 2500	X	12000	1	7200	62424 033 033

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC.ADQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

010	40.00 X 2500	X	12000 A 1598/1	1	9600	62481 011 011
010	40.00 X 2500	X	12000	1	9600	62481 021 021
010	40.00 X 2500	X	12000	1	9600	62481 022 022

RAUTARUUKKI STEEL

Testaus ja tarkastus Testing and Inspection
Prüfung und Kontrolle Essais et Contrôle

Tiltaja todistanne, että toimitus on

tilausvaatusten mukainen.

We hereby certify that the material described above has been

tested and complies with the terms of the order contract.

Es wird bestätigt, dass die Lieferung geprüft wurde und

den Vereinbarungen bei der Bestellannahme entspricht.

Nous certifions que la livraison est conforme aux

stipulations de l'acceptation de la commande.

M. Valkama

MINNA VALKAMA

Valtuutettu tarkastaja Authorized Inspector
Werkstattverantwortlicher Inspecteur autorisé

RAUTARUUKKI STEEL

Tekninen palvelu Tech. Ser. Services

Yhtiö nimi Company Name

RAUTARUUKKI OYJ

Osoite Address

PL 83, P.O. Box 93

FIN-92101 RAAHE, FINLAND

Kotipaikka Registered Office

HELSINKI

Puhelin Telephone

(08) 849 2738

+358 8 849 2736

Y-tunnus Business ID

0113278-9

Telekopio Telefax

(08) 849 2738

+358 8 849 2736

Y-tunnus Business ID

0113278-9

Telex Telex

32312 steel fl

Acciaieria Arvedi S.p.A.

Sede Legale:
Via Donizetti, 20
20122 Milano

Sede Amministrativa e Stabilimenti:
Via Acquaviva, 18
26100 Cremona - Italia
Tel. +39 0372 4781
Fax +39 0372 478259

Via Alberto da Giussano, 11
20011 Corbetta - MI
Tel. +39 02 972351

Cap.Soc. 30.000.000 EUR i.v.
Società interamente controllata
da Finarvedi S.p.A.

Part. IVA IT 11852670154
Cod.fisc. 00910070192
Reg.Imp.MI 00910070192
REA MI 1497770

e-mail vendite@ast.arvedi.it
www.arvedi.it

AcciaieriaArvedi**Certificato di collaudo**

Spett.le FRANCHINI LAMIERE S.P.A.
VIA IV NOVEMBRE

25010 SAN ZENO NAVIGLIO

BS

Numero 2011 / 51611 data 16/09/2011 EN 10204 3.1

Rif. conferma ordine	2011 / A / 20442 / 10	Vostro ordine	11-101
Prodotto fornitore	Coil NERO 1500x2,00 S235JR	Marca acciaio	S235JR
spess.	2	larg.	1500
norma	UNI EN 10025-2		

Prove meccaniche e tecnologiche

Prova	Rm N/mm ²	Al%	Re N/mm ²
minimo	360,	19,	235,
massimo	510,		

lotto	colata	qtà	spedizione	valori					
-712478705	124787	TON 24,98	2011/VE/3460931/9	Rm N/mm ²	382,1	Al%	28,5	Re N/mm ²	316

Analisi chimica

elemento	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
minimo												
massimo	0,17	1,4	0,03	0,035	0,035				0,55			0,37
colata	valori											
124787	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
	0,045	0,1927	0,0197	0,0053	0,0014	0,0321	0,0634	0,0143	0,1707	0,0087	0,04	0,1021

Note

Certifichiamo che:

- 1- L'acciaio usato è elaborato al forno elettrico (E) e ha grado di disossidazione FF
- 2- I prodotti sopra elencati sono conformi alle specifiche dell'ordine
- 3- Il controllo della marcatura, dell'identificazione, dell'aspetto della superficie, della forma e delle caratteristiche dimensionali è soddisfacente.
- 4- Nelle prove di trazione sono state usate solo provette prismatiche.

METALLURGIA QUALITA'

FRANCHINI LAMIERE SPA
COPIA CONFORME ALL'ORIGINALE

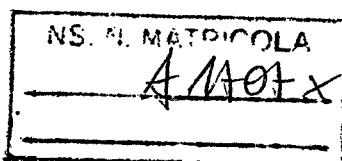
Firma

CLIENTE

ORDINE N°

COMMESA N° QUANTITA' E FORMA COME DA

Ns B.A.M.



OMM OM
PATERETTI
11/96
06/09/12



Acciaieria Arvedi S.p.A.

Sede Legale:
Via Donizetti, 20
20122 Milano

Sede Amministrativa e Stabilimenti:
Via Acquaviva, 18
26100 Cremona - Italia
Tel. +39 0372 4781
Fax +39 0372 478259

Via Alberto da Giussano, 11
20011 Corbetta - MI
Tel. +39 02 972351

Cap.Soc. 30.000.000 EUR i.v.
Società interamente controllata
da Finarvedi S.p.A.

Part. IVA IT 11852670154
Cod.fisc. 00910070192
Reg.Imp.MI 00910070192
REA MI 1497770

e-mail vendite@ast.arvedi.it
www.arvedi.it

AcciaieriaArvedi**Certificato di collaudo**

Spett.le

FRANCHINI LAMIERE S.P.A.
VIA IV NOVEMBRE**25010 SAN ZENO NAVIGLIO****BS****Numero 2011 / 32645 data 01/06/2011****EN 10204 3.1**

Rif. conferma ordine	2011 / A / 18063 / 10	Vostro ordine	11-057
Prodotto fornitore	Coil NERO 1800x3,00 S235JR	Marca acciaio	S235JR
spess.	3	larg.	1500
norma	UNI EN 10025-2		

Prove meccaniche e tecnologiche

Prova	Rm N/mm ²	Al%	Re N/mm ²
minimo	360,	24,	235,
massimo	510,		

lotto	colata	qtà	spedizione	valori					
-712294206	122942	TON 24,74	2011/VE/3438647/9	Rm N/mm ²	382,2	Al%	35,1	Re N/mm ²	308,1
		00002							

Analisi chimica

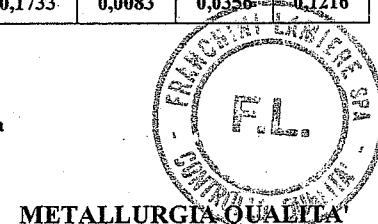
elemento	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
minimo												
massimo	0,17	1,4	0,03	0,035	0,035				0,55			0,37

colata	valori											
122942	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
	0,0401	0,2701	0,0275	0,0099	0,0015	0,0818	0,0779	0,0151	0,1733	0,0083	0,0356	0,1216

Note

Certifichiamo che:

- 1- L'acciaio usato è elaborato al forno elettrico (E) e ha grado di disossidazione FF
- 2- I prodotti sopra elencati sono conformi alle specifiche dell'ordine
- 3- Il controllo della marcatura, dell'identificazione, dell'aspetto della superficie, della forma e delle caratteristiche dimensionali è soddisfacente.
- 4- Nelle prove di trazione sono state usate solo provette prismatiche.

**METALLURGIA QUALITÀ**

Firma

FRANCHINI LAMIERE SPA
COPIA CONFORME ALL'ORIGINALE
CLIENTE *Eva Sm*
ORDINE N° *2011/VE/3438647/9*
COMMESSA N°
QUANTITA' E FORMATI COME DA
PIA ALTA *1000*
99/23/n

NS. N. MATRICOLA
<i>A08082</i>

Mod. 10.02

Rev. 1 del 1/11/2005

Azienda con sistema di
gestione certificato da IGQ
secondo ISO 9001

1608
Cert.n.1608 CPD P054

Pagina 1 di 1

Acciaieria Arvedi S.p.A.

Sede Legale:
Via Donizetti, 20
20122 Milano

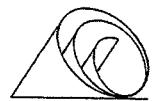
Sede Amministrativa e Stabilimenti:
Via Acquaviva, 18
26100 Cremona - Italia
Tel. +39 0372 4781
Fax +39 0372 478259

Via Alberto da Giussano, 11
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Part. IVA IT 11852670154
Cod.fisc. 00910070192
Reg.Imp.MI 00910070192
REA MI 1497770

e-mail vendite@ast.arvedi.it
www.arvedi.it

AcciaieriaArvedi**Certificato di collaudo**

Spett.le FRANCHINI LAMIERE S.P.A.
VIA IV NOVEMBRE

25010 SAN ZENO NAVIGLIO**BS**

Numero	2012 / 895	data	13/01/2012	EN 10204	3.1
---------------	-------------------	-------------	-------------------	-----------------	------------

Rif. conferma ordine	2011 / A / 23160 / 10	Vostro ordine	11-139
Prodotto fornitore	Coil NERO 1500x1400 S235JR	Marca acciaio	S235JR
spess.	4	larg.	1500
norma	UNI EN 10025-2		

Prove meccaniche e tecnologiche

Prova	Rm N/mm ²	Al%	Re N/mm ²
minimo	360,	24,	235,
massimo	510,		

lotto	colata	qtà	spedizione	valori					
-722012103	220121	TON 24,78	2012/VE/34001237/900001	Rm N/mm ²	376,4	Al%	35,2	Re N/mm ²	307,4

Analisi chimica

elemento	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
minimo												
massimo	0,17	1,4	0,03	0,035	0,035				0,55			0,37

colata	valori											
220121	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
	0,0424	0,1985	0,015	0,0055	0,0021	0,0741	0,0912	0,0215	0,2461	0,0093	0,0295	0,1172

Note

- Certifichiamo che:
- 1- L'acciaio usato è elaborato al forno elettrico (E) e ha grado di disossidazione FF
 - 2- I prodotti sopra elencati sono conformi alle specifiche dell'ordine
 - 3- Il controllo della marcatura, dell'identificazione, dell'aspetto della superficie, della forma e delle caratteristiche dimensionali è soddisfacente.
 - 4- Nelle prove di trazione sono state usate solo provette prismatiche.



Firma

NS. N. MATRICOLA	30087

FRANCHINI LAMIERE SPA
COPIA CONFORME ALL'ORIGINALE
CLIENTE Ova Sm
ORDINE N°
COMMESSA N°
QUANTITA' E FORMATI COME DA
Ns B.A.M. 168
..... 7/21/2011

INSPECTION CERTIFICATE

N°102043.1/DIN 50049-3.1/B/ISO 10474

ArcelorMittal

USINE DE FOS
13776 - FOS SUR MER CEDEX
FRANCE

Tél: 04.42.47.33.14 Fax: 04.42.47.24.27

FOS

Sigle du producteur / Mill's identification : F' Re=235 MINI MPa, Rm=360 - 510 MPa, A%>15.65) =24 MINI

T' Re=235 MINI MPa, Rm=360 - 510 MPa, A%>15.65) =24 MINI

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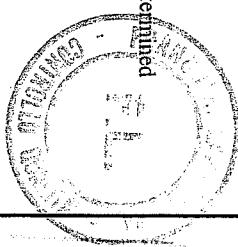
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**Document de contrôle basé sur un contrôle spécifique
Inspection document based on specific control
EN 10204**



Service de contrôle Inspection Organisme Département Qualité Quality department	Client Customer FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO	Nº commande Client Customer's order Nr	Nº commande Usine Mill's order Nr	Spécification Technique Technical specification
Identification du produit Product identification	Organisme de certification Notified body	Numéro de certificat Certificat number	FH2B001002	S235JR-CL1 EN10025
Relève pièce Part Number	Coulée Heat	Poste Item	0333	0333 - CPD-138002
			EN 10025-1	Année / Year 12
			Produit en acier de construction laminé à chaud Usages prévus: Construction de bâtiments ou génie civil	EN 10025-1 Hot rolled structural steel products. Intended uses: building constructions or civil
5122029	730221171	000001	Tolérances sur les dimensions et la forme. Produit suivant EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
5247040	730221094	000001		
5143017	730221171	000001		
5122024BX	730213237	000001		
			Acier	
Elongation			Elongation	
Résistance à la traction			Tensile strength	
Limité d'élasticité			Yield strength	
Résistance au choc			Impact strength	
Soudabilité			Weldability	
Durabilité: Aucune performance déterminée			Steel	
Substance réglementée: Aucune performance déterminée			S235JR-CL1	
			EN10025	
				Durability: No performance determined Regulated substance: No performance determined



本钢板材股份有限公司
BENGANG STEEL PLATES CO., LTD

BX STEEL
本钢集团

产 品 质 量 证 明 书
PRODUCT QUALITY CERTIFICATE

质量管理中心 JL-014

辽宁省本溪市平山区钢铁路18号
No. 18, Gangtie Road, Pingshan District
Beiyan Liaoning Province, P.R. China
电话: 0414-5828933 邮编: 117000
TEL: 0414-5828933 PC: 117000

H0872-A

0934

客户名称 SOLD TO	斯堪科东南亚公司	产品名称 Product	HRC
技术条件 SPEC.	Q/BB 131-2010 ACC. TO EN10204-2004 TYPE 3.1	商业发票号码 Invoice No.	ED11041894
钢种 Grade	S235JR	客户编号 Customer No.	SG000005
检验 INSPE.	本钢板材质量管理中心 BX Steel Quality Management Center	交货状态 Delivery State	热轧
		交货日期 Shipping Date	2011/04/27
		证明书日期 Issue Date	2011/04/28
		客户采购案号 Customer Ref. No.	R11025C035-2

项目 ITEM NO.	钢卷编号 COIL NO.	炉号 HEAT NO.	等级 CLASS NO.	尺寸及规格 MATERIAL DESCRIPTION					化学成分 CHEMICAL COMPOSITION %								拉伸试验 *A1 *A2 *A3 Rp0.2 RM % 180° d=2a	备注 REMARKS																	
				厚度 THICK	*宽度* WIDTH	长度 LENGTH	数量 QTY	重量 WEIGHT t	C	S	P	Ni	Cr	Mo	V	C2	B	MAX	MIN	MAX	MIN														
05	A110337512B	1142221	1	8.000mm*2000mm*C	1	28.980	12	10	44	11	11	40	3	0	1	0	20	35	30	8	10	35.8	235	360	24.0										
05	A110337523B	1142226	1	8.000mm*2000mm*C	1	28.870	10	10	45	11	9	30	3	0	1	0	20	35	30	8	10	35.8	235	360	24.0										
SPECIFICATION				TOTAL: 2					*B3 弯曲 BENDING C2=[C]+[Mn]/6+[Cr]+[Mo]+[V]/5+[Cu]+[Ni]/15 等级 1=合格品 CLASS 1=ELIGIBILITY																										
VISUAL INSPECTION(SURFACE) AND DIMENSION CHECK : OK																																			
SURVEYOR TO				兹证明本表所列产品, 均按标准进行制造及试验, 并且符合规范之要求。 WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE STANDARD TECHNIQUE.																															
注释 NOTES				*A1 屈服强度 YIELD STRENGTH *A2 抗拉强度 TENSILE STRENGTH *A3 伸长率 ELONGATION *B1 弯曲 BENDING *B2 弯曲 BENDING																															

兹证明本表所列产品, 均按标准进行制造及试验, 并且符合规范之要求。

SURVEYOR TO WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE STANDARD TECHNIQUE.

OVER S.r.L.
MONTAGGI INDUSTRIALI
Via Matteotti, 16
24050 GRASSOBBIO (BG)

Date : 31.08.2012
Doc.N°. 63F2B

INSPECTION BOOK N°. 63F2B
WORKSHOP JOB N°. : 2F11

CUSTOMER : BALLESTRA S.p.A. Milano

JOB : 2F11

ORDER N°. : 121280

Item : 63F2B

Description : 2nd. SLURRY FEEDING FILTER

OVER S.r.l.
F. Lipetti

DESMET BALLESTRA S.p.A.
Inspector
Gatti Davide

7/8/12

OVER S.r.L.

MONTAGGI INDUSTRIALI
Via Matteotti, 16
24050 GRASSOBBIO (BG)

Date : 31.08.2012

Doc.N° 63F2B

HYDROSTATIC TEST REPORT

Customer	BALLESTRA S.P.A.
Customer Order No.	121280
Job	2F11
Item	63F2B
Description	2nd. SLURRY FEEDING FILTER
Data sheet	2F11.35.124
Constructive Dwg.	SB.PRS.00069

Pressure (alternatively) on :

TIME HELD (hours)

SHELL SIDE	bar(g)	1,5
TUBE SIDE	bar(g)	
JACKET	bar(g)	0,75
COIL	bar(g)	

1

Pressure gauges serial N° 573

Dial range : 0 - 5

Vessel position : HORIZONTAL

Dichiariamo che la prova idraulica è stata eseguita utilizzando acqua potabile alle pressioni e tempi indicati in tabella ed ha avuto esito positivo.

We certify that the hydrostatic test with water of drinking quality has been performed, at the conditions and times above indicated, with satisfactory result.

OVER S.r.L. Grassobbio (Bg)

F.Libretti

CUSTOMER INSPECTOR

DESIGNER BALLESTRA S.P.A.
Inspector 7/5/12
Gatti D. *w only jacket*
MOD. 8.2.4-05 rev. 0 "Prova idraulica"

OVER S.r.l.
MONTAGGI INDUSTRIALI
Via Matteotti, 16
24050 GRASSOBBIO (BG)

Date : 31.08.2012

Doc. No. : 63F2B

WHITE PICKLING REPORT
(For apparatus in Stainless steel with parts in Carbon steel)
QUALITY CONTROL PLAN No. : 63F2B

Customer	BALLESTRA S.P.A.
Customer Order No.	121280
Job	2F11
Item	63F2B
Description	2nd. SLURRY FEEDING FILTER
Data sheet	2F11.35.124
Constructive Dwg.	SB.PRS.00069

Il decapaggio esterno è stato eseguito in accordo alla specifica Ballestra No SB-ATI-SP002/4 utilizzando pasta decapante DECABLITZ DR5 per un' ora e risciacquando accuratamente con acqua potabile.

The external white pickling treatment has been performed, according to the Ballestra's specification No. SB-ATI-SP002/4 with paste DECABLITZ DR5 for one hour and thoroughly rinsed with water of drinking quality.

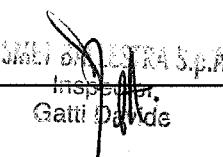
Il ciclo di verniciatura su superfici esterne è stato eseguito in accordo alla specifica Ballestra No. SB-ATI-SP002/4 utilizzando antiruggine COSMALVER TIPO BW0136
The external painting cycle has been performed, according to the Ballestra's specification No. SB-ATI-SP002/4 with antirust COSMALVER TYPE 0136

Le parti interne sono state pulite per mezzo di solvente EMULCLEAR M.

The internal parts have been cleaned by means of solvent EMULCLEAR M.


OVER S.r.l. - GRASSOBBIO (BG)

CUSTOMER INSPECTOR


Domenico GATTI DAVIDE
Inspecteur
Gatti Davide



OVER S.r.l.

MONTAGGI INDUSTRIALI

Via Matteotti, 16

24050 GRASSOBBIO (BG)

Workshop Job n° 2F11

N°. C0 12C61

CERTIFICATO CONTROLLO DIMENSIONALE

DIMENSIONAL TEST REPORT

CUSTOMER : BALLESTRA S.p.A.

JOB N°. 2F11

Purchase Order N°. 121280

Doc. N°. Sheet 1 of 1 Rev. 0

ITEM :

63F2B

Description :

2nd. SLURRY FEEDING FILTER

DATA SHEET N°.

2F11.35.124

Constructive Dwg. N°.

SB.PRS.00069

**SI CERTIFICA CHE L' APPARECCHIO E' STATO SOTTOPOSTO A
CONTROLLO DIMENSIONALE IN ACCORDO AI DISEGNI :**

BALLESTRA S.p.A. : DATA SHEET N°. 2F11.35.124

BALLESTRA S.p.A. : COSTRUTTIVO N°. SB.PRS.00069

ED ALLE SPECIFICHE RICHIAMATE SUGLI STESSI

**TUTTE LE MISURAZIONI EFFETTUATE SONO CONFORMI
ALLE TOLLERANZE INDICATE A DISEGNO
ED ALLE SPECIFICHE IN ESSI RICHIAMATE.
E' STATO ESEGUITO CONTROLLO SPESSORI**

**WE CERTIFY THAT THE ITEM HAS BEEN CONTROLLED
DIMENSIONALLY ACCORDING TO DRAWINGS :**

BALLESTRA S.p.A. : DATA SHEET N°. 2F11.35.124

BALLESTRA S.p.A. : CONSTRUCTIVE N°. SB.PRS.00069

**AND TO THE SPECIFICATIONS NOTED IN
THE ABOVE MENTIONED DRAWINGS.**

**ALL THE MEASUREMENTS PERFORMED RESULT WITHIN
DRAWINGS TOLERANCES
AND TO THE SPECIFICATIONS NOTED IN
THE ABOVE MENTIONED DRAWINGS.
THICKNESS CHECK HAS BEEN PERFORMED**

DESMET BALLESTRA S.p.A.
Manager
Giovanni Davide
[Signature]
13/12

RISULTATO / Result : SODDISFALENTE / Satisfactory

Rev.	Issued by	Date	Checked by	Date	Approved by	Date	Description
REV.	Emesso da	Data	Controllato da	Data	Approvato da	Data	Descrizione
1	F. Libretti						
0	OVER Srl	31.08.2012					

OVER S.r.L. Via Matteotti,16 Tel. 035 -525256 Fax 035 - 526467		CERTIFICATO DI CONFORMITA' <i>CERTIFICATE OF COMPLIANCE</i> CUSTOMER : BALLESTRA S.p.A. JOB N°. 2F11 Purchase Order N°. : 121280	
Workshop Job N° 2F11 N°.: CO 12C61			
ITEM :	63F2B	Description :	2nd. SLURRY FEEDING FILTER
DATA SHEET N°.			2F11.35.124
Constructive Dwg. N°.	SB.PRS.00069	QUALITY CONTROL PLAN :	

**SI CERTIFICA CHE IL MATERIALE RISULTA CONFORME
A QUANTO RICHIESTO DAI DISEGNI,
DALL' ORDINE ED ALLE SPECIFICHE IN ESSI RICHIAMATI.**

**WE HEREBY CERTIFY THAT THE MATERIAL IS IN COMPLETELY
ACCORDANCE WITH THE DRAWINGS,
THE ORDER AND THE SPECIFICATIONS NOTED IN ABOVE
MENTIONED DOCUMENTS.**

OFF. OVER S.R.L. GRASSOBBIO (BG)

BALLESTRA S.p.A.
Inspector
Gatti Guido
R
7/3/12

1	F. Lippetti						
0	OVER	31.08.2012					
Rev.	Issued by	Date	Checked by	Date	Approved by	Date	Description
REV.	Emesso da	Data	Controllato da	Data	Approvato da	Data	Descrizione

Bulloneria Trevi srl
Via C. Porta, 7
24047 Treviglio (BG)

INSPECTION CERTIFICATE

N° 800172 DATE 17/09/08

OVER srl
VIA MATTEOTTI, 16

24050 GRASSOBBIO (BG)

ROLLED BAR ANSI B1.1 A/SA 193 2 3/4"-10UNCX1000
ZINC PLATING WHITE

Qty 5

Order FAX Date 06/08/08 Heat AR3583
Item LOT 1060623 RDC 814834

The material is conforming to the following specifications:

ASTM A193/A193M-04b B7-ASME II PART "A" ED.2004 SA 193 B7

Mechanical Properties

Required	R Mpa	Rs 0.2 Mpa	A%	Z%	HB	HB 24h	Impact test	Proof Load	Impact test
Actual	970	921	21.0	60.4	294-311	min med	Temp °C	min med J	Temp °C

Chemical Properties Actual C Mn Si P S Ni Cr Mo V Ti Al B

VISUAL AND DIMENSIONAL TEST:SATISFACTORY. WE STATE THAT THE BOLTING MATERIAL WERE MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND ANY SUPPLEMENTARY REQUIREMENTS OR OTHER REQUIREMENTS DESIGNATED IN THE PURCHASE ORDER OR CONTACT AND WAS FOUND TO MEET THOSE REQUIREMENTS.

HEAVY HEX NUT h=D ANSI B18.2.2 Tab 9 A/SA 194 2 3/4"-10UNC Order FAX Date 06/08/08 Heat LOT 34855
ZINC PLATING WHITE

Qty 100 Item

Heat treatment QUENCHED AND TEMPERED 455°C
RDC 814810

The material is conforming to the following specifications:

ASTM A194/A194-04a GR.2H-ASME II PART "A" ED.2004 SA 194 2H

Mechanical Properties

Required	R Mpa	Rs 0.2 Mpa	A%	Z%	HB	HB 24h	Impact test	Proof Load	Impact test			
Actual	C	Mn	Si	P	S	Ni	Cr	Mo	V	Ti	Al	B

MIN 248 MAX 327 MIN 179/540°C POSITIVE
279-294 259
min med Temp °C min med J Temp °C
PROITIVE
POSITIVE

VISUAL AND DIMENSIONAL TEST:SATISFACTORY. WE STATE THAT THE BOLTING MATERIAL WERE MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND ANY SUPPLEMENTARY REQUIREMENTS OR OTHER REQUIREMENTS DESIGNATED IN THE PURCHASE ORDER OR CONTACT AND WAS FOUND TO MEET THOSE REQUIREMENTS.

Quality Control Department

bulloneria Trevi srl



Flanges & Fittings Italia S.p.A.
COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY BVQI ISO 9001:2000

SEDE LEGALE
22036 ERBA [Como] Italy
Via Volontari della Libertà, 1
SEDE AMMINISTRATIVA E STABILIMENTO
22044 INVERIGO [Como] Italy
Via Magni, 113 [Fraz. Carpaneo]
Tel. +39 031 359110
Fax +39 031 60567
R.E.A. COMO 0163943
quality.cff@farmas.com

I risultati delle analisi chimiche e prove meccaniche sono una copia conforme all'originale del certificato 3.1 emessi dal produttore e/o fornitore

Pag. 2 - 3

CERTIFICATO DI COLLAUDO

FERRAMENTA INDUSTRIALE BONACINA SRL
V.LE EUROPA 2G
24048 CURNASCO DI TREVIOLO BG IT

Certificato n. 1486
Fattura N. 1360
DDT N. 1591
Ns. Ord. N.

21.04.2011
Del 19.04.2011
Del 19.04.2011

COD. COL.	COLATA	POS.	VS.ORDINE	Q.TA'	DESCRIZIONE												DIM. IN ACC. A	VISIVO E DIMENS.	
COD. COL.	COLATA	POS.	MATERIALE	C%	S%	MN%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	A1%	C.E.%	ALTRI
53F21063-1	314860	013	FAX	4,00	WPI6 ELBOWS 90LR 1 SCH.160	SA420													
53B01062	34265	014	FAX	4,00	WPI6 CONC. RED. 8X6 SCH. STD	SA420													
MR5	JOL1A57	015	FAX	4,00	WPI6 ELBOWS 90LR 4 SCH. STD	SA420													
MP5	73040	016	FAX	20,00	A105N 1/2 COUPLINGS 1/2,300NPT														
	78995	017	FAX	5,00	A105N COUPLING 1/4,3000 NPT														
ML4	73216	018	FAX	16,00	A105N COUPLINGS 1/2X3/8 3000 SW														
MG3	843083	019	FAX	5,00	316L 1/2 COUPLINGS 1/2,3000 NPT														
K52	982454	021	FAX	2,00	316L COUPLING 1/4,3000 NPT														
	903807	022	FAX	7,00	304L 1/2 COUPLINGS 1/2,3000 NPT														
	78995	023	FAX	18,00	A105N HEXAGONAL HEAD PLUG 1														
	1629	024	FAX	18,00	A105N HEXAGONAL HEAD PLUG 3/8														

*COPIA CONFORME
ALL'ORIGINALE*

*FERRAMENTA INDUSTRIALE BONACINA SRL
V.LE EUROPA 2G
24048 CURNASCO DI TREVIOLO BG
Tel. 035-203666 - Fax 035-2036666
www.bonacina.it*

*TESTO DI ANALISI CHIMICA E PROVE MECCANICHE
CON RISULTATI CONFORMI AL CERTIFICATO 3.1
EMESSO DAL PRODUTTORE E/O FORNITORE*

TESTO DI ANALISI CHIMICA E PROVE MECCANICHE CON RISULTATI CONFORMI AL CERTIFICATO 3.1 EMMESSO DAL PRODUTTORE E/O FORNITORE	UFFICIO CONTROLLO QUALITA'	ENTE UFFICIALE DI COLLAUDO	COLLAUDO ESTERNO

COD. COL.	COLATA	POS.	TRATT. TERM.	FORMING	SML.	SNERNAMENTO	ROTTURA	Allungamento	Contrazione	Durezza HBW	Sc. ASTM A370	°C	1	2	3			Ns. Rif.
53F21063-1	314860	013	HOT	SMLS	369,0	538,0	26,5	0,0	161,0 167,0	KV	-50	54	41	42				
53B01062	34265	014	HOT	SMLS	308,0	442,0	47,0	0,0	135,0 -150,0	KV	-46	67	59	58				
MR5	JOL1A57	015	HOT	SMLS	325,0	472,0	42,0	0,0	128,0 -139,0	KV	-46	110	106	100				
MP5	73040	016	HOT	SMLS	320,0	532,0	31,5	56,0	168,0 -174,0	KV	-10	57	63	61				
ML4	78995	017	HOT	SMLS	314,0	526,0	31,0	57,0	160,0 -164,0	KV	-10	68	70	70				
MG3	73216	018	HOT	SMLS	321,0	528,0	30,0	52,0	158,0 -162,0	KV	-10	78	72	74				
	220658	019	HOT	SMLS	266,0	578,0	51,4	73,0	168,0 -177,0	KV	-10	210	201	201				
K52	843083	020	HOT	SMLS	261,0	555,0	58,0	75,6	160,0 -169,0	KV	-10	215	216	220				
	982454	021	HOT	SMLS	360,0	588,0	47,0	69,5	168,0 -172,0	KV	-10	210	208	208				
	903807	022	HOT	SMLS	297,0	605,0	56,0	74,0	180,0 -186,0	KV	-10	193	201	201				
	78995	023	HOT	SMLS	303,0	520,0	31,8	55,0	155,0 -162,0	KV	-10	78	71	71				
	1629	024	HOT	SMLS	325,0	533,0	31,0	59,0	168,0 -170,0	KV	-10	70	73	74				

NOTE ASME/ANSI MSS SP - NACE MR0175/03 - PED 97/23/EC - NACE MR01307. MATERIALE FORNITO
SECONDO I REQUISITI E LE SPECIFICHE DELL'ORDINE - SUPPLIED MATERIAL MEETS
SPECIFICATIONS AND P.O. REQUIREMENTS

NOTE MAT ACC ASTM/ASME A234-10 /SA234-07 AND ADD

1=Prodotto a caldo tra 620°-860° 2=Tratt. di distensione 3=Normalizzato 4=Normalizzato
5=Temprato e rinfornito 6=Soddisfacente 7=Vedi descrizione



METALFAR
FERROTTI INDUSTRIALI S.P.A.

STAMPAGGIO A CALDO DI ACCINI COMUNI - LEGATI E INOSSIDABILI

SOC. AMMINISTRATIVA E STASIS
23881 CESANA BRIANZA
Via G. Parini, 28
Tel. +39 031.655441
Fax +39 031.655449
quality.mis@farmas.com

**COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =**

CERTIFICATO DI COLLAUDO SECONDO EN 10204-3.1 INSPECTION CERTIFICATE			
DDT / Del Note N. 4305	Dei/Dated 22.11.2011	Fattura / Invoice N.	Dei/Dated
FERRAMENTA INDUSTRIALE BONACINA SRL		Ns.Ord / Our ref. N.	Dei/Dated
VIALE EUROPA, 2G - FRAZ. CURNASCO 24048 TREVIOLO	BG IT		

NOTE NOTES	UFFICIO CONTROLLO QUALITÀ QUALITY CONTROL DEPARTEMENT	ENTE UFFICIALE DI COLLAUDO INSPECTION AUTHORITY	MARCHIO PRODUZIONE MANUFACTURER'S SYMBOL
EDIMBURGO - Viale Europa, 43 - TREVOLTO (BG) Tel. 035-31268 - Fax 035-31268 C.P. 97100 - 20090 - BG			



SEDE AMMINISTRATIVA E STABILIMENTO:

STAMPAZIO A CALDO S.p.A.
INDUSTRIALI S.p.A.

DO DI ACCIAI COMUNI - LEGATI E INOSSIDABILI

SALA PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT

NOTE MANUFACTURING IN ACCORDANCE WITH ORDER AND SPECIFICATION
NOTES Q.A.S. IN ACCORD WITH PRESS EQUIPMENT DIRECTIVE 97/23/EC/PDI ANNEX I PARAGRAPHS 4.1

CERTIFICATO DI COLLAUDO DIN 50049/31 - EN 10204/3.1

Valvole & raccordi

Sede di: 21042 CARONNO PERTUSella (Varese)

Via Asmago, 1880 - Telefax 02.96557200

Telefono 02.9657141 (s.) - 02.96556438 - 02.96556464

MATERIALE: - MATERIAL: - MATERIEL:

ASTM A 105 N



INSPECTION CERTIFICATE CERTIFICAT DE RECEPTION

ORDINE - ORDER - COMMANDE
ORD.82 ORD.88 ORD.93

DATE 04/07/2012

BOLLA DI CONSEGNA -
DELIVERY NOTE - BORDEREAU LIVRAISON

N° 6415

N° CER-7368/12
DATE 04/07/2012
ENTE COLAUDATORE (RESPONSABLE COLLAUDO) / INSPECTION AUTHORITY (INSPECTOR)

ANALISI CHIMICA: - CHEMICAL COMPOSITION - COMPOSITION CHIMIQUE

Colata Heat Cutté	QUANT.	DESCRIZIONE PRODOTTO PRODUCT DESCRIPTION DESCRIPTION DU PRODUIT										SIGLA PRODUTTORE FLANGE MARK SIGLE									
		C	Si	Mn	S	P	Ni	Cr	Mo	Al	N	Cu	Ti	V	Nb	C.Eq.					
3352-12	50	FLANGE ASTM A 105 ANSI 150 WN RF 1"		0.184	0.20	0.96	0.007	0.009	0.13	0.11	0.048	0.026	0.0090	0.14	0.000	0.002	0.002	0.002	0.002	0.394	
9995-11	50	FLANGE ASTM A 105 ANSI 150 WN RF 1 1/2"		0.194	0.16	0.88	0.010	0.005	0.08	0.13	0.031	0.020	0.010	0.11	0.001	0.002	0.002	0.002	0.002	0.385	
1106025	50	FLANGE ASTM A 105 ANSI 150 SO RF 1"		0.183	0.18	0.96	0.005	0.004	0.15	0.15	0.050	0.020	0.010	0.15	0.000	0.000	0.000	0.000	0.000	0.403	
2228-11	4	FLANGE ASTM A 105 ANSI 150 SO RF 1 1/2"		0.187	0.21	0.83	0.005	0.005	0.14	0.10	0.050	0.015	0.008	0.11	0.000	0.002	0.002	0.002	0.002	0.372	

CARATTERISTICHE MECCANICHE - MECHANICAL TESTS - ESSAIS MÉCANIQUES

Acieraliera Steel manifactory	Colata Heat Cutté	Rottura Tensile st. N/mm²	Snervamento Yield point Limit d. N/mm²	Allungamento Elongation %	Contrazione Red. of area % Contraction	Durezza Hardness Hb	Resilienza - Impact Value - Resilience - Joule/cm²					
							TIPO Type	1.	2.	3.	Media	°C
OLIFER-ACP S.p.a.	3352-12	518	286	33	73	169-171	KV	41	45	48		+0
OLIFER-ACP S.p.a.	9995-11	551	377	25.0	60.0	172-174	KV	57	61	63		+0
OLIFER-ACP -Spa-	1106025	542	375	27.8	56.1	172-175	KV	53	55	57		+0
OLIFER-ACP S.p.a.	2228-11	514	331	30	65.0	172-174	KV	59	62	62		+0

FERRAMENTA INDUSTRIALE BONACINA SRL

Viale Europa 230 - 21043 TREVISO (BG)

Phone 035 201208

Note:
FOR FLANGES ANSI: DIMENSION IN ACCORDANCE TO ASME/ANSI B16.5
ACCORDING TO NACE MR 01-75

C. F. S.P. 04000727710182

CONTROLLO VISIVO DIMENSIONALE VISUAL AND DIMENSIONAL CONTROL SATISFACTORI UFFICIO CONTROLLO QUALITA' QUALITY CONTROL DEPARTMENT

Copia

TRATTAMENTO TERMICO HEAT TREATMENT - TRAITEMENT TERMIQUE
NORMALIZED AT 920°C
COOLED IN STILL AIR



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Cíl
Number

42884/1/2011

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Č. ext. obj. - External order No.:
OB0974

Číslo položky - Item number:
1

Č. obj. prij. - Consignee order No.:
1000057

Číslo zákazky výrobcu - Manufacturer's works order number:
Dv 116938/1/3 2123412

Číslo dopravného prostriedku - Transport No.:
LV338BF LV641YA

Číslo ložného listu - Loading Bill No.:
357369

Číslo avíza - Dispatch note:
3124279

Výrobok - Product:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horívá
Seamless hot finished steel tubes - pipelines for combustible fluids

Vonkajší priemer - Outside diameter:

219,0 mm

Hrubka steny - Wall thickness:

2,750 mm

Dĺžka - Length:

6000,000 mm [-0 +100] mm

Počet kusov - Number of pieces:

1098

Celková dĺžka - Total length:

6589,00 m

Celková hmotnosť - Total mass:

8464,00 kg

Materiál - Material:

B/PSL1 API Spec. 5L / ISO 3183/2008/, Grade B ASTM A 53/A 53M-07/2007/

Grade B ASME SA-53/SA-53M E10/2010/, Grade B ASTM A 106/A 106M-08/2008/,

Grade B ASME SA-106/SA-106M E10/2010/

Trieda - Class: PSL1

Technické predpisy - Technical requirements/Demand:

API Spec. 5L / ISO 3183 /2008/, ASME SA-106/SA-106M E10 /2010/, ASME SA-53/SA-53M E10 /2010/,
 ASTM A 106/A 106M -08 /2008/, ASTM A 53/A 53M-07 /2007/

Číslo tavby Cast number	Počet kusov Number of pieces	Dĺžka Length [m]	Hmotnosť Mass [kg]	Druh tavenia Steelmaking process
I4356	1098	6589	8464	E

Drahocenne - Steel grade:

úplne ukudnená oceľ - fully killed steel

Uprava povrchu - Surface protection:

Bez úpravy povrchu (neolejované) - Without surface treatment (without oil)

Miesto v Podbrezovej
Location koll

Dátum 06.09.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtěch Mireslav



ŽELEZIARNE PODBREZOVÁ, a.s. 976 81 Podbrezová, SLOVAKIA

Telefón/Phone: +421 48 645 40 70, 645 40 71, Fax: +421 48 645 40 72, www.oceleveny.sk, www.steelube.sk

IČO 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 200 1940300/8130

Spoľačnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Cíllo
Number

42384/1/2011

List č. - Sheet No.: 2 / 3

Chemické zloženie - Chemical composition:

Číslo tváry Cast number		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Mo [%]	Ti [%]	V [%]	Nb [%]	Exp.I [%]
	Predpis - Requirements													
	min. max.	0.28	0.29 1.06	0.10	0.030	0.030	0.40	0.40	0.40	0.15		0.080		0.150
14356		0.15	0.45	0.23	0.012	0.008	0.20	0.04	0.07	0.01	0.002	0.002	0.000	0.004

$$\text{Exp.1} = V + Nb + Ti$$

Číslo tváry Cast number		Exp.2 [%]
	min. max.	0.060
14356		0.002

$$\text{Exp.2} = V + Nb$$

Výrobková analýza - Product analysis:

Číslo tváry Cast number	C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Mo [%]	Ti [%]	V [%]	Nb [%]	
14356	1	0.16	0.46	0.23	0.012	0.010	0.20	0.05	0.07	0.01	0.001	0.002	0.001
14356	2	0.16	0.46	0.23	0.012	0.010	0.19	0.05	0.07	0.01	0.001	0.001	<0.001

Skuška ľahom - Tensile test: 20 °C

C. Nr	Číslo tváry Cast number	Vzorka č. Test No.	Rozmery Dimensions	Smer odberu vzorky Direction of the test piece	Média kľúč Yield point - Proof stress	Pevnosť v ľahu- Tensile strength	Težkosť Elongation	Predpis - Requirements:			
								min. max.	ReH [MPa]	Rm [MPa]	L ₀ = 2" [%]
									245	415	30.0
									—	—	—
1	14356	A039393/11	21.30x2.63	L	422	514	47.0				
2	14356	A039394/11	21.28x3.10	L	413	497	48.0				
3	14356	A039395/11	21.29x3.11	L	411	496	48.2				

Skuška ohybom vyhovela.
Bend test without objections.

Skuška vodným tlakom vyhovela.
Hydraulic pressure test without objections. 17.2 MPa 5.00 sec

Výrobky splňajú základné požiadavky na materiály pre tlakové zariadenia uvedené v Prílohe I Smernice pre tlakové zariadenia (PED) 97/23 EC.
The products are in compliance with the material basic requirements according to the Pressure Equipment Directive (PED) 97/23 EC, Annex I.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.

Vizuálna kontrola a rozmerov vyhoveli (100 %).

Visual inspection and dimensional check without objections (100 %).

Poznámky - Remarks

Miesto v Počebrezej
Location koll

Dátum 06.09.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vejtas Miroslav

ŽELEZIARNE PODBREZOVA, a.s., 976 81 Podbrezová, SLOVAKIA

Telefón/Phone: +421 48 645 40 79, 645 40 71, Fax: +421 48 645 40 72, www.octoloverury.sk, www.steeltube.sk

IČO 31 562 143, IC DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s., N° 2001940300/8130

Spoľnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Šéf vložka číslo 59/S





Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Cíllo
Number

42884/1/2011

List č. - Sheet No.: 3 / 3

CHEMICAL PROPERTIES CONFORM TO GRADE B ACCORDING TO ASTM A795



FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 2/G - 24048 TREVIOLO (BG)
Tel. 035 201266 - Fax 035 201268
C. P. e P. IVA 00727710162

Miesto v Podbrezovej
Location kell

Dátum 06.09.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtěch Miroslav



ŽELEZIARNE PODBREZOVA, z.s. 976 81 Podbrezová, SLOVAKIA
Telefon/Phone: +421 48 645 40 70, 645 40 71, Fax: +421 48 645 40 72, www.oceloverury.sk, www.steeltube.sk
IEČ 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Cinbank (Slovakia) a.s. № 2001940300/5130
Spoločnosť je zapísaná v Obchodnom registre Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Číslo
Number

11029/1/2011

List č. - Sheet No.: 2 / 3

Chemické zloženie - *Chemical composition:*

Číslo tavby Cast number	C	Mn	Si	P	S	Cu	Cr	Ni	Al	Mo	Ti	V	Nb
	Predpis - Requirements												
	min.	0.29	0.10			0.30	0.30	1.00	0.020	0.03	0.040	0.020	0.010
10639	0.15	0.49	0.23	0.013	0.006	0.18	0.04	0.06	0.023	0.01	0.001	0.003	0.001

Číslo tavby Cast number		Exp.1 [%]	Exp.2 [%]	Exp.3 [%]
	Predpis - Requirements			
	min. max.	0.40	0.150	0.060
10639		0.26	0.005	0.004

$$\text{Exp.1} = \text{C} + \text{Mn}/6 + (\text{V} + \text{Nb} + \text{Cr})/5 + (\text{Ni} + \text{Cu})/15$$

$$\text{Exp.2} = \text{V} + \text{Nb} + \text{Ti}$$

$$\text{Exp.3} = \text{V} + \text{Nb}$$

Výrobková analýza - *Product analysis:*

Číslo tavby Cast number	C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
10639	1	0.16	0.49	0.23	0.013	0.007	0.17	0.05	0.06	0.024	0.02	0.002	0.003 <0.001
10639	2	0.16	0.50	0.23	0.013	0.008	0.17	0.05	0.06	0.023	0.02	0.002	0.003 <0.001

Skuška ľahom - *Tensile test:* 20 °C

C. Nr	Číslo tavby Cast number	Vzorka č. Test No.	Rozmery Dimensions [mm]	Smer odberu vzorky Direction of the test piece	Medzidĺžka Yield point - Proof stress	Pevnosť v ľahu Tensile strength	Tažnosť Elongation	
							R _{0,5} [MPa]	R _U [MPa]
					290 —	415 570	23.0 —	*
1	10639	A006224/11	12.41x3.42	L	434	593	34.3	28.0

$$* \text{Tažnosť} - \text{Elongation} : \text{min. } (1944 * S_0^{**0.2}) / (R_m^{**0.9})$$

Skuška sťačením vyhovela.

Flattening test without objections.

Skuška rozširovaním vyhovela.

Flaring test without objections.

Skuška ohýbom vyhovela.

Bend test without objections.

Skuška vodným tlakom vyhovela.

Hydraulic pressure test without objections.

Skuška virívymí prúdnimi vyhovela.

Eddy current test without objections

Skuška virívymí prádnimi vyhovela.

ASTM E-309 100.00 %

FERRAMENTA INDUSTRIALE BONACINA SRL

Viale Europa 2/G - 24048 TREVIOLO (BG)

Tel. 035 201260 - Fax 035 201268

G. F. e P. IVA 06727710162

Miesto v Podbrezovej
Location sna

Dátum 01.03.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtás Miroslav



ŽELEZIARNE PODBREZOVA, a.s., 976 81 Podbrezová, SLOVAKIA

Telefón/Phone: +421 48 645 40 70, 645 40 71, Fax: +421 48 645 40 72, www.oceloverury.sk, www.steeltube.sk

IČO: 31 552 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 2001940500/8130

Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S



Inšpekčný certifikát
Inspection certificate
EN 10204:2004/3.1

Cílos:
Number

11029/1/2011

List č. - Sheet No.: 3 / 3

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM A520 tabuľka I.

We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM A520 table N. I.

Systém kvality výrobcu bol podrobnený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 97/23 EC). Certifikát vydaľo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2014. Rozsah platnosti certifikátu zahrňa pre dnešné výrobky. The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 97/23 EC. The certificate with the validity till 02/2014 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.

NACE MR 01-75-2003, HRC max. 22.

Všetky výrobky výhovujú vyššie uvedeným normám a požiadavkám v objednávke.

All products meet requirements of above mentioned standards and requirements specified in the order.

Vizuálna kontrola a rozmerov vyhoveli (100 %).

Visual inspection and dimensional check without objections (100 %).



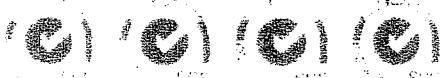
FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 2/C - 24040 TREVIOLO (BG)
Tel. 035 201266 - Fax 035 201268
C. F. e P. IVA 09727710162

Miesto v Podbrezovej
Location sna

Dátum: 01.03.2011
Date

Vedúci kontrolného a atestačného oddelenia
Engineering inspection official

Ing. Vojtás Miroslav



ŽELEZIARNE PODBREZOVÁ, a.s., 976 81 Podbrezová, SLOVAKIA.
Telefón/Phone: +421 48 645 40 70, 645 40 72, Fax: +421 48 645 40 72, www.oceioverury.sk, www.steinube.sk
IČO 31 562 141, IČ DPH/VAT N°: SK2020458704, Bankové spojenie/Bank account: Citibank (Slovakia) a.s. N° 2001940300/8130
Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Banská Bystrica, oddiel Sa, vložka číslo 69/S



RIVECO GENERALSIDER SPA



P. SOC. 15.390.000 EURO I.V. - R.E.A. n° 54649 - P.I., C.F. E REG. IMP. 00091170696

www.rivecogeneral sider.it

CERTIFICATO DI COLLAUDO

UNI EN 10204/05 3.1

N° 1386/11 del 07.07.11

CLIENTE:

INTERSIDER NORD-EST S.r.l.

Viale delle Industrie, 31/33/35
20040 CAMBIAGO (MI)

Vs. Ord.: RIF. ORDINE TEL. ODIERNO
 Ns. C.O.: n° 1003 del 28.06.11
 Ns. D.D.T.: n° 03/3260 del 07.07.11
 Destinazione: Cambiago (MI)

Copia conforme
all'originale

DESCRIZIONE: Tubi saldati longitudinalmente "HFI W" in acciaio L360GA per condotte metano conformi alla norma UNI EN 10208.1 e al D.M. 24.11.84 e successivo aggiornamento dei D.M. 16.11.99, D.M. 16.04.08 e D.M. 17.04.08.
 Internamente ed esternamente grezzi, scordonati, estremità smussate.
 Si dichiara che la fornitura è conforme alla norma EN 10208-1.

ANALISI CHIMICA											
Pos.	Colata n°	Dn. mm	Spess. mm	Lungh. m	Q.tà Kg.	C % <.240	Mn % <1.55	Si % <.600	P % <.035	S % <.035	Al % >.010 <.065
1	631668	457.0	6.3	6,0	1.680	.142	.69	.294	.017	.001	.029

CARATTERISTICHE MECCANICHE										
Pos.	Rs N/mm ² ≥ 360	R N/mm ² ≥ 460 ≤ 620	Rs/R ≤ 0.85	A % ≥ 20	R (Sald.) N/mm ² ≥ 460 ≤ 620	Prova Idraulica Bar	Resilienza			Acc. Tipo
							1	2	3	
1	416	547	--	31,0	559	78	--	--	--	L360GA

Controllo visivo e dimensionale : secondo norma

Prova di schiaccio : secondo norma

Prova idraulica : esito favorevole sul 100% dei tubi - Tempo di Prova : 10 sec.

Controllo non distruttivo (CND) su saldatura e testate secondo EN10208-1:esito favorevole sul 100% dei tubi

FERRAMENTA INDUSTRIALE
BONACCINA S.r.l.
Viale Europa, 20-TREVIOLO(BG)
Tel. 035-201268 Fax 035-201268
C.F. e P.IVA 00727770122

Riveco GeneralSider S.p.A.

Servizio Qualità

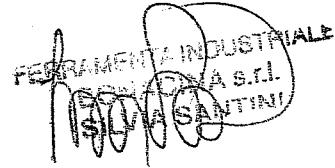
SEDE LEGALE E AMMINISTRATIVA:
66100 CHIETI SCALO (CH)
VIA MARINO CARBONI, 1
TEL. +39 0871 563345
FAX +39 0871 552300

SEDE OPERATIVA:
66100 CHIETI SCALO (CH)
VIA MARINO CARBONI, 1
TEL. +39 0871 563345
FAX +39 0871 560959 / 552300

SEDE OPERATIVA:
86035 LARINO (CB)
C.DA PIANE DI LARINO
TEL. +39 0871 563345
FAX +39 0874 820011



GENERALSIDER LARINA S.p.A.



ArcelorMittal South Africa Limited
Tubular Products
 Gen. Herzog rd.
 P O Box 48 Vryheid 391930
 South Africa

Telephone +27 (0)16 450 4220
 Fax +27 (0)16 423 4906

BONACINA S.r.l.
 Viale Europa, 26 - TREVIOLO (BG)
 Tel. 035-201268 - Fax 035-201268
 Cod. Fisc. e P. IVA 00727710162

MATERIAL TEST CERTIFICATE

STEAMLESS STEEL TUBE

CERTIFICATE DE RECEPTION - TUBES D'ACIER SANS Soudure

WAHRHEITSPFLEGEUNGS - NARLONNE STAHLOHRE

ISO 9001:2000



ArcelorMittal

TUBI ACCIAIO LOMBARDIA

4000007511

040001458574

FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES

ISO3183:2007/API 5L:2007 L245L290BX42 PSNL ASTM A106 GR. B ASME SA106/SA106B/SA530/SA530L4

ARCELORMITTAL SA ISO3183 Spec. SL-0319 MONOGRAM 01-01 ASTM A106 GR. B ASME SA106/106B/106A/106B/SA530/SA530L4
 SMLS TESTED 20.7 MPa (3000 psi) CAST NO: 89B0810 PROD/O NO: T5040751104

General Information

Information General

Allegoric information

Quantity Quantity Mango	Mass Poids Gewicht	Dimensions			Total Length
		Tube OD Diameter Durchmesser	Thickness Epaisseur Dicke	Length Longeur Länge	Length Longeur Länge
65	19,45/25,00(kg)	16,200(mm)	6,350(mm)	11.800(m)	767,000(m)
	42.882.226(lb)	6.626(")	0.250(")	38.700 (ft)	2.515.500(ft)

Steel making process Process de fabrication du Stahlherstellungsverfahren	Final Rolling Operation Fin de laminage /Wälzende	
Electric Arc	Final hot rolling operation finished above 850°C and cooled in still air.	

Chemical Composition

Analisi acciaio / Analyse métal

Element(%)	C	Si	Mn	S	P	Cr	Ni	Mo	Co	V	Al	Ti	Sn	Ca	N	B	Nb	CE
Minimum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Maximum	0,200	-	1,30	0,030	0,030	-	-	-	-	-	-	-	-	-	-	-	-	
Heat	0,169	0,29	0,030	0,004	0,008	0,06	0,07	0,022	0,080	0,002	0,023	0,001	0,007	0,0009	0,0086	0,0004	0,0010	0,33
Product	0,17	0,29	0,030	0,004	0,008	0,06	0,07	0,022	0,100	0,002	0,023	0,001	0,007	0,0009	0,0086	0,0004	0,0010	0,33
Product (ADD)	0,17	0,29	0,030	0,004	0,008	0,06	0,07	0,022	0,100	0,002	0,023	0,001	0,007	0,0009	0,0086	0,0004	0,0010	0,33

ArcelorMittal South Africa
Tubular Products
Genl. Hertzog rd.
P O Box 48 Vryheid 3930
South Africa

MATERIAL TEST CERTIFICATE

EFFECTS OF VARIOUS

SEAMLESS STEEL TUBING

CERTIFICAT DE RECEPTION - TUBES D'ACIER SANS SOUPLESSE

ArcelorMittal

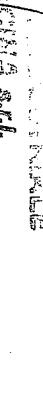
Customer:	TUBI ACCIAIO LOMBARDA		
Client Kunde	No de commande/Ref. Kundenummref.	ST14 127032	
Order No:	4000007511	Material No:	1000033749
No. de commande/Ref. Kundenummref.		No de matrikel: Werksnr.:	
Certificate Reference No:	040001458574	Classification No:	89B0810
Zugang-Nr. Porte:		Qualitäts-Nr. Qualitäts-Nr.:	
Produkt: Produit:	FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES	Page Number: Page:	3 of 3
Produkt-Nr. Produkt-Nr.:	150318312007/API 5L:2007 L245N290BX42 PSL1 ASTM A106, A53/A53.04 ASME SA-106, A53/SA-53.04	Blatt: Sheet:	
Specification:			
Spezifikation Spécification			
Aufgabe			
Product Marketing:	ARCELORMITTAL SA ISO3183/Spec 5L-0319 MONOGRAM 08-40 ASTM A106B ASME SA106B 16S310 (6.626) 6.350 (0.250) 11.800 (38.700) L245N1 1.290/X42 PSL1 SMLS TESTED 20.7 MPa (3000 psi) CAST NO:AS9398H10 PROD/O NO: T504075110A		
Vermarktung des Produktes Vente et commercialisation			

Quality Assurance Manager: *R. Baster*
Chef der servicekundlichen Qualität:
Qualitätsmanagement:

BONN C.R.A. S.p.A.

Maria EUNICE G. TREVIOLO (BG)
tel. 035-201263 - FAX 035-201268
*
o.d. Fisc. e P. VA 00727710162

Date of Issue: 30.07.2009

Certified by: 
Certified: 
Responsible:

and completely fully with specific minimum requirements. No changes, amendments or additions may be made to this document. Any changes which are effected shall invalidate this certificate.
Any changes which are effected shall invalidate this certificate.

TAL SPA

- THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL



RAUTARUUKKI
STEEL

VASTAANOTTOTODISTUS INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION

A 3/14

EN 10 204-3.1.B

Tiljaaja Purchaser Bestellsteller Acheteur

ACCIAI DI QUALITA

I-16121 GENOVA ITALY

Vastaanottaja Consignee Empfänger Destinataire

ACCIAI DI QUALITA

ALESSANDRIA, ITALY

Päivämäärä Date Datum Date

14.10.2010

C

TOIMITUSERÄ DELIVERY LIEFERUNG LIVRAISON

Tiljaaja Order
Bestellstellig Commande
Merkki Mark
Zeichen Marque
Tilausvalvostaja Order Confirmation
Auftragbestätigung Accuse de réception
Luovutus Shipping
Verschiffung Embaumement
Toimitustyyppi Delivery type
Vernaduri Type de livraison
Todistus Certificate
Zugnis Certificat

WAP 4855
1598/1
12534
VLIEBORG
PART DELIVERY
3B7

Liittolaisuus Quality Stamping
Markenbezeichnung Qualité

SA516GR60MTLTV

2562/01

Sulatus nro levy nro Cast No. plate No.
Schmelzen Nr. Walztafel Nr. Coulee No tôle No
Valmistajan merkki Mark of the Manufacturer
Zeichen des Herstellers Signe du producteur
Tarkastajan leima Stamp of work's Inspector
Stempel der Werkstachverständigen Poinçon de contrôle
Vastaanottaja leima Stamp of Surveyor
Stempel der Sachverständigen Poinçon d'expert
Muut leimauksia Other Stamps
Andere Stempelung Les autres repères poinçonnés

XXXXXX XX XX

Tuote Product
Erzeugungsform Produkt
Laatu Quality
Werckstoff Qualität
Laatuolosuus Quality Specification
Qualitätspezifikation Specification de qualité

HEAVY PLATES
ASME SA-516 GR-60
PRESS. VESSEL STEEL ED. 2001 OF ASME CODE SEC II SA20

Toleranssi Tolerance Toleranzen Tolérances

EN 10029/1991 CLASS B

ASME SA-516-01

Tekniiset vaatimukset
ja/tai viralliset
militärytöt.
Lisärajoitukset
ja/tai ammattiset
vaatimukset
Vorchriften:

Technical terms of
Delivery and/or
Official Regulations
Stipulations de la
commande et/ou
prescriptions officielles

SI- AND AL-KILLING

Positio	Mittat mm	Merkki	Kpl	Paino kg	Sulatus levy nro	Koe nro
Item	Dimensions mm	Mark	Pcs	Weight kg	Cast plate No.	Test No
Pkt.	Ammestukset mm	Zeichen	Stück	Gewicht kg	Schmelz Walztafel Nr.	Prüf No
Poste	Dimensions mm	Marque	Quantite	Poids kg	Coulee Tôle No	Essai No

NORMALIZED STEEL PLATES

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC. ADQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

007	20.00 X 2000	X	8000 A 1598/1	2	5120	62424 012 012
007	20.00 X 2000	X	8000	2	5120	62424 013 013
007	20.00 X 2000	X	8000	3	7680	62424 021 021
007	20.00 X 2000	X	8000	3	7680	62443 012 012

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC. ADQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

008	20.00 X 2500	X	12000 A 1598/1	1	4800	62300 041 041
008	20.00 X 2500	X	12000	2	9600	62481 012 012
008	20.00 X 2500	X	12000	2	9600	62481 032 032

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC. ADQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

009	30.00 X 2500	X	12000 A 1598/1	1	7200	62424 022 022
009	30.00 X 2500	X	12000	1	7200	62424 024 024
009	30.00 X 2500	X	12000	1	7200	62424 031 031
009	30.00 X 2500	X	12000	1	7200	62424 032 032
009	30.00 X 2500	X	12000	1	7200	62424 033 033

ADD. CERT EN10204 3.1B TO P265GH (ADW1) AND SA516GR60, SPEC. ADQ004/A REV

06 (10.7.00)

SURFACE CONDITION EN 10 163-2:1991 CLASS B3

010	40.00 X 2500	X	12000 A 1598/1	1	9600	62481 021 021
010	40.00 X 2500	X	12000	1	9600	62481 022 022
010	40.00 X 2500	X	12000	1	9600	62481 022 022

RAUTARUUKKI STEEL

Testaus ja tarkastus Testing and Inspection
Prüfung und Kontrolle Essais et Contrôle

Tiljaaja todistanne, että toimitus on
tilausvalvostuksen mukainen.

We hereby certify that the material described above has been
tested and complied with the terms of the order contract.

Es wird bestätigt, dass die Lieferung geprüft wurde und
den Vereinbarungen bei der Bestellannahme entspricht.

Nous certifions que la livraison est conforme aux
stipulations de l'acceptation de la commande.

M. Valkama
MINNA VALKAMA

Valtuutettu tarkastaja Authorized Inspector
Werkstachverständiger Inspecteur autorisé

RAUTARUUKKI STEEL
Tekninen palvelu Tech. &al Services
Yhtiön nimi Company Name

Osoite Address
PL 93, P.O. Box 93
FIN-92100 RAAHE, FINLAND

Kotipaikka Registered Office
UUSIMAA

Puhelin Telephone
(08) 84911
+358 8 84911

Y-tunnus Business ID
0113278-9

Telekopio Telefax
(08) 849 2738
+358 8 849 2738

Telex Telex
32312 steel fi
0113278-9

Acciaieria Arvedi S.p.A.

Sede Legale:
Via Donizetti, 20
20122 Milano

Sede Amministrativa e Stabilimenti:
Via Acquaviva, 18
26100 Cremona - Italia
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Fax +39 0372 478259

Via Alberto da Giussano, 11
20011 Corbetta - MI
Tel. +39 02 972351

Cap.Soc. 30.000.000 EUR i.v.
Società interamente controllata
da Finarvedi S.p.A.

Part. IVA IT 11852670154
Cod.fisc. 00910070192
Reg.Imp.MI 00910070192
REA MI 1497770

e-mail vendite@ast.arvedi.it
www.arvedi.it

AcciaieriaArvedi**Certificato di collaudo**

Spett.le FRANCHINI LAMIERE S.P.A.
VIA IV NOVEMBRE

25010 SAN ZENO NAVIGLIO

BS

Numero 2011 / 51611 data 16/09/2011 EN 10204 3.1

Rif. conferma ordine	2011 / A / 20442 / 10	Vostro ordine	11-101
Prodotto fornitore	Coil NERO 1500x200 S235JR	Marca acciaio	S235JR
spess.	2	larg.	1500
norma	UNI EN 10025-2		

Prove meccaniche e tecnologiche

Prova	Rm N/mm2	Al%	Re N/mm2
minimo	360,	19,	235,
massimo	510,		

lotto	colata	qtà	spedizione	valori					
				Rm N/mm2	382,1	Al%	28,5	Re N/mm2	316
-712478705	124787	TON 24,98	2011/VE/3460931/9 00001						

Analisi chimica

elemento	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
minimo												
massimo	0,17	1,4	0,03	0,035	0,035				0,55			0,37

colata	valori											
124787	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
	0,045	0,1927	0,0197	0,0053	0,0014	0,0321	0,0634	0,0143	0,1707	0,0087	0,04	0,1021

Note

- Certifichiamo che:
- 1- L'acciaio usato è elaborato al forno elettrico (E) e ha grado di disossidazione FF
 - 2- I prodotti sopra elencati sono conformi alle specifiche dell'ordine
 - 3- Il controllo della marcatura, dell'identificazione, dell'aspetto della superficie, della forma e delle caratteristiche dimensionali è soddisfacente.
 - 4- Nelle prove di trazione sono state usate solo provette prismatiche.

METALLURGIA QUALITA'

FRANCHINI LAMIERE SPA
COPIA CONFORME ALL'ORIGINALE

Firma

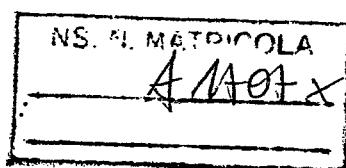
CLIENTE OMNIM

ORDINE N° 10476

COMMESSE N° QUANTITA' E FORMA COME DA

NS B.A.M. 04/07/08

PATERETTI



Acciaieria Arvedi S.p.A.

Sede Legale:
Via Donizetti, 20
20122 Milano

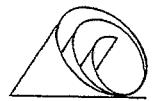
Sede Amministrativa e Stabilimenti:
Via Acquaviva, 18
26100 Cremona - Italia
Tel. +39 0372 4781
Fax +39 0372 478259

Via Alberto da Giussano, 11
20011 Corbetta - MI
Tel. +39 02 972351

Cap.Soc. 30.000.000 EUR i.v.
Società interamente controllata
da Finarvedi S.p.A.

Part. IVA IT 11852670154
Cod.fisc. 00910070192
Reg.Imp.MI 00910070192
REA MI 1497770

e-mail vendite@ast.arvedi.it
www.arvedi.it


Acciaieria Arvedi
Certificato di collaudo

Spett.le FRANCHINI LAMIERE S.P.A.
VIA IV NOVEMBRE

25010 SAN ZENO NAVIGLIO

BS

Numero	2012 / 895	data	13/01/2012			EN 10204	3.1
Rif. conferma ordine	2011 / A / 23160 / 10			Vostro.ordine	11-139		
Prodotto fornitore	Coil NERO	1500	S235JR	Marca acciaio	S235JR		
spess.	4			larg.	1500		
norma	UNI EN 10025-2						
Prove meccaniche e tecnologiche							
Prova	Rm N/mm ²	Al%	Re N/mm ²				
minimo	360,	24,	235,				
massimo	510,						
lotto	colata	qtà	spedizione				
-722012103	220121	TON 24,78	2012/VE/34001237/ 900001	Rm N/mm ²	376,4	Al%	35,2
				Re N/mm ²	307,4		

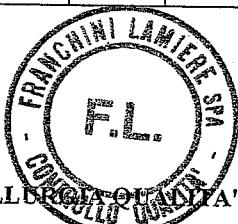
Analisi chimica

elemento	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
minimo												
massimo	0,17	1,4	0,03	0,035	0,035				0,55			0,37
colata	valori											
220121	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Sn	Al	Ceq
	0,0424	0,1985	0,015	0,0055	0,0021	0,0741	0,0912	0,0215	0,2461	0,0093	0,0295	0,1172

Note

Certifichiamo che:

- 1- L'acciaio usato è elaborato al forno elettrico (E) e ha grado di disossidazione FF
- 2- I prodotti sopra elencati sono conformi alle specifiche dell'ordine
- 3- Il controllo della marcatura, dell'identificazione, dell'aspetto della superficie, della forma e delle caratteristiche dimensionali è soddisfacente.
- 4- Nelle prove di trazione sono state usate solo provette prismatiche.



METALLURGICA LAMIERA

Firma

NS. N. MATRICOLA	Bo037

FRANCHINI LAMIERE SPA
COPIA CONFORME ALL'ORIGINALE

CLIENTE OVA SYM

ORDINE N° 148 148

COMMESSA N° QUANTITA' E FORMATI COME DA

NS. B.A.M. 148 148

..... 148 148



INSPECTION CERTIFICATE

N° 10204-3.7/DIN 50049-3.1/B/ISO 10474

Arcelet/Mittal
USINE DE FOSSES
13776 - FOS SUR MER CEDEX
FRANCE
Tel: +33 4 42 47 33 14 Fax: +33 4 42 47 24 27

FOS
**Signature du producteur /
 Mills identification:**
**R+225 MIN MPa Rm=390-510 MPa A% (5.65)=24 MINU
 R+200+200C 18-1 Min. 21-21 MINUMOY**

Organisme élou:
service de contrôle
Inspection organism

N° Commande Usine
Customer's Order Nbr
12-0221
FH2001062 00001
HOT ROLLED COIL, AS-ROLLED

Nuances et spécifications techniques / Grade and technical specifications:
S235JR-CL1 EN10025

Loc. Ref. Type S Temp. Pos. Z(4) Valeurs individuelles Average
 Loc. Ref. Type S Temp. Pos. Z(4) Valeurs individuelles Average

Etat de livraison
Delivery condition
LTC

Traitement de référence
Treatment of B1 samples

B01 B02 B03

(1) Conformité à la charge / Regarding specifications

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Document de contrôle basé sur un contrôle spécifique
Inspection document based on specific control

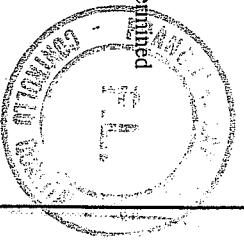


Service de contrôle Inspection Organisme Département Qualité Quality/department	Client Customers FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I - 25010 SAN ZENO NAVIGLIO	N° commande Client Customer's order Nr FH2B001002	N° commande Usine Mill's order Nr S235JR-CL1 EN10025
Repère pièce Part Number	Coulée Heat	Poste Item	Organisme de certification Notified body
5122029	730221171	000001	Produit en acier de construction laminé à chaud EN 10025-1
5247040	730221094	000001	Usages prévus: Construction de bâtiments ou génie civil Tolérances sur les dimensions et la forme. Produit suivant EN 10051
5143017	730221171	000001	Tolerances on dimensions and shape. Conform to EN 10051
5122024BX	730213237	000001	Intended uses: building constructions or civil

Elongation	Acier	Elongation	Spécification Technique Technical specification
Résistance à la traction	S235JR-CL1	Tensile strength	
Limité d'élasticité		Yield strength	
Résistance au choc		Impact strength	
Soudabilité	EN10025	Weldability	

Durabilité: Aucune performance déterminée
 Substance réglementée: Aucune performance déterminée

Durability: No performance determined
 Regulated substance: No performance determined



本钢板材股份有限公司
BENGANG STEEL PLATES CO., LTD

BX STEEL
本钢集团

产 品 质 量 证 明 书
PRODUCT QUALITY CERTIFICATE

质量管理中心 QL-014

辽宁省本溪市平山区铁路18号
No.18, Fangtie Road, Pingshan District
Beijing, Liaoning Province, P.R.China
电话:010-828933 邮编:117000
TEL:010-828933 PC:117000

H0872-A

0934

客户名称 SOLD TO	斯堪利东南亚公司	产品名称 Product	HRD
技术条件 SPEC.	Q/BB 131-2010 ACC. TO EN10204-2004 TYPE 3, 1	商业发票号码 Invoice No.	E011041894
钢种 Grade	S235JR	客户编号 CUSTOMER NO.	5NG00005
检验 INSPECTION	本钢板材质量管理中心 BX Steel Quality Management Center	交货状态 DELIVERY STATE	热轧
		发运日期 SHIPPING DATE	2011/04/27
		签单采购案号 Quotation No.	R1102RC035-2

项目 ITEM NO.	钢卷编号 COIL NO.	炉号 HEAT NO.	等级 CLASS NO.	尺寸及规格 MATERIAL DESCRIPTION			化学成分 CHEMICAL COMPOSITION %									拉伸试验 TENSILE TEST	*B1 弯曲 BENDING	备注 REMARKS							
				厚度 THICK.	*宽度* WIDTH	长度 LENGTH	数量 QTY	重量 WEIGHT	C	Si	Mn	P	S	Al	Cr	Ni	Mo	V	C2	B	*A1 Rp0.2 RM	*A2 Rp0.2 RM	*A3 Rp0.2 RM	N/M2Z	
05	A110337512B	1142221	1	8.000mm*2000mm*C	1	28.980	12	10	44	11	11	0.25	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	235	360	24.0	180° d=2a	
05	A110337523B	1142226	1	8.000mm*2000mm*C	1	28.870	10	10	45	11	11	0.25	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	20	13	265	395	33.0 OK

4

NS. N. MATRICA
A 12P1 X

NS. N. MATRICA
A 12P1 X

*11 屈服强度
YIELD STRENGTH
*12 抗拉强度
TENSILE STRENGTH
*13 伸长率
ELONGATION
注释
*B1 弯曲
BENDING
*B2 弯曲
BENDING
NOTES

VISUAL INSPECTION(SURFACE) AND DIMENSION CHECK : OK

兹证明本表所列产品，均按标准进行制造及试验，并且符合规范之要求。

SURVEYOR TO

WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH

THE STANDARD TECHNIQUE.

SURVEYOR TO	WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH	本钢板材质量管理中心 BX Steel Quality Management Center
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Arvedi Tubi Acciaio S.p.A.

26100 Cremona - Italia
Via Acquaviva, 3 - Zona Porto Canale
Tel. +39 0372 4091
Fax +39 0372 413170

www.arvedi.it

Cap.Soc. 4.000.000 EUR i.v.
Società interamente controllata
da Finarvedi S.p.A.
R.I. CR 00113630198
R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198




Certificato di collaudo EN 10204/3.1

Numero	211627	'data	20/12/2011
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Rif. conferma ordine **0211135301** / 650

Vostro ordine **198**
del **04/08/2011**

Consegna **0221146092**
Bolla **0000227278** del **20/12/2011**

Spett.le

FTD FERROTUBI E DERIVATI S.R.L.

VIA G. ROSSA 1

20061 CARUGATE

MI IT

Descrizione TUBO ELETTROSALDATO SCORDONATO

Norma EN 10224 ATA

Marca acciaio L235

Dimensioni BOL 273x5,6x6000 ERW EN 10217-1 TR1

Nr.tubi 42 MT 252,00 KG 9.588,00

Analisi chimica

	C	Mn	Si	P	S	Al	Cr	Ni	Mo	Cu	Sn	V	Nb	Ti	B	N
min																
max	0,1800	1,3000	0,4000	0,0350	0,0300					0,4000						
3027194B	0,0330	0,1560	0,0195	0,0033	0,0010					0,2034						

Prove meccaniche e tecnologiche

Ord.produz.	Colata/Serie	Lotto	Nr.tubi	R (MPa)	RP02(MPa)	A(%)	Rs/R	Fm (N)
13027194	3027194B			377	316	31,20		

Tipo prova	Norma di riferimento	Richiesto	Um	N.prove	Risultato
CND	EN 10246-3	E4H	%	100	FAVOREVOLE
DIMENSIONALE	EN 10224			1	FAVOREVOLE
PROVA DI SCHIACCIO	EN ISO 8492	0,67*D		1	FAVOREVOLE
PROVA DI TENUTA	EN 10246-1		%	100	FAVOREVOLE
VISIVO	EN 10224			1	FAVOREVOLE

Note

Ferramenta Industriale Bonacina s.r.l.
BONACINA s.r.l.
Silvia Santini

FERRAMENTA INDUSTRIALE BONACINA SRL
Viale Europa 2/G - 24048 TREVIOLO (BG)
Tel. 035 201266 | Fax 035 201268
C. F. e P. IVA 00727710162



Hermannhiller GmbH



Arvedi

Document ID: 00000000000000000000000000000000

Over



M I L L T E S T C E R T I F I C A T E

Certificate No 206981

Page 1 / 2

Type of Document	EN 10204 /3.1	Date 16/07/2008
Contract No/Lot No	1478 / 01	
Standard	API 5L / PSLI	
Material	API 5L GR B	
Product	E.R.W STEEL PIPE	
Customer	TAL S.P.A.	Inspector's Stamp
Order No./LC No.	RO 000467	! K !
Shipment No	401	! 2 !
Remarks		-----

Item	Dimension OD X WT X L (MM)	M.Type	Pieces	Total Length		Type
				(Mt)	(Tons)	
1	114.30X 6.02X11800	GWB	199	2,348.20	37.171	VPE
2	168.30X 3.96X11800	GWB	153	1,805.40	28.749	VPE
3	219.10X 3.96X11800	GWB	112	1,321.60	27.552	VPE
4	219.10X 6.35X11800	GWB	122	1,439.60	47.057	VPE
5	219.10X 8.18X11800	GWB	70	826.00	34.670	VPE
6	273.00X 3.96X11800	GWB	91	1,073.80	27.989	VPE
7	273.00X 6.35X11800	GWB	104	1,227.20	50.261	VPE
8	323.90X 4.37X11800	GWB	96	1,132.80	39.168	VPE
9	323.90X 6.35X11800	GWB	102	1,203.60	58.683	VPE

CHEMICAL ANALYSIS

Item	Heat No.	Chemical Composition(%)														
		C	Si	Mn	P	S	Al	Mo	Cr	Ni	Cu	V	N	Nb	Ti	Ceq
		x100			x1000											
1	1320529	10!	13!	90!	13!	7!	38!	1!	18!	56!	30!	8!	11!	0!	2!	.258
2	1996738	17!	2!	90!	17!	13!	62!	1!	23!	11!	25!	0!	19!	0!	1!	.330
3	1938712	19!	1!	97!	18!	15!	37!	3!	31!	17!	35!	1!	14!	1!	1!	.359
4	1715726	15!	20!	102!	9!	7!	40!	0!	16!	9!	18!	1!	15!	0!	2!	.325
4	1726847	17!	7!	97!	15!	8!	48!	0!	14!	12!	17!	2!	15!	1!	2!	.340
5	115844	12!	23!	94!	10!	13!	39!	1!	19!	31!	61!	13!	14!	0!	3!	.283
6	1724752	14!	11	62!	10!	7!	50!	0!	14!	16!	29!	0!	5!	0!	1!	.247
6	1812095	14!	11	64!	11!	7!	60!	1!	16!	16!	32!	1!	0!	1!	1!	.251
7	1215545	10!	24!	149!	20!	17!	44!	0!	29!	27!	73!	5!	0!	1!	2!	.356
7	1315547	8!	24!	148!	16!	14!	43!	0!	24!	20!	68!	5!	14!	1!	2!	.332

QUALITY CONTROL DEPARTMENT

e-mail : spirselimoglu@borusan.com , aguney@borusan.com

Ferramenta Industriale
BONACINA s.r.l.
Silvia Santini

BONACINA INDUSTRIAL GROUP

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