

**OFFICINE SASPE S.R.L.**

Via Senato, 10  
20020 ARESE (MI)

Date : 26.11.10

Doc. N° Cover 62F6B

**INSPECTION BOOK N° 62F6B**

WORKSHOP JOB N° : 1E35

**CUSTOMER : BALLESTRA S.p.A. Milano**

**JOB : 1E35**

**ORDER N°. : 101723**

**Item : 62F6B**

**Description : SLURRY FEEDING FILTER**

**OFFICINE SASPE S.R.L.**  
E.Accomazzi

BALLESTRA S.p.A.  
Director  
Cott. Davide  
24/11/10

## **WHITE PICKLING REPORT**

**( For apparatus in Stainless steel with parts in Carbon steel )**

**QUALITY CONTROL PLAN No. : 62F6B**

Customer	BALLESTRA S.P.A.
Customer Order No.	101723
Job	1E35
Item	62F6B
Description	SLURRY FEEDING FILTER
Data sheet	1E35.35.1141
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.***

OFFICINE SASPE S.R.L. - ARESE (MI)

CUSTOMER INSPECTOR

DECEMBER 1, 2010  
Inspector  
G. Davide  
23/11/10

OFFICINE SASPE S.R.L.  
Via Senato, 10  
20020 ARESE (MI)

Date : 26.11.10

Doc. No. : 62F6B

## HYDROSTATIC TEST REPORT

Customer	BALLESTRA S.P.A.
Customer Order No.	101723
Job	1E35
Item	62F6B
Description	SLURRY FEEDING FILTER
Data sheet	1E35.35.1141
Constructive Dwg.	SB.PRS.00307

Pressure ( alternatively ) on :

TIME HELD (hours)

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

Pressure gauges serial N° EN 850 - EN 730  
Dial range : 0 - 6 0 - 6

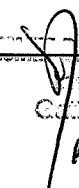
Vessel position : HORIZONTAL

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.

OFFICINE SASPE S.R.L.-ARESE (MI)

CUSTOMER INSPECTOR

  
Inspector  
Ces. Davide  
27/11/10  
WITNESS  
only jacket

**OFFICINE SASPE S.R.L.**Via Senato, 10  
20020 ARESE (MI)Workshop Job n° 1E35  
N°. C0 495/10**CERTIFICATO CONTROLLO DIMENSIONALE**

DIMENSIONAL TEST REPORT

**CUSTOMER : BALLESTRA S.p. A.**

JOB N° 1E35

Purchase Order N°. 101723

Doc. N°. Sheet 1 of 1 Rev. 0

ITEM :

62F6B

Description :

SLURRY FEEDING FILTER

DATA SHEET N°.

1E35.35.1141

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° 1E35.35.1141  
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° 1E35.35.1141  
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 : SODDISFACENTE / Satisfactory**

BALLESTRA S.p.A.  
Inspector  
Gatti Davide  
23/11/10

1			E.Accomazzi				
0		26.11.10	Off.Saspe Srl				
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  
SECONDO EN 10204 - 3.1**

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

Certificato n. 2921 Del 10.11.2007  
Fattura N. Del  
DOT N. 3118 Del 07.11.2007  
Ns. Ord. N. Del

Questo documento certifica che i raccordi sottocritici sono fabbricati in accordo con l'ultima normativa applicabile: ASME/ANSI MSS-SP  
I risultati delle analisi chimiche e prove meccaniche sono una copia conforme all'originale dei certificati emessi dal produttore e/o fornitore

Pag. 2 - 3

COD. COL.		COLATA	POS.	VS. ORDINE	Q.TA'	DESCRIZIONE										DIM. IN ACC. A		VISO E DIMENS.				
		200981	012	FAX	2	304/304L TEE 3 SCH.40S W										VEDI NOTE		SODDISFACENTE				
		761044	013	FAX	1	304/304L R.C. 6X4 40S S										VEDI NOTE		SODDISFACENTE				
		72475	014	FAX	2	A105N MANICOTTI 1/4 3000 NPT										VEDI NOTE		SODDISFACENTE				
		72476	015	FAX	30	A105N 1/2 MANIC. 3/4 3000 NPT										VEDI NOTE		SODDISFACENTE				
		74307	016	FAX	20	A105N 1/2 MANIC. 1/4 3000 NPT										VEDI NOTE		SODDISFACENTE				
		73847	017	FAX	20	A105N 1/2 MANIC. 1/2 3000NPT										VEDI NOTE		SODDISFACENTE				
		3P852CH	018	FAX	2	WPB CAPS 12 SCH.XS										VEDI NOTE		SODDISFACENTE				
		Z536	019	FAX	4	WPB CAPS 12 SCH. STD										VEDI NOTE		SODDISFACENTE				
		A70	020	FAX	34	A105N GOMITI 90 1 3000 SW SA105M										VEDI NOTE		SODDISFACENTE				
		N58	021	FAX	35	A105N TAPPI M.T.E. 1/2" SA105M										VEDI NOTE		SODDISFACENTE				
		74524	022	FAX	12	A105N GOMITI 90 1/2 3000 SW SA105M										VEDI NOTE		SODDISFACENTE				
		40801	023	FAX	6	A105N TEE 1/2 3000 SW SA105M										VEDI NOTE		SODDISFACENTE				
COD. COL.		COLATA	POS.	MATERIALE		C%	S%	Min%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	ALTRI ELEMENTI	
		200981	012	SA/A403 WP304/304L		0,012	0,580	1,460	0,001	0,024	18,170	8,260	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
		761044	013	SA/A403 WP304/304L		0,016	0,380	1,560	0,006	0,028	18,390	10,200	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
		72475	014	SA/A105N		0,210	0,220	0,890	0,026	0,015	0,100	0,050	0,010	0,005	0,170	0,001	0,001	0,000	0,012	0,395	0,000	0,000
		72476	015	SA/A105N		0,180	0,180	0,900	0,019	0,012	0,100	0,050	0,010	0,005	0,160	0,001	0,001	0,000	0,019	0,366	0,000	0,000
		74307	016	SA/A105N		0,210	0,280	0,870	0,014	0,015	0,110	0,090	0,010	0,000	0,220	0,000	0,000	0,000	0,000	0,399	0,000	0,000
		73847	017	SA/A105N		0,195	20,000	0,940	0,025	0,014	0,080	0,050	0,010	0,000	0,160	0,002	0,000	0,000	0,000	0,386	0,000	0,000
		3P852CH	018	SA/A234 WPB		0,160	0,210	0,760	0,006	0,020	0,040	0,020	0,000	0,000	0,010	0,001	0,002	0,000	0,000	0,296	0,000	0,000
		Z536	019	SA/A234 WPB		0,160	0,110	0,790	0,008	0,019	0,030	0,030	0,010	0,000	0,010	0,001	0,002	0,000	0,000	0,302	0,000	0,000
		A70	020	SA/A105N		0,190	0,190	1,080	0,020	0,023	0,100	0,050	0,010	0,005	0,170	0,012	0,001	0,002	0,014	0,409	0,000	0,000
		N58	021	SA/A105N		0,200	0,270	0,930	0,026	0,012	0,110	0,060	0,010	0,005	0,170	0,002	0,001	0,000	0,010	0,394	0,000	0,000
		74524	022	SA/A105N		0,210	0,240	0,910	0,019	0,018	0,090	0,040	0,010	0,005	0,150	0,002	0,001	0,000	0,020	0,395	0,000	0,000
		40801	023	SA/A105N		0,186	0,300	0,872	0,005	0,012	0,196	0,392	0,010	0,000	0,073	0,001	0,002	0,000	0,000	0,403	0,000	0,000
COD. COL.		COLATA	POS.	TRATT. TERM.	FORMING	SML	SNERNAMENTO	ROTTURA	ALLUNGAMENTO	CONTRAZIONE	DUREZZA Hb	RESILIENZA - JOULE/cm2		PRODOTTORE		Ns. Rif.						
		200981	012	6	COLD	W	240,0	604,0	57,0	0,0	146	TIPO 10x10mm		TA CHEN		N10311						
		761044	013	6	COLD	SMLS	267,0	565,0	49,0	0,0	144 - 150	KV	0	0	0	0	0					
		72475	014	3			301,0	526,0	36,0	49,0	158 - 166	KV	-10	65	64	63	0					
		72476	015	3			304,0	536,0	31,0	54,0	160 - 166	KV	20	105	100	104	0					
		74307	016	3	HOT	SMLS	329,0	532,0	26,0	55,0	154	KV	20	56	59	58	63					
		73847	017	3	HOT	SMLS	328,0	531,0	26,0	60,0	168	KV	20	56	58	54	54					
		3P852CH	018	3	COLD	SMLS	306,0	476,0	26,0	0,0	142	KV	-10	88	85	80	80					
		Z536	019	2	COLD	SMLS	372,0	485,0	26,0	0,0	130	KV	0	52	56	58	58					
		A70	020	3	HOT	SMLS	305,0	486,0	31,0	56,0	162	KV	-5	59	68	70	70					
		N58	021	3	HOT	SMLS	336,0	549,0	34,0	57,0	166	KV	-10	64	55	53	53					
		74524	022	3	HOT	SMLS	301,0	524,0	33,0	54,0	158 - 162	KV	-10	96	90	94	94					
		40801	023	3	HOT	SMLS	390,0	550,0	30,0	65,0	161 - 168	KV	-10	69	71	75	75					
NOTE		NACE MR0175/03 - NACE MR0170/363										UFFICIO CONTROLLO QUALITA'		ENTE UFFICIALE DI COLLAUDO		COLLAUDO ESTERNO						
												QUALITY CONTROL										

(\*) 1=Prodotto a caldo tra 650-980 2=Tratt. di distensione 3=Normalizzato 4=Normalizzato e rinvenuto  
5=Temprato e rinvenuto 6=Solubilizzato 7=Vedi descrizione

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

INSPECTION CERTIFICATE  
EN 10204 3.1

N° 10071

DATE 27/04/10

OVER srl

VIALE MATTEOTTI 16  
24050 GRASSOBBIO (BG)

ROLLED BAR ANSI B1.1 A/SA 193 B7 5/8"-11UNCX1000

Order FAX

Date 27/04/10

Heat

LOT

RDC

QTY 20

Item

AR4760

1090557

815849

Heat treatment QUENCHED AND TEMPERED 593°C

The material is conforming to the following specifications:

ASTM A193/A193M-07 B7-ASME II PART "A" ED.2007 SA 193 B7

Mechanical  
Properties

R Mpa	Rs 0.2 Mpa	A%	Z%	HB	HB 24h	Impact test min med	Temp °C	Proof Load	Impact test min med J	Temp °C
MIN 860	MIN 720	MIN 16	MIN 50	MAX 321						
Actual 1005	860	17.8	57.3	300						

Chemical

C	Mn	Si	P	S	Ni	Cr	Mo	V	Ti	Al	B
Actual .450	.820	.210	.006	.025	.970	.180					

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 2H 5/8"-11UNC

Order FAX

Date 27/04/10

Heat

LOT

RDC

Qty 350

Item

613171

1089999

819093

Heat treatment QUENCHED AND TEMPERED 455°C

The material is conforming to the following specifications:

ASTM A194/A194-07a GR.2H-ASME II PART "A" ED.2007 SA 194 2H-ASME VIII Div 2 ED2007 Art.M-5

Mechanical  
Properties

R Mpa	Rs 0.2 Mpa	A%	Z%	HB	HB 24h	Impact test min med	Temp °C	Proof Load	Impact test min med J	Temp °C
MIN 248	MAX 327	MIN 179/540°C	POSITIVE							
Actual 296-313										

Chemical

C	Mn	Si	P	S	Ni	Cr	Mo	V	Ti	Al	B
Actual .470	.520	.310	.013	.029							

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 ~~separément~~  
Bulloneria Trevi srl

ALLEBI SRL

Via Repubblica 1 25065 Lumezzane Brescia tel. 030872934

TEST CERTIFICATE 3.1

Certificato di analisi chimica e prove meccaniche

3.1 - en - 10204:2004

Cliente/Customer		DDT/INVOICE										Nr Certificato/Certificate											
FERRAMENTA INDUSTRIALE BONACINA SRL VIALE EUROPA 2/G 24048 (FRA. CURNASCO) TREVIOLO BG		2258 del 29/09/2010										2258 del 29/09/2010											
		Analisi chimiche / chemical analysys																Analisi meccaniche / mechanical test					
Colata	Qty	Descrizione	C%	Mn%	Si%	P%	S%	Ni%	Cr%	Mo%	Ti%	Al%	V%	Cu%	Nb%	Ce%	Pb%	R - N/mm2	S - N/mm2	A%	C%	HB	TT
2-15545	20	FLANGIA UNI 2278 DN 125 SJR	0,130	0,470	0,190	0,016	0,027	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	400	215	24	165		N
1617	1	FLANGIA UNI 2276 DN 250	0,170	0,580	0,210	0,016	0,015	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	452	251	45	27	139	S
1072	10	FLANGIA UNI 6093 DN 15	0,140	0,450	0,230	0,017	0,020	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	441	242	46	28	131	S
9612	10	FLANGIA UNI 6093 DN 20	0,170	0,780	0,220	0,016	0,015	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	465	264	45	26	145	S
100311	15	FLANGIA UNI 6093 DN 25	0,180	1,150	0,300	0,018	0,010	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	500	260	58	27	150	S
7846	6	FLANGIA UNI 6093 DN 32	0,180	0,790	0,240	0,015	0,016	0,120	0,010	0,027	0,000	0,000	0,000	0,080	0,000	0,000	0,314	553	1346	128	45	150	S
2-15545	15	FLANGIA UNI 6093 DN 40 SJR	0,130	0,470	0,190	0,016	0,027	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	400	215	24	165		N
08K68716	1	FLANGIA UNI 2276 DN 400	0,170	0,610	0,230	0,023	0,017	0,005	0,010	0,007	0,000	0,000	0,011	0,005	0,000	0,000	0,000	497	1255	129	37	165	N

CORRISPONDENTE  
ALL'ORIGINALE

FERRAMENTA INDUSTRIALE  
BONACINA S.r.l.  
Viale Europa, 2 - 24048 Trevio (BG)  
Tel. 035-201265 - Fax 035-201268  
Cod. Fisc. e P. IVA 00727710162

Ferramenta Industriale  
BONACINA S.r.l.  
Silvia Santini



Specifiche : A 105/a 105m - 01 - S235JR

Materiale conforme all'ordine ed alle specifiche

Controllo visivo e dimensionale positivo

Ufficio controllo qualità

AELLEBI SRL

 <b>comtubi</b> s.r.l. STEEL TUBES SERVICE				ATTESTATO DI CONFORMITA' EN 10204/2.1 CERTIFICATE OF COMPLIANCE EN 10204/2.1 ATTESTATION DE CONFORMITE EN 10204/2.1		DATA Date 30.04.08	
DIR.UFF.DEP.: Z.I. CIMAFAVA 29013 CARPANETO (PC) ITALIA TEL.0523-859043/TELEFAX 0523-850763 E-MAIL: comtubi@comtubi.com CF-P.IVA/VAT CODE IT 00275990331 MBCC.PC.006303 R.E.A. N.95436 - ISCR.REG.IMP.PC N.4191				No. <b>257/08</b>			
CLIENTE / Customer / Client  <b>SPETT.LE          JANNONE FERRO TUBI SPA          SEGRATE (MI)</b>				ORD. CLIENTE / Customer's order / Commande du Client  NR. 08/642 DEL 23/04/2008 - NR. 08/654 DEL 24/04/2008 - NR. 08/661 DEL 24/04/2008 - NR. 08/660 DEL 24/04/2008 - NR. 08/668 DEL 28/04/2008 -			
<b>GALVANIZED STEEL TUBES</b>							
NORMA - ACCIAIO / Specification - Steel / Specification Acier  <b>API 5L - ASTM A106 GR.B</b>				ESECUZIONE / Execution / Exécution SENZA SALDO / Seamless / Sans soudure <input checked="" type="checkbox"/> X SALDATO / Welded / Soude <input type="checkbox"/>			
Pos. Item Pos.	DIMENSIONI Dimensions Dimensions	QUANTITA' Quantity Quantité	PRODUTTORE Manufacturer Producteur	CERTIFICATO DI FABR. Mill test certificate Certificat d'usine	CODE		
1	1.1/4" X 3,56	MT. 12,00	ZELEZ - H.71357	14511/1/2007			
2	3/4" X 2,87	MT. 12,00	ZELEZ - H.71427	14752/1/2007			
3	1/2" X 2,77	MT. 18,00	ZELEZ - H.50359	3339/1/2005			
1	3/4" X 3,91	MT. 150,00	ZELEZ - H.61902	16110/1/2006			
1	1.1/2" X 3,68	MT. 6,00	TENARIS - H.760442	06/10918			
2	6" X 7,11	MT. 24,00	TUBOS R - H.89845	186571			
1	1/2" X 2,77	MT. 12,00	ZELEZ - H.50359	3339/1/2005			
2	3/4" X 2,87	MT. 78,00	TENARIS - H.770432	07/15345			
3	1" X 3,38	MT. 6,00	TUBOS R - H.89733	186572			
4	1.1/2" X 3,68	MT. 216,00 (MT. 138,00) (MT. 78,00)	TENARIS - H.761407 TENARIS - H.760442	06/22550 06/10918			
5	2" X 3,91	MT. 180,00	TUBOS R - H.88396	179398			
6	3" X 5,49	MT. 90,00 (MT. 48,00) (MT. 42,00)	TENARIS - H.772753 TENARIS - H.772147	07/30908 07/24633			
	5" X 6,55	MT. 6,00	VOEST A - H.424378	Z26521			
ZINCATURA A CALDO Hot galvanizing / Galvanization à chaud		FILETTATURA Threading / Filetage		MANICOTTO Coupling / Manchon			
ASTM A53 <input checked="" type="checkbox"/> X		ANSI B1.20.1 NPT <input checked="" type="checkbox"/> X		3000 LBS <input checked="" type="checkbox"/> X			
IL CONTROLLO VISIVO E DIMENSIONALE DEI TUBI E' STATO EFFETTUATO CON ESITO SODDISFACENTE / VISUAL AND DIMENSIONAL CONTROL OF THE TUBES HAS BEEN CARRIED OUT WITH SATISFACTORY RESULTS / LE CONTROLE VISUEL ET DIMENSIONAL DES TUBES A ETE EFFECTUE AVEC SATISFAISANT RESULTAT.							
NOTE / Remarks / Notes				UFFICIO COLLAUDI Inspection Dept/Service Qualité  <b>COMTUBI S.R.L.</b> A. GREGORI RESP. GESTIONE QUALITA'			



JANNONE FERRO TUBI S.p.A.

Ordine n. TEL SIG. LIV del 28/04/2008 Bolla n. 3959  
 Colata-heat 424378 Item 114,3 X 6,55  
 Cliente: OVER SRL N. Pezzi 1

del 5/05/2008 Kg. 144 MT 6  
 Code SS API 5L ZINC. VM  
 0000001469.001





**ŽELEZIARNE®  
PODBREZOVÁ**

**Inšpekčný certifikát  
Inspection certificate**  
EN 10204:1991/3.1.B, DIN 50049/3.1.B

Číslo 39255/1/2005  
Number

Čext.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 zákazky výrobcu - Manufacturer's works order number :  
Dv 60334/2/2 6523008

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

Číslo ložného listu - Loading Bill No. : 671279

Číslo avíza - Dispatch note : 654626

Výrobok - Product :

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

Vonkajší priemer - Outside diameter : 13.700 mm  
Hrúbka steny - Wall thickness : 2.240 mm  
Dĺžka - Length : 6000.000 mm -0 +100 mm  
Počet kusov - Number of pieces : 258  
Celková dĺžka - Total length : 1549.00 m  
Celková hmotnosť - Total mass : 1004 kg

Material - Material :

X42/PSL 1 API Spec. 5L/2004, B/PSL 1 API Spec. 5L/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

Technické predpisy - Technical requirements/Demand :

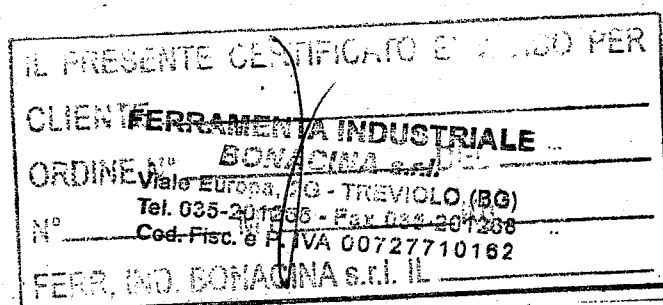
ASTM A 106/A 106M-04b, ASTM A 53/A 53M-04a, ASME SA-106 E2004, ASME SA-53/SA-53M E2004, API Spec.5L/2004,  
ASTM A530/A530M-04a, ASME SA530/SA530M-99, TAL.TS-01 REV.3, ASME B 36.10M

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

Druh ocele - Steel grade : úplne uškľadená oceľ - fully killed steel

Chemické zloženie - Chemical composition :

Číslo tavby Cast number														C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]
Predpis - Requirements :																									
min. max.														0.20	1.06	0.15 0.35	0.020	0.010	0.30	0.30	0.40	0.015	0.12	0.040	0.030
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



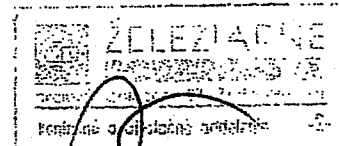
Ferramenta Industriale  
BONACINA s.r.l.  
Giovanni Bonacini

Miesto  
Location

v Podbrezovej  
c

Dátum 10.10.2005  
Date

Vedúci kontrolného a atestačného oddelenia Ing. Vojtas Miroslav  
Engineering inspection official



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.ocaloverury.sk, www.steelhub.sk  
IČO 31 562 141, IČ DPH / VAT NP : SK2020458704, Bankové spojenie / Bank account : VÚB Bratislava, číslo 1909-312/0200  
Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Bratislava, oddiel Sa, vložka číslo 69/S

Číslo tavby Cast number		Nb [ % ]	CEV [ % ]
	Predpis - Requirements :		
	min. max.	0.019	0.40
51192		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 ťahom - Tensile test : 20 °C

C. Nr.	Číslo tavby Cast number	Medza klzu Yield point - Proof stress	Pevnosť v ťahu Tensile strength	Ťažnosť Elongation
		ReH/ MPa	Rm/ MPa	Lo= 2"/ %
	Predpis - Requirements : min.	290	415	30.0
	max.	—	—	—
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 ohybom vyhovela.  
Bend test without objections.

Skúška vírivými prúdmi vyhovela.  
Eddy current test without objections. ASTM E-309 100 %

Výrobky spĺňajú 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.

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

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 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 ohybe nebola vykonaná z dôvodu nedostatočného rozmeru rúry, ktorý nedovoľuje pripraviť 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 vyššie 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  
SOMERIN s.r.l.  
Viale Europa, 13 - 11010 VIOLLO (BO)  
Tel. 035-201268 - Fax 035-201268  
Cod. Fisc. e P. IVA 00727710162



Miesto  
Location v Podbrezovej  
c

Dátum 10.10.2005  
Date

Vedúci kontrolného a atestačného oddelenia Ing. Vojtas Miroslav  
Engineering inspection official



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.ozeloverury.sk, www.steelube.sk  
IČO 31 562 141, IČ DPH / VAT N°: SK2020456704, Bankové spojenie / Bank account: VÚB Bratislava, № 1908-312/0200  
Spoločnosť je zapísaná v Obchodnom registri Okresného súdu Bratislava, oddiel So, vložka číslo 69/5

CLIENTE/CUSTOMER/CLIENT/KUNDE

OVER SRL MONTAGGI INDUSTRIALI 24050 GRASSOBBIO BG

POSIZIONE ARCHIVIO  
20200

ORDINE/ORDER/COMMANDE/BESTELLUNG

DATA/DATE/DATE/DATUM

COMMESSA/JOB/AFFAIRE/WERKSauftrag

COLLAUDO SECONDO/TEST ACCORDING TO/ESSAI SUIVANT/PRÜFUNG NACH

FAX

13/10/2010 753/005719/010 (1)

DESCRIZIONE/DESCRIPTION/DESCRIPTION/BESCHREIBUNG

LAMIERE FORATE

TIPO/TYPE/TYPE/TYP

MATERIALE/MATERIAL/NUANCE/WERKSTOFF

DIMENSIONI/DIMENSIONS/DIMENSIONS/ABMESSUNGEN

304

ASTM A 240 TP. 304

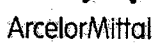
2000x1000x1.50 mm

ANALISI CHIMICA A NORMA/CHEMICAL REQUIREMENTS/ANALYSE IMPOSEE/CHEMISCHE ANFORDERUNGEN

	C	Mn	P	S	Si	Cr	Ni	N
MIN						17,50	8,00	
MAX	0,07	2,00	0,045	0,03	0,75	19,50	10,50	0,10

PROPRIETÀ MECCANICHE/MECHANICAL PROPERTIES/PROPRIETES MECANQUES/MECHANISCHE EIGENSCHAFTEN

R (Mpa): A%: Colata 013085

 <b>ArcelorMittal</b> ArcelorMittal - Stainless France ArcelorMittal Isbergues 62330 Isbergues FRANCE		<b>MILL CERTIFICATE BS EN 10204/3.1</b> CERTIFICAT DE RECEPTION NF EN 10204/3.1 ABNAHMEPRÜFZEUGNIS DIN EN 10204/3.1 N° N°N 10-1-69255-01-01																																					
Product - Produit - Erzeugnis COIL ROLLED COIL BOBINE LAMINEE A FROID KALTGEWÄLTZTES BAND		Purchaser and/or consignee Client et/ou destinataire Besteller und/oder Empfänger <b>SARINOX METALLI SPA</b> VIA ALFIERI 13 20060 BASiglio (MI) ITALIA																																					
Steel designation Désignation de l'acier Stahlbezeichnung EN 10028-7 / 08 - L 4307 4301 EN 10088-2 / 05 - L 4307 4301 ASTM A 240 / 09 - AISI304L AISI304 ASME SA 240 / 07 - AISI304L AISI304		Finish Présentation Oberflächen 2B 2B 2B 2B																																					
Identification of the product Identification du produit - Identifizierung des Erzeugnisses Coil n. N° de bobine Band/Nr <b>77744</b>		Dimensions Dimensions - Abmessungen Thickness Epaisseur - Dicke <b>1,500 mm</b> Width Largeur - Breite <b>1000,00 mm</b> Length Longueur - Länge <b>18919 KGS</b>																																					
<b>CHEMICAL ANALYSIS - ANALYSE CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG</b>																																							
<table border="1"> <thead> <tr> <th></th><th>C</th><th>Si</th><th>Mn</th><th>Ni</th><th>Cr</th><th>Mo</th><th>Ti</th><th>N</th><th>S</th><th>P</th><th>Cu</th></tr> </thead> <tbody> <tr> <td>Required-Exigé</td><td>% mini</td><td>0,030</td><td>0,75</td><td>2,00</td><td>10,00</td><td>19,50</td><td></td><td>0,100</td><td>0,0150</td><td>0,045</td><td></td></tr> <tr> <td>Analysis-Analyse</td><td>% maxi</td><td>0,024</td><td>0,40</td><td>1,33</td><td>8,00</td><td>18,13</td><td></td><td>0,069</td><td>0,0039</td><td>0,031</td><td>0,340</td></tr> </tbody> </table>					C	Si	Mn	Ni	Cr	Mo	Ti	N	S	P	Cu	Required-Exigé	% mini	0,030	0,75	2,00	10,00	19,50		0,100	0,0150	0,045		Analysis-Analyse	% maxi	0,024	0,40	1,33	8,00	18,13		0,069	0,0039	0,031	0,340
	C	Si	Mn	Ni	Cr	Mo	Ti	N	S	P	Cu																												
Required-Exigé	% mini	0,030	0,75	2,00	10,00	19,50		0,100	0,0150	0,045																													
Analysis-Analyse	% maxi	0,024	0,40	1,33	8,00	18,13		0,069	0,0039	0,031	0,340																												
Tests to verify batch and quality have been carried out: OK Tests de vérification de la conformité de la matière fournie: OK Versuchsleistungen wurden durchgeführt: OK																																							
<b>MECHANICAL PROPERTIES - PROPRIETES MECANQUES - MECHANISCHE WERTE</b>																																							
Room temperature - Température ambiante - Raumtemperatur Test temperature <table border="1"> <thead> <tr> <th>Direction (2) Anforderung</th><th>Yield strength Limite d'élasticité Streckgrenze Rp 0.2 %</th><th>Tensile strength Résistance à la traction Zugfestigkeit Rp 1 %</th><th>Elongation after fracture Allongement après rupture Bruchdehnung Rm</th><th>Hardness Dureté Haftigkeit HRB</th><th>Yield strength Limite d'élasticité Streckgrenze Rp 0.2 %</th><th>Tensile strength Résistance à la traction Zugfestigkeit Rm</th><th>Elongation % Allongement Bruchdehnung</th></tr> </thead> <tbody> <tr> <td>min</td><td>220</td><td>250</td><td>520</td><td>45</td><td>40</td><td>92</td><td></td></tr> <tr> <td>max</td><td>299</td><td>346</td><td>633</td><td>54</td><td>54</td><td>82</td><td></td></tr> </tbody> </table>				Direction (2) Anforderung	Yield strength Limite d'élasticité Streckgrenze Rp 0.2 %	Tensile strength Résistance à la traction Zugfestigkeit Rp 1 %	Elongation after fracture Allongement après rupture Bruchdehnung Rm	Hardness Dureté Haftigkeit HRB	Yield strength Limite d'élasticité Streckgrenze Rp 0.2 %	Tensile strength Résistance à la traction Zugfestigkeit Rm	Elongation % Allongement Bruchdehnung	min	220	250	520	45	40	92		max	299	346	633	54	54	82													
Direction (2) Anforderung	Yield strength Limite d'élasticité Streckgrenze Rp 0.2 %	Tensile strength Résistance à la traction Zugfestigkeit Rp 1 %	Elongation after fracture Allongement après rupture Bruchdehnung Rm	Hardness Dureté Haftigkeit HRB	Yield strength Limite d'élasticité Streckgrenze Rp 0.2 %	Tensile strength Résistance à la traction Zugfestigkeit Rm	Elongation % Allongement Bruchdehnung																																
min	220	250	520	45	40	92																																	
max	299	346	633	54	54	82																																	
Impact strength test Essai de résilience Kerbschlagenergieversuch Temperature Corrosion test Test de corrosion Korrosionstest																																							
Location of the sample (1) Emplacement de l'échantillon Lage des Probenabschnittes 1. Front - Début - Anfang 2. Back - Fin - Ende 3. Middle - Milieu - Mitte																																							
The delivery is in accordance with the order La fourniture est conforme aux exigences de la commande Die Lieferung entspricht den Bestellbedingungen																																							
Organisation inspection Organisation et/ou service-contrôle Überwachungsabteilung Service Métallurgique Le: 19/04/2010 M. THOMAS The inspector Le responsable Der Wertsachverständige																																							

POS./ITEM/REPÈRE/POS.

1 / Comm. 10C86

DISEGNO/DRAWING/PLAN/ZEICHNUNG

MARCA/MARK/MARQUE/MARKIERUNG

POS./ITEM/REPÈRE/POS.

DISEGNO/DRAWING/PLAN/ZEICHNUNG

MARCA/MARK/MARQUE/MARKIERUNG

POS./ITEM/REPÈRE/POS.

DISEGNO/DRAWING/PLAN/ZEICHNUNG

MARCA/MARK/MARQUE/MARKIERUNG

POS./ITEM/REPÈRE/POS.

DISEGNO/DRAWING/PLAN/ZEICHNUNG

MARCA/MARK/MARQUE/MARKIERUNG

POS./ITEM/REPÈRE/POS.

DISEGNO/DRAWING/PLAN/ZEICHNUNG

MARCA/MARK/MARQUE/MARKIERUNG

CONTROLLO DIMENSIONALE E  
CONFORMITÀ ALL'ORDINE  
DIMENSIONAL CHECK AND  
CONFORMITY TO THE ORDER REQUIREMENTS  
CONTRÔLE DIMENSIONNEL ET  
CONFORMITÉ À LA COMMANDE  
ABMESSUNGEN PRÜFUNG UND  
KONFORMITÄT DER BESTELLUNG

POSITIVO POSITIVE  
POSITIF POSITIF

Costacurta S.p.A. - VICO







[illegible]



SALA PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT

Certificato generato da un sistema informatico secondo la norma EN10204, valido senza firma - This certificate has been generated by computer and need not to be signed for validity acc. to EN10204

COD. COL. HEAT CODE	COLATA HEAT	POS. ITEM	VS. ORDINE YOUR REF.	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION	DIM. IN ACC. A DIM. ACCORDANCE TO	VISIVO E DMENS. VISUAL & DIMENS.					
	09/35285	0044	REINTEGRO DEPOSITO	65,00	S/O 150 RF 6"	A105	SATISFACTORY					
	09/33805	0045	REINTEGRO DEPOSITO	20,00	S/O 150 RF 8"	A105	SATISFACTORY					
	08/32860	0046	REINTEGRO DEPOSITO	10,00	S/O 150 RF 12"	A105	SATISFACTORY					
	09/35466	0048	REINTEGRO DEPOSITO	10,00	S/O 300 RF 8"	A105	SATISFACTORY					
	548727	0049	REINTEGRO DEPOSITO	5,00	S/O 300 RF 12"	A105	SATISFACTORY					
	74401	0050	REINTEGRO DEPOSITO	20,00	S/O 300 RF 1.1/2"	A105	SATISFACTORY					
	08/38247	0051	REINTEGRO DEPOSITO	20,00	S/O 300 RF 2"	A105	SATISFACTORY					
COD. COL. HEAT CODE	COLATA HEAT	POS. ITEM	MATERIALE MATERIAL	C%	SI%	ROTTURA TENSILE STRENGTH	SNERVAMENTO YIELD POINT	PROVETTA / TEST SPECIM. SEZ./SECT.	LUNG./LENG. mm	SNERVAMENTO YIELD POINT	FORMA SHAPE	SNERVAMENTO YIELD POINT
	09/35285	0044	ASTM A105	0,200	0,230	528,0	347,0	126,60	50,80	347,0	1	0,0
	09/33805	0045	ASTM A105	0,200	0,230	529,0	372,0	126,60	50,80	372,0	1	0,0
	08/32860	0046	ASTM A105	0,190	0,250	536,0	338,0	126,60	50,80	338,0	1	0,0
	09/35466	0048	ASTM A105	0,200	0,230	526,0	344,0	126,60	50,80	344,0	1	0,0
	548727	0049	ASTM A105	0,180	0,180	540,0	330,0	126,60	50,80	330,0	1	0,0
	74401	0050	ASTM A105	0,195	0,270	538,0	333,0	126,60	50,80	333,0	1	0,0
	08/38247	0051	ASTM A105	0,200	0,220	529,0	370,0	126,60	50,80	370,0	1	0,0
COD. COL. HEAT CODE	COLATA HEAT	POS. ITEM	MATERIALE IN ACCORDO A MATERIAL IN ACCORDANCE TO				TRATTAMENTO TERMICO HEAT TREATMENT		FORNO FURNACE		ORIGINE ORIGIN	
	09/35285	0044	ASTM/ASME A 105/SA 105 M - 05				NORMALIZED AT 920 C - COOLED IN STILL AIR		ELECTRIC FURNACE		EUROPE	
	09/33805	0045	ASTM/ASME A 105/SA 105 M - 05				NORMALIZED AT 920 C - COOLED IN STILL AIR		ELECTRIC FURNACE		EUROPE	
	08/32860	0046	ASTM/ASME A 105/SA 105 M - 05				NORMALIZED AT 920 C - COOLED IN STILL AIR		ELECTRIC FURNACE		EUROPE	
	09/35466	0048	ASTM/ASME A 105/SA 105 M - 05				NORMALIZED AT 920 C - COOLED IN STILL AIR		ELECTRIC FURNACE		EUROPE	
	548727	0049	ASTM/ASME A 105/SA 105 M - 05				NORMALIZED AT 920 C - COOLED IN STILL AIR		ELECTRIC FURNACE		EUROPE	
	74401	0050	ASTM/ASME A 105/SA 105 M - 05				NORMALIZED AT 920 C - COOLED IN STILL AIR		ELECTRIC FURNACE		EUROPE	
	08/38247	0051	ASTM/ASME A 105/SA 105 M - 05				NORMALIZED AT 920 C - COOLED IN STILL AIR		ELECTRIC FURNACE		EUROPE	
NOTE NOTES	UFFICIO CONTROLLO QUALITA' QUALITY CONTROL DEPARTMENT			ENTE UFFICIALE DI COLLAUDO INSPECTION AUTHORITY			MARCHIO PRODUZIONE MANUFACTURER'S SYMBOL					
	S. Corti			MFF								

FERRAMENTA INDUSTRIALE  
VIALE EUROPA, 29 - FRAZ. CURNASCO  
24048 TREVIOLO (BG)  
Tel. 035 236201268  
Fax 035 236201268  
E-mail: quality.mif@tarfas.com



**CERTIFICATO DI COLLAUDO SECONDO EN 10204 - 3.1 INSPECTION CERTIFICATE**

Certif. n. 779 DDT / Del Note n. 1049	/ Dated 26.02.2010 Del / Dated 26.02.2010	Fattura / Invoice n. Del / Dated
FERRAMENTA INDUSTRIALE BONACINA SRL VIALE EUROPA, 2G - FRAZ. CURNASCO 24048 TREVIOLO BG IT		

Pag. 6 - 10

SALA PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT

certificato generato da un sistema informatico secondo la norma EN10204, valido senza firma - This certificate has been generated by computer and need not to be signed for validity acc. to EN10204

COD. COL. HEAT CODE		COLATA HEAT	POS. ITEM	VS. ORDINE YOUR REF.	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION		DIM. IN ACC. A DIM. ACCORDANCE TO		VISIVO E DMENS. VISUAL & DIMENS.										
		09/79424	0037	REINTEGRO DEPOSITO	20,00	S/O 150 RF 5"	A105	ASME/ANSI B16.5		SATISFACTORY										
		09/33890	0038	REINTEGRO DEPOSITO	11,00	S/O 150 RF 10"	A105	ASME/ANSI B16.5		SATISFACTORY										
		09/33501	0039	REINTEGRO DEPOSITO	5,00	S/O 150 RF 14"	A105	ASME/ANSI B16.5		SATISFACTORY										
		09/33796	0040	REINTEGRO DEPOSITO	10,00	S/O 150 RF 16"	A105	ASME/ANSI B16.5		SATISFACTORY										
		09/90593	0041	REINTEGRO DEPOSITO	3,00	S/O 150 RF 20"	A105	ASME/ANSI B16.5		SATISFACTORY										
		08/74748	0042	REINTEGRO DEPOSITO	50,00	S/O 150 RF 2"	A105	ASME/ANSI B16.5		SATISFACTORY										
		09/36266	0043	REINTEGRO DEPOSITO	134,00	S/O 150 RF 4"	A105	ASME/ANSI B16.5		SATISFACTORY										
COD. COL. HEAT CODE		COLATA HEAT	POS. ITEM	MATERIALE MATERIAL	C%	SI%	MIN%	S%	P%	Cr%	NI%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	ALTRI ELEMENTI OTHER ELEMENTS
		09/79424	0037	ASTM A105	0,190	0,250	0,960	0,014	0,008	0,080	0,050	0,010	0,011	0,160	0,001	0,001	0,000	0,023	0,382	
		09/33890	0038	ASTM A105	0,200	0,220	1,010	0,010	0,013	0,130	0,060	0,010	0,010	0,210	0,003	0,002	0,000	0,007	0,414	
		09/33501	0039	ASTM A105	0,200	0,220	1,140	0,010	0,014	0,130	0,050	0,010	0,016	0,130	0,023	0,000	0,000	0,025	0,430	
		09/33796	0040	ASTM A105	0,185	0,230	0,970	0,013	0,015	0,140	0,060	0,020	0,000	0,210	0,003	0,001	0,000	0,009	0,397	
		09/90593	0041	ASTM A105	0,190	0,230	1,020	0,010	0,018	-0,050	0,090	0,020	0,002	0,260	0,003	0,001	0,000	0,030	0,398	
		08/74748	0042	ASTM A105	0,185	0,220	0,980	0,014	0,013	0,080	0,050	0,010	0,008	0,180	0,001	0,001	0,000	0,021	0,381	
		09/36266	0043	ASTM A105	0,180	0,230	0,970	0,015	0,009	0,110	0,050	0,010	0,009	0,160	0,002	0,000	0,000	0,005	0,380	
COD. COL. HEAT CODE		COLATA HEAT	POS. ITEM	PROVETTA / TEST SPECIM. SEZ./SECT. mm2	SNERVAMENTO YIELD POINT N/mm2 >=0,2%	ROTTURA TENSILE STRENGTH N/mm2 >=	ALLUNGAMENTO ELONGATION %>=	CONTRAZIONE REDUCT. OF AREA %>=	DUREZZA HB HARDNESS Hb	PIEGA BEND TEST	SCHIACCIAM. FLATTENING TEST	RESILIENZA / IMPACT TEST - JOULE/cm2 °C	FORMA SHAPE 1=O 2=□	SNERVAMENTO YIELD POINT N/mm2 >=1,0%						
		09/79424	0037	126,60	50,80	533,0	33,0	58,0	163,0 - 165,0	0,0	0,0	KV	20	80	80	83	1	0,0		
		09/33890	0038	126,60	50,80	532,0	30,0	59,0	163,0 - 165,0	0,0	0,0	KV	20	83	88	88	1	0,0		
		09/33501	0039	126,60	50,80	534,0	31,0	60,0	163,0 - 165,0	0,0	0,0	KV	20	83	90	95	1	0,0		
		09/33796	0040	126,60	50,80	531,0	30,0	59,0	163,0 - 165,0	0,0	0,0	KV	20	88	85	87	1	0,0		
		09/90593	0041	126,60	50,80	545,0	30,0	61,0	163,0 - 165,0	0,0	0,0	KV	20	80	88	88	1	0,0		
		08/74748	0042	126,60	50,80	531,0	32,0	58,0	163,0 - 165,0	0,0	0,0	KV	20	82	86	84	1	0,0		
		09/36266	0043	126,60	50,80	510,0	30,0	59,0	156,0 - 159,0	0,0	0,0	KV	20	89	90	85	1	0,0		
COD. COL. HEAT CODE		COLATA HEAT	POS. ITEM	MATERIALE IN ACCORDANCE A MATERIAL IN ACCORDANCE TO					TRATTAMENTO TERMICO HEAT TREATMENT				FORNO FURNACE		ORIGINE ORIGIN					
		09/79424	0037	ASTM/ASME A 105/SA 105 M - 05					NORMALIZED AT 920 C - COOLED IN STILL AIR				ELECTRIC FURNACE		EUROPE					
		09/33890	0038	ASTM/ASME A 105/SA 105 M - 05					NORMALIZED AT 920 C - COOLED IN STILL AIR				ELECTRIC FURNACE		EUROPE					
		09/33501	0039	ASTM/ASME A 105/SA 105 M - 05					NORMALIZED AT 920 C - COOLED IN STILL AIR				ELECTRIC FURNACE		EUROPE					
		09/33796	0040	ASTM/ASME A 105/SA 105 M - 05					NORMALIZED AT 920 C - COOLED IN STILL AIR				ELECTRIC FURNACE		EUROPE					
		09/90593	0041	ASTM/ASME A 105/SA 105 M - 05					NORMALIZED AT 920 C - COOLED IN STILL AIR				ELECTRIC FURNACE		EUROPE					
		08/74748	0042	ASTM/ASME A 105/SA 105 M - 05					NORMALIZED AT 920 C - COOLED IN STILL AIR				ELECTRIC FURNACE		EUROPE					
		09/36266	0043	ASTM/ASME A 105/SA 105 M - 05					NORMALIZED AT 920 C - COOLED IN STILL AIR				ELECTRIC FURNACE		EUROPE					
NOTE NOTES		OFFICINA DI PRODUZIONE					UFFICIO CONTROLLO QUALITA' QUALITY CONTROL DEPARTMENT					ENTE UFFICIALE DI COLLAUDO INSPECTION AUTHORITY		MARCHIO PRODUZIONE MANUFACTURER'S SYMBOL						
		SOMACM s.r.l. via Europa, 23 - REVOLINO 1.035-20126 - P. 02-9561189 C.F. 02.11.12.1					S. Corti							MFF						



**METALFAR**  
PRODOTTI INDUSTRIALI S.P.A.

STAMPAGGIO A CALDO DI ACCIAI COMUNI - LEGATI E INOSSIDABILI

SEDE AMMINISTRATIVA E STABILIMENTO:  
23861 CESANA BRIANZA (LC) - Italia  
Via G. Parini, 28  
Tel. +39 031.655441  
Fax +39 031.655149  
quality.mff@farinas.com

COMPANY  
WITH QUALITY MANAGEMENT  
SYSTEM CERTIFIED BY DNV  
= ISO 9001 : 2000 =

**CERTIFICATO DI COLAUDO SECONDO EN 10204 - 3.1 INSPECTION CERTIFICATE**

Certif. n. 779 Dated 26.02.2010 Fattura / Invoice n. Del / Dated

DDT / Del Note n. 1049 Del / Dated 26.02.2010

FERRAMENTA INDUSTRIALE BONACINA SRL


VIALE EUROPA, 2G - FRAZ. CURNASCO

24048 TREVIOLO

BG IT

**SALA PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT**

Certificato generato da un sistema informatico secondo la norma EN10204, valido senza firma - This certificate has been generated by computer and need not to be signed for validity acc. to EN10204

COD. COL. HEAT CODE		COLATA HEAT	POS. ITEM	VS. ORDINE YOUR REF.	Q.TA' Q.TY	DESCRIZIONE DESCRIPTION		DIM. IN ACC. A DIM. ACCORDANCE TO				VISIVO E DIMENS. VISUAL & DIMENS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		654722	0030	REINTEGRO DEPOSITO	10,00			ASME/ANSI B16.5				SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		71412	0031	REINTEGRO DEPOSITO	15,00			ASME/ANSI B16.5				SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		77048	0032	REINTEGRO DEPOSITO	20,00			ASME/ANSI B16.5				SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		74526	0033	REINTEGRO DEPOSITO	50,00			ASME/ANSI B16.5				SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		74301	0034	REINTEGRO DEPOSITO	50,00			ASME/ANSI B16.5				SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		09/77048	0035	REINTEGRO DEPOSITO	50,00			ASME/ANSI B16.5				SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		09/35394	0036	REINTEGRO DEPOSITO	130,00	ASME/ANSI B16.5				SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		COLATA HEAT	POS. ITEM	MATERIALE MATERIAL	C%	SI%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

# MILL TEST CERTIFICATE

EN 10204/3.1.B

LOT:1

COPY TRUE TO  
THE ORIGINAL

**BORUSAN BORU**  
Borusan Bilgiçlik Boru Fabrikası A.Ş.  
E-Mail : KYASAR@BORUSAN.COM

Type of Document Batch/Designation		Quantity / Dimensions		Remarks	
Item No.	Dimensions (mm)	Process	Total Length	Total Weight	Remarks
1	673.98X12000	173	2076	34.110	VPE
2	673.98X12000	174	898	17.300	VPE
3	673.98X12000	180	1920	54.900	VPE
4	673.98X12000	98	1176	25.150	VPE
5	673.98X12000	188	2016	66.900	VPE
6	673.98X12000	87	1044	44.540	VPE
7	1073.98X12000	159	1908	51.800	VPE
8	1073.98X12000	85	1020	42.350	VPE
9	1273.98X12000	136	1632	58.500	VPE
10	1273.98X12000	54	848	32.500	VPE

ERW LONGITUDINALLY WELDED BLACK STEEL PIPES

Inspector's Stamp

Certificate No. 1027

Product: E.R.W STEEL PIPE

File No / Contract No. D/BF 1539

Standard: API 5L GRB

Date: 21.09.2000

Page: 1

Customer: TAL TUBI ACCIATO

Order No./C.D. No. Bestell.-Nr./Akte.Nr.

Specification: Lieferbedingungen

Item No.	Heat No.	Schmelz-Nr.	Chemical Composition (%) / Chemische Zusammensetzung													Reported / Test / Nachweis / Ergebnisse										Hydrostatic / Hydrostatisch / Druckversuch (underflow)										Thermal Analysis / Thermische Analyse																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			C	Si	Mn	P	S	Al	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq	S	P	Mn	Si	Mo	Cr	Ni	Cu	V	Ceq

