

"Proyecto Alba – Nuevas Plantas de Poliolefinas, Plataformas Logísticas y Offsites"

Data: 01/04/2025

DOSSIER DA QUALIDADE

Documentação Técnica e Certificação

CAPÍTULO 1.4.3: CERTIFICADOS TÉCNICOS E DE CONFORMIDADE DOS TUBOS INSTALADOS.**✓ APROVADO**

Certificados técnicos e de conformidade dos tubos instalados.

VALIDAÇÃO E VERIFICAÇÃO

Ação	Responsável	Data	Assinatura
Elaborado por Tecnico da Qualidade	José Antunes	31/03/2025	
Aprovado por Diretor de Obra	Luis salvado	01/04/2025	

Notas/Observações: Além da documentação deste capítulo os certificados técnicos e de conformidade dos tubos instalados estão incluídos nos respetivos dossiers de fabricação, conforme detalhado no Capítulo 2 – PIPING.

VALIDAÇÃO REPSOL	ASSINATURA/CARIMBO
Responsável:	
Data:	

DOSSIER DE QUALIDADE

 <p>ASCH INFRAESTRUCTURAS Y SERVICIOS</p>	Empreitada:	DOCUMENTO Nº:
	4001008 - "Nuevas Plantas de Poliolefinas, Plataformas Logísticas Y Offsites"	DATA:
		31/01/2025
		FOLHA Nº : / DE: 386 de 2080

1.4.3 TUBAGEM

ITEM	DESCRIÇÃO DOCUMENTAL	Nº CERTIFICADO	DATA
TUBOS DE HDPE			
1	TUBAGENS PLÁSTICAS EM POLIETILENO (PE) POLITEJO PARA DRENAGEM	PT07/02125	29/11/2021
2	TUBO ASTM-80 Ø101.6x9	43277	02/02/2024

* VER CAPÍTULO SOLDADURA - DOSSIER DE FABRICAÇÃO - POLIETILENO

31/01/2025			
Data	Qualidade	Director Obra	Repsol
	Verificado	Aprovado	Cliente



Certificado de Conformidade

Certificate of Conformity

PT07/02125

POLITEJO - Indústria de Plásticos, S.A.

E.N. 3, Km 16 - Casais da Lagoa
2050-038 AVEIRAS DE BAIXO

Âmbito Certificado

Certified Scope

Produto(s): Tubagens plásticas em Polietileno (PE) para abastecimento de água, e para drenagem e esgoto sob pressão.

Product(s): Plastics pipes of Polyethylene (PE) for water supply and for drainage and sewerage under pressure.

Variante(s): descritas em anexo.

Variant(s): described in annex.

Documento(s) normativo(s) / Standard(s)

NP EN 12201-1:2012; NP EN 12201-2:2011+A1:2015;
CEN/TS 12201-7:2014

Este certificado é válido desde

This certificate is valid from

29 de novembro de 2021 até 10 de outubro de 2024,
sujeito a auditorias de acompanhamento com resultados satisfatórios

29 November 2021 until 10 October 2024, and remains valid subject to satisfactory surveillance audits

Auditoria de Renovação a realizar antes de 10 de agosto de 2024

Re certification audit due before 10 August 2024

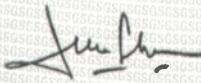
Versão 25. Certificado pela SGS desde junho de 2007

Issue 25. Certified with SGS since June 2007

Autorizado por:
Authorized by:



Luis Neves



Luis Santos

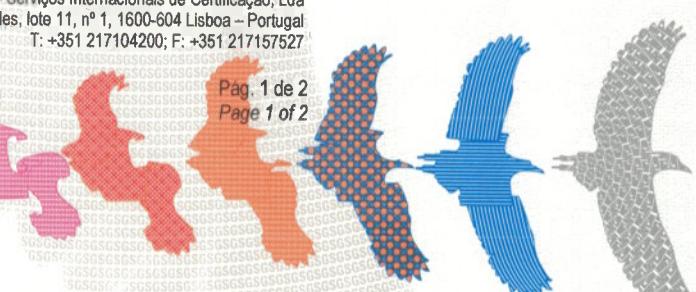
Direção de Certificação
Certification Management



C0001
ISO/IEC 17065
Produtos

SGS ICS – Serviços Internacionais de Certificação, Lda
Polo Tecnológico de Lisboa, Rua Cesina Adães Bermudes, lote 11, n.º 1, 1600-604 Lisboa – Portugal
T: +351 217104200; F: +351 217157527

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Certificado de Conformidade

Certificate of Conformity

PT07/02125

ANEXO 1

(ANNEX 1)

Produto(s): Tubagens plásticas em Polietileno (PE) para abastecimento de água, e para drenagem e esgoto sob pressão.

Product(s): Plastics pipes of Polyethylene (PE) for water supply and for drainage and sewerage under pressure.

Variante(s):

Variant(s):



PT/NP EN 12201 / 07/02125

Para abastecimento de água For water supply

Material <i>Material</i>	Pressão Nominal <i>Nominal Pressure</i> (PN)	Razão Dimensional <i>Normalizada / Série</i> <i>Standard Dimension Ratio / Series</i> (SDR / S)	Diâmetro Nominal <i>Nominal Diameter</i> (mm)
PE 80	8	17 / 8	32, 40, 50, 63, 75, 90, 110 (matéria-prima PE 100)
	10	13,6 / 6,3	25, 32, 40, 63, 90, 110 (matéria-prima PE 100)
PE 100	5	33 / 16	800, 1000
	6	26 / 12,5	125, 140, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1200, 1400, 1600
	8	21 / 10	32, 40, 50, 63, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1200, 1400, 1600
	10	17 / 8	25, 32, 40, 50, 63, 75, 90, 110, 125, 140, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1200
	12,5	13,6 / 6,3	125, 140, 160, 200, 250, 280, 315, 355, 400, 450, 500, 560
	16	11 / 5	25, 32, 63, 75, 90, 110, 125, 140, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630, 800
	20	9 / 4	110, 125, 160, 180, 200
	25	7,4 / 3,2	125, 140, 160, 200

Para drenagem e saneamento com pressão For drainage and sewerage under pressure

Material <i>Material</i>	Classe de pressão <i>Nominal pressure</i> (PN)	Razão Dimensional <i>normalizada / Série</i> <i>Standard dimension ratio / Series</i> (SDR / S)	Diâmetro Nominal <i>Nominal Diameters</i> (mm)
PE 80	8	17 / 8	200 (matéria-prima PE 100)
	6	26 / 12,5	110, 125, 140, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1200, 1400, 1600
	8	21 / 10	630, 710, 800, 900, 1000, 1200, 1400, 1600
	10	17 / 8	32, 40, 50, 63, 75, 90, 110, 125, 140, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1200
	12,5	13,6 / 6,3	125, 140, 160, 200, 250, 315, 400
	16	11 / 5	63, 75, 90, 110, 125, 140, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 560, 630

IPAC
acreditação

C0001
ISO/IEC 17065
Produtos

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DOSSIER DE QUALIDADE

 <p>ASCH INFRAESTRUCTURAS Y SERVICIOS</p>	Empreitada:	DOCUMENTO Nº:
	4001008 - "Nuevas Plantas de Poliolefinas, Plataformas Logísticas Y Offsites"	DATA:
		31/01/2025
		FOLHA Nº : / DE: 389 de 2080

ITEM	DESCRIÇÃO DOCUMENTAL	Nº CERTIFICADO	DATA
TUBOS DE AÇO CARBONO			
1	TUBOS ASTM-A-106 B SMLS, ASME B36,10 Ø6", SCH40,L7805	MTC-4-19-035	17/12/2019
2	TUBOS ASTM-A-106 B SMLS, ASME B36,10 Ø6", SCH40,L7805	MTC-4-19-039	17/12/2019
3			

* VER CAPÍTULO SOLDADURA - DOSSIER DE FABRICAÇÃO - AÇO CARBONO

20/12/2023			
Data	Qualidade	Director Obra	Repsol
	Verificado	Aprovado	Cliente



3.1 MILL TEST CERTIFICATE ACCORDING TO EN 10204
Certificado de fabricación tipo 3.1 de acuerdo a EN 10204

No. Certificate MTC-4-19-039
Nº certificado:
Date / Fecha: 17/12/2019
Pages/Páginas: 4

GENERAL INFORMATION // Información general:

Manufacturer: <i>Fabricante</i>	BAIKA STS		Steel grade: <i>Grado de acero:</i>	API 5L Gr. BN PSL2
Cliente: <i>Client:</i>	CUÑADO		Packing list nº: <i>Nº de listado de tubería:</i>	0275-18-06
Project: <i>Proyecto:</i>	POLIDUCTO REPSOL		Pipe quantity: <i>Número de tuberías:</i>	80
Item: <i>Posición:</i>	6	Size (mm): <i>Dimensiones (mm):</i>	168 x 7,11	Total length (m): <i>Lontitud total (m):</i>

APPLIED PRODUCTS // Productos aplicados:

Abrasive grit: <i>Granalla:</i>	_LG18-W ABRASIVES	Product standard: <i>Norma de producto</i>	ED-N-03.00-02a
FBE: <i>Epoxy polvo:</i>	ARSONSIPE 507191	Coating class: <i>Clase de revestimiento:</i>	B3
Adhesive: <i>Adhesivo:</i>	MPB COESIVE L8.92.8	Coating: <i>Revestimiento:</i>	High density polyethylene <i>Polietileno de alta densidad (HDPE)</i>
High density polyethylene: <i>Polietileno de alta densidad (HDPE):</i>	MPB LUXENE HDPE2050	Minimum thickness (mm): <i>Espesor mínimo (mm):</i>	5,4

BAIKA Steel Tubular Systems, S.L., hereby certify that the pipes herein described satisfy the manufacturing, testing, and inspection requirements stated in the purchase order

BAIKA Steel Tubular Systems S.L., certifica que las tuberías referenciadas satisfacen los requisitos de fabricación, ensayos e inspección de la orden de pedido

This certificate cannot be reproduced partially without the written consent of BAIKA Steel Tubular Systems S.L.
Este certificado no puede reproducirse parcialmente sin el consentimiento escrito de BAIKA Steel Tubular Systems, S.L.

Signed for and on behalf of the manufacturer by:
Firmado por y en nombre del fabricante:

Ignacio González Martín
QA /QC Manager
TUBULAR SYSTEMS



3.1 MILL TEST CERTIFICATE ACCORDING TO EN 10204

Certificado de fabricación tipo 3.1 de acuerdo a EN 10204

No. Certicate MTC-4-19-039
Nº certificado:
Date / Fecha: 17/12/2019
Pages/Páginas: 4

MEASURE USES IT / Respiration responsive

Ignacio González Martín
QA/QC Manager

TUBULAR SYSTEMS

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Baika Steel Tubular Systems, S.L. • B01559111

CALIDAD.



3.1 MILL TEST CERTIFICATE ACCORDING TO EN 10204

No. Certicate MTC-4-19-039
Nº certificado:
Date / Fecha: 17/12/2019
Pages/Páginas: 4

ESTRUTURA DE RESULTADOS DE ENSAIO

(*) Test at 65°C during 24 hours at -3.5 V

Ignacio González Martín
QA /QC Manager

3 of/de 4

Baika Steel Tubular Systems, S.L. • B01559111
CALIDAD



3.1 MILL TEST CERTIFICATE ACCORDING TO EN 10204
Certificado de fabricación tipo 3.1 de acuerdo a EN 10204

No. Certificate MTC-4-19-039
 Nº certificado:
 Date / Fecha: 17/12/2019
 Pages/Páginas: 4

TEST RESULTS / Resultados de ensayo:

Polyethylene HDPE (*)	Pipe ID	Thickness (mm)	Peel strength (N/mm) (**)	HDPE batch	MFR	Elongation at break (%)	Impact resist. (J/mm)	Indentation resis. (mm)
	Nº tubería	Espesor (mm)	Resistencia a pelado (N/mm)	Lote de HDPE	Índice de fluidez	Elongación a la rotura (%)	Resistencia al impacto (J/mm)	Resistencia a indentación
	47-1351	6,16	32,1	21,8	2019-L2-000295	-	-	-
	47-427	6,22	37,7	21,8	-	-	-	-
	47-427	-	-	-	-	-	-	-
	STOCK EMPUJE	-	-	-	2,24	>444,45	-	0,04 23°C / 0,1 80°C
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	Acc. criteria Criterio acept.	> mm.	> 18 N/mm 23°C	>5 N/mm 80°C	Acc. criteria Criterio acept.	ΔMFR ± 20%	≥ 400%	≥ 7 J/mm - 23°C ≤ 0,2 mm- 23°C ≤ 0,4 mm- 80°C
	Frequency Frecuencia	Every ten pipes Cada diez tuberías	1 / shift 1 / turno	1 / shift 1 / turno	Frequency Frecuencia		1 / batch 1 / lote	
					HDPE batch	Flexibilidad	Hot water immersion (mm)	
					Lote de HDPE	Flexibility	Inmersión en agua caliente (mm)	
					2019-L2-000295	OK	No disbonding	No disbonding
					-	-	-	-
					-	-	-	-
					-	-	-	-
					-	-	-	-
					Acc. criteria Criterio acept.	No cracks when bending at 0°C	Average disbonding ≤ 2mm	Maximum disbonding ≤ 3 mm
					Frequency Frecuencia		1 / batch 1 / lote	

(*) Continuity test with satisfactory results in 100% of the coating surface. Residual magnetism < 30 G. Flexibility test

Ensaya de continuidad a 25 kV con resultado satisfactorio en el 100% de la superficie revestida. Magnetismo residual < 30 G

(**) Test performed at 23°C and 80°C

Ensaya realizado a 23°C y 80°C



Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER,
I, ROMAN, NEAMT ROMANIA

Buyer: CUNADO S.A.
CALLE CAMINO DEL OLIVAR ,2, MADRID,
SPAIN

Buyer's
reference PO NO.: PC0052419
Contract 50003868

Item	Item Client
6	170 L-PIP46-R

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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28.11.2018



ArcelorMittal

Total weight:	26.137 tons 0 lbs	Total Length:	924.92 meters 3 034.51 feet	Pieces	Bundles
				80	15

SEAMLESS STEEL LINE PIPES

Standard:

API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018

Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.00 - 12.00 m	36.09 - 39.37 feet
Hydro Test:	Bar 196	PSI -	MPa 19.6
		Time(sec) 10	Steel Grade: BN - PSL2

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	Min	-	-	-	-	-	-	-	-	-	-	-	-	-
63497		Heat analysis	0.15	0.81	0.24	0.004	0.007	0.10	0.08	0.15	0.024	0.02	0.008	0.001	0.001	0.0004	0.0046
63820		Heat analysis	0.15	0.84	0.22	0.003	0.006	0.11	0.07	0.16	0.025	0.02	0.011	0.002	0.001	0.0003	0.0070
63837		Heat analysis	0.14	0.86	0.24	0.003	0.008	0.15	0.12	0.17	0.034	0.03	0.016	0.001	0.001	0.0002	0.0046
63845		Heat analysis	0.15	0.83	0.23	0.004	0.010	0.01	0.07	0.20	0.038	0.02	0.010	0.001	0.001	0.0002	0.0068
63847		Heat analysis	0.14	0.86	0.24	0.004	0.011	0.13	0.08	0.18	0.032	0.02	0.009	0.001	0.001	0.0003	0.0070
63848		Heat analysis	0.15	0.86	0.23	0.002	0.007	0.10	0.09	0.16	0.036	0.03	0.012	0.001	0.001	0.0002	0.0076
63497	18-1918	Product analysis	0.16	0.83	0.25	0.002	0.007	0.11	0.09	0.17	0.030	0.02	0.007	0.002	0.001	0.0002	0.0066
63497	18-1918	Product analysis	0.16	0.83	0.25	0.002	0.007	0.11	0.09	0.17	0.029	0.02	0.007	0.002	0.001	0.0002	0.0068
63820	18-2014	Product analysis	0.14	0.84	0.23	0.002	0.007	0.09	0.07	0.15	0.027	0.02	0.010	0.001	0.001	0.0001	0.0074
63820	18-2014	Product analysis	0.15	0.83	0.23	0.002	0.007	0.09	0.07	0.15	0.026	0.02	0.009	0.001	0.001	0.0001	0.0000
63837	18-2008	Product analysis	0.14	0.86	0.24	0.002	0.009	0.17	0.11	0.16	0.034	0.02	0.015	0.001	0.001	0.0001	0.0063
63837	18-2008	Product analysis	0.15	0.85	0.24	0.002	0.009	0.17	0.11	0.16	0.034	0.02	0.015	0.001	0.001	0.0001	0.0061
63845	18-2008	Product analysis	0.15	0.84	0.23	0.003	0.010	0.09	0.07	0.19	0.039	0.02	0.009	0.001	0.001	0.0001	0.0084
63845	18-2008	Product analysis	0.15	0.84	0.22	0.003	0.010	0.08	0.07	0.19	0.040	0.02	0.009	0.001	0.001	0.0001	0.0082
63847	18-2008	Product analysis	0.15	0.85	0.24	0.003	0.010	0.11	0.08	0.19	0.036	0.02	0.009	0.001	0.001	0.0002	0.0071
63847	18-2008	Product analysis	0.15	0.84	0.25	0.003	0.011	0.11	0.08	0.20	0.035	0.02	0.009	0.001	0.001	0.0002	0.0075
63848	18-2014	Product analysis	0.15	0.85	0.23	0.002	0.008	0.08	0.08	0.16	0.036	0.02	0.009	0.001	0.001	0.0001	0.0077
63848	18-2014	Product analysis	0.15	0.85	0.23	0.002	0.008	0.08	0.08	0.17	0.035	0.02	0.009	0.001	0.001	0.0001	0.0076

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CRISTIANUS
0180. TSK

29.11.2018

R

ArcelorMittal Products Roman S.A.
Quality Control Representative

Eng. Dumitru Claudiu

29.11.2018

Rum

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER,
I, ROMAN, NEAMT ROMANIA

Buyer: CUNADO S.A.
CALLE CAMINO DEL OLIVAR ,2, MADRID,
SPAIN

Buyer's reference PO NO.: PC0052419
Contract 50003868

Item	Item Client
6	170 L-PIP46-R

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 16006/1

28.11.2018



Total weight:	26.137 tons 0 lbs	Total Length:	924.92 meters 3 034.51 feet	Pieces	80	Bundles	15
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SEAMLESS STEEL LINE PIPES

Standard:

API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018

Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.00 - 12.00 m	36.09 - 39.37 feet
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Hydro Test:	Bar 196	PSI -	MPa 19.6	Time(sec) 10	Steel Grade: BN - PSL2
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Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	Max Min	Nb + V	Nb + Ti + V	CE UIW
				0.060	-	0.43
63497		Heat analysis		0.009	0.010	0.33
63820		Heat analysis		0.013	0.014	0.33
63837		Heat analysis		0.017	0.018	0.34
63845		Heat analysis		0.011	0.012	0.31
63847		Heat analysis		0.010	0.011	0.33
63848		Heat analysis		0.013	0.014	0.34
63497	18-1918	Product analysis		0.009	0.010	0.34
63497	18-1918	Product analysis		0.009	0.010	0.34
63820	18-2014	Product analysis		0.011	0.012	0.32
63820	18-2014	Product analysis		0.010	0.011	0.33
63837	18-2008	Product analysis		0.016	0.017	0.34
63837	18-2008	Product analysis		0.016	0.017	0.35
63845	18-2008	Product analysis		0.010	0.011	0.33
63845	18-2008	Product analysis		0.010	0.011	0.33
63847	18-2008	Product analysis		0.010	0.011	0.34
63847	18-2008	Product analysis		0.010	0.011	0.34
63848	18-2014	Product analysis		0.010	0.011	0.33
63848	18-2014	Product analysis		0.010	0.011	0.33

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Formular 12A, rev.9

C. CRISTIAN
O&G, TSR
29.11.2018

Quality Control Representative

Eugen DAMIAN CRISTIAN

0771800000

Romania



Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER, I, ROMAN, NEAMT ROMANIA		MILL TEST CERTIFICATE according to EN 10204/3.1/2004				Page 3/8 B 16006/1 28.11.2018		ArcelorMittal	
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR, 2, MADRID, SPAIN		SEAMLESS STEEL LINE PIPES				Total weight:	Total Length:	Pieces	Bundles
						26.137 tons 0 lbs	924.92 meters 3 034.51 feet	80	15
Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018									
Buyer's reference PO NO.: PC0052419 Contract 50003868		Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch		Schedule: 40		Length: 11.00 - 12.00 m	36.09 - 39.37 feet		
Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:	BN - PSL2	
6	170 L-PIP46-R		196	-	19.6	10			

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	Max	Nb + V		Nb + Ti + V		CE_IIW	
				Min	0.060	-	-	0.43	-
				-	-	-	-	-	-

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+SB

CE_S = C+Mn/6

CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

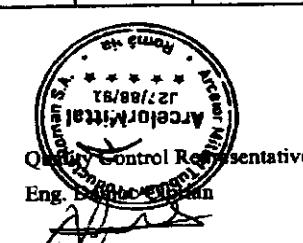
Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.90
		mm	inch	mm	inch	mm	inch	mm ²	inch ²							
63497	Longitudinal Flat	50.8	2	40.00	1.575	8.10	0.319	324.0	12.756	18-4361	368.00	53.4	512.00	74.3	40.60	0.72
63820	Longitudinal Flat	50.8	2	40.00	1.575	7.80	0.307	312.0	12.283	18-4530	354.00	51.3	487.00	70.6	39.90	0.73
63837	Longitudinal Flat	50.8	2	40.00	1.575	7.60	0.299	304.0	11.969	18-4514	364.00	52.8	507.00	73.5	39.60	0.72
63845	Longitudinal Flat	50.8	2	40.00	1.575	8.30	0.327	332.0	13.071	18-4514	391.00	56.7	536.00	77.7	38.30	0.73
63845	Longitudinal Flat	50.8	2	40.00	1.575	8.60	0.339	344.0	13.543	18-4515	373.00	54.1	513.00	74.4	40.30	0.73
63845	Longitudinal Flat	50.8	2	40.00	1.575	8.20	0.323	328.0	12.913	18-4517	373.00	54.1	514.00	74.5	38.60	0.73
63847	Longitudinal Flat	50.8	2	40.00	1.575	7.70	0.303	308.0	12.126	18-4514	393.00	57.0	550.00	79.8	40.00	0.71
63847	Longitudinal Flat	50.8	2	40.00	1.575	8.30	0.327	332.0	13.071	18-4517	370.00	53.7	512.00	74.3	39.00	0.72
63847	Longitudinal Flat	50.8	2	40.00	1.575	8.70	0.343	348.0	13.701	18-4530	351.00	50.9	493.00	71.5	41.90	0.71
63848	Longitudinal Flat	50.8	2	40.00	1.575	7.90	0.311	316.0	12.441	18-4530	407.00	59.0	564.00	81.8	38.50	0.72

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. C. M. I. M. U.S.
OAO. TSK
29.11.2018

R



Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER, I, ROMAN, NEAMT ROMANIA		MILL TEST CERTIFICATE according to EN 10204/3.1/2004					Page 4/8		 ArcelorMittal			
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN							B 16006/1					
							28.11.2018					
		SEAMLESS STEEL LINE PIPES					Total weight:	Total Length:	Pieces	Bundles		
							26.137 tons	924.92 meters	80	15		
							0 lbs	3 034.51 foets				
</td												

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER, I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10204/3.1/2004	Page 5/8		ArcelorMittal
		B 16006/1		
		28.11.2018		
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN	SEAMLESS STEEL LINE PIPES	Total weight: 26.137 tons 0 lbs	Total Length: 924.92 meters 3 034.51 feet	Pieces: 80 Bundles: 15
Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018				
Buyer's reference PO NO.:PC0052419	Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.00 - 12.00 m	36.09 - 39.37 feet
Contract 50003868	Hydro Test:	Bar 196	PSI -	MPa 19.6
Item	Item Client	Time(sec) 10	Steel Grade: BN - PSL2	-
6	170 L-PIP46- R			

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.215	HV 10 max.-	HV 10 max.-					HRC max.-
				OD	Midwall	ID	End A	End B	
63845	18-3791	163;162;160;161	-	-	-	-	-	-	<
63845	18-3791	162;161;160;161	-	-	-	-	-	-	<
63845	18-3792	162;161;163;164	-	-	-	-	-	-	<
63845	18-3792	163;161;162;161	-	-	-	-	-	-	<
63845	18-3793	163;164;165;162	-	-	-	-	-	-	<
63845	18-3793	164;162;163;161	-	-	-	-	-	-	<
63847	18-3791	161;159;160;162	-	-	-	-	-	-	<
63847	18-3791	159;158;160;161	-	-	-	-	-	-	<
63847	18-3792	158;159;161;160	-	-	-	-	-	-	<
63847	18-3792	160;159;158;161	-	-	-	-	-	-	<
63847	18-3815	158;159;161;160	-	-	-	-	-	-	<
63847	18-3815	159;158;157;160	-	-	-	-	-	-	<
63848	18-3815	163;164;162;161	-	-	-	-	-	-	<
63848	18-3815	162;163;161;160	-	-	-	-	-	-	<

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CIPRIAN
080-TSK
29.11.2018
R
J



Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER, I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10204/3.1/2004	Page 6/8		ArcelorMittal			
		B 16006/1	28.11.2018				
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR 2, MADRID, SPAIN	SEAMLESS STEEL LINE PIPES	Total weight: 26.137 tons 0 lbs	Total Length: 924.92 meters 3 034.51 feet	Pieces 80	Bundles 15		
Buyer's reference Contract	PO NO.: PC0052419 50003868	Standard: API 5L ed.45-2012/ API 5L ed.46-2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018	Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.00 - 12.00 m 36.09 - 39.37 feet		
Item	Item Client	Hydro Test:	Bar 196	PSI -	MPa 19.6	Time(sec) 10	Steel Grade: BN - PSL2
6	170 L-PIP46-R						

Heat

Heat	Pieces	Length (m)	Weight (kg)
63497	1	-	-
63820	30	-	-
63837	10	-	-
63845	16	-	-
63847	7	-	-
63848	16	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CHITIMUS
080.73K
29.11.2018

R



Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER, I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10204/3.1/2004	Page 7/8		ArcelorMittal	
		B 16006/1			
		28.11.2018			
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN	SEAMLESS STEEL LINE PIPES	Total weight: 26.137 tons 0 lbs	Total Length: 924.92 meters 3 034.51 feet	Pieces: 80 Bundles: 15	
Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018					
Buyer's reference PO NO.:PC0052419 Contract 50003868	Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.00 - 12.00 m 36.09 - 39.37 feet		
Item 6	Item Client 170 L-PIP46-R	Hydro Test: Bar 196	PSI - 19.6	MPa Time(sec) 10	Steel Grade: BN - PSL2

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5

Manufacturing process – hot rolling.

Hot finished, steel is fully killed and produced by electric furnace, source G000108.

Visual inspection and dimensional check without objection.

Heat treatment: normalizing at temperature 910 - 940°C, time soaking 4 min.

NDT full body:

100% ultrasonic testing in accordance with ASTM E213 : Le +Li (12.5 % from W.T) – satisfactory.

NDT for the pipe ends:

ultrasonic testing : Le+Li (12.5 % from W.T.) – satisfactory.

detection of laminar imperfection on the pipe ends, surface coverage - satisfactory.

bevel at each pipe end have been inspected for defects by wet magnetical particle, without stratification – satisfactory.

ultrasonic inspection to verify that the 50 mm wide zone at each pipe end is free of such laminar imperfection.

Hydrostatic test hold for 10 sec. no leakage noticed.

Hydrostatic test hold for 20 sec. no leakage noticed. (for a percentage of 10% of pipes) :

serial: 2-18-47-1362; 2-18-47-1366; 2-18-47-1506; 2-18-47-1517; 2-18-47-1544; heat: 63820

serial: 2-18-47-1490; heat: 63837

serial: 2-18-47-431; 2-18-47-494; heat: 63845

NDT After hydrostatic test,(max.5 pcs)

serial: 2-18-47-413; 2-18-47-448; 2-18-47-496; heat: 63845

serial:2-18-47-539; 2-18-47-540 heat: 63848

NDT full body:

100% ultrasonic testing in accordance with ASTM E213 : Le +Li (12.5 % from W.T) – satisfactory.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CRISTIANUS
O&P - TSK
29.11.2018
R



Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER, I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10204/3.1/2004	Page 8/8 B 16006/1 28.11.2018	ArcelorMittal		
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN	SEAMLESS STEEL LINE PIPES	Total weight: 26.137 tons 0 lbs	Total Length: 924.92 meters 3 034.51 feet		
Standard: Buyer's reference PO NO. :PC0052419 Contract 50003868	Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.00 - 12.00 m 36.09 - 39.37 feet		
Item 6	Item Client 170 L-PIP46- R	Hydro Test: Bar 196	PSI - 19.6	MPa Time(sec) 10	Steel Grade: BN - PSL2

NDT for the pipe ends:

ultrasonic testing : Le+Li (12.5 % from W.T.) – satisfactory.

detection of laminar imperfection on the pipe ends, surface coverage - satisfactory.

bevel at each pipe end have been inspected for defects by wet magnetical particle, without stratification – satisfactory.

ultrasonic inspection to verify that the 50 mm wide zone at each pipe end is free of such laminar imperfection.

Magnetism residual check : four readings were taken approximately 90° apart around the circumference of each end of the pipe. The average of the four readings is ≤ 25 Gs, and no one reading is exceed 30 Gs.

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CRISTIANUS
OAB. TSK
29.11.2018

R
J

Formular 12A, rev.9





3.1 MILL TEST CERTIFICATE ACCORDING TO EN 10204
Certificado de fabricación tipo 3.1 de acuerdo a EN 10204

No. Certificate MTC-4-19-035
Nº certificado:
Date / Fecha: 17/12/2019
Pages/Páginas: 4

GENERAL INFORMATION / Información general:

Manufacturer: Fabricante	BAIKA STS		Steel grade: Grado de acero:	API 5L Gr. BN PSL2
Cliente: Client:	CUÑADO		Packing list nº: Nº de listado de tubería:	0275-18-01
Project: Proyecto:	POLIDUCTO REPSOL		Pipe quantity: Número de tuberías:	224
Item: Posición:	1	Size (mm): Dimensiones (mm):	168 x 7,11	Total length (m): Longitud total (m):

APPLIED PRODUCTS: / Productos aplicados:

Abrasive grit: Granalla:	_LG18-W ABRASIVES _LG25 W ABRASIVES	Product standard: Norma de producto Coating class: Clase de revestimiento: Coating: Revestimiento: Minimum thickness (mm): Espesor mínimo (mm):	ED-N-03.00-02a
FBE: Epoxy polvo:	ARSONSI PE 507191		B3
Adhesive: Adhesivo:	MPB COESIVE L8.92.8		High density polyethylene Polietileno de alta densidad (HDPE)
High density polyethylene: Polietileno de alta densidad (HDPE):	MPB LUXENE HDPE2050		2,7

BAIKA Steel Tubular Systems, S.L., hereby certify that the pipes herein described satisfy the manufacturing, testing, and inspection requirements stated in the purchase order

BAIKA Steel Tubular Systems S.L., certifica que las tuberías referenciadas satisfacen los requisitos de fabricación, ensayos e inspección de la orden de pedido

This certificate cannot be reproduced partially without the written consent of BAIKA Steel Tubular Systems S.L.
Este certificado no puede reproducirse parcialmente sin el consentimiento escrito de BAIKA Steel Tubular Systems, S.L.

Signed for and on behalf of the manufacturer by:
Firmado por y en nombre del fabricante:

Ignacio González Martín
QA/QC Manager
BAIKA Steel Tubular Systems, S.L. • B01559111

CALIDAD



3.1 MILL TEST CERTIFICATE ACCORDING TO EN 10204
Certificado de fabricación tipo 3.1 de acuerdo a EN 10204

No. Certificate MTC-4-19-035
Nº certificado:
Date / Fecha: 17/12/2019
Pages/Páginas: 4

TEST RESULTS / Resultados de ensayo:

Surface Superficie	Pipe ID Nº tubería	ΔT dew point (°C) ΔT punto de rocío (°C)	Salt content (mg/m²) Contenido en sal (mg/cm²)	Roughness (µm) Rugosidad (µm)	Dust Polvo	Grit batch Lote granalla	Water contaminat. (µS/cm)
	Contaminación Agua (µS/cm)						
47-358	1496	4,3	0,3	75,5	2/2	Abrasive grit Granalla	LG 25 - 118249 0,14
	1406	-	-	79,3	2/2		LG 18 - 219155 0,13
	44-1633	-	-	66,75	2/2		-
	47-280	-	-	76,68	2/2		-
	47-315	5,8	-	70,39	2/2		-
	47-1504	7,3	-	72,1	2/2		-
	47-645	-	-	70,7	2/1		-
	47-479	-	-	82,1	2/1		-
	47-1498	-	-	78,7	2/2		-
	47-358	8,4	-	77,8	2/1		-
	47-500	-	-	73,54	2/2		-
	47-340	-	-	70,8	2/2		-
	497	-	0,3	-	-		-
	-	-	-	-	-		-
	-	-	-	-	-		-
	-	-	-	-	-		-
	-	-	-	-	-		-
	-	-	-	-	-		-
	-	-	-	-	-		-
	-	-	-	-	-		-
Acc. criteria Criterion accept.	> 3º °C	≤ 2 µg/cm²	50-100 µm	≤ 2	Acc. criteria Criterion accept.	≤ 150 µS/cm	
	2 / shift Frecuencia	1 / shift 1 / turno	1 / hour 1 / hora			1 / shift Frecuencia	
	2 / turno					1 / turno	

Ignacio González Martín
Quality Manager



3.1 MILL TEST CERTIFICATE ACCORDING TO EN 10204

Certificado de fabricación tipo 3.1 de acuerdo a EN 10204

No. Certificate MTC-4-19-035
Nº certificado:
Date / Fecha: 17/12/2019
Pages/Páginas: 4

TESTIMONIALS / [Results](#) / [Testimonials](#)

(*) Test at 65°C during 24 hours at -3,5 V


 Ignacio González Martín
 Oracle Manager
OTS



3.1 MILL TEST CERTIFICATE ACCORDING TO EN 10204
Certificado de fabricación tipo 3.1 de acuerdo a EN 10204

No. Certificate: MTC-4-19-035
 Nº certificado:
 Date / Fecha: 17/12/2019
 Pages/Páginas: 4

TEST RESULTS / Resultados de ensayo:

Polyethylene HDPE (*)	Pipe ID	Thickness (mm)	Peel strength (N/mm) (**)	HDPE batch	MFR	Elongation at break (%)	Impact resist. (J/mm)	Indentation resis. (mm)
	Nº tubería	Espesor (mm)	Resistencia a pelado (N/mm)	Lote de HDPE	Índice de fluidez	Elongación a la rotura (%)	Resistencia al impacto (J/mm)	Resistencia a indentación
	332	3,63	33,9	15,1	2019-L2-000295	0,04	>444,09	-
	47-360	3,82	-	-	-	-	-	0,05 23°C / 0,06 80°C
	47-337	3,8	36,9	12,9	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	Acc. criteria Criterio acept.	> mm. 23°C	> 18 N/mm 23°C	>5 N/mm 80°C	Acc. criteria Criterio acept.	ΔMFR ± 20%	≥ 400%	≥ 7 J/mm - 23°C ≤ 0,2 mm- 23°C ≤ 0,4 mm- 80°C
Frequency Frecuencia	Every ten pipes Cada diez tuberías	1 / shift 1 / turno	1 / shift 1 / turno	Frequency Frecuencia			1 / batch 1 / lote	
				HDPE batch	Flexibilidad	Hot water immersion (mm)		
				Lote de HDPE	Flexibility	Inmersión en agua caliente (mm)		
				2019-L2-000295	OK	No disbonding	No disbonding	
				-	-	-	-	
				-	-	-	-	
				-	-	-	-	
				-	-	-	-	
				Acc. criteria Criterio acept.	No cracks when bending at 0°C	Average disbonding ≤ 2mm	Maximum disbonding ≤ 3 mm	
				Frequency Frecuencia		1 / batch 1 / lote		

(*) Continuity test with satisfactory results in 100% of the coating surface. Residual magnetism < 30 G. Flexibility test

Ensaya de continuidad a 25 kV con resultado satisfactorio en el 100% de la superficie revestida. Magnetismo residual < 30 G

(**) Test performed at 23°C and 80°C

Ensaya realizado a 23°C y 80°C

Signature: D. P. Baika Martín
D.O. / CC. Waerner

TUBULAR SYSTEMS

Baika Steel Tubular Systems, S.L. · B0155911

CALIDAD

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA				MILL TEST CERTIFICATE according to EN 10204/3.1/2004				Page 1/9		 ArcelorMittal			
								B 16001/1					
								28.11.2018					
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN				SEAMLESS STEEL LINE PIPES				Total weight:	Total Length:	Pieces	Bundles		
								74.737 tons 0 lbs	2 644.97 meters 8 677.72 feet	224	36		
Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018													
Buyer's reference PO NO. :PC0052419 Contract 50003868				Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch		Schedule: 40		Length: 11.50 - 12.00 m		37.73 - 39.37 feet			
Item 1		Item Client 120 L-6- R		Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: BN - PSL2				
		196	2849		19.6	10							

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	Max	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.24	1.20	0.40	0.015	0.025	0.30	0.30	0.50	-	0.15	-	-	0.040	0.0010	-
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63490		Heat analysis	0.15	0.84	0.21	0.005	0.010	0.12	0.10	0.20	0.025	0.03	0.009	0.001	0.001	0.0004	0.0070	
63491		Heat analysis	0.14	0.84	0.21	0.005	0.012	0.12	0.10	0.20	0.022	0.02	0.009	0.001	0.001	0.0003	0.0074	
63497		Heat analysis	0.15	0.81	0.24	0.004	0.007	0.10	0.08	0.15	0.024	0.02	0.008	0.001	0.001	0.0004	0.0046	
63820		Heat analysis	0.15	0.84	0.22	0.003	0.006	0.11	0.07	0.16	0.025	0.02	0.011	0.002	0.001	0.0003	0.0070	
63837		Heat analysis	0.14	0.86	0.24	0.003	0.008	0.15	0.12	0.17	0.034	0.03	0.016	0.001	0.001	0.0002	0.0046	
63845		Heat analysis	0.15	0.83	0.23	0.004	0.010	0.01	0.07	0.20	0.038	0.02	0.010	0.001	0.001	0.0002	0.0068	
63847		Heat analysis	0.14	0.86	0.24	0.004	0.011	0.13	0.08	0.18	0.032	0.02	0.009	0.001	0.001	0.0003	0.0070	
63848		Heat analysis	0.15	0.86	0.23	0.002	0.007	0.10	0.09	0.16	0.036	0.03	0.012	0.001	0.001	0.0002	0.0076	
63490	18-1918	Product analysis	0.15	0.84	0.21	0.004	0.008	0.10	0.08	0.20	0.026	0.02	0.008	0.002	0.001	0.0002	0.0080	
63490	18-1918	Product analysis	0.15	0.83	0.21	0.003	0.008	0.10	0.08	0.20	0.026	0.02	0.008	0.002	0.001	0.0002	0.0078	
63491	18-1918	Product analysis	0.15	0.86	0.22	0.005	0.010	0.11	0.09	0.19	0.021	0.02	0.008	0.002	0.001	0.0001	0.0083	
63491	18-1918	Product analysis	0.15	0.86	0.22	0.005	0.010	0.11	0.09	0.19	0.021	0.02	0.008	0.002	0.001	0.0001	0.0081	
63497	18-1918	Product analysis	0.16	0.83	0.25	0.002	0.007	0.11	0.09	0.17	0.030	0.02	0.007	0.002	0.001	0.0002	0.0066	
63497	18-1918	Product analysis	0.16	0.83	0.25	0.002	0.007	0.11	0.09	0.17	0.029	0.02	0.007	0.002	0.001	0.0002	0.0068	
63820	18-2015	Product analysis	0.15	0.83	0.24	0.003	0.007	0.09	0.07	0.15	0.026	0.02	0.009	0.001	0.001	0.0001	0.0073	
63820	18-2015	Product analysis	0.15	0.83	0.23	0.002	0.007	0.10	0.07	0.15	0.026	0.02	0.009	0.001	0.001	0.0001	0.0071	
63837	18-2008	Product analysis	0.14	0.86	0.24	0.002	0.009	0.17	0.11	0.16	0.034	0.02	0.015	0.001	0.001	0.0001	0.0063	
63837	18-2008	Product analysis	0.15	0.85	0.24	0.002	0.009	0.17	0.11	0.16	0.034	0.02	0.015	0.001	0.001	0.0001	0.0061	

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. DAMIANUS
OBO - TSK
29. 11. 2018

Quality Control Representative
Eng. Damian Ciprian

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10204/3.1/2004	Page 2/9		ArcelorMittal	
		B 16001/1			
28.11.2018		Total weight: 74.737 tons 0 lbs			
SEAMLESS STEEL LINE PIPES		Total Length: 2 644.97 meters 8 677.72 feet	Pieces 224	Bundles 36	
Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018					
Buyer's reference PO NO.: PC0052419 Contract 50003868	Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.50 - 12.00 m	37.73 - 39.37 feet	
Item 1	Item Client 120 L-6- R	Hydro Test: Bar 196	PSI 2849	MPa 19.6 Time(sec) 10	Steel Grade: BN - PSL2

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	Max	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.24	1.20	0.40	0.015	0.025	0.30	0.30	0.50	-	0.15	-	-	0.040	0.0010	-
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63845	18-2008	Product analysis	0.15	0.84	0.23	0.003	0.010	0.09	0.07	0.19	0.039	0.02	0.009	0.001	0.001	0.0001	0.0084	
63845	18-2008	Product analysis	0.15	0.84	0.22	0.003	0.010	0.08	0.07	0.19	0.040	0.02	0.009	0.001	0.001	0.0001	0.0082	
63847	18-2008	Product analysis	0.15	0.85	0.24	0.003	0.010	0.11	0.08	0.19	0.036	0.02	0.009	0.001	0.001	0.0002	0.0071	
63847	18-2008	Product analysis	0.15	0.84	0.25	0.003	0.011	0.11	0.08	0.20	0.035	0.02	0.009	0.001	0.001	0.0002	0.0075	
63848	18-2008	Product analysis	0.15	0.85	0.23	0.001	0.008	0.08	0.08	0.16	0.036	0.02	0.009	0.001	0.001	0.0001	0.0078	
63848	18-2008	Product analysis	0.15	0.86	0.23	0.002	0.008	0.09	0.09	0.15	0.036	0.02	0.008	0.001	0.001	0.0001	0.0077	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	Max	Nb + V		Nb + Ti + V		CE IIW					
				Max	Min	0.060	-	-	-	-	-	-	0.43
63490		Heat analysis		0.010			0.011						0.34
63491		Heat analysis		0.010			0.011						0.33
63497		Heat analysis		0.009			0.010						0.33
63820		Heat analysis		0.013			0.014						0.33
63837		Heat analysis		0.017			0.018						0.34
63845		Heat analysis		0.011			0.012						0.31
63847		Heat analysis		0.010			0.011						0.33
63848		Heat analysis		0.013			0.014						0.34

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. C. CARPINA
0.00.75K
29.11.2018

Quality Control Representative
Eng. Dumitru Ciprian

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA		MILL TEST CERTIFICATE according to EN 10204/3.1/2004				Page 3/9		 ArcelorMittal	
						B 16001/1			
						28.11.2018			
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN		SEAMLESS STEEL LINE PIPES				Total weight: 74.737 tons 0 lbs	Total Length: 2 644.97 meters 8 677.72 feet	Pieces 224	Bundles 36
Buyer's reference PO NO.: PC0052419 Contract 50003868		Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018							
		Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch		Schedule: 40		Length: 11.50 - 12.00 m	37.73 - 39.37 feet		
Item 1	Item Client 120 L-6- R	Hydro Test:	Bar 196	PSI 2849	MPa 19.6	Time(sec) 10	Steel Grade: BN - PSL2		

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	Max	Nb + V	Nb + Ti + V	CE_HW
			Min	0.060	-	0.43
63490	18-1918	Product analysis		0.010	0.011	0.33
63490	18-1918	Product analysis		0.010	0.011	0.33
63491	18-1918	Product analysis		0.010	0.011	0.34
63491	18-1918	Product analysis		0.010	0.011	0.34
63497	18-1918	Product analysis		0.009	0.010	0.34
63497	18-1918	Product analysis		0.009	0.010	0.34
63820	18-2015	Product analysis		0.010	0.011	0.33
63820	18-2015	Product analysis		0.010	0.011	0.33
63837	18-2008	Product analysis		0.016	0.017	0.34
63837	18-2008	Product analysis		0.016	0.017	0.35
63845	18-2008	Product analysis		0.010	0.011	0.33
63845	18-2008	Product analysis		0.010	0.011	0.33
63847	18-2008	Product analysis		0.010	0.011	0.34
63847	18-2008	Product analysis		0.010	0.011	0.34
63848	18-2008	Product analysis		0.010	0.011	0.33
63848	18-2008	Product analysis		0.009	0.010	0.33

$$CE_{PCM} = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B$$

$$CE_S = C + Mn/6$$

$$CE_{HW} = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15$$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CRISTIANUS
090-734
29.11.2018

Quality Control Representative
Eng. Danieci Ciprian

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10204/3.1/2004	Page 4/9		ArcelorMittal			
		B 16001/1					
		28.11.2018					
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN		SEAMLESS STEEL LINE PIPES	Total weight: 74.737 tons 0 lbs	Total Length: 2 644.97 meters 8 677.72 feet			
Standard: API SL ed.45-2012/ API SL ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018		Pieces: 224	Bundles: 36				
Buyer's reference PO NO.: PC0052419 Contract 50003868		Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.50 - 12.00 m 37.73 - 39.37 feet			
Item	Item Client	Hydro Test:	Bar 196	PSI 2849	MPa 19.6	Time(sec) 10	Steel Grade: BN - PSL2
1	120 L-6- R						

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.90
		mm	inch	mm	inch	mm	inch	mm ²	inch ²							
63490	Longitudinal Flat	50.8	2	40.00	1.575	7.60	0.299	304.0	11.969	18-4304	368.00	53.4	517.00	75.0	40.90	0.71
63490	Longitudinal Flat	50.8	2	40.00	1.575	8.50	0.335	340.0	13.386	18-4361	351.00	50.9	491.00	71.2	41.10	0.71
63491	Longitudinal Flat	50.8	2	40.00	1.575	7.90	0.311	316.0	12.441	18-4361	362.00	52.5	513.00	74.4	40.80	0.71
63497	Longitudinal Flat	50.8	2	40.00	1.575	8.10	0.319	324.0	12.756	18-4361	368.00	53.4	512.00	74.3	40.60	0.72
63820	Longitudinal Flat	50.8	2	40.00	1.575	7.80	0.307	312.0	12.283	18-4530	354.00	51.3	487.00	70.6	39.90	0.73
63837	Longitudinal Flat	50.8	2	40.00	1.575	7.60	0.299	304.0	11.969	18-4514	364.00	52.8	507.00	73.5	39.60	0.72
63845	Longitudinal Flat	50.8	2	40.00	1.575	8.30	0.327	332.0	13.071	18-4514	391.00	56.7	536.00	77.7	38.30	0.73
63845	Longitudinal Flat	50.8	2	40.00	1.575	8.60	0.339	344.0	13.543	18-4515	373.00	54.1	513.00	74.4	40.30	0.73
63845	Longitudinal Flat	50.8	2	40.00	1.575	8.20	0.323	328.0	12.913	18-4517	373.00	54.1	514.00	74.5	38.60	0.73
63847	Longitudinal Flat	50.8	2	40.00	1.575	7.70	0.303	308.0	12.126	18-4514	393.00	57.0	550.00	79.8	40.00	0.71
63847	Longitudinal Flat	50.8	2	40.00	1.575	8.30	0.327	332.0	13.071	18-4516	368.00	53.4	509.00	73.8	41.30	0.72
63847	Longitudinal Flat	50.8	2	40.00	1.575	8.30	0.327	332.0	13.071	18-4517	370.00	53.7	512.00	74.3	39.00	0.72
63848	Longitudinal Flat	50.8	2	40.00	1.575	8.20	0.323	328.0	12.913	18-4514	383.00	55.5	528.00	76.6	41.20	0.73
63848	Longitudinal Flat	50.8	2	40.00	1.575	7.90	0.311	316.0	12.441	18-4530	407.00	59.0	564.00	81.8	38.50	0.72

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CRISTIANUS
D.B.O. TSK
29.11.2018

R

Quality Control Representative
Eng. Dumoc Ciprian

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA		MILL TEST CERTIFICATE according to EN 10204/3.1/2004					Page 5/9		 ArcelorMittal			
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN		SEAMLESS STEEL LINE PIPEs					B 16001/1					
Buyer's reference PO NO.: PC0052419		Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018					28.11.2018					
Contract 50003868		Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch		Schedule: 40			Length: 11.50 - 12.00 m		37.73 - 39.37 feet			
Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:	BN - PSL2				
1	120 L-6 - R		196	2849	19.6	10						

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C	Shear Area min. %			Lateral Expansion min. mm				
						100	91	92				90	90	90	0.75	0.76	0.77		
63490	18-6943	Longitudinal	10x5x55	+20	14.0	100	91	92	-	94	-	-	-	90	90	90	0.75	0.76	0.77
63490	18-6993	Longitudinal	10x5x55	+20	14.0	93	103	117	-	104	-	-	-	90	90	90	0.78	0.86	1.01
63491	18-6993	Longitudinal	10x5x55	+20	14.0	87	92	86	-	88	-	-	-	90	90	90	0.73	0.77	0.72
63497	18-6993	Longitudinal	10x5x55	+20	14.0	101	94	95	-	97	-	-	-	90	90	90	0.85	0.80	0.81
63820	18-7233	Longitudinal	10x5x55	+20	14.0	102	93	95	-	97	-	-	-	90	90	90	0.85	0.77	0.78
63837	18-7215	Longitudinal	10x5x55	+20	14.0	106	108	103	-	106	-	-	-	90	90	90	0.89	0.91	0.87
63845	18-7215	Longitudinal	10x5x55	+20	14.0	91	91	97	-	93	-	-	-	90	90	90	0.76	0.76	0.81
63845	18-7216	Longitudinal	10x5x55	+20	14.0	89	94	92	-	92	-	-	-	90	90	90	0.74	0.78	0.76
63845	18-7217	Longitudinal	10x5x55	+20	14.0	99	93	94	-	95	-	-	-	90	90	90	0.82	0.78	0.79
63847	18-7215	Longitudinal	10x5x55	+20	14.0	95	94	93	-	94	-	-	-	90	90	90	0.80	0.79	0.79
63847	18-7216	Longitudinal	10x5x55	+20	14.0	93	93	100	-	95	-	-	-	90	90	90	0.77	0.77	0.83
63847	18-7218	Longitudinal	10x5x55	+20	14.0	92	105	93	-	97	-	-	-	90	90	90	0.77	0.89	0.78
63848	18-7215	Longitudinal	10x5x55	+20	14.0	99	91	95	-	95	-	-	-	90	90	90	0.83	0.77	0.80
63848	18-7232	Longitudinal	10x5x55	+20	14.0	83	82	88	-	84	-	-	-	90	90	90	0.68	0.67	0.72

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.215	HV 10 max.-	HV 10 max.-					HRC max.-	
				OD	Midwall	ID	End A	End B		
63490	18-3589	148;149;150;147	-	-	-	-	-	-	<-	<-
63490	18-3589	150;148;147;149	-	-	-	-	-	-	<-	<-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. Ciprianos
000-TSK
29.11.2018

Quality Control Representative
Eng. Danilo Ciprian

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10204/3.1/2004				Page 6/9		 ArcelorMittal
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN	SEAMLESS STEEL LINE PIPES				B 16001/1		
Buyer's reference PO NO. :PC0052419 Contract 50003868	Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018				28.11.2018		
Item	Item Client	Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.50 - 12.00 m	37.73 - 39.37 feet		
1	120 L-6-R	Hydro Test:	Bar 196	PSI 2849	MPa 19.6	Time(sec) 10	Steel Grade: BN - PSL2

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.215	HV 10 max.-	HV 10 max.-					HRC max-
				OD	Midwall	ID	End A	End B	
63490	18-3641	164;166;165;163	-	-	-	-	-	-	<
63490	18-3641	165;163;164;163	-	-	-	-	-	-	<
63491	18-3641	162;160;163;161	-	-	-	-	-	-	<
63491	18-3641	160;161;163;162	-	-	-	-	-	-	<
63497	18-3641	162;163;164;165	-	-	-	-	-	-	<
63497	18-3641	162;161;163;164	-	-	-	-	-	-	<
63820	18-3816	158;156;157;159	-	-	-	-	-	-	<
63820	18-3816	157;158;156;158	-	-	-	-	-	-	<
63837	18-3792	161;160;159;162	-	-	-	-	-	-	<
63837	18-3792	160;158;159;161	-	-	-	-	-	-	<
63845	18-3791	163;162;160;161	-	-	-	-	-	-	<
63845	18-3791	162;161;160;161	-	-	-	-	-	-	<
63845	18-3792	162;161;163;164	-	-	-	-	-	-	<
63845	18-3792	163;161;162;161	-	-	-	-	-	-	<
63845	18-3793	163;164;165;162	-	-	-	-	-	-	<
63845	18-3793	164;162;163;161	-	-	-	-	-	-	<
63847	18-3791	161;159;160;162	-	-	-	-	-	-	<
63847	18-3791	159;158;160;161	-	-	-	-	-	-	<
63847	18-3792	158;159;161;160	-	-	-	-	-	-	<

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CRISTIAN
080-TSK
29.11.2018
R

Quality Control Representative
Engr. Dumitru Ciprian

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10284/3.1/2004	Page 7/9 B 16001/1 28.11.2018	ArcelorMittal			
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN	SEAMLESS STEEL LINE PIPES	Total weight: 74.737 tons 0 lbs	Total Length: 2 644.97 meters 8 677.72 feet			
Buyer's reference PO NO.: PC0052419	Standard:	224	36			
Contract 50003868	Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.50 - 12.00 m 37.73 - 39.37 feet			
Item 1	Item Client 120 L-6- R	Hydro Test: Bar 196	PSI 2849	MPa 19.6	Time(sec) 10	Steel Grade: BN - PSL2

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.215	HV 10 max.-	HV 10 max.-					HRC max.-
				OD	Midwall	ID	End A	End B	
63847	18-3792	160;159;158;161	-	-	-	-	-	-	<
63847	18-3794	162;161;159;160	-	-	-	-	-	-	<
63847	18-3794	159;160;161;160	-	-	-	-	-	-	<
63848	18-3792	159;157;158;159	-	-	-	-	-	-	<
63848	18-3792	158;159;157;157	-	-	-	-	-	-	<
63848	18-3815	163;164;162;161	-	-	-	-	-	-	<
63848	18-3815	162;163;161;160	-	-	-	-	-	-	<

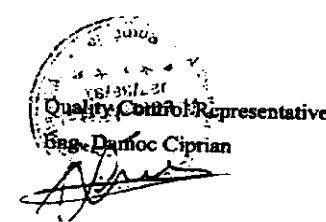
Heat

Heat	Pieces	Length (m)	Weight (kg)
63490	6	-	-
63491	1	-	-
63497	6	-	-
63820	16	-	-
63837	26	-	-
63845	70	-	-
63847	51	-	-
63848	48	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

C. CHITIMOS
0100. TSK
29. 11. 2018

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J



Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA

Buyer: CUNADO S.A.

CALLE CAMINO DEL OLIVAR ,2, MADRID,
SPAIN

Buyer's reference PO NO.: PC0052419

Contract 50003868

Item	Item Client
1	120 L-6 - R

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
Manufacturing process – hot rolling.

Hot finished, steel is fully killed and produced by electric furnace, source G000108.

Visual inspection and dimensional check without objection.

Heat treatment: normalizing at temperature 910 - 940°C, time soaking 4 min.

NDT full body:

-100% ultrasonic testing in accordance with ASTM E213 : Le +Li (12.5 % from W.T) – satisfactory.

NDT for the pipe ends:

- ultrasonic testing : Le+Li (12.5 % from W.T.) – satisfactory.

- detection of laminar imperfection on the pipe ends, surface coverage - satisfactory.

- bevel at each pipe end have been inspected for defects by wet magnetical particle, without stratification – satisfactory.

- ultrasonic inspection to verify that the 50 mm wide zone at each pipe end is free of such laminar imperfection.

Hydrostatic test hold for 10 sec. no leakage noticed.

Hydrostatic test hold for 20 sec. no leakage noticed. (for a percentage of 10% of pipes) :

serial: 2-18-47-1381; 2-18-47-1476; 2-18-47-1398; 2-18-47-1406; 2-18-47-1469; 2-18-47-1388; 2-18-47-1392; 2-18-47-1483; 2-18-47-1387;
2-18-47-1438; 2-18-47-1455; 2-18-47-1488; heat: 63837

serial: 2-18-47-332; 2-18-47-372; heat: 63847

serial: 2-18-47-519; 2-18-47-591; 2-18-47-520; heat: 63848

serial: 2-18-47-1518; 2-18-47-1516; 2-18-47-1515; 2-18-47-1361; heat: 63820

serial: 2-18-47-483; 2-18-47-402; heat: 63845

NDT After hydrostatic test,(max.5 pcs)

serial : 2-18-47-426; 2-18-47-411; 2-18-47-440 ;heat : 63845

serial : 2-18-47-523; 2-18-47-518; heat : 63848

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 16081/I

28.11.2018

ArcelorMittal

Total weight:	Total Length:	Pieces	Bundles
74.737 tons 0 lbs	2 644.97 meters 8 677.72 feet	224	36

SEAMLESS STEEL LINE PIPE

Standard:

API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018

Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch	Schedule: 40	Length: 11.50 - 12.00 m	37.73 - 39.37 feet
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Hydro Test:	Bar 196	PSI 2849	MPa 19.6	Time(sec) 10	Steel Grade: BN - PSL2
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080. TSK
29.11.2018

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Quality Control Representative
Eng. Damoc Ciprian

A01 Manufacturing Plant Riveco GeneralSider S.p.A. Via Marino Carboni, 1 66100 CHIETI	A03 Inspection Certificate Date Number 2188/2018/A -- 19/09/2018 Delivery Note / --	A06 Purchaser 990195 CUNADO S.A.U. CL. CAMINO DEL OLIVAR, 2 28806 ALCALA DE HENARES-MADRID ES	A07 Purchaser Order P.O. PC0052133 - 05/09/2018	A10 RGS Reference 965/2018 – 07/09/2018 /
B01 Product Description Longitudinally "HFW" welded carbon steel pipes manufactured according to API 5L Gr.BM PSL2 45th Ed. Internally and externally bare, bevelled ends.	B11 Diameter (mm) 355,6	B12 Wall Thickness (mm) 6,40	B13 Length (m) 12,00	B02 Steel Grade GR.BM
	B03 Normative Reference API 5L - PSL2			
	B10 Number of pipe 32	B15 Meters 384,000	B15 Weight (kg)	

Chemical Composition - Product Analysis

Identification Test Pieces			Al	C	Cr	Cu	Mn	Mo	Nb	Ni	P	S	Si	Sn	Ti	V	V+Nb+Ti	CEQ
C00 Prov.	B07 Pipe No.	B08 Cast No.	0,220	0,300	0,500	1,200	0,150	0,050	0,300	0,025	0,015	0,450		0,040	0,050		0,430	
013	1201206		0,105	0,049	0,058	1,007	0,003	0,004	0,030	0,013	0,003	0,217		0,001	0,004		0,290	
014	1201206		0,102	0,049	0,057	1,013	0,002	0,004	0,030	0,011	0,004	0,215		0,001	0,004		0,288	

Tensile Test							Charpy Impact Test																	
C00 Test Pieces	B07 Pipe No.	B08 Cast No.	C02 Test Type	C12 Rm N/mm² Min. 415 Max 655	C11 Rt0,5 N/mm² Min. 245 Max 450	C14 Rt05/Rm Max 0,93	C13 A%	Identification Test Pieces			C02 Test Type	C03 "C Sect. mm²	Individual Values			Average Min. 27	Individual Values			Average Min. 33,75				
								Min. 0					Min. 0				Min. 0							
								(1)	(2)	(3)			J	J	J		(1)	(2)	(3)					
015		1201206	TC	502,55	330,15	0,66	27,36	15		1201206	TC	0,0	40,0				219,5	212,9	218,3	216,9				
015		1201206	TS	521,78																				

Legend: LC=Longitudinal on pipe body - TC=Transversal on pipe body - TS=Transversal on weld seam

HYDRAULIC TEST: pressure 53 bar. Duration 5 seconds. Results positive on 100% of pipes.

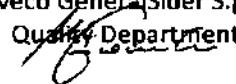
Test Type														Result
Visual examination and Dimensional testing														POSITIVE
Flattening test and Metallographic Test														POSITIVE
Non Destructive Testing 100% ultrasonic test according to API 5L level N10														POSITIVE
Minimum temperature for heat treatment of the weld seam : 900°C														POSITIVE
013) CE Pcm = 0,173 % (Max 0,25 %) 014) CE Pcm = 0,170 % (Max 0,25 %)														POSITIVE

I prodotti forniti sono conformi ai requisiti dell'ordine. / The products supplied are in compliance with the requirements of the order.

A01 Manufacturing Plant Riveco GeneralSider S.p.A. Via Marino Carboni, 1 66100 CHIETI	A03 Inspection Certificate Date Number 2188/2018/A -- 19/09/2018 Delivery Note /-	A05 Purchaser 990195 CUNADO S.A.U. CL. CAMINO DEL OLIVAR, 2 28806 ALCALA DE HENARES-MADRID ES	A07 Purchaser Order P.O. PC0052133 - 05/09/2018	A10 RGS Reference 965/2018 – 07/09/2018 /
B01 Product Description Longitudinally "HFW" welded carbon steel pipes manufactured according to API 5L Gr.BM PSL2 45th Ed. Internally and externally bare, bevelled ends.		B11 Diameter (mm) 355,6	B12 Wall Thickness (mm) 6,40	B13 Length (m) 12,00
B03 Normative Reference API 5L - PSL2				
B10 Number of pipe 32		B15 Meters 384,000	B15 Weight (kg)	

Riveco GeneralSider S.p.A.

Quality Department

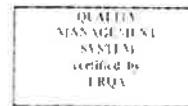




TUBOS REUNIDOS GROUP, S.L.U
 Barrio Sagarríbá, 2 - 01470 AMURRIO (Spain)
 MILL: TUBOS

EN 10204:2004 / 3.1

CERTIFICADO DE CALIDAD
 MILL TEST CERTIFICATE



THE BILLET AND THE MATERIAL COVERED BY THIS CERTIFICATE ARE MANUFACTURED AT OUR STEEL PLANT IN AMURRIO, SPAIN

PAG. 1 / 3

Nº 0000359684/4 Rev. 000

CLIENTE: CUSTOMER	CUÑADO, S.A. *M*	PEDIDO / PARTIDA: ORDER / ITEM	PC0137110 100.
PRODUCTO: ARTICLE	TUBERIA SIN SOLDADURA LAMINADA EN CALIENTE HOT FINISHED SEAMLESS TUBES	CLI. MATERIAL: CLIENT MATERIAL	038018-0003660
EXTREMOS: ENDS	BISELADOS BEVELLED ENDS	REF. FABRICA: WORK ORDER	200028572 000100
NORMA / GRADO: API STANDARD AND GRADE	ASTM A53/A53M20/ASME SA53/SA53M21 / ASTM A106/A106M19/ASME SA106/SA106M21/API 5L 2018 46TH ED. PSL1/EN 10216-2:2013 B/P265GH TC 1	PROTECCIÓN SUPERFICIE: EXT COATING	SIN PROTECCIÓN BAKE
ESPEC. ADICIONALES: ADITIONAL Specs.	NACE MR0175/ISO 15156 ED. 2015 NACE MR0103/ISO 17945 ED. 2015 ASME II.PART D.TABLE Y1 PED 2014/68/EU	DIMENSIONAL STD: DIMENSIONAL STD:	ANSI/ASME B36.10M
FAB. DE PALANQUILLA: BLOCK MANUFACTURE	COLADA CONTINUA CONTINUOUS CASTING	PROCESO FUSION: MELTING PROCESS	HORNOS ELECTRICOS ACERO TOTALMENTE CALMADO EFECTO CORRIENTE ALTA SECO
DIMENSIONES: DIMENSIONS	114,3 X 6,02 MM. X 5,6,5 M.		
MARCAS: MARKING	ESTAMPADO: DIE STAMPING		
PINTADO: STENCILED	TUBOS API SPEC 5L, 5L-0011 (SEUJO API (MM/AA) 114,3 X 6,02 X 5,6,5 M 1,5 IN (HEAD) 16,8 MPa (LENGTH IN METERS) M ASTM/ASME A/SAS A/SAS 10216-2 B/P265GH NDE S TGT TR1 PO PC0137110		
CÓDIGO COLOR: COLOR CODE			

EST. SUMINISTRO: NORMALIZADO DE LAMINACIÓN ENRIEJADO AL AIRE / NORMALIZING ROLLED COOLED
 SUPPLYING COND IN STILL AIR
 920 °C

DESCRIPCION SUMINISTRO / DESCRIPTION OF DELIVERY

ITEM FAB. TR. ITEM	ITEM CLI. CLIENT ITEM	LONG INDIV (M) INDIVIDUAL LENGTH	COLADA CAST NO.	Nº TUBOS QUANTITY	LONG. TOTAL (M) LENGTH	PESO(KG) WEIGHT
000100	100.	5,000 - 6,500	128833	247	1,491,800	24,172
TOTAL				247	1,491,800	24,172

Albarán/Delivery
note/Lieferschein/
Boa de Envio/so

TUBOS REUNIDOS GROUP (MILL: TUBOS) GARANTIZA QUE TODOS LOS TUBOS CUBIERTOS POR ESTE CERTIFICADO CUMPLEN LOS REQUISITOS DEL PEDIDO Y CON LAS ESPECIFICACIONES ARRIBA MENCIONADAS.
 TUBOS REUNIDOS GROUP (MILL: TUBOS) CERTIFICA QUE ALL THE TUBES COVERED BY THIS CERTIFICATE COMPLY WITH ORDER REQUIREMENTS AND ARE IN ACCORDANCE WITH THE SPECIFICATIONS.

AMURRIO 19.07.2022

CONTROL DE CALIDAD DE TUBOS REUNIDOS
 GROUP
 MILL TUBOS
 TUBOS REUNIDOS GROUP (QUALITY CONTROL)
 Basilea Eguizabal

24.07.2023

CUNADO	Cliente: (Client)	REPSOL POLIMEROS UNIPESSOAL, LDA			Pedido: (Delivery)	4500034667	Envío: (Shipment)	EXP1299550
	Descripción: (Description)	4" STD TUBO AC SIN SOLD. ROSC.C/MAN A-106 GR.B / GALV.			S/Ref: (V/Ref)	250 L-11 PIPG010C144		
	Colada: (Heat)	128833-16/44149	Cantidad: (Quantity)	271,88	Albarán: (Delivery N)	/250/250	Factura Nº: (Invoice #)	



TUBOS REUNIDOS GROUP, S.L.U
 Barrio Sagarríbal, 2 - 01470 AMURRIO (Spain)
 Mill: TUBOS

EN 10204:2004 / 3.1

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE



PAG. 2 / 3

Nº 0000359684/4 Rev. 000

ENSAJOS NO DESTRUCTIVOS / NON DESTRUCTIVE TESTS

ENSAJO / TEST	% CONTROL / TEST RATIO	REQUISITOS / REQUIREMENTS	RESULTADO / RESULT
VISUAL Y DIMENSIONAL VISUAL & DIMENSIONAL INSPECTION	100%		O.K.
P.HIDROSTATICA/ HYDROTEST	100%	2.430,0 PSI 5 SEC.	O.K.
CORRIENTES INDUCIDAS/ EDDY CURRENTS	100%	ASTM E 309/UNE-EN ISO 10893-2	O.K.
MAGNETISMO RESIDUAL/ RESIDUAL MAGNETISM		MAX 30,0 GAUSS	

ENSAJOS TECNOLÓGICOS Y METALÚRGICOS / TECHNOLOGICAL AND METALLURGICAL TESTS

APLASTADO PLASTISING	ACI 5L PSL1/A53/A106/EN 10216-2 -OK	ABOCARDADO FLARING	ACI 5L PSL1/A53/A106/EN 10216-2 -OK
-------------------------	--	-----------------------	--

ANALISIS DE COLADA / CAST ANALYSIS

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Ti	Nb	C.E.
														0,0200
MIN.	0,29	0,15												
MAX.	0,20	1,06	0,40	0,020	0,0100	0,300	0,300	0,0800	0,3000	0,0200		0,0400	0,0100	0,41
128833	0,1320	0,96	0,26	0,008	0,0075	0,060	0,130	0,0300	0,2900	0,0030	0,0270	0,0010	0,0020	0,34

ANALISIS DE PRODUCTO / PRODUCT ANALYSIS

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Ti	Nb	C.E.
														0,0200
MIN.	0,29	0,15												
MAX.	0,20	1,06	0,40	0,020	0,0100	0,300	0,300	0,0800	0,3000	0,0200		0,0400	0,0100	0,41
128833	0,1290	0,95	0,26	0,008	0,0073	0,060	0,130	0,0300	0,2800	0,0040	0,0270	0,0020	0,0020	0,33
128833	0,1290	0,95	0,26	0,008	0,0069	0,060	0,130	0,0300	0,2800	0,0040	0,0280	0,0020	0,0020	0,33

FORMULAS

	(01)	(02)	(03)
MIN.			
MAX.	0,700	0,060	1,000
128833	0,500	0,006	0,504
128833	0,500	0,006	0,504

(01)
 (02)
 (03)

AMURRIO 19.07.2022

CONTROL DE CALIDAD DE TUBOS REUNIDOS
 GROUP
 TUBOS REUNIDOS GROUP S.A.
 Barrio Sagarríbal, 2 - 01470 AMURRIO (Spain)

Berta Izquierdo

24.07.2023

	Cliente: (Client) Repsol Polímeros Unipessoal, Lda	Pedido: (Delivery) 4500034667	Envío: (Shipment) EXP1299550
Descripción: (Description)	4" STD TUBO AC SIN SOLD. ROSC.C/MAN A-106 GR.B / GALV.	S/Ref: (V/Ref) 250 L-11 PIPG010C144	
Codada: (Heat)	128833-16/44149	Cantidad: (Quantity) 271,88	Albarán: (Delivery N) /250/250
			Factura Nº: (Invoice #)



TUBOS REUNIDOS GROUP, S.L.U
 Barrio Sagarríbaj, 2 - 01470 AMURRIO (Spain)
 Mill: TUBOS

EN 10204:2004 / 3.1

QUALITY
 MANAGEMENT
 SYSTEM
 verified by
 LRQA

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

PAG. 3 / 3

Nº 0000359684/4 Rev. 000

ENSAYOS DE TRACCIÓN / TENSILE TEST

COLADA CAST	Nº	L/T (1)	TP (2)	DIMENSION (mm)	L.ELAST. YIELD POINT (MPa) (3)	R.TRACC. T.Strength (MPa)	ALARG. ELONG. (%) (4)	EstriccióN Reducción of Area (%)	DUREZA HARDNESS (HRB)	MEDIA MEDIA MÍA
					265	415	23			
						570				99
MIN.										
MAX.										

128833 1 L P 25,10 x 6,500 330 480 36 77 77 77 77
 128833 2 L P 25,10 x 6,300 338 476 38 76 77 77 77

(1) : L = LONGITUDINAL // T = TRANSVERSAL
 (2) : T = Full size tube // P = Strip specimen // C = Cylindrical // F = Flat specimen
 (3) : yield point (0,5%)
 (4) : Lo = 2" (50 mm)

ENSAYOS DE IMPACTO - CHARPY V / IMPACT TEST

COLADA CAST	Nº	L/T (1)	DIMENS (mm)	T [°] (°C)	RESISTENCIA IMPACT TEST (J)	Avg (J)	AREA DUCTIL SHEAR AREA (%)	ESTRICCIÓN RED. AREA (%)
			10 10,00 20		27 / 27			
128833	1	L	10 5,00 20	78	85 97 87			

(1) : L = LONGITUDINAL // T = TRANSVERSAL

ANEXOS / ANNEX

FULLY KILLED
 RADIATION FREE
 MERCURY FREE
 NO WELD REPAIR

TENSILE TEST ACC TO ISO 6992-1:2019

HEAT	T P	DIMENSION (MM)	YIELD POINT (MPA)	T. STRENGTH (MPA)	ELONG. (%)	HARDNESS HRB
128533	L	24,90 x 6,700	368	492	32,00	79,0
128533	L	25,00 x 6,600	365	497	31,00	80,0
128731	L	24,80 x 6,500	358	502	30,00	80,0
128731	L	25,10 x 6,500	362	493	31,00	78,0
128832	L	25,10 x 6,500	341	462	30,00	77,0
128832	L	25,20 x 6,700	349	470	29,00	76,0
128833	L	25,10 x 6,600	342	492	33,00	78,0
128833	L	25,00 x 6,500	346	493	31,00	80,0

LO= P PROPORCIONAL = 5,65 X 50%
 YIELD POINT: (RF 0,2%)

AMURRIO 19.07.2022

CONTROL DE CALIDAD DE TUBOS REUNIDOS

GROUP
 Mill: TUBOS
 TUBOS REUNIDOS GROUP QUALITY CONTROL

Borni Egizabal

24.07.2023

	Cliente: (Client)	REPSOL POLIMEROS UNIPESSOAL, LDA			Pedido: (Delivery)	4500034667	Envío: (Shipment)	EXP1299550
	Descripción: (Description)	4" STD TUBO AC SIN SOLD. ROSC.C/MAN A-106 GR.B / GALV.			S/Ref: (Y/Ref)	250 L-11 PIPG010C144		
	Colada: (Heat)	128833-16/44149			Cantidad: (Quantity)	271,88	Albarán: (Delivery N)	/250/250
							Factura Nº: (Invoice #)	

 Galvexsa POLÍGONO INDUSTRIAL CUATRO CAMINOS SN C.P. 10320 CASATEJADA/CÁDIZ QUALITY SYSTEM CERTIFIED BY ISO 9001:2015 STANDARD NO. ES09/7330	CERTIFICADO DE CALIDAD QUALITY CERTIFICATE CERTIFICATE OF COMPLIANCE WITH THE ORDER	Reg.32 Edic.04. Julio./017
CLIENTE: CUÑADO (Customer): REF. GALVEXSA <u>Albarán 759/23</u> (Ref. Galvexsa) REF. CLIENTE: ME0012393-TR02 (Ref. Customer):	CERTIFICADO N°: 0226/23 FACTURA: (Invoice n°) FECHA: <u>09/03/2023</u>	

GALVEXSA. Empresa dedicada a la galvanización en caliente por inmersión **CERTIFICA QUE:**
(GALVEXSA, Company dedicated to the hot dip galvanizing. CERTIFIES THAT:)

- ⇒ **La calidad del zinc usado es conforme a la norma UNE-EN 1179.**
(The quality of the zinc used is accordant to standard UNE EN 1179)
- ⇒ **Los materiales indicados cumplen las normas de galvanizado UNE-EN ISO 1461 y ASTM 123** (Materials meet the standards of galvanized UNE-EN ISO 1461 y ASTM 123)

TABLA 3. UNE-EN ISO 1461. Espesores mínimos admisibles del espesor del recubrimiento galvanizado.
(Minimum allowable thickness of the galvanized coatings)

Tipo de pieza y espesor (Piece rate and thickness)	Espesor local en µm (valor mínimo) (Local thickness in µm (minimum value))	Espesor medio en µm (valor mínimo) (Mean thick in µm (minimum value))
Acero/Steel > 6 mm	70	85
Acero/Steel >3mm hasta/until 56mm	55	70
Acero/Steel ≥ 1,5 mm hasta/until ≤ 3 mm	45	55
Acero/Steel <1,5mm	35	45
Piezas moldeadas/Casting materials ≥6 mm	70	80
Piezas moldeadas/Casting materials <6 mm	60	70

Equipo de control: Elcometer 456 N° de serie PA00360 (Control equipment) Resultado del control: (Result of control)	Inspección visual 100%: OK (Visual inspection 100%)	
Descripción del material (Description of the material)	Espesor medio de recubrimiento (Mean thick coating) (µm)	Gra/m2
4" STD TUBO AC SIN SOLD. BE A-106 GR.B - COLADA RS9064 (114.00) 4" STD TUBO AC SIN SOLD. BE A-106 GR.B - COLADA RS9064 (48.00) 4" STD TUBO AC SIN SOLD. BE A-106 GR.B - COLADA 128833 (114.76) 4" STD TUBO AC STN SOLD. BE A-106 GR.B - COLADA 128833 (114.84) 4" STD TUBO AC SIN SOLD. BE A-106 GR.B - COLADA 128833 (42.28) 1" XS TUBO AC SIN SOLD. PE A-106 GR.B - COLADA RS9124 (24.28) 3" STD TUBO AC SIN SOLD. BE A-106 GR.B - COLADA 23995 (36.30) 1" XS TUBO AC SIN SOLD. PE A-106 GR.B - COLADA RS9124 (12.14) 3" STD TUBO AC SIN SOLD. BE A-106 GR.B - COLADA 23995 (6.05)	>100	>720
Observaciones: (Remarks)		

24/07/2023

 CUNADO	Cliente: (Client)	REPSOL POLIMEROS UNIPESSOAL, LDA			Pedido: (Delivery)	4500034667	Envío: (Shipment)	EXP1299550
	Descripción: (Description)	4" STD TUBO AC SIN SOLD. ROSC.C/MAN A-106 GR.B / GALV.			S/Ref: (V/Ref)	250 L-11 PIPG010C144		
	Colada: (Heat)	128833-16/44149	Cantidad: (Quantity)	271,88	Albarán: (Delivery N)	/250/250	Factura N°: (Invoice #)	

Industrias Mecanicas Sumeca S.L.

ARGANDA DEL REY 4 MAYO 23

CERTIFICADO DE MECANIZACION (MACHINING CERTIFICATE)

Pedido de mecanizado
(Machining Order) ME0012925
Cliente
(Customer) CUÑADO
Albarán de mecanizado
(Machining Delibery Note) 36574

Certificamos que el material descrito a continuación ha sido mecanizado satisfactoriamente cumpliendo con todos los controles realizados de acuerdo a las normas de fabricación y de dimensión aplicables

We certify that the material described below has been satisfactorily machined, complying with standards
all the controls carried out in accordance with the applicable manufacturing and dimension

UNID (UNITS)	DESCRIPCION MATERIAL (MATERIAL DESCRIPTION)
567,57	2" XS TUBO AC SIN SOLD. GALV. A-106B C-R58786 / 1222450 / 129286 HACER ROSCAR EXTREMOS NPT
36,30	3" STD TUBO AC SIN SOLD. GALV. A-106B C-23995 HACER ROSCAR EXTREMOS NPT
433,88	4" STD TUBO AC SIN SOLD. GALV. A-106B C-R59064 / 128833 HACER ROSCAR EXTREMOS NPT

Control dimensional (ASME B36.10) satisfactorio
Dimensional Control (ASME B16.10) Satisfactory

24/07/2023 

 CUNADO	REPSOL POLIMEROS UNIPESSOAL, LDA	Pedido: (Delivery)	4500034667	Envío: (Shipment)	EXP1299550
Descripción: (Description)	4" STD TUBO AC SIN SOLD. ROSC.C/MAN A-106 GR.B / GALV.	S/Ref: (Y/Ref)	250 L-11 PIPG010C144		
Codado: (Heat)	128833-16/44149	Cantidad: (Quantity)	271,88	Albarán: (Delivery N)	/250/250

CUNADO	WILLIAMS
Ufficio e stabilimento Offices & Plant	VIA DEL SALICCIANO, 1/A 21040 SUMIRAGO (VA) - ITALY Phone +39 0331 27101 Fax +39 0331 90860 http://www.williams.it - E-mail: info@williams.it
Collocazione (Location)	COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV
Collocazione (Location)	COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV
Collocazione (Location)	Collocazione (Location)

CUNADO S.A.U.		CERTIFICATO DI ANALISI CHIMICA E PROVE MECCANICHE CHEMICAL COMPOSITION AND TENSILE PROPERTIES CERTIFICATE		UNI EN 10204 / 1.1 SHEET 3 / 4																									
Data/Date:	DV 230969	Our Job N°:	IT 230505	Del 03/04/2023																									
Cliente Customer	C/ CANINO DEL OLIVAR, 2 {Esg. C/ H 28006 - ALCALA' DE HENARES - MADRID ES - Spain		Ordine / Order N°: PC U1/3550	Del / Del 03/04/2023																									
Pps. Item	Q.tà Qty	Descrizione Description	Classe materiale Material class	Cod.Cliente Client code number	Colata n° Heat number	Cod. colata Heat code	Cart. originale Mill certif.	Acciaieria Steel plant	Treat.Termitico Heat Treatment																				
30	/2	COUPLING 8" ASME B16.11 3000 HPT SA/A105N HDG	SA/A105N	006068-0016000	1644149		6679	RIVA ACCIAIO S.P.A.	Normalization																				
ANALISI CHIMICA / CHEMICAL COMPOSITION																													
Colata n° Heat n°	C %	Mn %	Si %	P %	S %	Cr %	N %	Mo %	Cu %	V %	Nb/Cb %	Sn %	Al %	Ca %	N %	Pb %	Ti %	W %	Fe %	Co %	B %	Ta %	Zr %	Zn %	Se %	As %	H %	O %	
1644149	0,1950	1,0100	0,7200	0,0120	0,0380	0,1300	0,0600	0,0200	0,1200	0,0170	0,0010	0,0050	0,0240				0,0160												
	Ceq %	PCM %	PREN %	Xbar pom %	Jfcl %	CCfact %	Creq %	AVN %																					
	0,41																												
CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES																													
Colata n° Heat n°	YS 0,2% (MPa)	YS 0,5% (MPa)	TS (MPa)	EI %	RA %	VS/TS %	Prove di resistenza [C] / [J]	Single Value [J]	Ave [J]	Shear Area [%]	Lam Exp. (mm)	Durezza HB	Hydro Test																
1644149	398,00	547,00	10,70	59,80							161	164																	
ACCORDING TO ASME B16.11/B1.20.1 NORMALIZATION AT 920°C. FOLLOWED BY CALM AIR COOLING - MATERIAL FULLY KILLED & FINE GRAIN PRACTICE - NACE MR -0175 / ISO 15156 (latest edition) - NACE MRD103-2016 ACCORDING TO ASME SECTION II PARTA ED. 2021 - VISUAL AND DIMENSIONAL CHECKING: SATISFACTORY MATERIAL HOT DIP GALVANIZED ACCORDING TO ASTM A153 ACCORDING TO P.E.O. 2014/58/EU ANNEX I PAR. 4.3 MECHANICAL TEST CARIED OUT ACCORDING TO ASTM A370 - MATERIAL IN COMPLIANCE TO PURCHASE ORDER - MARKING ACCORDING TO MSS-SP-95 Issued in agreement with TÜV SÜD Industrie Service GmbH - QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036 - (Certification no. DGR-0036-QS-W 975/2021/2006/MUC-001) FOR SURFACE HARDNESS CHECK REPORT SEE "VIAR" CERTIFICATE N° 1173/23/V										ENTE COLLAUD. / Inspection Agency																			

24/07/2023



衡阳华菱钢管有限公司 HENG YANG VALIN STEEL TUBE CO., LTD.

item 550

Original Document



Scanned QR Code
Verifiable
Inspection
Certificate

产品质量证明书

INSPECTION CERTIFICATE



1102628

湖南省衡阳市大栗新村10号 邮编 421001
Add: 10 Dalixincun, Hengyang City, Hunan, P.R.China P.C.: 421001
E-mail: hystc@hysteeltube.com

CUSTOMER:		CUNADO, S.A.				ACCORDING TO EN10204-2004 3.1		CERTIFICATE NO.:		23406296						
CONTRACT-ITEM NO.:		2323020019019	P.O.NO.:	PC0161926		TRAIN NO.:		DATE:		20230421						
PRODUCT:		Seamless Line Pipe	PROCESS OF MANUFACTURE		HOT FINISHED SEAMLESS CIRCULAR HOLLOW SECTIONS		DELIVERY CONDITION:		Normalized							
SPECIFICATION:		ASTM A106/A106M-2019				HEAT TREATMENT:										
DIMENSIONS:		273X12.7mm*10m-11.8m	GRADE:	A106B		L/C ISSUING BANK:		PIPE-END DESCRIBE:		ASME B16.25						
REMARK:		Part No 55 PED 97/23/EC														
TOTAL BUNDLES:		II	TOTAL PIECES:		II	TOTAL LENGTH:		118.47	m	L/C NO.:						
NO.	TEST LOT No.	HEAT No.	BUNDLES	PIECES	LENGTH	WEIGHT	IMPACT TEST NOTCH TYPE/ORIENTATION/TEMPERATURE(°C)/SIZE (mm):									
							m	mt	Wt	AK1(IJ)	Av.(J)	% S.A.	LE	AK2(IJ)	Av.(J)	% S.A.
min																
max																
1	523030283	23302307	II	II	118.47	9.658										
2																
3																
4																
5																
NO.	TENSILE TEST(S T×38mm/L/50) SAMPLE TYPE-SIZE(mm)/ORIENTATION/GAUGE LENGTH(mm)					HARDNESS TEST (HV10)			GRAIN SIZE No.	BANDED STRUCTURE No. (AI)	NONMETAL INCLUSION (Severity Level No.)					
	TS(MPa)	YS(MPa)	EL(%)	R.A. (%)	YS/TS	Inside	Middle	Outside			Type A	Type B	Type C	Type D	Type Ds	
min	415	240	29.4					H	T	H	T	H	T			
max	655															
1	467/	334/	47/		248	248	248									
2																
3																
4																
5																
HYDROSTATIC TEST		RESIDUAL MAGNETIC		FLATTENING TEST	BENDING TEST	MACROSCOPIC TEST	COATING	VISUAL & DIMENSION								
13/5 MPa/s	ACCEPTABLE	ACCEPTABLE	/	/	/	/	/	ACCEPTABLE								
NOTE: W1--THEORETICAL WEIGHT W2--ACTUAL WEIGHT N/A--NOT AVAILABLE Register of Shipping certificate NO.: Surveyor or customer third party:																
Av.--AVERAGE S.A.--SHEAR AREA AK1--ABSORB ENERGY FOR THE FIRST SET AK2--ABSORB ENERGY FOR THE SECOND SET TENSILE&IMPACT&HARDNESS TEST SAMPLE LOCATION:PIPE END																
SAMPLE ORIENTATION: L--LONGITUDINAL T--TRANSVERSE SAMPLE TYPE: S--STRIP B--BAR F--FULL-SECTION LE--SIDE EXPANSION PIPE END MACHINING:ACCEPTABLE																
Certificate-maker: 吴媛洁 Auditor: 刘建辉 Quality Manager: 孙群峰 Page: 1/2																



衡阳华菱钢管有限公司 HENG YANG VALIN STEEL TUBE CO.,LTD

1102629
HSQC

Original Document



Scanned QR Code
Verifiable Inspection Certificate

产品质量证明书

INSPECTION CERTIFICATE



1102629

湖南省衡阳市大栗新村10号 邮编 421001
Add: No.10,Dalixincun,Hengyang City,Hunan,P.R.China P.C.:421001
E-mail: hsqc@hysteeltube.com

CERTIFICATE NO.: 23406296

NO.	HEAT No.		Type TEST LOT No.	ACCORDING TO EN10204-2004 3.1												CHEMICAL COMPOSITION (%)	CERTIFICATE NO.: 23406296	
	TEST LOT No.			C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	SUM6	SUME	SUMG		
	Standard range	P		min	10	29												
1	23302307	H	2	2	2	3	4	3	3	3	3	3	4	3	3	2		
	523030283	P	10	29	29	17	44	43	17	56	14	40	19	134	30			
	523030283	P	14	29	92	15	37	48	20	52	13	30		136	31			
2			13	30	92	17	44	43	17	56	14	40	19	134	30			
3																		
4																		
5																		

Position	NDT Type	ET (Drilled hole) Size	MPI Sensitivity Test Panel	Non-Destructive Test (each pipe)								Thickness Testing Coverage %	Result
				Longitudinal (QUARE/N type notch)		Transverse (QUARE/N type notch)		Laminar		(Flat bottom hole) Size	Coverage %		
PIPE BODY	MFL			External Surface	Internal Surface	External Surface	Internal Surface	(Flat bottom hole) Size	Coverage %				
PIPE END	UT			12.5%WT	12.5%WT								
BEVEL				12.5%WT	12.5%WT								

NOTE: WT--Wall Thickness. UT--ASTM E 213 MFL--ASTM E570

NOTE: H--HEAT ANALYSIS

P--PRODUCT ANALYSIS
SUM6:Nb+Ti+V;SUME:Cu+Ni+Cr+V+Mo;SUMG:CE;

The blind area at the pipe end of the manufacturer automatic NDT has been eliminated by manual NDE or excision.

CHEMICAL COMPOSITION*10: 0-->1 1-->10 2-->100 3-->1000 4-->10000 5-->100000

The latest version of any undated standard applies to this certificate.

We hereby declare that the product herein described has been manufactured, sampled, tested or inspected, or both, in accordance with this standard and specifications required in your order and has been found to meet the requirements. This certificate is issued by a computerized system and it is valid with electronic signature. In case the owner of the certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use.

Any alteration and/or falsification will be subject to the law.

If you need to assure the authenticity of this certificate, please do not hesitate to contact Hengyang Valin Steel Tube CO.,LTD, E-mail: hsqc@hysteeltube.com

Register of Shipping certificate NO.:
Surveyor or customer third party:

Certificate-maker: 叶媛洁

Auditor: 刘建辉

Quality Manager:

孙海峰

Page: 2/2

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I, ROMAN, NEAMT ROMANIA	MILL TEST CERTIFICATE according to EN 10204/3.1/2004	Page 9/9 B 16001/1 28.11.2018	ArcelorMittal
Buyer: CUNADO S.A. CALLE CAMINO DEL OLIVAR ,2, MADRID, SPAIN	SEAMLESS STEEL LINE PIPES	Total weight: 74.737 tons 0 lbs	Total Length: 2 644.97 meters 8 677.72 feet
Standard: API 5L ed.45-2012/ API 5L ed.46- 2018-PSL2; ASME B36.10M-2015; Pipes acc with Repsol specs and AMR Technical Offer Repsol 25.09.2018			
Dimensions: 168.30 x 7.11 mm 6.625 X 0.280 inch Schedule: 40			
Item	Item Client	Hydro Test: Bar 196	Length: 11.50 - 12.00 m 37.73 - 39.37 feet
1	120 L-6- R	PSI 2849	MPa 19.6
		Time(sec) 10	Steel Grade: BN - PSL2

NDT full body:

-100% ultrasonic testing in accordance with ASTM E213 : Le +Li (12.5 % from W.T) – satisfactory.

NDT for the pipe ends:

- ultrasonic testing : Le+Li (12.5 % from W.T.) – satisfactory.

- detection of laminar imperfection on the pipe ends, surface coverage - satisfactory.

- bevel at each pipe end have been inspected for defects by wet magnetical particle, without stratification – satisfactory.

- ultrasonic inspection to verify that the 50 mm wide zone at each pipe end is free of such laminar imperfection.

Magnetism residual check : four readings were taken approximately 90° apart around the circumference of each end of the pipe. The average of the four

readings is ≤ 25 Gs, and no one reading is exceed 30 Gs.

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

C. CIPRIAN
OBO. TSK
29.11.2018

Quality Control Representative
Eng. Damoc Ciprian

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

DOSSIER DE QUALIDADE

 <small>INFRAESTRUCTURAS Y SERVICIOS</small>	Empreitada:	DOCUMENTO N°:
	4001008 - "Nuevas Plantas de Poliolefinas, Plataformas Logísticas Y Offsites"	DATA:
		FOLHA N° : / DE:

ITEM	DESCRIÇÃO DOCUMENTAL	Nº CERTIFICADO	DATA
MICROESTACAS			
1	DECLARAÇÃO DESEMPEÑHO TUBO PARA MICROESTACAS Nº38217		19/03/2024
2			

20/12/2023			
Data	Qualidade	Director Obra	Repsol
	Verificado	Aprovado	Cliente

DECLARACIÓN DE PRESTACIONES (MÉTODO 3a-EXC2) / DECLARATION OF PERFORMANCE (Method 3a-EXC2)

Número / No. 38217

1. Código de identificación única del producto tipo / *Unique identification code of the product-type:***COMPONENTES DE ACERO ESTRUCTURAL / Steel structural components**2. Tipo, lote o número de serie o cualquier otro elemento que permita la identificación del producto de construcción como se establece en el artículo 11, apartado 4 del Reglamento Nº 305/2011: / *Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4) Regulation 305/2011:***ORDEN DE TRABAJO 38217. TUBO PARA MICROPILOTE/ Manufacturing order 38217. Micropile steel pipe**3. Uso o usos previstos del producto de construcción, con arreglo a la especificación técnica armonizada aplicable, tal como lo establece el fabricante: / *Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:***EN 1090-1:2009+A1:2011. PARA USO ESTRUCTURAL EN TODO TIPO DE OBRAS DE CONSTRUCCIÓN / For structural use in all types of construction works**4. Nombre, nombre o marca registrados y dirección de contacto del fabricante según lo dispuesto en el artículo 11, apartado 5 del Reglamento Nº 305/2011: / *Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5) Regulation 305/2011:***COMERCIAL DE SONDEOS, S.L. – AVENIDA DEL LOMO, 2, POLÍGONO INDUSTRIAL DE VALDILECHA, 28511, VALDILECHA, MADRID, ESPAÑA**5. En su caso, nombre y dirección de contacto del representante autorizado cuyo mandato abarca las tareas especificadas en el artículo 12, apartado 2 del Reglamento Nº 305/2011: / *Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2) Regulation 305/2011:***NO APLICABLE / Not applicable**6. Sistema o sistemas de evaluación y verificación de la constancia de las prestaciones del producto de construcción tal como figura en el anexo V del Reglamento Nº 305/2011: / *System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V Regulation 305/2011:***SISTEMA 2+ / System 2+**

7. En caso de declaración de prestaciones relativa a un producto de construcción cubierto por una norma armonizada:

Nombre y número de identificación del organismo notificado: **OCÀ INSTITUTO DE CERTIFICACIÓN, S.L.U. (2375)**

Tarea realizada:

- i) la inspección inicial de la planta de producción y del control de producción en fábrica;
- ii) la vigilancia, evaluación y supervisión permanentes del control de producción en fábrica, por el **SISTEMA 2+**, emitiendo el certificado de conformidad del control de producción en fábrica **2375/CPR/21/3015**

*In case of the declaration of performance concerning a construction product covered by a harmonised standard:*Name and identification number of the notified body: **OCÀ INSTITUTO DE CERTIFICACIÓN, S.L.U. (2375)**

Performed:

- (i) initial inspection of the manufacturing plant and of factory production control;
- (ii) continuous surveillance, assessment and evaluation of factory production control, under **System 2+** and issued the certificate of conformity of the factory production control, **No. 2375/CPR/21/3015**

8. En caso de declaración de prestaciones relativa a un producto de construcción para el que se ha emitido una evaluación técnica europea: / *In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:*

NO APPLICABLE / Not applicable

9. Prestaciones declaradas / *Declared performance*

Características esenciales / Essential characteristics	Prestaciones / Performance
Tolerancias dimensionales y de forma / <i>Tolerances on dimensions and shape</i>	EN 1090:2; EN 13920 (Clase C); API 5CT
Soldabilidad / <i>Weldability</i>	<i>Ceq tubo</i> ≤ 3%
Tenacidad a la fractura / <i>Fracture toughness</i>	PND
Capacidad portante / <i>Load bearing capacity</i>	PND
Deformación en el estado límite de servicio / <i>Deformation Serviceability Limit State</i>	PND
Resistencia a la fatiga / <i>Fatigue strength</i>	PND
Resistencia al fuego / <i>Resistance to fire</i>	PND
Reacción frente al fuego / <i>Reaction to fire</i>	A1
Emisión de cadmio / <i>Release of cadmium and its compounds</i>	PND
Emisión de radioactividad / <i>Emission of radioactivity</i>	Cumple
Durabilidad / <i>Durability</i>	PND

10. Las prestaciones del producto identificado en los puntos 1 y 2 son conformes con las prestaciones declaradas en el punto 9. *The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.*

La presente declaración de prestaciones se emite bajo la sola responsabilidad del fabricante identificado en el punto 4. / *This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.*

Firmado por y en nombre del fabricante por:

Signed for and on behalf of the manufacturer by:

Álvaro Torres Vallejo

Gerente (Manager)

 COMERCIAL DE SONDEOS S.L.
 Avda. del Lirio, 2
 28511 Valdilecha (Madrid)
 Tel. +34 91 873 05 41 Fax: +34 91 873 87 60
 M.F. 928866267

Valdilecha, a 19 de marzo de 2024

DOSSIER DE QUALIDADE

 <small>INFRAESTRUCTURAS Y SERVICIOS</small>	Empreitada:	DOCUMENTO N°:
	4001008 - "Nuevas Plantas de Poliolefinas, Plataformas Logísticas Y Offsites"	DATA:
		FOLHA N° : / DE:

ITEM	DESCRIÇÃO DOCUMENTAL	CÓDIGO	DATA
ARMAZÉM REPSOL			
1	LISTA DE MATERIAIS ENTREGUES		

20/12/2023			
Data	Qualidade	Director Obra	Repsol
	Verificado	Aprovado	Cliente

LISTA DE MATERIAIS DO ARMAZÉM

REFERÊNCIA: LMA-08/23
 Revisão: 0 Obra: R007

PROJECTO:

4008 - PROJETO ALBA

EMPRESA SOLICITANTE:

01- ASCH INFRAESTRUCTURAS Y SERVICIOS SA

Nº VALE	DATA ENTREGA	MATERIAL	DIÂMETRO	UNICODE	PEDIDO	ITEM	UNIDADES	QUANTIDADE DESPACHADA	QUANTIDADE UTILIZADA	TOTAL DEVOLVIDA	OBSERVAÇÕES
0001	24/08/2023	TUBO DN90-HDPE	DN90 - 4"				ROLO	264 ml	264 ml	0 ml	SEGMENTO Ad, Ae - TUBOS COMPRADOS PINTO&CRUZ
0001	24/08/2023	TUBO DN90-HDPE-P	DN90 - 4"				ROLO	264 ml	264 ml	0 ml	SEGMENTO Ad, Ae - TUBOS COMPRADOS PINTO&CRUZ
0002	06/09/2023	TUBOS DN1000-HDPE	DN1000	DN1000-HDPE			7	42 ml	36 ml	6ml	ZONA NORTE - NOVAS UNIDADES - existente a 45º 01SW/ 45º 01SW a SW1
0002	06/09/2023	CODO 45º	DN1000				1	1 ud	1 ud	0 ud	ZONA NORTE - NOVAS UNIDADES
0003	06/09/2023	TUBOS HDPE -315	DN315	DN315-HDPE			5	30 ml	30 ml	0 ml	ZONA ESTE - NOVAS UNIDADES - SWn3-Swn4
0003	06/09/2023	TUBOS HDPE -350	DN350	DN350-HDPE			31	186 ml	186 ml	0 ml	ZONA ESTE - NOVAS UNIDADES - SWe1 - SWe8
0004	27/09/2023	TUBOS CORRUGADOS (SN8) DN200	DN200	GEN/TUB-ACC	4500034776	10	8	48 ml	48 ml	42 ml	ZONA SUL - SSs1/20 to SWs1/9 - NOVAS UNIDADES
0004	27/09/2023	TUBOS ASTM A-53 B TP SMLS - ASME B36,10 Ø SCH 20, L4	DN250	PIPA020B11020			15	90 ml	0 ml	90 ml	AVENIDA 27 - JÁ DEVOLVIDO - VALE 4008-01-0001
0004	27/09/2023	TUBOS ASTM A-53 B TP SMLS - ASME B36,12 Ø SCH 20, L4	DN300	PIPA020B11020			1	6 ml	6 ml	0 ml	AVENIDA 27 - OCW26 - EXISTING MANHOLE
0004	27/09/2023	TUBOS CORRUGADOS (SN8) DN500	DN500	GEN/TUB-ACC	4500034776	70	45	270 ml	270 ml	0 ml	AVENIDA 27 - LINHA SWw1 a SWw6
0005	29/09/2023	TUBOS CORRUGADOS (SN8) DN200	DN200	GEN/TUB-ACC	4500034776	10	6	36 ml	36 ml	0 ml	ZONA NORTE - NOVAS UNIDADES - SSn1-14 /SWn1-7
0005	29/09/2023	TUBOS CORRUGADOS (SN8) DN225	DN250	GEN/TUB-ACC	4500034776	20	13	78 ml	78 ml	0 ml	ZONA NORTE - NOVAS UNIDADES - SWn1/SWn3
0005	29/09/2023	TUBOS CORRUGADOS (SN8) DN280	DN315	GEN/TUB-ACC	4500034776	30	5	96 ml	96 ml	0 ml	ZONA NORTE - NOVAS UNIDADES - SWn3-SWn5
0005	29/09/2023	TUBOS CORRUGADOS (SN8) DN355	DN350	GEN/TUB-ACC	4500034776	40	18	108 ml	108 ml	0 ml	ZONA NORTE - NOVAS UNIDADES - SWn5-SW1

LISTA DE MATERIAIS DO ARMAZÉM

 REFERÊNCIA: LMA-08/23
 Revisão: 0 Obra: R007

PROJECTO:

4008 - PROJETO ALBA

EMPRESA SOLICITANTE:

01- ASCH INFRAESTRUCTURAS Y SERVICIOS SA

Nº VALE	DATA ENTREGA	MATERIAL	DIÂMETRO	UNICODE	PEDIDO	ITEM	UNIDADES	QUANTIDADE DESPACHADA	QUANTIDADE UTILIZADA	TOTAL DEVOLVIDA	OBSERVAÇÕES
0006	02/11/2023	TUBOS CORRUGADOS DN560	DN560	GEN/TUB-ACC	4500034776	80	7	42 ml	42 ml	0 ml	NOVAS UNIDADES - SWs10-SW6
0007	29/01/2024	TUBOS, ASTM A-106 B SMLS, ASME B36,10 Ø6", SCH 40, L-7805	DN150 - 6"	TUBERIA DE CORUÑA			40 ml	40 ml	40 ml	0 ml	MODIFICAÇÃO LINHA CONTRA INCÊNDIOS AVENIDA 27 - LIGAÇÃO HIDRANTES
0007	29/01/2024	CODOS 90°, ASTM A-234 WPB. ASME B16,9. Ø6", SCH40, L-7961	DN150 - 6"	PIPA010B1640			6 ud	6 ud	6 ud	0 ud	MODIFICAÇÃO LINHA CONTRA INCÊNDIOS AVENIDA 27 - LIGAÇÃO HIDRANTES
0008	29/01/2024	CPEZDESNUDOCU1G70 Cable puesta a tierra, Conductor desnudo, Conductor desnudo, Cobre,		4500034874		POS 10	500 ml	500 ml	0 ml	0 ml	REDE DE TERRAS DE ESFERAS
0008	29/01/2024	MATERIAL DE PUESTA A TIERRA Registro para inspección de picas en puesta a tierra sin		4500034874		POS 80	17 ud	17 ud	0 ud	0 ml	REDE DE TERRAS DE ESFERAS
0008	29/01/2024	MATERIAL DE PUESTA A TIERRA Electrodo de acero-cobre de alta resistencia, diámetro mínimo		4500034874		POS 70	17 ud	17 ud	0 ud	0 ml	REDE DE TERRAS DE ESFERAS
0008	29/01/2024	MATERIAL DE PUESTA A TIERRA Grapa tipo petaca unión de dos cables con pica de tierra,		4500034874		POS 90	25 ud	25 ud	0 ud	0 ml	REDE DE TERRAS DE ESFERAS
0009	28/02/2024	Flange 6" 150 para proteção contra incêndio ASTM galvanizado PN16					6 ud	6 ud	6 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0010	12/03/2024	TUBO ASTM A53 B TP S SMLS ASME B36,10, Ø12, SCH20, L4	DN300	PIPA020B11020			36 ml	36 ml	0 ml	36 ml	AVENIDA 27 - LINHA OCW - JÁ DEVOLVIDO - VALE DEVOLUÇÃO 4008-01-0001
0011	14/03/2024	TUBOS PEAD (SN8) DN560	DN560				100 ml	100 ml	100 ml	0 ml	ZONA SUL - NOVAS UNIDADES - SEGMENTOS Ai, Aj, Ah - SWs7-SWs7
0011	14/03/2024	TUBOS PEAD (SN8) DN450	DN450				136 ml	136 ml	136 ml	0 ml	ZONA SUL - NOVAS UNIDADES - SEGMENTOS Ai, Aj, Ah - SWe8- SWs7
0012	02/04/2024	CURVAS DE 90° DN500 SDR11/PN16 HDPE 100 (ELBOW)					6 ud	6 ud	6 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0012	02/04/2024	PORTA BRIDAS DN 500 SDR11/PN16 HDPE100 (STUB END)					2 ud	2 ud	2 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27

LISTA DE MATERIAIS DO ARMAZÉM

REFERÊNCIA: LMA-08/23
Revisão: 0 Obra: R007

PROJECTO:

4008 - PROJETO ALBA

EMPRESA SOLICITANTE:

01- ASCH INFRAESTRUCTURAS Y SERVICIOS SA

Nº VALE	DATA ENTREGA	MATERIAL	DIÂMETRO	UNICODE	PEDIDO	ITEM	UNIDADES	QUANTIDADE DESPACHADA	QUANTIDADE UTILIZADA	TOTAL DEVOLVIDA	OBSERVAÇÕES
0012	02/04/2024	FLANGES LOUCAS 20" 150 lb (LOOSE BACKING FLANGE)					2 ud	2 ud	2 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0012	02/04/2024	T LADOS IGUAIS DN 500 SDR11/PN16 HDPE100 (EQUAL TEE)					1 ud	1 ud	1 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0012	02/04/2024	VARAS DE TUBO - DN 500 SDR11/PN16 HDPE 100	DN500				6 ud	6 ud	72 ml	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0013	15/04/2024	Cable puesta a tierra, Conductor desnudo,, Cobre, 1 Cond. Tierra (A/V), 70 mm ² Cable de		450003874		10	510 ml	510 ml	0 ml	0 ml	REDE DE TERRAS - AVENIDA 27
0013	15/04/2024	Cable puesta a tierra, Conductor isolado, 35 mm ² (DERIVED EARTHING GRID SECTION 35 mm ²)		450003874		20	189 ml	189 ml	0 ml	0 ml	REDE DE TERRAS - AVENIDA 27
0013	15/04/2024	Embarrado de conexion de 60X6X475 mm,incluyendo 6 grapas para cable de 35 -95		450003874		100	2 ud	2 ud	0 ml	0 ml	REDE DE TERRAS - AVENIDA 27
0013	15/04/2024	Registro para inspección de picas en puesta a tierra sin fondo. Fabricada en poliéster, com tapa		450003874		80	2 ud	2 ud	0 ml	0 ml	REDE DE TERRAS - AVENIDA 27
0013	15/04/2024	Grapa para fijación de cable 35 mm ² a estructura o equipo		450003874		30	32 ud	32 ud	0 ml	0 ml	REDE DE TERRAS - AVENIDA 27
0013	15/04/2024	Grapa para fijación de cable 35 mm ² a estructura o equipo		450003874		40	32 ud	32 ud	0 ml	0 ml	REDE DE TERRAS - AVENIDA 27
0013	15/04/2024	Puente de prueba de pletina de cobre, fijación de conductores de tierra mediante soldadura		450003874		50	3 ud	3 ud	0 ml	0 ml	REDE DE TERRAS - AVENIDA 27
0014	14/03/2024	Juntas de 150 libras					12 ud	12 ud	12 ud	0 ml	ZONA SUL - NOVAS UNIDADES - SEGMENTOS Ai, Aj, Ah
0014	14/03/2024	Esparragos para Bridas de 3/4					96 ud	96 ud	96 ud	0 ml	ZONA SUL - NOVAS UNIDADES - SEGMENTOS Ai, Aj, Ah
0015	22/04/2024	TUBOS POLIETILENO - HDPE - DN350	DN350				3 ud	18 ml	18 ml	0 ml	ZONA ESTE - SWe7 + SWe8
0015	22/04/2024	TUBOS POLIETILENO - DN500 SDR11/PN16 HDPE	DN500				2 ud	12 ml	12 ml	0 ml	- ZONA SUL - NOVAS UNIDADES - SEGMENTOS, Ah - SWw6-SW5

LISTA DE MATERIAIS DO ARMAZÉM

PROJECTO:

4008 - PROJETO ALBA

EMPRESA SOLICITANTE:

01- ASCH INFRAESTRUCTURAS Y SERVICIOS SA

Nº VALE	DATA ENTREGA	MATERIAL	DIÂMETRO	UNICODE	PEDIDO	ITEM	UNIDADES	QUANTIDADE DESPACHADA	QUANTIDADE UTILIZADA	TOTAL DEVOLVIDA	OBSERVAÇÕES
0016	29/04/2024	TUBO POLIETILENO - DN400 HDPE	DN400				2 ud	12 ml	12 ml	0 ml	ZONA SUL - CAIXA SWs7 TO OTHERS (TECNINONT)
0017	13/05/2024	CURVAS 90° DN 500 SDR11 PN16		MF3P0G1226FI230	4500035594	250	5 ud	5 ud	5 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	45425	VARAS DE TUBO - DN500 SDR11/PN16 HDPE	DN500	PPBP0R126FD30			2 ud	24 ml	24 ml	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	PORTA BRIDAS DN500 SDR11 PN16		FLBG500CFI3500X20	4500035809	50 60 70 80 90	1 ud	1 ud	1 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	REDUÇÃO DN500/DN355 SDR11 PN16		MP8P0G1426FI23027	4500035594	380	1 ud	1 ud	1 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	REDUÇÃO DN355/DN250 SDR11 PN16		MF8P0G1426FI22724			1 ud	1 ud	1 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	PORTA BRIDAS DN250 SDR11 PN16		MF1P0G1126FI124			2 ud	2 ud	2 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	FLANGES LOUCAS 10" - 150 libra		FLBG500CFI3250X10	4500035809	10 20 30 40	2 ud	2 ud	2 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	VALVULA 20" - 150 libra		G2DN500L-G202	4500035333	260	1 ud	1 ud	1 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	VALVULA 10" - 150 libra		G2DN500L-G202	4500034705	190	1 ud	1 ud	1 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	JUNTAS DE CARTÃO 3 mm x 500 DN mm		GFRS101AFF500X20			4 ud	4 ud	4 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	JUNTAS DE CARTÃO 3 mm x 250 DN mm		GFRS101AFF250X10			2	2	2	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	curvas 45° - DN250 mm SDR11 PN16		MF2P0G1226FI224			2	2	2	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27

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Nº VALE	DATA ENTREGA	MATERIAL	DIÂMETRO	UNICODE	PEDIDO	ITEM	UNIDADES	QUANTIDADE DESPACHADA	QUANTIDADE UTILIZADA	TOTAL DEVOLVIDA	OBSERVAÇÕES
0017	13/05/2024	curvas 90° - DN250 mm SDR11 PN16		MF2P0G1226FI224			2	2	2	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	VARAS TUBO PEAD DN250 SDR11 PN16	DN250	PPBP0R126FD24	4500035594	40	4	24 ml	24 ml	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	PERNOS 1"1/8 com 250 mm de comprimento					80	80	80	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0017	13/05/2024	PERNOS 7/8 com 180 mm de comprimento					24	24	24	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0018	15/05/2024	TUBOS CORRUGADOS SW - DN500	DN500				6	36 ml	36 ml	0 ml	AVENIDA 26 - SWw6 - SW5
0019	15/05/2024	ANILHAS DE CHAPA PARA PERNOS 1"1/8					160 ud	160 ud	160 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0019	15/05/2024	ANILHAS DE CHAPA PARA PERNOS 7/8					160 ud	160ud	160 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0020	21/05/2024	TUBOS ASTM A53 B TP S SMLS - ASME B36.10 Ø10", SCH20, L4 - REVESTIDOS	DN250				8 ud	90 ml	90 ml	0 ml	AVENIDA 26/27 - LINHA DE PERÓXIDOS - OTHERS to OCW25
0020	21/05/2024	TUBOS ASTM A53 B TP S SMLS - ASME B36.10 Ø14", SCH20, L4 - REVESTIDOS	DN350				3 ud	35 ml	35 ml	0 ml	AVENIDA 26/27 - LINHA DE PERÓXIDOS - OCW25 to OCW26
0021	12/06/2024	Junta no metálica, C.S.F (Fibra sintética comprimida resistente al petróleo), Entre bridas		NMGQ001R1FB6			7 ud	7 ud	7 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0021	12/06/2024	Junta no metálica, C.S.F (Fibra sintética comprimida resistente al petróleo), Entre bridas de		NMGQ001R1FB10			1 ud	1 ud	1 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0021	12/06/2024	Anilhas de chapa de furo 1" 1/8 - (ou 35 mm)					80 ud	80 ud	80 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0021	12/06/2024	Anilhas de chapa de furo 7/8" - (ou 25 mm)					48 ud	48 ud	48 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
0021	12/06/2024	Espárrago y dos tuercas hexagonales pesadas, ASTM A-193 Gr B7 / ASTM A 194 Gr 2H, ASME		SB2R051G3/45			56 ud	56 ud	56 ud	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27

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0022	03/09/2024	Vent Type 2- oil drainage Sytem with Hydraulic Seal- as per detail drawing 00-000-8-05-01504		Incluido no conjunto do Vent Type 2		10	7 ud	7 ud	7 ud	0 ml	VENTS TYPE 2
0022	03/09/2024	M16 x54mm Hexagonal Head Bolts- for type 2 vents		Incluido no conjunto do Vent Type 2			56 ud	56 ud	56 ud	0 ml	VENTS TYPE 2
0022	03/09/2024	Spirometal Gasket 174-114 (3mm)- For Type 2 vents		Incluido no conjunto do Vent Type 2			14 ud	14 ud	14 ud	0 ml	VENTS TYPE 2
0022	03/09/2024	TUBOS ASTM A-106 B SMLS - ASME B36,10 Ø4" SCH40, L7805	DN100 - 4"	PIPA010B1440	4500034667	90	3 ud	34 ml	34 ml	0 ml	VENTS TYPE 1 (PARA FABRICO)
0022	03/09/2024	TUBOS ASTM A-106 B SMLS - ASME B36,10 Ø4" SCH40, L7805 - GR.B (POLIKEN) DN4 L-	DN100 - 4"	PIPA010B1440	4500034667	530	2 ud	20 ml	20 ml	0 ml	VENTS TYPE 1 (PARA FABRICO)
0022	03/09/2024	CODO DE 90º Y RADIO LARGO ASTM-A-234-WPB, ASME B16.9 4", SCH40, L-7961		90LA200F3440	4500034667	240	18 ud	18 ud	18 ud	0 ml	VENTS TYPE 1 (PARA FABRICO)
0023	19/08/2024	TUBOS AST A-53 B TP S SMLS - ASME B36,10 Ø14", SCH-20, L4	DN350	TUBERIA DE CORUÑA			2	24 ml	24 ml	0 ml	LIGAÇÃO CAIXAS OCW27 A OCW8
0024	16/09/2024	M16 x54mm Hexagonal Head Bolts- for type 2 vents		Incluido no conjunto do Vent Type 2			112 ud	112 ud	112 ud	0 ml	VENTS TYPE 2
0025	25/09/2024	TUBO DE POLIETILENO - DRENAGE - HDPE - (SW2/SW4 para OTHERS)	DN400				8 ud	48 ml	?	0 ml	LINHA SW - SEGMENTO Ad/AE - (OTHERS para SW2 + OTHERS para SW4)

RESUMO

COMPRAS EXTERIOR

	Tubo Cambidur PP SN8 (vara c/6,2) 250 mm	DN250						99,2 ml			COMPRADO A PINTO&CRUZ
	Tubo Cambidur PP SN8 (vara c/6,2) 250 mm	DN250						174 ml			COMPRADO A PINTO&CRUZ
	TUBO PEAD MRS 100 PN16 ROLO 50MT 110 MM	DN100						550 ml			COMPRADO A PINTO&CRUZ - 11 ROLOS 50 ml
	Tubo Cambidur PP SN8 (vara c/6,2) 250 mm	DN250						24,8 ml			COMPRADO A PINTO&CRUZ

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		TubFM PE 100 SDR 11d 90	DN100					48 ml			COMPRADO A PINTO&CRUZ

RESUMO	TUBOS AÇO CARBONO										
	TUBOS ASTM A-106 B SMLS - ASME B36,10 Ø4" SCH40, L7805	DN100 - 4"	PIPA010B1440	4500034667	0090	3 ud	34 ml	34 ml	0 ml	VENTS TYPE 1 (PARA FABRICO)	
	TUBOS ASTM A-106 B SMLS - ASME B36,10 Ø4" SCH40, L7805 - GR.B (POLIKEN) DN4 L-	DN100 - 4"	PIPA010B1440	4500034667	0530	2 ud	20 ml	20 ml	0 ml	VENTS TYPE 1 (PARA FABRICO)	
	TUBOS, ASTM A-106 B SMLS, ASME B36,10 Ø6", SCH 40, L-7805	DN150 - 6"	TUBERIA DE CORUÑA	-		7 ud	40 ml	40 ml	0 ml	MODIFICAÇÃO LINHA CONTRA INCÊNDIOS AVENIDA 27 - LIGAÇÃO HIDRANTES	
	TUBOS ASTM A53 B TP S SMLS - ASME B36.10 Ø10", SCH20, L4 - REVESTIDOS	DN250 10"	TUBERIA DE CORUÑA	-		8 ud	90 ml	90 ml	0 ml	AVENIDA 26/27 - LINHA DE PERÓXIDOS - OTHERS to OCW25	
	TUBOS ASTM A-53 B TP SMLS - ASME B36,12 Ø SCH 20, L4	DN300 12"	PIPA020B11020			1 ud	6 ml	6 ml	0 ml	AVENIDA 27 - OCW26 - EXISTING MANHOLE	
	TUBOS ASTM A53 B TP S SMLS - ASME B36.10 Ø14", SCH20, L4 - REVESTIDOS +	DN350 14"	TUBERIA DE CORUÑA	-		5 ud	60 ml	39 ml	21 ml	AVENIDA 26/27 - LINHA DE PERÓXIDOS - OCW25 to OCW26 + LIGAÇÃO CAIXAS OCW27 A OCW8	
								TOTAL:	250 ml		

RESUMO	TUBOS CORRUGADOS										
	TUBOS CORRUGADOS (SN8) DN200	DN200	GEN/TUB-ACC	4500034776	10	8+6	84 ml	42 ml	42 ml	ZONA NORTE - NOVAS UNIDADES - SSn1-14 /SWn1-7	
	TUBOS CORRUGADOS (SN8) DN225	DN250	GEN/TUB-ACC	4500034776	20	13 ud	78 ml	78 ml	0 ml	ZONA NORTE - NOVAS UNIDADES - SWn1/SWn3	
	TUBO CAMBIDUR PP SN8 (VARA c/6,2) 250 mm	DN250				50 ud	298 ml	270 ml	30 ml	AVENIDA 26 - LINHA SANITÁRIOS - OTHERS-SD6 COMPRADO A PINTO&CRUZ	
	TUBOS CORRUGADOS (SN8) DN280	DN315	GEN/TUB-ACC	4500034776	30	16 ud	96 ml	96 ml	0 ml	ZONA NORTE - NOVAS UNIDADES - SWn3-SWn5	
	TUBOS CORRUGADOS HDPE -315	DN315	DN315-HDPE			5 ud	30 ml	30 ml	0 ml	ZONA ESTE - NOVAS UNIDADES - SWn3-Sw4	
	TUBOS CORRUGADOS HDPE -350	DN350	DN350-HDPE			31 ud	186 ml	186 ml	0 ml	ZONA ESTE - NOVAS UNIDADES - SWe1 - SWe7	
	TUBOS POLIETILENO - HDPE - DN350	DN350				3 ud	18 ml	18 ml	0 ml	ZONA ESTE - SWe7 + SWe8	
	TUBOS CORRUGADOS (SN8) DN355	DN350	GEN/TUB-ACC	4500034776	40	18 ud	108 ml	108 ml	0 ml	ZONA NORTE - NOVAS UNIDADES - SWn5-SW1	
	TUBO POLIETILENO - DN400 HDPE	DN400				2+8 ud	60 ml	60 ml	0 ml	ZONA SUL - CAIXA SWs7 TO OTHERS (TECNINONT)	
	TUBOS CORRUGADOS PEAD (SN8) DN450	DN450				23 ud	136 ml	136 ml	0 ml	ZONA SUL - NOVAS UNIDADES - SEGMENTOS Ai, Aj, Ah - SWe8- SWs7	
	TUBOS CORRUGADOS (SN8) DN500	DN500	GEN/TUB-ACC	4500034776	70	45 ud	270 ml	270 ml	0 ml	AVENIDA 27 - LINHA SWw1 a SWw6	
	TUBOS CORRUGADOS SW - DN500	DN500				6 ud	36 ml	36 ml	0 ml	AVENIDA 26 - SWw6 - SW5	
	TUBOS CORRUGADOS - DN500 SDR11/PN16 HDPE	DN500				2 ud	12 ml	12 ml	0 ml	- ZONA SUL - NOVAS UNIDADES - SEGMENTOS, Ah - SWw6-SW5	
	TUBOS CORRUGADOS SW - DN500	DN500				6 ud	36 ml	36 ml	0 ml	AVENIDA 26 - SWw6 - SW5	
	TUBOS PEAD (SN8) DN560	DN560				17 ud	100 ml	100 ml	0 ml	ZONA SUL - NOVAS UNIDADES - SEGMENTOS Ai, Aj, Ah - SWs7-SWs7	

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	06/09/2023	TUBOS CORRUGADOS DN560	DN560	GEN/TUB-ACC	4500034776	80	7 ud	42 ml	42 ml	0 ml	NOVAS UNIDADES - SWs10-SW6
		TUBOS DN1000-HDPE	DN1000	DN1000-HDPE			7ud	42 ml	36 ml	6ml	ZONA NORTE - NOVAS UNIDADES - existente a 45º 01SW / 45º 01SW a SW1

RESUMO

TUBOS REDE DE INCÊNDIOS

	02/04/2024	VARAS DE TUBO - DN 500 SDR11/PN16 HDPE 100	DN500				6 ud	6 ud	72 ml	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
	45425	VARAS DE TUBO - DN500 SDR11/PN16 HDPE	DN500	PPBP0R126FD30			2 ud	24 ml	24 ml	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27
	13/05/2024	VARAS TUBO PEAD DN250 SDR11 PN16	DN250	PPBP0R126FD24	4500035594	40	4 ud	24 ml	24 ml	0 ml	REDE DE CONTRA - INCÊNDIOS AVENIDA 27

RESUMO

TUBOS REDE - RAW WATER

	24/08/2023	TUBO DN100-HDPE - ÁGUA NORMAL	DN100		ANULADO		ROLO	264 ml	264 ml	0 ml	SEGMENTO Ad, Ae - TUBOS COMPRADOS PINTO&CRUZ
	24/08/2023	TUBO DN100-HDPE-P - ÁGUA POTÁVEL	DN100		ANULADO		ROLO	264 ml	264 ml	0 ml	SEGMENTO Ad, Ae - TUBOS COMPRADOS PINTO&CRUZ
	23/08/2023	TUBO PEAD MRS 100 PN16 ROLO 50MT 110 MM	DN100		COMPRADO		ROLO	550 ml	517 ml	33 ml	LINHA 4RW 220016 - AGUA NORMAL/POTÁVEL COMPRADO A PINTO&CRUZ - 11 ROLOS 50 ml