16085, 16086, 16087.

A01

ArcelorMittal Gipuzkoa, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 419
20212 OLABERRIA (Guipúzcoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

CE 09-0099 AMBE-2/08-CPR-13-1 EN 10025-1:2004

AENOR ER Empresa Registrada ER-0262/1994

ArcelorMittal

MILL TEST CERTIFICATE

BER P-28876

DISCHARGE ADDRESS	CUSTOMER
ArcelorMittal Commercial Sections S Grove Wharf DN15-8UA Gunness (S. Humberside) GRAN BRETAÑA	**BARRETT CENTRAL DISTRIBUTION LTD** BRIGG ROAD SCUNTHORPE GRAN BRETAÑA

SHIPPED AND CERTIFIED BY	CREDIT NUMBER	PORT OF LOADING
ARCELORMITTAL BERGARA C/IBARRA, 6 20570 BERGARA (Guipuzcoa) TELEF. (943) 76.19.40 - FAX (943) 765243		**PASAJES, SPAIN**
	PORT OF DISCHARGE	VESSEL
	GUNNESS BARRET	**LADY ALEXANDRA**

OUR REFERENCE	CONTRACT NUMBER	ORDER NUMBER	DATE
P1704995	**E-47525/1100431600**	**J002183**	**11/03/2016**

HOT ROLLED STEEL STRUCTURALS

SIZE	LENGTH	BUNDLES	PIECES BUNDLES	TOTAL PIECES	WEIGHT BUNDLES	TOTAL WEIGHT	HEAT
Pintar Testas: VERDE **Instrucciones de carga: carga con alma horizontal embarque en bodega**							
PF CHANNEL 200x75x23	**9,5**	**6**	**20**	**120**	**4446**	**26.676**	**360239**
PF CHANNEL 200x75x23	**14**	**5**	**12**	**60**	**3931**	**19.655**	**360242**
PF CHANNEL 200x75x23	**15,5**	**6**	**12**	**72**	**4352**	**26.112**	**360245**

TOTAL BUNDLES **17** TOTAL WEIGHT **72.443 Kg.**

A02 EN 10204/3.1 A03

S 355 J0+M - EN 10025-2/2004 SUITABLE FOR GALVANIZING (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.279

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb					Cev
B11	B04	C71	C72	C73	C74	C75	C76	C77	C78									
PFC-200x75x23	360239	,11	1,09	,18	,014	,010	,012	,045	,121	,351	,158	,036	,000					,36
PFC-200x75x23	360242	,10	1,08	,19	,015	,010	,012	,045	,137	,356	,178	,040	,000					,36
PFC-200x75x23	360245	,09	1,04	,19	,018	,012	,012	,045	,203	,419	,178	,039	,001					,36

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5,65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B03	C11	C12	C13	C50	C03	C40/41	C42			C43
PFC-200x75x23	360239	363	514	31,4		0º	10	192	185	175	184
PFC-200x75x23	360242	394	527	30,1		0º	10	145	171	180	165
PFC-200x75x23	360245	381	517	33,		0º	10	167	176	188	177

3 análisis

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMB
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Responsable del Departamento de Calidad Z01

Amagoia Lekuona

ARCELORMITTAL GIPUZKOA, S.L.U. INSCRITA EN EL REGISTRO MERCANTIL DE GUIPUZCOA, TOMO 1253 DEL LIBRO DE INSCRIPCIONES, HOJA SS-5017, FOLIO 137, INSCRIPCION 1ª - Nº I.V.A./N.I.F.: (ES) B-20435301

Material: P.F. CHANNEL 200MM X 75MM X 23KGM - Certificate: 0016087 - Cast: 360245

This is a True Copy of Original Test Certificate: - 0016087 - Page: 1 of 1

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer: ALPINE GROUP (1974) LIMITED
Load Number:
Customer Order Number: S3991/87762
Advice Number: G756177
Material Code: P.F. CHANNEL 200MM X 75MM X 23KGM
Certificate Number: 0016087
Cast Number: 360245
Invoice Number:

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer:	**ALPINE GROUP (1974) LIMITED**
Load Number:	
Customer Order Number:	**S3991/87762**
Advice Number:	**G756177**
Material Code:	**P.F. CHANNEL 200MM X 75MM X 23KGM**
Certificate Number:	**0016822**
Cast Number:	**360711**
Invoice Number:	

This is a True Copy of Original Test Certificate: - 0016822 - Page: 1 of 1

Material: P.F. CHANNEL 200MM X 75MM X 23KGM - Certificate: 0016822 - Cast: 360711

16520 16521 16522

A01

ArcelorMittal Gipuzkoa, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 419
20212 OLABERRIA (Guipúzcoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

09-0099
AMBE-2/08-CPR-13-1
EN 10025-1:2004

AENOR ER Empresa Registrada
ER-0262/1994

ArcelorMittal

MILL TEST CERTIFICATE

BER P-28989

DISCHARGE ADDRESS	CUSTOMER
ArcelorMittal Commercial Sections S Grove Wharf DN15-8UA Gunness (S. Humberside) GRAN BRETAÑA	**BARRETT CENTRAL DISTRIBUTION LTD** BRIGG ROAD SCUNTHORPE GRAN BRETAÑA

SHIPPED AND CERTIFIED BY	CREDIT NUMBER	PORT OF LOADING
ARCELORMITTAL BERGARA C/IBARRA, 6 20570 BERGARA (Guipúzcoa) TELEF. (943) 76.19.40 - FAX (943) 765243		**PASAJES, SPAIN**
	PORT OF DISCHARGE	VESSEL
	GUNNESS BARRET	**OSTENAU**

OUR REFERENCE	CONTRACT NUMBER	ORDER NUMBER	DATE
P1704995	**E-47928/1100436969**	**J002377**	**31/03/2016**

HOT ROLLED STEEL STRUCTURALS

SIZE	LENGTH	BUNDLES	PIECES BUNDLES	TOTAL PIECES	WEIGHT BUNDLES	TOTAL WEIGHT	HEAT
Pintar Testas: VERDE **Instrucciones de carga: carga con alma horizontal embarque en bodega**							
PF CHANNEL 200x75x23	9,5	6	20	120	4446	26.676	360583
PF CHANNEL 200x75x23	12,2	1	15	15	4282	4.282	360584
PF CHANNEL 200x75x23	12,2	32	16	512	4568	146.176	360706,360707
PF CHANNEL 200x75x23	14	7	12	84	3931	27.517	360711
PF CHANNEL 200x75x23	15,5	14	12	168	4352	60.928	360718,360719

TOTAL BUNDLES **60** TOTAL WEIGHT **265.579 Kg.**

A02 EN 10204/3.1

A03

S 355 J0+M - EN 10025-2/2004 SUITABLE FOR GALVANIZING (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.279

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%) C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B2	C01	C72	C73	C74	C75	C76	C77	C78										
PFC-200x75x23	360583	,11	1,04	,16	,009	,011	,012	,044	,080	,277	,132	,033	,001						,34
PFC-200x75x23	360584	,11	1,06	,18	,008	,013	,012	,043	,075	,299	,151	,028	,000						,34
PFC-200x75x23	360706	,11	1,05	,18	,012	,010	,011	,043	,061	,355	,127	,027	,000						,34
PFC-200x75x23	360707	,11	1,03	,16	,010	,015	,011	,042	,073	,351	,125	,032	,000						,35
PFC-200x75x23	360711	,10	1,08	,17	,013	,008	,011	,045	,117	,376	,167	,027	,000						,35
PFC-200x75x23	360718	,12	1,03	,17	,012	,013	,012	,044	,061	,384	,144	,027	,000						,37
PFC-200x75x23	360719	,13	1,04	,18	,014	,015	,011	,047	,069	,367	,151	,027	,000						

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES ReH MPa	Rm MPa	A% L0=5,65VSo	Doblado 180º	FLEXIÓN POR CHOQUE IMPACT TEST °C	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B2	C11	C12	C13	C50	C03	C40/41		C42		C43
PFC-200x75x23	360583	396	515	32,5		0º	10	43	113	58	71
PFC-200x75x23	360584	396	525	29,9		0º	10	193	180	174	182
PFC-200x75x23	360706	381	509	34,3		0º	10	169	179	186	178

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer:	**ALPINE GROUP (1974) LIMITED**
Load Number:	
Customer Order Number:	**S3991/87762**
Advice Number:	**G756177**
Material Code:	**P.F. CHANNEL 200MM X 75MM X 23KGM**
Certificate Number:	**0015511**
Cast Number:	**360238**
Invoice Number:	

This is a True Copy of Original Test Certificate: - 0015511 - Page: 1 of 1

Material: P.F. CHANNEL 200MM X 75MM X 23KGM - Certificate: 0015511 - Cast: 360238

A01

ArcelorMittal Gipuzkoa, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 419
20212 OLABERRIA (Guipúzcoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

CE 09-0099 AMBE-2/08-CPR-13-1 EN 10025-1:2004

AENOR ER Empresa Registrada ER-0262/1994

ArcelorMittal

15696

MILL TEST CERTIFICATE

BER P-28719

DISCHARGE ADDRESS	CUSTOMER
ArcelorMittal Commercial Sections S Grove Wharf DN15-8UA Gunness (S. Humberside) GRAN BRETAÑA	**BARRETT CENTRAL DISTRIBUTION LTD** BRIGG ROAD SCUNTHORPE GRAN BRETAÑA

SHIPPED AND CERTIFIED BY	CREDIT NUMBER	PORT OF LOADING
ARCELORMITTAL BERGARA C/IBARRA, 6 20570 BERGARA (Guipúzcoa) TELEF. (943) 76.19.40 - FAX (943) 765243		**PASAJES, SPAIN**
	PORT OF DISCHARGE	VESSEL
	GUNNESS BARRET	**ARCTICA HAV**

OUR REFERENCE	CONTRACT NUMBER	ORDER NUMBER	DATE
P1704995	**E-47096/1100425494**	**J002086**	**19/02/2016**

HOT ROLLED STEEL STRUCTURALS

SIZE	LENGTH	BUNDLES	PIECES BUNDLES	TOTAL PIECES	WEIGHT BUNDLES	TOTAL WEIGHT	HEAT
Pintar Testas: VERDE **Instrucciones de carga: carga con alma horizontal embarque en bodega**							
PF CHANNEL 200x75x23	**12,2**	**3**	**16**	**48**	**4568**	**13.704**	**360237,360238**

TOTAL BUNDLES **3** TOTAL WEIGHT **13.704 Kg.**

A02 EN 10204/3.1 A03

S 355 J0+M - EN 10025-2/2004 SUITABLE FOR GALVANIZING (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.279

C70:E MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%) C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb					Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78									
PFC-200x75x23	360237	,10	1,02	,19	,017	,013	,012	,045	,112	,379	,145	,035	,000					,34
PFC-200x75x23	360238	,09	1,06	,19	,015	,007	,012	,050	,121	,411	,199	,046	,000					,35

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES ReH MPa	Rm MPa	A% L0=5,65VSo	Doblado 180°	FLEXIÓN POR CHOQUE IMPACT TEST °C	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
PFC-200x75x23	360237	383	508	30,5		0º	10	197	215	198	203
PFC-200x75x23	360238	388	520	29,2		0º	10	158	76	158	131

2 análisis

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación

B06: Marca AMB
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Responsable del Departamento de Calidad Z01

Amagoia Lekuona

Material: UNIVERSAL BEAM 254 X 102 X 22 - Certificate: 0014393 - Cast: 580305

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP™ CELSA BARCELONA

Sostenibilidad Siderúrgica Gestión ESS SGSS - 001:2010

CE 3099 06 CELSA01BCN

14 3589
14 3591
14 3590
14 3511
14 3592
14 3593

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004
Type: S 355 JO +AR
St. Tol.: EN 10034/93
Our Ref: 02326292
(B26-31BAL2)

Customer: BARRETT STEEL LTD
CUTLER HEIGHTS LANE
BD4 9HU BRADFORD DUDLEY HILL
United Kingdom

Destination: BARRETT STEEL SERVICES LTD
DAT GROVEPORT
United Kingdom

Document n°: 201139643
Order number : 10471855
Your order : J001933

Material (L=Lenght)	Heat Number	CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
		C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	Nb %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Tensile Str. MPA	Elong. L0= 5,65VSo %
S355JO +AR UB254X102X22 L.12.5m	CE199263	0.100	1.190	0.180	0.019	0.017	0.120	0.130	0.320	0.025	0.029	0.002	0.003	0.0118	0.001	0.363	400	530	28.4
S355JO +AR UB254X102X22 L.12.5m	CE199264	0.110	1.180	0.180	0.011	0.017	0.120	0.130	0.320	0.025	0.030	0.003	0.003	0.0108	0.001	0.372	402	528	28.1
S355JO +AR UB254X102X22 L.12.5m	CE199343	0.090	1.110	0.220	0.025	0.028	0.120	0.140	0.490	0.023	0.031	0.002	0.003	0.0110	0.001	0.352	389	521	28.2
S355JO +AR UB254X102X22 L.12.5m	CE199345	0.100	1.190	0.210	0.029	0.025	0.130	0.140	0.440	0.023	0.031	0.003	0.004	0.0112	0.001	0.374	401	528	29.3
S355JO +AR UB254X102X22 L.12.5m	CE580305	0.080	1.150	0.190	0.027	0.015	0.110	0.130	0.350	0.021	0.030	0.003	0.002	0.0109	0.001	0.336	392	522	28.3
S355JO +AR UB254X102X22 L.12.5m	CE580312	0.100	1.110	0.180	0.030	0.019	0.140	0.130	0.350	0.021	0.028	0.002	0.003	0.0112	0.001	0.355	388	522	26.7
S355JO +AR UB254X102X22 L.14m	CE199343	0.090	1.110	0.220	0.025	0.028	0.120	0.140	0.490	0.023	0.031	0.002	0.003	0.0110	0.001	0.352	389	521	28.2
S355JO +AR UB254X102X22 L.14m	CE199344	0.080	1.150	0.200	0.025	0.027	0.160	0.140	0.470	0.024	0.032	0.002	0.002	0.0113	0.001	0.356	401	526	28.2
S355JO +AR UB254X102X22 L.14m	CE199345	0.100	1.190	0.210	0.029	0.025	0.130	0.140	0.440	0.023	0.031	0.003	0.004	0.0112	0.001	0.374	401	528	29.3
S355JO +AR UB254X102X22 L.14m	CE580305	0.080	1.150	0.190	0.027	0.015	0.110	0.130	0.350	0.021	0.030	0.003	0.002	0.0109	0.001	0.336	392	522	28.3
S355JO +AR UB254X102X22 L.14m	CE580312	0.100	1.110	0.180	0.030	0.019	0.140	0.130	0.350	0.021	0.028	0.002	0.003	0.0112	0.001	0.355	388	522	26.7
S355JO +AR UB254X102X22 L.15.5m	CE199343	0.090	1.110	0.220	0.025	0.028	0.120	0.140	0.490	0.023	0.031	0.002	0.003	0.0110	0.001	0.352	389	521	28.2

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

Castellbisbal,30.12.2015
Juan Diego Martínez Gálvez
Quality Control Manager

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

This is a True Copy of Original Test Certificate: - 0014393 - Page: 1 of 4

BARRETT Constructional Steel
Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer: ALPINE GROUP (1974) LIMITED
Load Number: S3991/87762
Customer Order Number: G756177
Advice Number:
Material Code: UNIVERSAL BEAM 254 X 102 X 22
Certificate Number: 0014393
Cast Number: 580305
Invoice Number:

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer:	**ALPINE GROUP (1974) LIMITED**
Load Number:	
Customer Order Number:	**S3991/87762**
Advice Number:	**G756177**
Material Code:	**UNIVERSAL BEAM 254 X 102 X 22**
Certificate Number:	**0014393**
Cast Number:	**580305**
Invoice Number:	

Material: UNIVERSAL BEAM 254 X 102 X 22 - Certificate: 0014393 - Cast: 580305

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP
CELSA BARCELONA

Sostenibilidad Siderurgica

0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004
Type: S 355 JO +AR
St. Tol.: EN 10034/93
Our Ref: 02326292
(B26-31BRESI)

Customer: BARRETT STEEL LTD
CUTLER HEIGHTS LANE
BD4 9HU BRADFORD DUDLEY HILL
United Kingdom

Destination: BARRETT STEEL SERVICES LTD
DAT GROVEPORT
United Kingdom

Document n°: 201139643
Order number : 10471855
Your order : J001933

Material (L-Lenght)		Heat Number	MECH. PROPERTIES Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S355JO +AR	UB254X102X22 L.12.5m	CE199263	137	106	112	118	0
S355JO +AR	UB254X102X22 L.12.5m	CE199264	142	111	117	123	0
S355JO +AR	UB254X102X22 L.12.5m	CE199343	143	113	119	125	0
S355JO +AR	UB254X102X22 L.12.5m	CE199345	138	107	113	119	0
S355JO +AR	UB254X102X22 L.12.5m	CE580305	151	121	127	133	0
S355JO +AR	UB254X102X22 L.12.5m	CE580312	149	119	125	131	0
S355JO +AR	UB254X102X22 L.14m	CE199343	143	113	119	125	0
S355JO +AR	UB254X102X22 L.14m	CE199344	139	108	114	120	0
S355JO +AR	UB254X102X22 L.14m	CE199345	138	107	113	119	0
S355JO +AR	UB254X102X22 L.14m	CE580305	151	121	127	133	0
S355JO +AR	UB254X102X22 L.14m	CE580312	149	119	125	131	0
S355JO +AR	UB254X102X22 L.15.5m	CE199343	143	113	119	125	0

Type sample for Impact Test: Direct or transformed data to KV 550/10.

Castellbisbal,30.12.2015
Juan Diego Martínez Gálvez
Quality Control Manager

Material: UNIVERSAL BEAM 254 X 102 X 22 - Certificate: 001439 3 - Cast: 580305

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS-001/2010

CE
0096
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004
Type: S 355 JO +AR
St. Tol.: EN 10034/93
Our Ref: 02326292
(B26-31BAL2)

Customer: BARRETT STEEL LTD
CUTLER HEIGHTS LANE
BD4 9HU BRADFORD DUDLEY HILL
United Kingdom

Destination: BARRETT STEEL SERVICES LTD
DAT GROVEPORT
United Kingdom

Document n°: 201139643
Order number : 10471855
Your order : J001933

Material (L=Lenght)	Heat Number	CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
		C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	Nb %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Ten-sile Str. MPA	Elong. L0= 5,65VSo %
S355JO +AR UB254X102X22 L.15.5m	CE199344	0.080	1.150	0.200	0.025	0.027	0.160	0.140	0.470	0.024	0.032	0.002	0.002	0.0113	0.001	0.356	401	526	28.2
S355JO +AR UB254X102X22 L.15.5m	CE580305	0.080	1.150	0.190	0.027	0.015	0.110	0.130	0.350	0.021	0.030	0.003	0.002	0.0109	0.001	0.336	392	522	28.3
S355JO +AR UB254X102X22 L.15.5m	CE580312	0.100	1.110	0.180	0.030	0.019	0.140	0.130	0.350	0.021	0.028	0.002	0.003	0.0112	0.001	0.355	388	522	26.7

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

Castellbisbal,30.12.2015
Juan Diego Martínez Gálvez
Quality Control Manager

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

This is a True Copy of Original Test Certificate: - 0014393 - Page: 3 of 4

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer: ALPINE GROUP (1974) LIMITED
Load Number:
Customer Order Number: S3991/87762
Advice Number: G756177
Material Code: UNIVERSAL BEAM 254 X 102 X 22
Certificate Number: 0014393
Cast Number: 580305
Invoice Number:

Material: UNIVERSAL BEAM 254 X 102 X 22 - Certificate: 0014393 - Cast: 580305

COMPANIA ESPANOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP™ CELSA BARCELONA

Sostenibilidad Siderurgica Gestión RSE SGSS - 007/2011C

CE 0099 06 CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004
Type: S 355 JO +AR
St. Tol.: EN 10034/93
Our Ref: 02326292
(B26-31BRESI)

Customer: BARRETT STEEL LTD
CUTLER HEIGHTS LANE
BD4 9HU BRADFORD DUDLEY HILL
United Kingdom

Destination: BARRETT STEEL SERVICES LTD
DAT GROVEPORT
United Kingdom

Document n°: 201139643
Order number : 10471855
Your order : J001933

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S355JO +AR UB254X102X22 L.15.5m	CE199344	139	108	114	120	0
S355JO +AR UB254X102X22 L.15.5m	CE580305	151	121	127	133	0
S355JO +AR UB254X102X22 L.15.5m	CE580312	149	119	125	131	0

Type sample for Impact Test: Direct or transformed data to KV 550/10.

Castellbisbal,30.12.2015
Juan Diego Martínez Gálvez
Quality Control Manager

This is a True Copy of Original Test Certificate: - 0014393 - Page: 4 of 4

Barrett Constructional Steel Limited
282 Cutler Heights Lane
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West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer: ALPINE GROUP (1974) LIMITED
Load Number:
Customer Order Number: S3991/87762
Advice Number: G756177
Material Code: UNIVERSAL BEAM 254 X 102 X 22
Certificate Number: 0014393
Cast Number: 580305
Invoice Number:

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer:	**ALPINE GROUP (1974) LIMITED**
Load Number:	
Customer Order Number:	**S3991/87762**
Advice Number:	**G756177**
Material Code:	**UNIVERSAL BEAM 254 X 102 X 22**
Certificate Number:	**0016115**
Cast Number:	**163658**
Invoice Number:	

This is a True Copy of Original Test Certificate: - 0016115 - Page: 1 of 1

Material: UNIVERSAL BEAM 254 X 102 X 22 - Certificate: 0016115 - Cast: 163658

16115,

A01

ArcelorMittal Gipuzkoa, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 419
20212 OLABERRIA (Guipúzcoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

CE 09-0099 AMOL-2/08-CPR-13-1 EN 10025-1:2004

AENOR ER Empresa Registrada ER-0036/1992

ArcelorMittal

MILL TEST CERTIFICATE

OLA P-48728

DISCHARGE ADDRESS	CUSTOMER
ArcelorMittal Commercial Sections S Grove Wharf DN15-8UA Gunness (S. Humberside) GRAN BRETAÑA	**BARRETT CENTRAL DISTRIBUTION LTD** BRIGG ROAD SCUNTHORPE GRAN BRETAÑA

SHIPPED AND CERTIFIED BY	CREDIT NUMBER	PORT OF LOADING
ARCELORMITTAL OLABERRIA CARRETERA MADRID - IRUN, KM. 419 20212 OLABERRIA (Guipúzcoa) TELEF. (943) 80.50.00 - FAX (943) 88.04.04		**PASAJES, SPAIN**
	PORT OF DISCHARGE	VESSEL
	GUNNESS BARRET	**LADY ALEXANDRA**

OUR REFERENCE	CONTRACT NUMBER	ORDER NUMBER	DATE
P1704995	**E-53968/1100424184**	**J002052**	**11/03/2016**

HOT ROLLED STEEL STRUCTURALS

SIZE	LENGTH	BUNDLES	PIECES BUNDLES	TOTAL PIECES	WEIGHT BUNDLES	TOTAL WEIGHT	HEAT
Pintar Testas: VERDE Instrucciones de carga: carga con alma horizontal							
U BEAMS 254x102x22	**9,5**	**5**	**20**	**100**	**4180**	**20.900**	**163658,163659**
U BEAMS 254x102x22	**11**	**3**	**20**	**60**	**4840**	**14.520**	**163659**
U BEAMS 254x102x25	**11**	**2**	**18**	**36**	**4990**	**9.980**	**163665**
U BEAMS 254x102x25	**12,5**	**3**	**16**	**48**	**5040**	**15.120**	**163664,163665**
U BEAMS 254x102x25	**15,5**	**3**	**12**	**36**	**4687**	**14.061**	**163665**
U BEAMS 254x102x28	**9,5**	**2**	**18**	**36**	**4839**	**9.678**	**163667**
U BEAMS 254x102x28	**9,5**	**1**	**14**	**14**	**3764**	**3.764**	**163667**
U BEAMS 254x102x28	**14**	**3**	**12**	**36**	**4754**	**14.262**	**163779**
U BEAMS 254x102x28	**15,5**	**3**	**10**	**30**	**4387**	**13.161**	**163667**

TOTAL BUNDLES **25** TOTAL WEIGHT **115.446 Kg.**

A02 EN 10204/3.1 A03

S 355 J0+M - EN 10025-2/2004 SUITABLE FOR GALVANIZING (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B33	C71	C72	C73	C74	C75	C76	C77	C78										
UB-254x102x22	163658	,10	,72	,21	,014	,020	,009	,043	,090	,260	,160	,034	,003						,28
UB-254x102x22	163659	,09	,71	,21	,014	,020	,009	,043	,090	,270	,160	,034	,003						,27
UB-254x102x25	163664	,09	,70	,18	,012	,020	,008	,045	,090	,250	,140	,029	,003						,26
UB-254x102x25	163665	,09	,73	,20	,014	,021	,009	,045	,090	,240	,130	,025	,003						,27
UB-254x102x28	163667	,11	,77	,18	,016	,023	,009	,046	,100	,300	,140	,024	,003						,30
UB-254x102x28	163779	,08	,73	,17	,019	,023	,008	,040	,120	,320	,130	,026	,003						,26

[redacted]

ALPINE GROUP (1974) LIMITED

Customer:
Load Number: S3991/87762
Customer Order Number: G756177
Advice Number:

Material Code: UNIVERSAL BEAM 254 X 102 X 22
Certificate Number: 0013574
Cast Number: 63076
Invoice Number:

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

This is a True Copy of Original Test Certificate: - 0013574 - Page: 1 of 1

12569
12574

TATA

A01
LONGS STEEL UK LIMITED
P.O. Box 1, Brigg Road,
Scunthorpe,
North Lincolnshire, DN16 1BP.
Telephone: 01724 404040
Fax: 402353 Telex: 52601

INSPECTION CERTIFICATE

A02

Advance
In Accordance with EN10204 3.1
Product manufactured under a Management System approved to ISO 9001

Date: 23/10/15 (Z02)
Cert No.: SMSM/15/00881184/1 (A03)

Customer (A06)

BARRETT STEEL LIMITED
BARRETT STEEL SERVICES
CUTLER HEIGHTS LANE
DUDLEY HILL
BRADFORD
WEST YORKSHIRE BD4 9HU

B06/A10

CSI:2478374

Inspection (A11): WORKS INSPECTION

Longs Steel Ref. No. (A08): 315837/ 1
Works Order/Item No. (A08): 391643/ 1
Customers Order No. (A07): J001807

Specification/Product (B01/B02)
EN10025-2:S355J0+AR
ADVANCE355J0

UKB 254 X 102 X 22
As Rolled.
Length 12500mm (B09-B12)

CE 0038

L=Longitudinal T=Transverse Z=Through Thickness S=Sub-Surface M=Mid-Thickness Q=Quarter-Thickness TH=Third-Thickness BS=Bottom Surface A=Supply Condition N=Normalised SR=Stress Relieved SA=Strain Aged (C70)

Steelmaking Process: B.O.S.

B08 Quantity	B07 Cast/Heat No.	B07 Piece No.	C02 Dir	C11 Yield Stress Re MPa	C12 Tensile Strength Rm	C14 Re/Rm %	C13 Elong% A Lo = 5.65√So	C02 Dir	C01 Pos	Charpy Impact KV2 10x5x2mmV Units Joules C42	C43	C (C71-92)	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Nb	N	Sn	Ti	V	CEV
	Specification	Min		355	470		22			14 Av/ 10 Ind @ 0C		.20	.55	1.60	.035	.035					.550		.012				.45
		Max			630																						
16	63076			421	549		30			0C 76 75 68	73	.16	.19	1.34	.012	.008	0.012	.001	.018	.043	.011	.002	.009	.001	.001	.043	.40
160	63078			408	546		35			0C 84 85 89	86	.15	.22	1.36	.022	.009	0.015	.001	.018	.033	.011	.002	.009	.001	.002	.040	.39
				408	534		33			0C 69 73 57	66																
				418	550		37			0C 61 55 57	58																
				420	543		34			0C 48 57 85	63																

CE Marking Certificate Number = 0038/CPR/20050001/A

On behalf of Longs Steel UK Limited, the manufacturer. These results are certified by Longs Steel UK Limited and comply with the requirements of the Product Description. (Z01)

R.J.Preston, Test House Manager, Scunthorpe (Z02)

All original Inspection Certificates issued by Longs Steel UK Limited will contain either an embossed stamp, or be impregnated with a Longs Steel UK Limited watermarked logo, or a combination of both. Any recipient of a copy of a Longs Steel UK Limited Inspection Certificate without either the stamp or watermarking should ensure from the supplier that it is a true and accurate reproduction of the original. Company Registration Number 09438207.

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer:	**ALPINE GROUP (1974) LIMITED**
Load Number:	
Customer Order Number:	**S3991/87762**
Advice Number:	**G756177**
Material Code:	**UNIVERSAL BEAM 254 X 146 X 31**
Certificate Number:	**0017172**
Cast Number:	**164384**
Invoice Number:	

This is a True Copy of Original Test Certificate: - 0017172 - Page: 1 of 3

Material: UNIVERSAL BEAM 254 X 146 X 31 - Certificate: 0017172 - Cast: 164384

16176 16556 16557 16559 16560
A01 16178 17014 17169 17170

ArcelorMittal Gipuzkoa, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 419
20212 OLABERRIA (Guipúzcoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

CE 09-0099 AMOL-2/08-CPR-13-1 EN 10025-1:2004

AENOR ER Empresa Registrada ER-0036/1992

ArcelorMittal

MILL TEST CERTIFICATE

OLA P-49049

DISCHARGE ADDRESS	CUSTOMER
ArcelorMittal Commercial Sections S Grove Wharf DN15-8UA Gunness (S. Humberside) GRAN BRETAÑA	**BARRETT CENTRAL DISTRIBUTION LTD** BRIGG ROAD SCUNTHORPE GRAN BRETAÑA

SHIPPED AND CERTIFIED BY	CREDIT NUMBER	PORT OF LOADING
ARCELORMITTAL OLABERRIA CARRETERA MADRID - IRUN, KM. 419 20212 OLABERRIA (Guipúzcoa) TELEF. (943) 80.50.00 - FAX (943) 88.04.04		**PASAJES, SPAIN**
	PORT OF DISCHARGE	VESSEL
	GUNNESS BARRET	**OSTENAU**

OUR REFERENCE	CONTRACT NUMBER	ORDER NUMBER	DATE
P1704995	**E-54604/1100432628**	**J002232**	**31/03/2016**

HOT ROLLED STEEL STRUCTURALS

SIZE	LENGTH	BUNDLES	PIECES BUNDLES	TOTAL PIECES	WEIGHT BUNDLES	TOTAL WEIGHT	HEAT
Pintar Testas: VERDE Instrucciones de carga: carga con alma horizontal							
U BEAMS 254x146x31	12,5	29	12	348	4665	135.285	164248,164249,164250, 164251,164252
U BEAMS 254x146x31	13	5	12	60	4852	24.260	164253,164254
U BEAMS 254x146x31	14	23	10	230	4354	100.142	164246,164247,164248
U BEAMS 254x146x31	15,5	31	10	310	4821	149.451	164257,164374,164378, 164379,164384
U BEAMS 254x146x31	16,5	10	10	100	5132	51.320	164251,164252
U BEAMS 254x146x31	17,5	11	8	88	4354	47.894	164383,164384
U BEAMS 254x146x37	11	5	12	60	4884	24.420	164241,164245
U BEAMS 254x146x37	12,5	30	10	300	4625	138.750	164241,164242,164245
U BEAMS 254x146x37	14	10	10	100	5180	51.800	164238,164239,164240
U BEAMS 254x146x37	18,3	6	6	36	4063	24.378	164246,164408
U BEAMS 254x146x43	11	5	10	50	4730	23.650	164233
U BEAMS 254x146x43	12,5	12	8	96	4300	51.600	164232,164417
U BEAMS 254x146x43	14	4	8	32	4816	19.264	164234
U BEAMS 254x146x43	15,5	6	6	36	3999	23.994	164232,164233,164417

TOTAL BUNDLES **187** TOTAL WEIGHT **866.208 Kg.**

A02 EN 10204/3.1 A03

S 355 J0+M - EN 10025-2/2004 SUITABLE FOR GALVANIZING (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%) C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B31	C71	C72	C73	C74	C75	C76	C77	C78										
UB-254x146x31	164256	,10	,69	,19	,019	,022	,009	,045	,150	,360	,160	,036	,003						,29

Barrett Constructional Steel Limited
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West Yorkshire, BD4 9HU
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www.barrettsteel.com

Customer:	**ALPINE GROUP (1974) LIMITED**
Load Number:	
Customer Order Number:	**S3991/87762**
Advice Number:	**G756177**
Material Code:	**UNIVERSAL BEAM 254 X 146 X 31**
Certificate Number:	**0017172**
Cast Number:	**164384**
Invoice Number:	

Material: UNIVERSAL BEAM 254 X 146 X 31 - Certificate: 0017172 - Cast: 164384

A01

ArcelorMittal Gipuzkoa, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM 47,9
20212 OLABERRIA (Guipúzcoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

CE 09-0099 AMOL-2/08-CPR-13-1 EN 10025-1:2004

AENOR ER Empresa Registrada ER-0036/1992

ArcelorMittal

MILL TEST CERTIFICATE

OLA P-49049

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%) C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B12	C71	C72	C73	C74	C75	C76	C77	C78										
UB-254x146x31	164247	,10	,70	,21	,019	,020	,008	,045	,170	,410	,190	,035	,003						,30
UB-254x146x31	164248	,10	,69	,20	,021	,022	,008	,044	,150	,400	,180	,035	,003						,29
UB-254x146x31	164249	,11	,69	,20	,020	,020	,008	,046	,170	,340	,160	,031	,003						,31
UB-254x146x31	164250	,10	,70	,20	,018	,021	,008	,045	,150	,360	,170	,038	,003						,30
UB-254x146x31	164251	,10	,71	,17	,021	,021	,008	,045	,170	,400	,180	,037	,003						,31
UB-254x146x31	164252	,10	,70	,19	,019	,020	,009	,044	,140	,440	,170	,034	,003						,30
UB-254x146x31	164253	,09	,69	,20	,019	,022	,008	,043	,190	,310	,250	,040	,003						,30
UB-254x146x31	164254	,10	,70	,20	,017	,025	,009	,045	,130	,290	,230	,041	,003						,30
UB-254x146x31	164257	,09	,69	,18	,023	,025	,009	,043	,160	,390	,150	,025	,003						,29
UB-254x146x31	164374	,08	,72	,21	,017	,021	,009	,041	,240	,270	,220	,038	,003						,30
UB-254x146x31	164378	,09	,77	,18	,015	,020	,008	,058	,150	,290	,210	,030	,003						,30
UB-254x146x31	164379	,10	,66	,17	,019	,025	,009	,045	,140	,320	,200	,029	,004						,28
UB-254x146x31	164383	,09	,69	,19	,018	,020	,008	,045	,190	,300	,220	,038	,003						,30
UB-254x146x31	164384	,10	,73	,16	,021	,020	,009	,047	,190	,290	,200	,032	,003						,31
UB-254x146x37	164238	,10	,72	,21	,022	,020	,008	,048	,160	,310	,160	,043	,003						,30
UB-254x146x37	164239	,11	,70	,16	,017	,021	,008	,045	,150	,330	,180	,040	,003						,31
UB-254x146x37	164240	,10	,73	,19	,022	,021	,008	,051	,180	,390	,140	,028	,003						,31
UB-254x146x37	164241	,08	,73	,20	,019	,020	,009	,047	,130	,370	,130	,027	,003						,28
UB-254x146x37	164242	,11	,74	,19	,018	,020	,009	,045	,120	,350	,160	,033	,003						,30
UB-254x146x37	164245	,09	,70	,19	,015	,023	,008	,043	,120	,320	,160	,034	,003						,28
UB-254x146x37	164246	,10	,69	,19	,019	,022	,009	,045	,150	,360	,160	,036	,003						,29
UB-254x146x37	164408	,11	,73	,21	,017	,019	,008	,046	,150	,320	,180	,027	,003						,31
UB-254x146x43	164232	,09	,70	,19	,015	,020	,008	,044	,120	,290	,150	,029	,003						,27
UB-254x146x43	164233	,10	,70	,20	,015	,019	,009	,046	,140	,310	,150	,029	,003						,29
UB-254x146x43	164234	,09	,69	,19	,017	,020	,009	,044	,120	,320	,150	,029	,003						,28
UB-254x146x43	164417	,10	,73	,21	,018	,020	,009	,042	,220	,410	,180	,031	,003						,33

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES ReH MPa	Rm MPa	A% L0=5,65VSo	Doblado 180°	FLEXIÓN POR CHOQUE IMPACT TEST °C	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B12	C11	C12	C13	C50	C03	C40/41	C42			C43
UB-254x146x31	164246	397	507	29,8		0°	5	78	82	51	70
UB-254x146x31	164247	391	522	32,5		0°	5	78	72	79	76
UB-254x146x31	164248	396	504	28,2		0°	5	83	81	80	81
UB-254x146x31	164249	384	512	30,1		0°	5	60	37	50	49
UB-254x146x31	164250	383	495	31,9		0°	5	56	56	84	65
UB-254x146x31	164251	401	505	33,9		0°	5	79	77	81	79
UB-254x146x31	164252	407	519	34,8		0°	5	55	86	109	83
UB-254x146x31	164253	404	497	33,1		0°	5	104	89	87	93
UB-254x146x31	164254	389	519	34,6		0°	5	90	86	94	90
UB-254x146x31	164257	407	512	30,6		0°	5	50	89	92	77
UB-254x146x31	164374	393	493	29,8		0°	5	87	64	104	85
UB-254x146x31	164378	365	485	29,2		0°	5	110	90	100	100
UB-254x146x31	164379	385	501	29,7		0°	5	64	83	69	72
UB-254x146x31	164383	387	495	33,4		0°	5	100	100	108	103
UB-254x146x31	164384	385	503	29,7		0°	5	75	61	78	71
UB-254x146x37	164238	395	490	31,2		0°	7,5	114	121	122	119
UB-254x146x37	164239	391	508	33,1		0°	7,5	111	110	125	115
UB-254x146x37	164240	397	512	31,1		0°	7,5	143	108	118	123

Barrett Constructional Steel Limited
282 Cutler Heights Lane
Dudley Hill
Bradford
West Yorkshire, BD4 9HU
Tel: 01724 290950 Fax: 01724 290966
www.barrettsteel.com

Customer:	**ALPINE GROUP (1974) LIMITED**
Load Number:	
Customer Order Number:	**S3991/87762**
Advice Number:	**G756177**
Material Code:	**UNIVERSAL BEAM 254 X 146 X 31**
Certificate Number:	**0017172**
Cast Number:	**164384**
Invoice Number:	

Material: UNIVERSAL BEAM 254 X 146 X 31 - Certificate: 0017172 - Cast: 164384

A01

ArcelorMittal Gipuzkoa, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 419
20212 OLABERRIA (Gipúzcoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

CE 09-0099 AMOL-2/08-CPR-13-1 EN 10025-1:2004

AENOR ER Empresa Registrada ER-0036/1992

ArcelorMittal

MILL TEST CERTIFICATE

OLA P-49049

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5,65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B20	C11	C12	C13	C50	C03	C40/41	C42			C43
UB-254x146x37	164241	379	500	29,2		0º	7,5	90	45	63	66
UB-254x146x37	164242	398	512	31,6		0º	7,5	52	98	96	82
UB-254x146x37	164245	371	495	30,7		0º	7,5	78	87	115	93
UB-254x146x37	164246	396	502	31,2		0º	7,5	129	126	115	123
UB-254x146x37	164408	407	513	29,7		0º	7,5	95	34	39	56
UB-254x146x43	164232	372	487	36,4		0º	10	173	112	179	155
UB-254x146x43	164233	386	489	33,4		0º	10	56	63	42	54
UB-254x146x43	164234	368	486	34,		0º	10	98	83	110	97
UB-254x146x43	164417	370	492	31,5		0º	10	182	174	168	175

27 análisis

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Responsable del Departamento de Calidad Z01

Lorenzo Zabala