

A01

ArcelorMittal Gipuzkoa, S.L.U.

Long Carbon Europe  
 CARRETERA MADRID - IRUN, KM. 419  
 20212 OLABERRIA (Gulpuzcoa)  
 TELEF. (943) 80.50.00 - FAX (943) 88.04.04



## MILL TEST CERTIFICATE

OLA P-30494

DISCHARGE ADDRESS		CUSTOMER	
Plesa Anahuac Y Clas, S.A. de C.V. Av. Valle de las Alamedas 66-O Col. S. Francisco Chilpan, Tul MEXICO		Plesa Anahuac Y Clas, S.A. de C.V. Av. Valle de las Alamedas 66-O Col. S. Francisco Chilpan, Tul MEXICO	
SHIPPED AND CERTIFIED BY		CREDIT NUMBER	PORT OF LOADING
ARCELORMITTAL OLABERRIA CARRETERA MADRID - IRUN, KM. 419 20212 OLABERRIA (Gulpuzcoa) TELEF. (943) 80.50.00 - FAX (943) 88.04.04			BILBAO, SPAIN
		PORT OF DISCHARGE	VESSEL
		VERACRUZ	ASIABORG
OUR REFERENCE	CONTRACT NUMBER	ORDER NUMBER	DATE
Igomez	01-E-40740 / 1700014099	12164	30/03/2012

Material: WF Vigas,

El exportador de los productos incluidos en el presente documento,  
 Autorización aduanera no.

ACERALIA GIPUZKOA S.L.U. ES/20/0040/03

Declara que, salvo indicación en sentido contrario, estos  
 productos gozan de un origen preferencial ESPAÑA

SIZE	LENGTH	BUNDLES	PIECES BUNDLES	TOTAL PIECES	WEIGHT BUNDLES	TOTAL WEIGHT	HEAT
<b>+RED</b>							
WF BEAMS 10x15	40'	6	18	108	4898	29.388	137443
WF BEAMS 10x22	40'	6	12	72	4790	28.740	137403,137404
WF BEAMS 10x26	40'	6	10	60	4717	28.302	137399,137400
WF BEAMS 12x14	40'	7	18	126	4571	31.997	137498
WF BEAMS 12x16	40'	6	18	108	5225	31.350	137497
WF BEAMS 12x26	40'	23	10	230	4717	108.491	137448,137449,137454, 137455
WF BEAMS 12x30	40'	28	8	224	4355	121.940	137443,137444,137445, 137446,137447
WF BEAMS 12x40	40'	9	6	54	4355	39.195	137351,137352,137353
WF BEAMS 12x50	40'	8	6	48	5443	43.544	137350
WF BEAMS 14x30	40'	7	8	56	4355	30.485	137465,137466,137467
WF BEAMS 16x45	40'	22	5	110	4082	89.804	137197,137203
WF BEAMS 21x62	40'	7	4	28	4500	31.500	137230,137233,137234
WF BEAMS 24x68	40'	11	3	33	3701	40.711	137644,137645,137646, 137648

TOTAL BUNDLES 146

TOTAL WEIGHT 655.447 Kg.

A02 EN 10204/3.1

CSA G40.21 50W/ASTM A572 G50/A992/A6

(B01/B02/B03) A03



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COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)														
	C	Mn	Si	P	S	V	Cr	Ni	Mo	Cu	Nb	Sn	CEV		
137197	,095	1,160	,180	,016	,024	,039	,120	,160	,020	,350	,005	,016	,36		
137203	,121	1,200	,190	,014	,029	,037	,100	,130	,023	,330	,004	,027	,38		
137230	,080	1,170	,170	,034	,021	,040	,080	,180	,024	,380	,003	,026	,34		
137233	,087	1,200	,200	,022	,029	,039	,090	,150	,029	,410	,003	,038	,36		
137234	,095	1,200	,200	,017	,023	,045	,080	,170	,034	,370	,003	,035	,36		
137350	,104	1,190	,180	,018	,027	,039	,090	,140	,025	,330	,005	,024	,36		
137351	,109	1,200	,170	,015	,016	,038	,110	,140	,026	,340	,003	,025	,38		
137352	,105	1,150	,200	,010	,027	,037	,090	,140	,024	,350	,003	,025	,36		
137353	,103	1,170	,180	,012	,022	,038	,120	,190	,032	,370	,005	,033	,37		
137399	,099	1,200	,190	,023	,020	,039	,150	,150	,018	,340	,003	,027	,37		
137400	,109	1,150	,170	,016	,025	,038	,120	,140	,022	,360	,005	,028	,37		
137403	,096	1,140	,190	,014	,019	,037	,100	,160	,021	,340	,003	,021	,35		
137404	,092	1,130	,180	,015	,019	,036	,130	,160	,023	,340	,005	,022	,35		
137443	,093	1,190	,210	,025	,032	,040	,160	,210	,029	,360	,003	,033	,38		
137444	,091	1,160	,200	,019	,022	,042	,150	,210	,033	,370	,005	,029	,37		
137445	,091	1,220	,170	,023	,029	,043	,180	,250	,032	,400	,010	,034	,39		
137446	,102	1,180	,190	,019	,025	,041	,150	,210	,032	,400	,013	,028	,38		
137447	,091	1,170	,180	,021	,031	,043	,140	,190	,025	,350	,013	,028	,36		
137448	,104	1,150	,190	,022	,031	,041	,150	,180	,029	,350	,011	,025	,38		
137449	,082	1,160	,190	,024	,029	,042	,140	,190	,029	,340	,012	,030	,35		
137454	,089	1,240	,210	,015	,029	,041	,140	,170	,025	,340	,018	,034	,37		
137455	,126	1,140	,180	,017	,019	,042	,150	,180	,021	,410	,005	,030	,40		
137465	,105	1,170	,190	,020	,018	,041	,140	,210	,035	,410	,004	,033	,38		
137466	,103	1,210	,190	,028	,026	,042	,210	,250	,044	,390	,011	,029	,41		
137467	,116	1,190	,210	,033	,024	,044	,180	,230	,044	,400	,006	,030	,41		
137497	,098	1,100	,160	,029	,017	,036	,190	,200	,035	,430	,003	,027	,38		
137498	,124	1,150	,170	,027	,019	,039	,230	,230	,030	,470	,003	,029	,42		
137644	,100	1,160	,170	,022	,020	,038	,130	,190	,029	,410	,005	,037	,37		
137645	,103	1,190	,170	,031	,018	,038	,120	,210	,032	,420	,006	,036	,38		
137646	,100	1,150	,180	,012	,015	,038	,090	,180	,028	,420	,004	,041	,36		
137648	,099	1,130	,190	,031	,016	,039	,110	,200	,033	,410	,008	,033	,36		

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES					
		ReH MPa		Rm MPa		A% LO=8"	
011	011	011		012		013	
W-10x15	137443	413	403	548	544	23,9	22,2
W-10x22	137403	395	379	515	513	21,1	21,6
W-10x22	137404	389	387	526	506	21,1	21,
W-10x26	137399	371	359	515	515	21,3	21,
W-10x26	137400	390	384	524	510	21,7	21,3
W-12x14	137498	389	373	607	585	22,2	21,7
W-12x16	137497	390	388	539	515	22,2	21,8
W-12x26	137448	403	394	535	527	22,2	22,1
W-12x26	137449	409	403	534	520	21,5	21,4
W-12x26	137454	404	394	534	526	21,3	21,
W-12x26	137455	418	412	551	547	21,3	20,8
W-12x30	137443	394	388	537	516	22,1	21,8
W-12x30	137444	403	393	535	515	21,8	21,3

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		ReH MPa		Rm MPa		A% LO=8"	
B11	B08	C11		C12		C13	
W-12x30	137445	400	388	535	513	22,7	21,9
W-12x30	137446	407	391	532	522	21,8	21,2
W-12x30	137447	432	426	566	550	23,	22,6
W-12x40	137351	402	398	523	517	25,3	24,5
W-12x40	137352	405	395	527	516	23,2	22,7
W-12x40	137353	395	402	512	523	23,1	23,4
W-12x50	137350	396	392	521	513	25,1	24,4
W-14x30	137465	389	384	544	522	22,1	21,3
W-14x30	137466	399	389	546	525	22,	21,3
W-14x30	137467	377	377	523	517	23,2	23,
W-16x45	137197	393	387	516	499	22,9	22,3
W-16x45	137203	430	427	560	543	22,1	21,9
W-21x62	137230	399	388	516	506	23,5	23,2
W-21x62	137233	397	395	520	506	23,4	23,1
W-21x62	137234	395	385	514	500	22,6	22,5
W-24x68	137644	395	379	512	492	25,9	25,7
W-24x68	137645	393	379	516	510	23,5	23,3
W-24x68	137646	378	364	524	503	23,1	22,4
W-24x68	137648	381	372	514	514	24,9	24,3

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### 31 análisis

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.  
 B06: Marca AMO

*Amal*

Ángel Martínez de Treviño