

A01

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



MILL TEST CERTIFICATE

OLA P-33673

DISCHARGE ADDRESS		CUSTOMER	
Abinsa S.A.de C.V. Ave. Adolfo Lopez Mateos K.M. 6.5 San Nicolas de Los Garza MEXICO		Abinsa S.A.de C.V. Ave. Adolfo Lopez Mateos K.M. 6.5 San Nicolas de Los Garza MEXICO	
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			BILBAO, SPAIN
		PORT OF DISCHARGE	VESSEL
		ALTAMIRA	AUSTRALIABORG.
OUR REFERENCE	CONTRACT NUMBER	ORDER NUMBER	DATE
mcabello	01-E-42984 / 1700015722	MEZCLA-Q4	30/11/2012

Material: WF Vigas,

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

ARCELORMITTAL 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
+RED/YELLOW							
WF BEAMS 8x24	40'	9	10	90	4323	38.909	141143,141148,141709, 141710,141711
WF BEAMS 10x33	40'	12	8	96	4776	57.310	141560,141561,141562
WF BEAMS 12x14	40'	7	18	126	4579	32.056	141218,141219,141857, 141858,141859,141860
WF BEAMS 12x19	40'	4	14	56	4828	19.314	141866,141867
WF BEAMS 12x22	40'	4	12	48	4778	19.112	141868
WF BEAMS 12x26	40'	17	10	170	4741	80.590	141898,141899,141900, 141904,141905
WF BEAMS 12x30	40'	9	8	72	4368	39.314	141906,141907
WF BEAMS 12x40	40'	9	6	54	4357	39.211	141849,141850,141851
WF BEAMS 12x50	40'	6	6	36	5433	32.598	141846,141847
WF BEAMS 14x22	40'	4	12	48	4744	18.976	141847,141848,141849, 141850
WF BEAMS 14x26	40'	2	10	20	4636	9.273	141814
WF BEAMS 16x26	40'	14	6	84	2825	39.550	141775,141777
WF BEAMS 16x31	40'	15	6	90	3328	49.915	141778,141780
WF BEAMS 16x57	40'	2	5	10	5097	10.194	141767
WF BEAMS 18x65	40'	11	4	44	4703	51.728	141214,141228,141654
WF BEAMS 21x44	40'	10	5	50	4020	40.195	141530,141531,141533, 141534,141535,141537

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SIZE	LENGTH	BUNDLES	PIECES BUNDLES	TOTAL PIECES	WEIGHT BUNDLES	TOTAL WEIGHT	HEAT
WF BEAMS 21x50	40'	3	5	15	4531	13.592	141549,141551,141552
WF BEAMS 24x84	40'	1	1	1	1519	1.519	141490
WF BEAMS 21x57	40'	2	5	10	5059	10.118	141529

TOTAL BUNDLES 141

TOTAL WEIGHT 603.474 Kg.

A02 EN 10204/3.1

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

(B01/B02/B03) A03

COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)													CEV							
	C	Mn	Si	P	S	V	Cr	Ni	Mo	Cu	Nb	Sn									
141143	,115	1,230	,220	,027	,015	,044	,140	,140	,030	,510	,003	,043	,41								
141148	,078	1,070	,180	,014	,024	,049	,090	,130	,023	,580	,003	,057	,34								
141214	,106	1,150	,200	,019	,014	,035	,160	,180	,036	,460	,004	,039	,39								
141218	,100	1,070	,200	,021	,011	,037	,150	,150	,027	,450	,003	,026	,36								
141219	,121	1,170	,200	,017	,011	,035	,130	,150	,032	,470	,003	,028	,40								
141228	,076	1,160	,210	,018	,021	,034	,080	,110	,018	,400	,003	,044	,33								
141490	,095	1,140	,180	,035	,016	,037	,150	,170	,029	,500	,004	,039	,37								
141529	,110	1,050	,210	,027	,018	,034	,130	,120	,024	,410	,006	,046	,36								
141530	,096	1,090	,220	,016	,008	,043	,120	,150	,028	,430	,003	,041	,35								
141531	,099	1,110	,170	,020	,007	,037	,140	,150	,028	,480	,007	,045	,37								
141533	,083	1,010	,170	,022	,011	,036	,120	,150	,027	,470	,003	,042	,33								
141534	,083	1,040	,200	,027	,013	,039	,130	,150	,029	,440	,003	,041	,34								
141535	,112	1,030	,190	,028	,010	,034	,140	,150	,030	,480	,003	,046	,37								
141537	,086	,960	,170	,029	,023	,032	,130	,140	,024	,450	,003	,043	,32								
141549	,096	1,070	,190	,022	,015	,035	,120	,120	,025	,430	,003	,040	,35								
141551	,107	1,080	,200	,029	,010	,037	,120	,120	,024	,470	,003	,030	,36								
141552	,097	1,010	,170	,032	,012	,033	,150	,130	,023	,480	,003	,037	,35								
141560	,092	1,050	,170	,028	,018	,037	,180	,180	,049	,500	,003	,033	,37								
141561	,091	1,080	,170	,023	,019	,036	,190	,160	,034	,440	,003	,040	,36								
141562	,108	1,110	,200	,029	,009	,034	,180	,150	,036	,390	,003	,036	,38								
141654	,089	1,060	,200	,018	,017	,044	,110	,130	,020	,450	,010	,044	,34								
141709	,113	1,020	,190	,025	,011	,039	,190	,140	,039	,450	,003	,035	,38								
141710	,104	1,080	,180	,026	,013	,040	,180	,160	,045	,480	,003	,040	,38								
141711	,116	1,080	,180	,024	,013	,040	,230	,170	,032	,460	,003	,045	,40								
141767	,097	1,040	,200	,019	,011	,037	,130	,150	,031	,350	,003	,042	,34								
141775	,099	1,070	,170	,024	,010	,036	,130	,130	,025	,450	,003	,039	,35								
141777	,087	1,030	,180	,024	,015	,039	,110	,130	,026	,450	,003	,033	,33								
141778	,090	1,040	,190	,025	,012	,034	,120	,140	,035	,500	,003	,029	,34								
141780	,091	1,050	,180	,019	,011	,031	,120	,120	,022	,480	,003	,035	,34								
141814	,095	1,040	,180	,022	,026	,031	,160	,180	,039	,450	,003	,028	,36								
141846	,088	1,030	,200	,019	,019	,041	,220	,210	,056	,440	,003	,024	,37								
141847	,084	1,080	,190	,026	,022	,042	,250	,210	,052	,450	,012	,030	,38								
141848	,095	1,010	,170	,020	,020	,040	,160	,170	,039	,370	,005	,024	,35								
141849	,086	,980	,180	,016	,021	,035	,130	,160	,042	,370	,003	,037	,33								
141850	,097	1,030	,180	,026	,022	,032	,160	,180	,041	,380	,007	,033	,35								
141851	,089	,990	,180	,025	,020	,034	,120	,160	,037	,340	,003	,026	,33								
141857	,095	,980	,180	,022	,020	,035	,190	,160	,032	,490	,003	,030	,35								
141858	,086	1,010	,180	,018	,015	,036	,140	,160	,032	,450	,003	,032	,34								

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COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																				
	C	Mn	Si	P	S	V	Cr	Ni	Mo	Cu	Nb	Sn	CEV								
141859	.085	1,020	.180	.016	.016	.033	.150	.150	.044	.450	.003	.030	.34								
141860	.089	1,010	.170	.019	.024	.038	.170	.140	.038	.520	.003	.025	.35								
141866	.082	1,040	.210	.017	.016	.034	.100	.160	.041	.360	.003	.021	.33								
141867	.082	1,040	.180	.017	.019	.034	.130	.160	.039	.330	.006	.019	.33								
141868	.092	1,050	.190	.019	.019	.035	.110	.180	.043	.360	.003	.023	.34								
141898	.107	1,030	.180	.023	.022	.036	.150	.190	.043	.380	.003	.076	.36								
141899	.105	1,110	.210	.020	.020	.033	.130	.200	.048	.410	.003	.035	.37								
141900	.087	1,020	.180	.017	.022	.034	.120	.200	.045	.470	.003	.034	.34								
141904	.114	1,030	.160	.016	.010	.034	.160	.180	.033	.490	.007	.037	.38								
141905	.108	1,050	.170	.021	.012	.038	.180	.180	.034	.490	.007	.045	.38								
141906	.095	1,040	.190	.018	.012	.036	.190	.230	.045	.560	.010	.041	.38								
141907	.092	1,010	.180	.015	.011	.036	.150	.180	.032	.500	.007	.044	.35								
MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES						A% LO=8"													
		ReH MPa	Rm MPa																		
		C11	C12	C13																	
W-10x33	141560	397	389	521	514	22,6	22,														
W-10x33	141561	388	374	542	524	22,5	22,														
W-10x33	141562	390	382	535	524	23,4	23,1														
W-12x14	141218	399	393	572	562	22,3	21,9														
W-12x14	141219	396	390	617	617	22,3	22,1														
W-12x14	141857	406	398	540	516	22,8	22,5														
W-12x14	141858	428	420	545	537	23,1	22,8														
W-12x14	141859	416	404	555	531	22,4	21,8														
W-12x14	141860	393	385	526	514	22,4	22,2														
W-12x19	141866	385	381	502	500	24,5	23,9														
W-12x19	141867	395	381	520	516	22,7	22,6														
W-12x22	141868	385	377	534	534	24,2	23,6														
W-12x26	141898	371	360	501	496	22,7	22,														
W-12x26	141899	389	378	536	528	22,4	22,2														
W-12x26	141900	386	382	535	523	22,4	21,9														
W-12x26	141904	390	387	554	533	22,4	22,1														
W-12x26	141905	441	431	597	587	22,3	21,9														
W-12x30	141906	358	356	522	517	22,8	22,2														
W-12x30	141907	366	356	524	516	22,5	21,8														
W-12x40	141849	396	389	512	505	22,5	21,8														
W-12x40	141850	398	392	518	506	22,3	22,														
W-12x40	141851	391	385	526	510	22,8	22,1														
W-12x50	141846	414	405	541	519	22,3	21,7														
W-12x50	141847	405	401	528	516	22,9	22,1														
W-14x22	141847	416	408	556	552	22,3	22,2														
W-14x22	141848	413	403	531	523	22,8	22,4														
W-14x22	141849	391	381	534	528	22,5	22,														
W-14x22	141850	407	407	525	523	22,5	21,9														
W-14x26	141814	390	379	533	527	22,6	22,														
W-16x26	141775	430	416	547	531	22,8	22,6														
W-16x26	141777	433	428	536	521	22,4	22,														
W-16x31	141778	414	410	541	521	22,4	21,8														

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MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES					
		ReH MPa		Rm MPa		A% LO=8"	
B11	B02	C11		C12		C13	
W-16x31	141780	427	421	535	533	22,5	21,7
W-16x57	141767	392	378	503	493	23,8	23,1
W-18x65	141214	386	370	516	502	26,5	25,9
W-18x65	141228	373	369	500	482	24,9	24,8
W-18x65	141654	391	379	512	494	25,6	25,2
W-21x44	141530	396	390	514	492	25,6	25,3
W-21x44	141531	404	387	528	522	23,1	22,9
W-21x44	141533	395	391	509	493	22,9	22,5
W-21x44	141534	404	396	522	518	24,	23,4
W-21x44	141535	404	394	533	509	24,8	24,8
W-21x44	141537	412	395	516	512	22,7	22,5
W-21x50	141549	408	394	520	506	23,8	23,2
W-21x50	141551	415	403	545	527	22,8	21,9
W-21x50	141552	404	398	532	520	23,	22,9
W-21x57	141529	413	401	530	524	25,7	24,8
W-24x84	141490	418	404	539	520	22,6	22,2
W-8x24	141143	445	450	575	563	22,1	22,1
W-8x24	141148	448	430	550	540	22,6	22,5
W-8x24	141709	389	387	556	543	22,6	22,
W-8x24	141710	421	413	574	560	22,4	21,9
W-8x24	141711	418	408	547	546	22,4	21,7

50 análisis

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

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Lorenzo Zabala