

ArcelorMittal Madrid, S.L.
 Long Carbon Steel Europe
 CARRETERA TOLEDO, N-401 - KM. 9,200
 28021 VILLAVERDE (Madrid)
 TELEF. (91) 797.23.00 - FAX (91) 795.31.81



QUALITY CERTIFICATE

MAD P-8316

DISCHARGE ADDRESS		CUSTOMER	
Plesa Anahuac Y Cias, S.A. de C.V. Av. Valle de las Alamedas 66-O Col. S. Francisco Chilpan, Tul MEXICO		Plesa Anahuac Y Cias, 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 MADRID, S.L. CARRETERA TOLEDO, N-401 - KM. 9,200 28021 VILLAVERDE (Madrid) TELEF. (91) 797.23.00 - TELEX 22120 - 49632 ARIS			BILBAO, SPAIN
		PORT OF DISCHARGE	VESSEL
		VERACRUZ	LERICI STAR
OUR REFERENCE	CONTRACT NUMBER	ORDER NUMBER	DATE
mcabello	E-11736	5373	01/11/2007

SIZE	LENGTH	BUNDLES	PIECES BUNDLES	TOTAL PIECES	WEIGHT BUNDLES	TOTAL WEIGHT	HEAT
+/ROJO							
WF BEAMS 18x76	40'	44	4	176	5516	242.704	73636,73637,73639,73641,73642,73643,73644,73648,73650,73652,73653,73654,73656,73658,73659,73660,73662,73663
WF BEAMS 18x86	40'	53	3	159	4681	248.093	73611,73612,73613,73617,73621,73622,73623,73624,73627
WF BEAMS 18x97	40'	19	3	57	5280	100.320	73626,73627,73628,73629
WF BEAMS 18x106	40'	24	3	72	5770	138.480	73684,73685,73686,73687,73688,73689

TOTAL BUNDLES **140** TOTAL WEIGHT **729.597 Kg.**

A02 EN 10204/3.1.B

CSA G40.21 50W/ASTM A36-04/A572 G50-04/A992-04/A6-04

(B01/B02/B03) A03

COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)												
	C	Mn	Si	P	S	V	Cr	Ni	Mo	Cu	Nb	Sn	CEV
73611	,096	,824	,186	,012	,017	,002	,092	,106	,021	,371	,017	,019	,29
73612	,090	,825	,195	,011	,022	,002	,079	,101	,019	,406	,017	,014	,28
73613	,093	,872	,169	,014	,029	,003	,084	,105	,020	,464	,017	,015	,30
73617	,067	1,073	,193	,021	,024	,003	,078	,104	,024	,468	,024	,018	,30
73621	,094	,753	,176	,019	,027	,002	,117	,119	,021	,494	,017	,022	,29
73622	,089	,798	,184	,018	,025	,002	,101	,114	,021	,447	,016	,016	,28
73623	,088	,796	,193	,020	,027	,002	,122	,110	,022	,461	,018	,019	,29
73624	,087	,819	,191	,014	,020	,002	,091	,114	,025	,462	,018	,012	,29
73626	,097	,756	,236	,026	,021	,002	,130	,114	,022	,458	,016	,016	,29
73627	,085	,778	,240	,016	,017	,002	,105	,108	,021	,430	,017	,015	,28
73628	,076	,708	,201	,027	,026	,003	,154	,110	,019	,474	,017	,019	,27
73629	,086	,775	,257	,021	,019	,002	,116	,108	,021	,446	,016	,013	,28
73636	,088	,815	,228	,015	,019	,002	,086	,103	,021	,409	,016	,012	,28

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	C	Mn	Si	P	S	V	Cr	Ni	Mo	Cu	Nb	Sn	CEV
800													
73637	,078	,773	,204	,016	,005	,002	,079	,100	,020	,462	,020	,013	,26
73639	,065	,779	,173	,018	,021	,002	,081	,115	,021	,495	,035	,015	,26
73641	,086	,734	,186	,030	,018	,002	,152	,110	,023	,472	,017	,014	,28
73642	,122	,619	,198	,023	,017	,002	,162	,128	,032	,498	,017	,018	,31
73643	,093	,731	,193	,015	,023	,002	,117	,106	,020	,481	,017	,019	,28
73644	,095	,748	,177	,020	,019	,002	,126	,105	,021	,506	,016	,015	,29
73648	,090	,814	,198	,018	,023	,002	,094	,102	,021	,444	,017	,016	,29
73650	,092	,796	,198	,018	,021	,003	,091	,114	,022	,453	,017	,015	,29
73652	,075	,803	,188	,012	,019	,002	,087	,115	,023	,425	,016	,016	,27
73653	,086	,888	,200	,017	,026	,004	,116	,108	,021	,440	,016	,017	,30
73654	,095	,768	,192	,020	,021	,002	,143	,133	,023	,452	,017	,022	,30
73656	,076	,824	,197	,011	,018	,002	,068	,092	,017	,384	,016	,013	,26
73658	,085	,847	,235	,010	,017	,002	,065	,091	,018	,436	,017	,012	,28
73659	,091	,806	,194	,008	,019	,002	,071	,090	,017	,397	,016	,013	,28
73660	,085	,848	,199	,010	,018	,002	,087	,092	,019	,356	,017	,015	,28
73662	,080	,785	,196	,018	,023	,002	,134	,091	,018	,355	,016	,015	,27
73663	,063	,833	,191	,015	,025	,003	,112	,095	,019	,358	,029	,015	,26
73684	,088	,824	,160	,013	,021	,002	,064	,102	,019	,456	,017	,020	,28
73685	,089	,864	,180	,013	,021	,002	,056	,110	,023	,478	,018	,016	,29
73686	,062	,876	,179	,016	,020	,003	,092	,105	,021	,410	,016	,016	,27
73687	,083	,833	,207	,015	,024	,002	,066	,099	,019	,362	,017	,023	,27
73688	,095	,848	,197	,012	,026	,002	,085	,105	,021	,362	,023	,019	,29
73689	,096	,783	,201	,017	,020	,002	,091	,104	,020	,423	,017	,023	,28
73723	,090	,789	,179	,018	,029	,002	,106	,128	,026	,405	,017	,019	,28

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES					
		ReH MPa	Rm MPa	A% LO=8"			
811	800	C11	C12	C13			
W-18x106	73684	349	352	472	476	23,4	23,1
W-18x106	73685	362	367	473	478	23,3	23,1
W-18x106	73686	349	351	459	461	24,5	24,4
W-18x106	73687	353	348	459	454	24,8	25,1
W-18x106	73688	360	366	480	487	23,2	22,9
W-18x106	73689	353	358	475	476	23,5	23,5
W-18x76	73636	362	365	477	480	21,3	21,1
W-18x76	73637	355	359	474	477	23,1	22,9
W-18x76	73639	381	385	466	469	20,5	20,4
W-18x76	73641	359	362	472	476	22,7	22,5
W-18x76	73642	371	373	482	485	21,	20,7
W-18x76	73643	356	361	473	477	22,3	23,1
W-18x76	73644	371	376	494	498	23,7	23,5
W-18x76	73648	348	353	467	470	22,8	22,6
W-18x76	73650	353	354	469	470	22,4	22,1
W-18x76	73652	346	348	465	471	26,7	26,3
W-18x76	73653	349	354	473	479	23,9	23,6
W-18x76	73654	369	374	484	489	22,3	21,9
W-18x76	73656	352	357	472	477	22,7	22,3
W-18x76	73658	360	366	479	482	20,9	20,7

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MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES					
		ReH MPa		Rm MPa		A% L0=8"	
B11	B06	C11		C12		C13	
W-18x76	73659	359	365	466	469	21,7	21,3
W-18x76	73660	355	357	470	475	22,6	22,4
W-18x76	73662	357	364	462	466	23,2	23,
W-18x76	73663	363	370	463	468	24,6	24,2
W-18x86	73611	379	382	471	475	21,3	21,1
W-18x86	73612	347	351	463	468	23,4	23,1
W-18x86	73613	351	357	469	472	23,3	23,1
W-18x86	73617	366	367	468	472	24,2	23,9
W-18x86	73621	369	372	482	485	21,6	21,4
W-18x86	73622	355	358	474	476	22,1	21,9
W-18x86	73623	363	368	475	479	22,2	21,9
W-18x86	73624	378	382	483	487	21,9	21,7
W-18x86	73723	355	359	477	481	22,6	22,3
W-18x97	73626	353	358	474	478	23,2	22,9
W-18x97	73627	371	375	474	479	28,2	28,1
W-18x97	73628	354	358	472	476	24,1	23,8
W-18x97	73629	356	359	469	472	23,	22,6

37 análisis

Z01

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

B06: Marca APM

Carlos Alvarez