

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



CERTIFICADO DE CALIDAD

MAD P-9241

MATERIAL	LARGO	PAQUETE	BARRAS PAQUETE	TOTAL BARRAS	PESO PAQUETE	PESO TOTAL	COLADAS
WF BEAMS 18x86	40'	43	3	129	4681	201.283	76871,76873,76877, 76878,76879,76880, 76881,76952

TOTAL PAQUETES **322** TOTAL PESO **1.638.635 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
B08													
74275	,091	,841	,206	,010	,022	,002	,079	,080	,018	,337	,018	,015	,28
74552	,109	,782	,207	,018	,025	,002	,096	,103	,018	,471	,017	,022	,30
74555	,083	,837	,204	,014	,025	,002	,084	,117	,019	,468	,020	,021	,28
74556	,090	,807	,215	,016	,021	,002	,077	,119	,018	,476	,020	,020	,28
74563	,088	,859	,216	,012	,022	,002	,081	,107	,019	,345	,018	,015	,28
76045	,130	1,154	,182	,018	,028	,003	,097	,112	,026	,505	,018	,025	,39
76059	,090	,825	,211	,016	,025	,002	,108	,088	,019	,388	,018	,016	,29
76060	,085	,818	,205	,014	,018	,002	,105	,097	,020	,414	,017	,023	,28
76081	,121	1,333	,229	,012	,023	,003	,086	,091	,029	,310	,018	,014	,39
76826	,092	1,331	,238	,014	,027	,004	,089	,090	,028	,317	,017	,016	,37
76827	,094	1,293	,208	,015	,022	,004	,100	,087	,026	,346	,016	,017	,36
76828	,095	1,288	,211	,020	,024	,004	,122	,087	,026	,384	,017	,017	,37
76829	,101	1,277	,216	,013	,019	,004	,119	,097	,025	,397	,018	,020	,38
76830	,082	1,257	,197	,013	,028	,003	,112	,094	,024	,402	,016	,018	,35
76831	,103	1,275	,226	,013	,030	,003	,126	,094	,025	,367	,016	,017	,38
76832	,103	1,333	,244	,020	,030	,004	,100	,100	,026	,419	,017	,021	,39
76833	,128	1,215	,219	,029	,019	,004	,116	,117	,025	,429	,018	,018	,40
76835	,109	1,380	,230	,011	,017	,004	,069	,076	,024	,313	,017	,014	,38
76836	,096	1,351	,196	,015	,019	,004	,104	,071	,023	,312	,016	,012	,37
76837	,096	1,368	,215	,012	,015	,004	,070	,078	,023	,318	,016	,015	,37
76838	,085	,830	,219	,015	,018	,003	,101	,121	,020	,416	,016	,016	,28
76839	,098	,786	,188	,014	,010	,003	,104	,107	,019	,415	,017	,018	,29
76840	,101	,831	,202	,014	,021	,003	,082	,099	,019	,387	,017	,016	,29
76841	,098	,867	,205	,022	,012	,003	,094	,089	,017	,349	,018	,016	,29
76842	,105	,804	,166	,029	,016	,003	,101	,096	,018	,401	,016	,018	,30
76843	,098	,773	,178	,020	,013	,003	,168	,120	,031	,404	,016	,019	,30
76845	,092	,828	,207	,015	,026	,003	,096	,108	,023	,363	,016	,015	,29
76846	,095	,823	,194	,020	,025	,003	,109	,111	,020	,390	,016	,018	,29
76847	,085	,864	,209	,017	,027	,004	,080	,101	,019	,382	,017	,019	,28
76848	,078	,741	,183	,015	,018	,004	,218	,130	,037	,340	,019	,018	,28
76849	,088	,813	,212	,017	,020	,003	,126	,099	,021	,350	,018	,017	,28
76850	,084	,835	,204	,020	,018	,003	,114	,099	,019	,376	,018	,017	,28
76851	,090	,805	,191	,024	,012	,003	,121	,094	,017	,383	,017	,017	,28
76852	,085	,799	,217	,018	,019	,003	,113	,111	,019	,395	,018	,016	,28
76853	,092	,800	,194	,020	,018	,003	,120	,131	,018	,377	,017	,018	,29
76855	,087	,837	,203	,026	,019	,003	,105	,125	,020	,493	,016	,020	,29
76856	,105	,747	,191	,014	,018	,003	,098	,125	,018	,388	,015	,019	,29
76862	,082	,847	,206	,013	,020	,003	,094	,078	,014	,371	,016	,019	,28
76863	,095	,832	,194	,022	,019	,003	,109	,083	,015	,370	,017	,029	,29
76864	,090	,816	,195	,020	,023	,003	,097	,094	,016	,385	,016	,029	,28

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COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																
	C	Mn	Si	P	S	V	Cr	Ni	Mo	Cu	Nb	Sn	CEV				
B08																	
76865	,082	,835	,193	,015	,019	,003	,087	,102	,017	,443	,016	,028	,28				
76866	,098	,763	,178	,020	,016	,003	,100	,105	,016	,482	,018	,022	,29				
76867	,079	,822	,181	,020	,024	,002	,085	,094	,015	,411	,016	,020	,27				
76868	,085	,794	,245	,016	,018	,002	,079	,093	,015	,389	,016	,022	,27				
76869	,086	,901	,207	,016	,024	,003	,071	,088	,016	,345	,016	,016	,28				
76870	,091	,931	,187	,015	,018	,003	,047	,085	,016	,344	,018	,019	,29				
76871	,103	,885	,199	,017	,024	,003	,098	,087	,015	,367	,016	,016	,30				
76873	,089	,828	,212	,019	,020	,003	,079	,102	,016	,425	,018	,020	,28				
76877	,085	,862	,214	,020	,027	,003	,085	,105	,017	,415	,017	,020	,28				
76878	,090	,787	,210	,029	,020	,003	,117	,099	,018	,432	,017	,019	,28				
76879	,089	,802	,202	,025	,025	,003	,107	,102	,018	,464	,018	,021	,29				
76880	,076	,822	,194	,028	,021	,003	,097	,100	,017	,422	,017	,021	,27				
76881	,088	,845	,223	,018	,023	,003	,071	,109	,019	,442	,016	,023	,28				
76952	,102	1,324	,249	,014	,011	,004	,061	,097	,023	,402	,016	,018	,37				
76964	,105	1,335	,246	,012	,014	,004	,069	,091	,023	,356	,015	,016	,38				
76978	,115	1,176	,197	,029	,026	,004	,104	,098	,024	,455	,016	,018	,37				

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES					
		ReH MPa		Rm MPa		A% LO=8"	
B11	B08	C11		C12		C13	
W-12x72	74563	350	355	465	469	21,1	20,9
W-12x79	74556	378	380	480	486	22,1	21,8
W-12x87	74555	364	367	476	479	22,2	21,9
W-12x87	74556	361	364	474	477	23,1	22,7
W-12x96	74552	367	370	478	481	23,7	23,4
W-18x106	76059	348	351	472	477	23,7	23,1
W-18x106	76060	349	351	474	478	23,5	23,1
W-18x106	76838	346	349	474	478	23,6	23,3
W-18x106	76839	351	358	486	490	23,1	22,9
W-18x106	76840	354	360	481	485	22,	21,7
W-18x106	76841	353	355	482	484	22,8	22,7
W-18x106	76842	346	351	493	496	21,2	21,1
W-18x119	76830	362	367	506	509	20,2	20,1
W-18x119	76831	366	368	524	528	21,1	21,
W-18x119	76832	383	385	522	526	20,5	20,4
W-18x119	76833	371	378	533	538	20,1	20,3
W-18x119	76835	356	363	513	518	21,3	21,1
W-18x119	76836	379	383	509	512	21,2	20,9
W-18x119	76837	365	369	508	513	21,3	21,1
W-18x130	76828	361	366	513	516	21,6	21,3
W-18x130	76829	356	360	506	510	22,1	22,
W-18x143	74275	347	350	462	466	23,1	22,9
W-18x143	76826	354	359	508	510	22,4	22,1
W-18x143	76827	351	355	501	505	23,2	22,9
W-18x76	76843	365	368	480	485	20,5	20,4
W-18x76	76845	362	366	479	482	21,4	21,1
W-18x76	76846	356	362	474	479	20,6	20,5
W-18x76	76847	355	361	473	477	20,6	20,5