



MAANSHAN IRON AND STEEL CO., LTD.

CERTIFICATE OF PRODUCT QUALITY

Customer: TEWOO METAL (H.K.) LIMITED

Material description: HOT ROLLED STEEL H-BEAM.

Steel type: ALLOYED, HOT/COLD ROLLED NO ALLOYED, ETC

Specification: ASTM A6/A6M-2009 ASTM A572/A572M-2012

ASTM A992/A992M-2011(B:0.0008%-0.0040%)

QUALITY NO.: QSR8132703406

CONTRACT NO.: 16MGE-B-9-100-

ADD: NO.8 JIUHUA WEST ROAD, MAANSHAN CITY, ANHUI PROVINCE, P.R. CHINA
POSTCODE: 243000 TEL: (0555)2877326
QUALITY DEPARTMENT: BILU YU
TEL: (0555)2877321



DATE: 2016-7-6

LOT No.	Heat No.	Steel Grade	Size (INCH)	Length (M)	Pieces	Theoretical Weight (MT)	Chemical Composition (%)											Mechanical Properties				
							C	SI	Mn	P	S	Cr	NI	Cu	V	Mo	Nb	B	CEV	Sn	Yield Strength σ_s (Mpa)	Tensile Strength σ_b (Mpa)
216061056	16105612	MC345B	W10*22	12.192	70	27.93	0.17	0.25	1.27	0.024	0.022	0.03	0.01	0.02	0.048	0.002	0.0013	0.40	393	543	32.0	
216060051	16104914	MC345B	W12*26	12.192	7	3.304	0.15	0.19	1.22	0.027	0.012	0.02	0.01	0.02	0.021	0.002	0.0021	0.36	419	523	30.0	
216060052	16104914	MC345B	W12*26	12.192	60	28.32	0.15	0.19	1.22	0.027	0.012	0.02	0.01	0.02	0.021	0.002	0.001	0.0021	0.36	374	529	24.0
216060053	16304710	MC345B	W12*26	12.192	49	23.128	0.15	0.23	1.26	0.024	0.011	0.03	0.02	0.02	0.020	0.003	0.002	0.0014	0.37	378	535	26.0
216060054	16304710	MC345B	W12*26	12.192	50	23.6	0.15	0.23	1.26	0.024	0.011	0.03	0.02	0.02	0.020	0.003	0.002	0.0014	0.37	350	504	26.0
216060066	16304711	MC345B	W12*30	12.192	20	10.86	0.17	0.21	1.26	0.022	0.014	0.02	0.01	0.02	0.019	0.002	0.000	0.0014	0.39	406	567	34.0
216060067	16304711	MC345B	W12*30	12.192	30	16.29	0.17	0.21	1.26	0.022	0.014	0.02	0.01	0.02	0.019	0.002	0.000	0.0014	0.39	391	560	32.0
116060221	16104930	MC345B	W14*132	12.192	12	28.68	0.16	0.27	1.35	0.035	0.013	0.04	0.01	0.01	0.047	0.003	0.001	0.0013	0.40	411	558	26.0
116060222	16104930	MC345B	W14*132	12.192	1	2.39	0.16	0.27	1.35	0.035	0.013	0.04	0.01	0.01	0.047	0.003	0.001	0.0013	0.40	414	557	26.5
116060383	16204672	MC345B	W16*36	12.192	12	7.752	0.16	0.22	1.07	0.026	0.017	0.03	0.01	0.02	0.019	0.002	0.001	0.0012	0.35	369	506	24.5
116060384	16204672	MC345B	W16*36	12.192	24	15.504	0.16	0.22	1.07	0.026	0.017	0.03	0.01	0.02	0.019	0.002	0.001	0.0012	0.35	363	501	24.5
116060346	16105020	MC345B	W16*40	12.192	30	21.96	0.16	0.31	1.31	0.024	0.017	0.02	0.01	0.02	0.026	0.005	0.002	0.0013	0.39	372	523	22.5
116060333	16304820	MC345B	W16*45	12.192	12	9.804	0.17	0.30	1.28	0.032	0.017	0.02	0.01	0.01	0.025	0.002	0.002	0.0014	0.39	374	530	22.5
116060334	16304820	MC345B	W16*45	12.192	18	14.706	0.17	0.30	1.28	0.032	0.017	0.02	0.01	0.01	0.025	0.002	0.002	0.0014	0.39	372	524	23.0
116060335	16105020	MC345B	W16*45	12.192	1	0.817	0.16	0.31	1.31	0.024	0.017	0.02	0.01	0.02	0.026	0.005	0.002	0.0013	0.39	373	523	22.5
116060321	16204656	MC345B	W16*50	12.192	22	20.108	0.18	0.33	1.29	0.032	0.019	0.02	0.01	0.01	0.023	0.002	0.002	0.0014	0.41	372	511	27.0
116060322	16204655	MC345B	W16*50	12.192	2	1.828	0.16	0.28	1.26	0.027	0.017	0.02	0.01	0.01	0.022	0.002	0.002	0.0014	0.38	378	503	27.0
216060925	16105615	MC345B	W8*13	12.192	18	4.23	0.16	0.27	1.22	0.030	0.019	0.04	0.01	0.02	0.024	0.002	0.002	0.0012	0.38	410	538	30.0
216060926	16105615	MC345B	W8*13	12.192	54	12.69	0.16	0.27	1.22	0.030	0.019	0.04	0.01	0.02	0.024	0.002	0.002	0.0012	0.38	396	533	30.5
216060927	16305356	MC345B	W8*13	12.192	21	4.935	0.17	0.23	1.04	0.025	0.018	0.03	0.01	0.01	0.018	0.002	0.002	0.0010	0.35	408	536	31.5
116061487	16402701	MC345B	W12*65	12.192	18	21.294	0.17	0.30	1.25	0.022	0.020	0.01	0.01	0.01	0.023	0.001	0.002	0.0014	0.39	370	529	28.5



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CITY, ANHUI PROVINCE, P.R. CHINA

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Steel type: ALLOYED, HOT/COLD ROLLED NO ALLOYED, ETC

Specification: ASTM A6/A6M-2009 ASTM A572/A572M-2012

ASTM A992/A992M-2011(B:0.0008%-0.0040%)

DATE: 2016-7-6

LOT No.	Heat No.	Steel Grade	Size (INCH)	Length (M)	Pieces	Theoretical Weight (MT)	Chemical Composition (%)											Mechanical Properties					
							C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Nb	B	CEV	Sn	Yield Strength σ_s (Mpa)	Tensile Strength σ_b (Mpa)	Elongation δ 200 (%)
116061488	16402701	MC345B	W12*65	12.192	3	3.549	0.17	0.30	1.25	0.022	0.020	0.01	0.01	0.01	0.023	0.001	0.002	0.0014	0.39		395	531	29.0
116061467	16104290	MC345B	W12*79	12.192	9	12.834	0.17	0.31	1.28	0.025	0.015	0.03	0.01	0.01	0.021	0.003	0.002	0.0020	0.40		358	547	25.5
116061468	16104291	MC345B	W12*79	12.192	1	1.426	0.17	0.29	1.29	0.030	0.016	0.03	0.01	0.01	0.022	0.004	0.002	0.0016	0.40		362	558	26.5
116061469	16305278	MC345B	W12*79	12.192	2	2.852	0.16	0.30	1.28	0.024	0.021	0.01	0.00	0.01	0.021	0.001	0.001	0.0013	0.38		394	536	26.0
116061451	16402244	MC345B	W12*96	12.192	18	31.374	0.17	0.27	1.30	0.028	0.012	0.03	0.01	0.02	0.037	0.002	0.001	0.0016	0.40		411	531	27.0
116060739	16204730	MC345B	W18*40	12.192	30	21.96	0.18	0.30	1.26	0.029	0.017	0.03	0.01	0.02	0.022	0.005	0.002	0.0014	0.40		382	536	23.5
116060740	16204730	MC345B	W18*40	12.192	3	2.196	0.18	0.30	1.26	0.029	0.017	0.03	0.01	0.02	0.022	0.005	0.002	0.0014	0.40		375	531	23.0
116060716	16304875	MC345B	W18*50	12.192	30	27.06	0.15	0.23	1.21	0.026	0.018	0.03	0.01	0.02	0.026	0.004	0.002	0.0020	0.37		358	509	26.0
116060718	16304874	MC345B	W18*50	12.192	3	2.706	0.18	0.29	1.26	0.030	0.018	0.04	0.01	0.03	0.025	0.004	0.002	0.0013	0.41		369	530	25.0
116060701	16105096	MC345B	W18*60	12.192	1	1.085	0.18	0.33	1.29	0.030	0.020	0.04	0.01	0.03	0.023	0.005	0.002	0.0016	0.41		369	533	26.5
116060702	16204733	MC345B	W18*60	12.192	18	19.53	0.17	0.30	1.28	0.030	0.019	0.07	0.01	0.03	0.023	0.007	0.002	0.0014	0.41		391	533	26.5
116060703	16204733	MC345B	W18*60	12.192	8	8.68	0.17	0.30	1.28	0.030	0.019	0.07	0.01	0.03	0.023	0.007	0.002	0.0014	0.41		412	533	26.5
116060692	16105023	MC345B	W18*71	12.192	4	5.12	0.17	0.30	1.33	0.023	0.019	0.03	0.01	0.01	0.023	0.004	0.002	0.0013	0.40		385	524	26.0
116060693	16105023	MC345B	W18*71	12.192	17	21.76	0.17	0.30	1.33	0.023	0.019	0.03	0.01	0.01	0.023	0.004	0.002	0.0013	0.40		394	530	27.0
116060670	16304724	MC345B	W18*97	12.192	8	14.048	0.18	0.27	1.30	0.028	0.012	0.03	0.01	0.02	0.037	0.002	0.001	0.0013	0.41		416	543	27.5
116060671	16104962	MC345B	W18*97	12.192	6	10.536	0.17	0.38	1.37	0.026	0.016	0.04	0.03	0.01	0.040	0.005	0.002	0.0014	0.42		413	537	24.5
TOTAL:					692	486.846																	

<NOTE> STEEL GRADE IS BASED ON THIS CERTIFICATE.

Consignor:

Quality Control center Auditor:

MAANSHAN IRON & STEEL CO., LTD.
SPECIAL TESTING QUALITY INSPECTOR

质量检验专用章

MAANSHAN IRON & STEEL CO., LTD.
SPECIAL TESTING QUALITY INSPECTOR



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							C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Nb	B	CEV	Sn	Yield Strength σ_s (Mpa)	Tensile Strength σ_b (Mpa)
216061056	16105612	MC345B	W10*22	12.192	70	27.93	0.17	0.25	1.27	0.024	0.022	0.03	0.01	0.02	0.048	0.002	0.002	0.0013	0.40	393	543	32.0
216060051	16104914	MC345B	W12*26	12.192	7	3.304	0.15	0.19	1.22	0.027	0.012	0.02	0.01	0.02	0.021	0.002	0.0021	0.36	419	523	30.0	
216060052	16104914	MC345B	W12*26	12.192	60	28.32	0.15	0.19	1.22	0.027	0.012	0.02	0.01	0.02	0.021	0.002	0.0021	0.36	374	529	24.0	
216060053	16304710	MC345B	W12*26	12.192	49	23.128	0.15	0.23	1.26	0.024	0.011	0.03	0.02	0.02	0.020	0.003	0.002	0.0014	0.37	378	535	26.0
216060054	16304710	MC345B	W12*26	12.192	50	23.6	0.15	0.23	1.26	0.024	0.011	0.03	0.02	0.02	0.020	0.003	0.002	0.0014	0.37	350	504	26.0
216060066	16304711	MC345B	W12*30	12.192	20	10.86	0.17	0.21	1.26	0.022	0.014	0.02	0.01	0.02	0.019	0.002	0.000	0.0014	0.39	406	567	34.0
216060067	16304711	MC345B	W12*30	12.192	30	16.29	0.17	0.21	1.26	0.022	0.014	0.02	0.01	0.02	0.019	0.002	0.000	0.0014	0.39	391	560	32.0
116060221	16104930	MC345B	W14*132	12.192	12	28.68	0.16	0.27	1.35	0.035	0.013	0.04	0.01	0.01	0.047	0.003	0.001	0.0013	0.40	411	558	26.0
116060222	16104930	MC345B	W14*132	12.192	1	2.39	0.16	0.27	1.35	0.035	0.013	0.04	0.01	0.01	0.047	0.003	0.001	0.0013	0.40	414	557	26.5
116060383	16204672	MC345B	W16*36	12.192	12	7.752	0.16	0.22	1.07	0.026	0.017	0.03	0.01	0.02	0.019	0.002	0.001	0.0012	0.35	369	506	24.5
116060384	16204672	MC345B	W16*36	12.192	24	15.504	0.16	0.22	1.07	0.026	0.017	0.03	0.01	0.02	0.019	0.002	0.001	0.0012	0.35	363	501	24.5
116060346	16105020	MC345B	W16*40	12.192	30	21.96	0.16	0.31	1.31	0.024	0.017	0.02	0.01	0.02	0.026	0.005	0.002	0.0013	0.39	372	523	22.5
116060333	16304820	MC345B	W16*45	12.192	12	9.804	0.17	0.30	1.28	0.032	0.017	0.02	0.01	0.01	0.025	0.002	0.002	0.0014	0.39	374	530	22.5
116060334	16304820	MC345B	W16*45	12.192	18	14.706	0.17	0.30	1.28	0.032	0.017	0.02	0.01	0.01	0.025	0.002	0.002	0.0014	0.39	372	524	23.0
116060335	16105020	MC345B	W16*45	12.192	1	0.817	0.16	0.31	1.31	0.024	0.017	0.02	0.01	0.02	0.026	0.005	0.002	0.0013	0.39	373	523	22.5
116060321	16204656	MC345B	W16*50	12.192	22	20.108	0.18	0.33	1.29	0.032	0.019	0.02	0.01	0.01	0.023	0.002	0.002	0.0014	0.41	372	511	27.0
116060322	16204655	MC345B	W16*50	12.192	2	1.828	0.16	0.28	1.26	0.027	0.017	0.02	0.01	0.01	0.022	0.002	0.002	0.0014	0.38	378	503	27.0
216060925	16105615	MC345B	W8*13	12.192	18	4.23	0.16	0.27	1.22	0.030	0.019	0.04	0.01	0.02	0.024	0.002	0.002	0.0012	0.38	410	538	30.0
216060926	16105615	MC345B	W8*13	12.192	54	12.69	0.16	0.27	1.22	0.030	0.019	0.04	0.01	0.02	0.024	0.002	0.002	0.0012	0.38	396	533	30.5
216060927	16305356	MC345B	W8*13	12.192	21	4.935	0.17	0.23	1.04	0.025	0.018	0.03	0.01	0.01	0.018	0.002	0.002	0.0010	0.35	408	536	31.5
116061487	16402701	MC345B	W12*65	12.192	18	21.294	0.17	0.30	1.25	0.022	0.020	0.01	0.01	0.01	0.023	0.001	0.002	0.0014	0.39	370	529	28.5



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116061488	16402701	MC345B	W12*65	12.192	3	3.549	0.17	0.30	1.25	0.022	0.020	0.01	0.01	0.01	0.023	0.001	0.002	0.0014	0.39		395	531	29.0
116061467	16104290	MC345B	W12*79	12.192	9	12.834	0.17	0.31	1.28	0.025	0.015	0.03	0.01	0.01	0.021	0.003	0.002	0.0020	0.40		358	547	25.5
116061468	16104291	MC345B	W12*79	12.192	1	1.426	0.17	0.29	1.29	0.030	0.016	0.03	0.01	0.01	0.022	0.004	0.002	0.0016	0.40		362	558	26.5
116061469	16305278	MC345B	W12*79	12.192	2	2.852	0.16	0.30	1.28	0.024	0.021	0.01	0.00	0.01	0.021	0.001	0.001	0.0013	0.38		394	536	26.0
116061451	16402244	MC345B	W12*96	12.192	18	31.374	0.17	0.27	1.30	0.028	0.012	0.03	0.01	0.02	0.037	0.002	0.001	0.0016	0.40		411	531	27.0
116060739	16204730	MC345B	W18*40	12.192	30	21.96	0.18	0.30	1.26	0.029	0.017	0.03	0.01	0.02	0.022	0.005	0.002	0.0014	0.40		382	536	23.5
116060740	16204730	MC345B	W18*40	12.192	3	2.196	0.18	0.30	1.26	0.029	0.017	0.03	0.01	0.02	0.022	0.005	0.002	0.0014	0.40		375	531	23.0
116060716	16304875	MC345B	W18*50	12.192	30	27.06	0.15	0.23	1.21	0.026	0.018	0.03	0.01	0.02	0.026	0.004	0.002	0.0020	0.37		358	509	26.0
116060718	16304874	MC345B	W18*50	12.192	3	2.706	0.18	0.29	1.26	0.030	0.018	0.04	0.01	0.03	0.025	0.004	0.002	0.0013	0.41		369	530	25.0
116060701	16105096	MC345B	W18*60	12.192	1	1.085	0.18	0.33	1.29	0.030	0.020	0.04	0.01	0.03	0.023	0.005	0.002	0.0016	0.41		369	533	26.5
116060702	16204733	MC345B	W18*60	12.192	18	19.53	0.17	0.30	1.28	0.030	0.019	0.07	0.01	0.03	0.023	0.007	0.002	0.0014	0.41		391	533	26.5
116060703	16204733	MC345B	W18*60	12.192	8	8.68	0.17	0.30	1.28	0.030	0.019	0.07	0.01	0.03	0.023	0.007	0.002	0.0014	0.41		412	533	26.5
116060692	16105023	MC345B	W18*71	12.192	4	5.12	0.17	0.30	1.33	0.023	0.019	0.03	0.01	0.01	0.023	0.004	0.002	0.0013	0.40		385	524	26.0
116060693	16105023	MC345B	W18*71	12.192	17	21.76	0.17	0.30	1.33	0.023	0.019	0.03	0.01	0.01	0.023	0.004	0.002	0.0013	0.40		394	530	27.0
116060670	16304724	MC345B	W18*97	12.192	8	14.048	0.18	0.27	1.30	0.028	0.012	0.03	0.01	0.02	0.037	0.002	0.001	0.0013	0.41		416	543	27.5
116060671	16104962	MC345B	W18*97	12.192	6	10.536	0.17	0.38	1.37	0.026	0.016	0.04	0.03	0.01	0.040	0.005	0.002	0.0014	0.42		413	537	24.5
TOTAL:					692	486.846																	

<NOTE> STEEL GRADE IS BASED ON THIS CERTIFICATE.

Consignor:

质量检验专用章

QUALITY CONTROL CENTER AUDITOR:

质量检验专用章