



# 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%)

**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

**QUALITY NO.:** QSR8132703406  
**CONTRACT NO.:** 16MGE-B-9-100-2  
**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 $\sigma_s$ (Mpa)	Tensile Strength $\sigma_b$ (Mpa)
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
<b>TOTAL:</b>					<b>692</b>	<b>486.846</b>																

**Consignor:** \_\_\_\_\_  
**Quality Control center Auditor:** \_\_\_\_\_

<NOTE> STEEL GRADE IS BASED ON THIS CERTIFICATE.