



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-13 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.: OSR8132703406

CONTRACT NO.: 16WGE-B-9-140

DATE: 2016-10-8

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 (%)
216080049	16206363	MC345B	W10*22	12.192	31	12.369	0.17	0.24	1.25	0.024	0.012	0.04	0.01	0.02	0.022	0.003	0.002	0.0010	0.39	368	539	30.0	0.72
216080050	16206363	MC345B	W10*22	12.192	79	31.521	0.17	0.24	1.25	0.024	0.012	0.04	0.01	0.02	0.022	0.003	0.002	0.0010	0.39	391	537	29.0	0.73
216080051	16206364	MC345B	W10*22	12.192	74	29.526	0.18	0.25	1.26	0.023	0.012	0.05	0.01	0.02	0.023	0.005	0.003	0.0013	0.41	384	532	28.0	0.72
216080056	16106812	MC345B	W10*22	12.192	36	14.364	0.17	0.22	1.24	0.030	0.016	0.04	0.01	0.02	0.023	0.003	0.003	0.0015	0.39	373	520	29.0	0.72
216080057	16106812	MC345B	W10*26	12.192	48	22.512	0.17	0.22	1.24	0.030	0.016	0.04	0.01	0.02	0.023	0.003	0.003	0.0015	0.39	405	546	30.0	0.74
216080060	16206384	MC345B	W10*30	12.192	44	24.024	0.18	0.22	1.26	0.027	0.010	0.03	0.01	0.01	0.048	0.001	0.003	0.0014	0.41	345	464	31.0	0.74
216080061	16206384	MC345B	W10*30	12.192	36	19.656	0.18	0.22	1.26	0.027	0.010	0.03	0.01	0.01	0.048	0.001	0.003	0.0014	0.41	413	571	30.5	0.72
216080347	16206626	MC345B	W12*26	12.192	30	14.16	0.16	0.25	1.26	0.024	0.028	0.03	0.01	0.02	0.022	0.004	0.003	0.0016	0.38	358	529	33.0	0.68
216080348	16206626	MC345B	W12*26	12.192	69	32.568	0.16	0.25	1.26	0.024	0.028	0.03	0.01	0.02	0.022	0.004	0.003	0.0016	0.38	357	523	32.5	0.68
216080349	16107083	MC345B	W12*26	12.192	76	35.872	0.18	0.20	1.09	0.026	0.023	0.04	0.01	0.02	0.025	0.003	0.002	0.0018	0.38	353	506	32.5	0.70
216080350	16107083	MC345B	W12*26	12.192	62	29.264	0.18	0.20	1.09	0.026	0.023	0.04	0.01	0.02	0.025	0.003	0.002	0.0018	0.38	352	508	32.0	0.69
216080351	16306768	MC345B	W12*30	12.192	36	19.548	0.16	0.20	1.25	0.027	0.024	0.04	0.04	0.03	0.049	0.003	0.003	0.0018	0.39	416	553	33.0	0.75
216080357	16107080	MC345B	W12*35	12.192	53	33.602	0.18	0.20	1.25	0.029	0.018	0.06	0.01	0.02	0.048	0.002	0.002	0.0020	0.41	398	541	35.5	0.74
216080358	16107080	MC345B	W12*35	12.192	48	30.432	0.18	0.20	1.25	0.029	0.018	0.06	0.01	0.02	0.048	0.002	0.002	0.0020	0.41	398	549	35.0	0.72
216080359	16206622	MC345B	W12*35	12.192	20	12.68	0.18	0.20	1.27	0.025	0.019	0.04	0.01	0.02	0.050	0.004	0.003	0.0020	0.41	399	544	36.0	0.73
216081087	16206622	MC345B	W12*40	12.192	35	25.62	0.18	0.20	1.27	0.025	0.019	0.04	0.01	0.02	0.050	0.004	0.003	0.0020	0.41	439	590	30.5	0.74
216081088	16206622	MC345B	W12*40	12.192	28	20.496	0.18	0.20	1.27	0.025	0.019	0.04	0.01	0.02	0.050	0.004	0.003	0.0020	0.41	442	578	29.5	0.76
216081092	16107079	MC345B	W12*50	12.192	29	26.158	0.18	0.25	1.35	0.023	0.014	0.04	0.01	0.02	0.051	0.003	0.003	0.0013	0.43	414	600	37.0	0.69
216070854	16206112	MC345B	W14*30	12.192	54	28.944	0.16	0.25	1.26	0.029	0.015	0.06	0.02	0.03	0.022	0.003	0.002	0.0012	0.39	365	511	31.0	0.71
216070855	16205862	MC345B	W14*30	12.192	61	32.696	0.16	0.20	1.19	0.031	0.018	0.03	0.01	0.02	0.024	0.002	0.001	0.0021	0.37	372	523	30.0	0.71