

Contract No.	
Customer	HYUNDAI CORPORATION
PO No.	32201705CP13
L/C No.	
Commodity	H-BEAM
Specification	HOT ROLLED WIDE FLANGE BEAM ASTM A572 G50/A992/CSA G 40.21-13 50WM(345WM) PARA MATERIAL DE VIGA



INSPECTION CERTIFICATE
EN 10204(2004) TYPE 3.1

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Factory	63, Jungbong-Daero, Dong-gu, Incheon, S. Korea
Certificate No.	IH20170702479-1
Class certificate No.	
Issue date	2017-07-17

Dimensions	Length	Heat No.	Quantity (PCS)	Weight (kg)	Chemical Composition													Tensile Test		BEND TEST			Impact Test(L)			Remarks (Impact Specimen Size)									
																		Yield Ratio(%)	BEND TEST	V-Notch			Remarks (Impact Specimen Size)												
					C	Si	Mn	P	S	Cu	Ni	Mo	Cr	Al	V	Nb	Sn			Ce(1)	Tensile Strength	Elongation		AVG	1		2	3							
x100													N/mm ²	%				°C																	
6X6X15	40.00 FT	D 141207	56	15,232	14	16	60	29	8	32	8	2	19	3	3	14	14	31	509	26.0	0.76														
																				515	25.0	0.77													
8X5-1/4X21	40.00 FT	D 140842	52	19,812	16	15	62	24	7	29	11	2	21	3	3	17	14	34	525	24.0	0.76														
																				522	24.5	0.77													
8X5-1/4X21	40.00 FT	D 140843	56	21,336	16	16	59	24	9	32	10	2	19	5	3	15	16	33	520	25.0	0.77														
																				517	25.0	0.77													
8X5-1/4X21	40.00 FT	D 140845	8	3,048	16	14	60	28	7	33	11	2	21	3	3	18	14	34	520	24.0	0.80														
																				521	24.0	0.81													
8X8X35	40.00 FT	D 141411	12	7,620	18	12	59	23	8	35	11	3	20	3	3	15	16	36	532	28.0	0.70														
																				540	27.5	0.70													
10X4X19	40.00 FT	D 141672	20	6,900	16	15	59	25	10	30	13	2	14	3	3	16	15	32	547	24.0	0.77														
																				544	24.5	0.77													
10X5-3/4X22	40.00 FT	D 141389	8	3,192	14	23	112	20	5	31	10	3	16	30	33	4	18	40	575	23.5	0.77														
																				569	24.0	0.77													
10X5-3/4X22	40.00 FT	D 141393	64	25,536	9	20	151	9	3	14	5	2	6	25	5	37	12	37	521	28.5	0.75														
																				527	28.0	0.75													
10X5-3/4X22	40.00 FT	D 141394	96	38,304	18	13	58	15	11	28	9	2	10	4	2	14	16	33	532	26.0	0.75														
																				529	26.5	0.75													
10X5-3/4X26	40.00 FT	D 140788	16	7,552	17	15	57	22	8	28	9	2	12	2	2	16	13	32	546	23.5	0.76														
																				542	24.0	0.76													
SUB TOTAL			388	148,532																															

***** N E X T *****

Note
(1) Cept: (CE=C+Mn/6+Cr/5+V/5+Mo/5+Ni/15+Cu/15)
(2) Gauge length : 200 mm
(3) Y.R = Y.S/T.S

WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR THE ABOVE ORDER.

J. C. Ahn
General Manager of Q.A Team

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PO No.	32201705CP13
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INSPECTION CERTIFICATE
EN 10204(2004) TYPE 3.1

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Factory	63, Jungbong-Daero, Dong-gu, Incheon, S. Korea
Certificate No.	IH20170702479-2
Class certificate No.	
Issue date	2017-07-17

Dimensions	Length	Heat No.	Quantity (PCS)	Weight (kg)	Chemical Composition											Tensile Test			Impact Test(L)			Remarks (Impact Specimen Size)						
					Chemical Composition											Yield Ratio(%)	BEND TEST	Impact Test(L)										
					C	Si	Mn	P	S	Cu	Ni	Mo	Cr	Al	V			Nb	Sn	CE _{eq}	Tensile Strength		Yield Strength	Elongation	V-Notch	1	2	3
x100											%			AVG														
10X5-3/4X26	40.00 FT	D 141412	16	7,552	18	14	58	29	10	36	10	2	20	3	3	16	20	35	510	375	24.0	0.74						
10X5-3/4X26	40.00 FT	D 141413	8	3,776	18	14	58	30	10	40	10	2	22	4	2	16	19	36	507	372	25.0	0.73						
12X6-1/2X26	40.00 FT	D 141653	78	36,816	16	14	57	28	7	28	10	2	13	3	2	16	13	31	495	368	24.0	0.74						
12X6-1/2X26	40.00 FT	D 141654	6	2,832	17	13	59	30	10	31	11	2	12	4	2	16	16	32	493	365	24.5	0.74						
12X6-1/2X35	40.00 FT	D 141624	6	3,810	12	19	114	22	6	30	10	2	14	23	36	6	19	38	526	384	25.0	0.73						
12X6-1/2X35	40.00 FT	D 141630	24	15,240	10	17	149	8	2	11	5	1	7	35	5	38	7	38	522	382	25.5	0.73						
12X6-1/2X35	40.00 FT	D 141631	18	11,430	15	13	59	11	5	25	8	2	11	3	2	17	12	30	539	398	26.0	0.74						
18X7-1/2X65	40.00 FT	E 197856	27	31,833	18	16	95	24	8	28	7	1	11	3	14	3	12	39	504	377	26.5	0.75						
18X7-1/2X71	40.00 FT	E 197853	12	15,468	19	15	96	25	6	27	8	2	12	3	14	4	24	40	505	382	26.5	0.76						
18X7-1/2X71	40.00 FT	E 197854	6	7,734	19	14	94	26	8	30	8	2	12	3	13	3	15	40	517	376	26.0	0.73						
SUB TOTAL			201	136,491																								

===== N E X T =====

Note

- (1) Ceqt: (CE=C+Mn/6+Cr/5+V/5+Mo/5+Ni/15+Cu/15)
- (2) Gauge length : 200 mm
- (3) Y.R = Y.S/T.S

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J. C. Ahn

General Manager of Q.A Team

HMS I 102(A)-3a A4(210x297)

2015059

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Qrcode scanner App : "Qreal"

Contract No.	
Customer	HYUNDAI CORPORATION
PO No.	32201705CP13
L/C No.	
Commodity	H-BEAM
Specification	HOT ROLLED WIDE FLANGE BEAM ASTM A572 G50/A992/CSA G 40.21-13 50WM(345WM) PARA MATERIAL DE VIGA

INSPECTION CERTIFICATE
EN 10204(2004) TYPE 3.1



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Factory	63, Jungbong-Daero, Dong-gu, Incheon, S. Korea
Certificate No.	IH20170702479-4
Class certificate No.	
Issue date	2017-07-17

Dimensions	Length	Heat No.	Quantity (PCS)	Weight (kg)	Chemical Composition													Tensile Test			BEND TEST			Impact Test(L)			Remarks (Impact Specimen Size)											
																		Yield Ratio(b)	Yield Ratio			V-Notch	V-Notch			Remarks												
					C	Si	Mn	P	S	Cu	Ni	Mo	Cr	Al	V	Nb	Sn		CE _{eq}	Tensile Strength	Yield Strength		Elongation	AVG	1			2	3	1	2	3						
x100													x100			N/mm ²			%			%																
14X8X43	40.00 FT	E 198528	4	3,120	18	14	64	19	8	26	8	1	10	4	14	2	23	33	515	375	27.0	0.73																
14X8X43	40.00 FT	E 198529	3	2,340	18	15	65	19	8	28	10	1	10	4	13	3	11	34	521	372	27.0	0.72																
14X8X43	40.00 FT	E 198530	21	16,380	18	16	64	18	7	25	9	2	9	4	14	2	10	33	509	390	27.5	0.77																
14X14-1/2X90	40.00 FT	N 037949	5	8,160	19	14	96	26	8	27	10	1	14	5	14	4	15	41	548	390	26.0	0.71																
14X14-1/2X90	40.00 FT	N 037950	7	11,424	18	16	95	26	9	29	9	2	14	4	12	4	12	40	545	388	26.0	0.71																
14X14-1/2X90	40.00 FT	N 037951	2	3,264	20	17	95	24	14	24	10	2	17	6	13	3	10	42	545	394	26.5	0.72																
14X14-1/2X90	40.00 FT	N 037952	2	3,264	19	14	92	23	5	22	8	1	14	5	13	3	12	40	539	395	26.0	0.73																
14X14-1/2X90	40.00 FT	N 037953	4	6,528	18	17	95	24	6	23	8	1	12	5	29	3	10	39	537	393	27.0	0.73																
16X5-1/2X26	40.00 FT	D 141522	5	2,360	19	15	93	25	8	29	9	2	18	4	27	4	16	42	544	389	24.0	0.71																
16X5-1/2X26	40.00 FT	D 141641	40	18,880	18	14	72	28	4	27	8	1	16	4	2	19	15	36	562	408	23.0	0.73																
SUB TOTAL			93	75,720																																		

===== N E X T =====

Note
(1) Ceqt: (CE=C+Mn/6+Cr/5+V/5+Mo/5+Ni/15+Cu/15)
(2) Gauge length : 200 mm
(3) Y.R = Y.S/T.S

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J. C. Ahn

General Manager of Q.A Team
HMS I 102(A)-3a A4(21.0x297)
2017.07.19:08:50:03
2015059

Qrcode scanner App : "Qreal"

Contract No.	
Customer	HYUNDAI CORPORATION
PO No.	32201705CP13
L/C No.	
Commodity	H-BEAM
Specification	HOT ROLLED WIDE FLANGE BEAM ASTM A572 G50/A992/CSA G 402L-13 50WM(345WM) PARA MATERIAL DE VIGA

INSPECTION CERTIFICATE
EN 10204(2004) TYPE 3.1



Factory	63, Jungbong-Daero, Dong-gu, Incheon, S. Korea
Certificate No.	IH20170702479-8
Class certificate No.	
Issue date	2017-07-17

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Dimensions	Length	Heat No.	Quantity (PCS)	Weight (kg)	Chemical Composition													Tensile Test			Impact Test(L)			Remarks (Impact Specimen Size)							
																		Yield Ratio(%)	BEND TEST	V-Notch											
					C	Si	Mn	P	S	Cu	Ni	Mo	Cr	Al	V	Nb	Sn			CE _{II}	Tensile Strength	Yield strength	Elongation		AVG	1	2	3			
x100	x100	x1000	x1000	x1000	x1000	x100	x100	x100	x100	x1000	x1000	x1000	x100	x100	N/mm ²	N/mm ²	%														
24X9X84	40.00 FT	N 037762	2	3,048	18	13	101	24	8	25	8	2	16	2	15	4	14	41	547	409	27.0	0.75									
24X9X84	40.00 FT	N 037764	1	1,524	20	15	97	21	10	26	9	2	13	3	14	5	22	42	544	411	27.0	0.76									
24X7X55	40.00 FT	E 198091	17	16,966	14	14	55	20	9	25	9	1	14	3	12	2	11	29	559	420	26.0	0.75									
24X7X55	40.00 FT	E 198092	17	16,966	13	15	51	18	9	26	8	1	11	3	11	2	17	26	554	415	28.0	0.75									
24X12-3/4X146	40.00 FT	N 038317	1	2,649	17	13	114	30	10	28	10	1	16	4	14	5	12	42	496	404	26.5	0.82									
24X12-3/4X146	40.00 FT	N 038318	3	7,947	17	17	114	29	5	28	10	1	16	4	15	5	11	42	485	371	26.0	0.76									
24X12-3/4X146	40.00 FT	N 038320	6	15,894	17	16	113	31	7	24	10	1	15	3	15	4	10	42	477	366	26.5	0.77									
24X12-3/4X146	40.00 FT	N 038322	1	2,649	17	18	114	23	9	28	9	1	13	4	15	6	13	42	552	380	26.5	0.69									
24X12-3/4X146	40.00 FT	N 038322	1	2,649	17	18	114	23	9	28	9	1	13	4	15	6	13	42	551	384	26.0	0.70									
24X12-3/4X146	40.00 FT	N 038322	1	2,649	17	18	114	23	9	28	9	1	13	4	15	6	13	42	567	396	25.0	0.70									
24X12-3/4X146	40.00 FT	N 038322	1	2,649	17	18	114	23	9	28	9	1	13	4	15	6	13	42	566	392	25.5	0.69									
24X12-3/4X146	40.00 FT	N 038322	1	2,649	17	18	114	23	9	28	9	1	13	4	15	6	13	42	558	384	25.5	0.69									
24X12-3/4X146	40.00 FT	N 038322	1	2,649	17	18	114	23	9	28	9	1	13	4	15	6	13	42	559	387	26.0	0.69									
24X12-3/4X146	40.00 FT	N 038322	1	2,649	17	18	114	23	9	28	9	1	13	4	15	6	13	42	556	378	27.5	0.68									
24X12-3/4X146	40.00 FT	N 038322	1	2,649	17	18	114	23	9	28	9	1	13	4	15	6	13	42	557	374	27.0	0.67									
TOTAL			1,112	826,999																											

***** E N D *****

Note	(1) Ceq _t (CE=C+Mn/6+Cr/5+V/5+Mo/5+Ni/15+Cu/15) (2) Gauge length : 200 mm (3) Y.R = Y.S/T.S
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J. C. Ahn

General Manager of Q.A. Team
HMS I 102(A)-3a A4(210x297)

Qrcode scanner App : "Qreal" 2017.07.19.08.50.03 2015059