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Factory: 63, Jungbong-Daero, Dong-gu, Incheon, S. Korea  
 Certificate No.: IH20221105460-1  
 Class certificate No.:  
 Issue date: 2022-12-02

# INSPECTION CERTIFICATE

## EN 10204(2004) TYPE 3.1

Contract No.	
Customer	HYUNDAI CORPORATION
PO No.	462211ASP1
L/C No.	
Commodity	H-BEAM
Specification	ASTM A572 G50/A992/CSA G40.21-13 50MM(345MM)

Dimensions	Length	Heat No.	Quantity (PCS)	Weight (kg)	Chemical Composition													Tensile Test			Yield Ratio			Impact Test(L)			Remarks (Impact Specimen Size)				
																		Tensile Strength N/mm <sup>2</sup>	Yield Strength N/mm <sup>2</sup>	Elongation %	Yield Ratio	V-Notch		AVG	°C						
					C	Si	Mn	P	S	Cu	Ni	Mo	Cr	Al	V	Nb	N					CE <sub>in</sub>	1		2	3					
4X4X13	40.00 FT	D 175130	6	1,416	17	14	60	21	11	27	9	2	11	3	1	16	106	32	382	27.0	27.0	0.738									
4X4X13	40.00 FT	D 175131	204	48,144	11	14	81	22	11	26	10	2	12	3	2	17	120	30	385	27.5	27.5	0.761									
6X6X15	40.00 FT	D 174993	136	36,992	16	16	62	20	7	25	12	2	15	3	2	17	97	32	430	27.0	27.0	0.809									
6X6X15	40.00 FT	D 174994	32	8,704	17	14	63	23	8	23	10	2	19	3	2	18	98	34	407	26.0	25.6	0.745									
6X6X20	40.00 FT	D 174989	26	9,438	17	14	60	20	10	25	10	2	14	3	2	17	108	33	405	26.0	26.6	0.734									
6X6X20	40.00 FT	D 174990	152	55,176	17	14	61	18	10	26	11	2	12	3	2	17	84	32	407	25.8	26.1	0.734									
8X4X10	20.00 FT	D 168335	2	182	17	15	60	21	5	28	8	2	14	3	1	15	117	33	447	25.0	25.5	0.802									
8X4X10	20.00 FT	D 172866	3	273	17	13	60	23	5	29	12	2	16	2	1	15	120	33	439	25.1	24.2	0.805									
8X4X10	20.00 FT	D 172873	9	819	17	14	63	24	5	22	9	2	14	2	1	16	115	33	437	24.5	24.9	0.792									
8X4X10	20.00 FT	D 174846	206	18,746	17	15	62	23	6	21	10	2	15	3	2	17	121	33	429	24.9	25.1	0.785									
<b>SUB TOTAL</b>			<b>776</b>	<b>179,890</b>																											

Note  
 Melted and Poured in Republic of Korea  
 (1) Ceq: (C+Cr+V+Mo)/5+(Cu+Ni)/15+Mn/6  
 (2) Gauge length : 200 mm  
 (3) Y.R. = Y.S/1.5

**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. E. Han*

General Manager of Q.A Team

2022.12.05.17:30:59

This test report can be verified the authenticity to scan the top-right QR code via "Qreal" mobile app.

HMS I 102(A)-3a A4(20x297)