



Contract No.	
Customer	DUFERCO
PO No.	32201802C611
L/C No.	
Commodity	H-BEAM
Specification	ASTM A572 G50/A992/CSA G40.21-13 50MM(345MM)

**INSPECTION CERTIFICATE**  
EN 10204(2004) TYPE 3.1



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Factory	63, Jungbong-Daero, Dong-gu, Incheon, S. Korea
Certificate No.	IH20180602924-2
Class certificate No.	
Issue date	2018-06-15

Dimensions	Length	Heat No.	Quantity (PCS)	Weight (kg)	Chemical Composition																Tensile Test			Yield Ratio	BEND TEST	Impact Test(L)				Remarks (Impact Specimen Size)
					C	Si	Mn	P	S	Cu	Ni	Mo	Cr	Al	V	Nb	Sn	CE <sub>eq</sub>	Tensile Strength	Yield Strength	Elongation (%)	V-Notch	℃							
					x100			x1000			x100			x1000			x100	N/mm <sup>2</sup>			%	AVG	1			2	3			
21X12-1/4X111	40.00 FT	N 042833	18	36,252	18	14	93	18	8	20	8	2	11	4	12	4	24	38	536	383	26.0	0.715								
21X12-1/4X111	40.00 FT	N 042834	2	4,028	19	15	96	17	5	19	8	2	9	3	14	3	7	39	540	376	26.5	0.697								
27X10X94	40.00 FT	N 042806	6	10,236	18	16	96	24	9	25	10	1	14	4	14	5	10	40	533	397	26.0	0.745								
27X10X94	40.00 FT	N 042811	4	6,824	19	17	94	23	12	26	8	2	12	3	13	1	15	40	540	412	27.0	0.763								
27X10X94	40.00 FT	N 042812	3	5,118	18	14	95	24	11	27	9	2	10	3	13	2	14	39	525	393	28.5	0.749								
27X10X94	40.00 FT	N 042813	2	3,412	18	15	93	23	11	23	10	2	9	3	13	2	10	38	539	413	25.5	0.767								
27X10X94	40.00 FT	N 042814	20	34,120	18	16	97	21	10	23	9	2	8	3	14	1	12	39	536	403	26.5	0.752								
27X10X94	40.00 FT	N 042815	20	34,120	19	16	96	24	12	24	9	2	8	3	14	3	10	39	538	386	25.0	0.718								
27X10X94	40.00 FT	N 042816	20	34,120	18	16	95	24	11	26	10	2	8	3	13	2	10	38	530	386	25.0	0.729								
<b>TOTAL</b>			<b>249</b>	<b>451,996</b>																										

===== E N D =====

(1) Ceq: (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 \*

Note

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. Han*

General Manager of QA Team