No.	
r	DUFERCO
	32201711C611
lity	H-BEAM
tion	ASTM A572 G50/A992/CSA G40.21-13 50WM(345WM)

INSPECTION CERTIFICATE

EN 10204(2004) TYPE 3.1

HYUNDAI STEEL

Factory	63, Jungbong-Daero, Dong-gu, Incheon, S. Korea
Certificate No.	IH20180202206-2
Class certificate No.	
Issue date	2018-02-13

ıensions	Length	Heat No.	Quantity (PCS)	Weight (kg)	Chemical Composition C	Si	Mn	P	S	Cu	Ni	Mo	Cr	Al	V	Nb	Sn	CE(1)	Tensile Test Tensile Strength	Yield Strength	Elongation (2)	Yield Ratio(3)	BEND TEST	Impact Test(L) V-Notch AVG	1	2	3 (℃)	Remarks (Impact Specimen Size)
					×100			×1000		×100				×1000				×100	N/mm2		%	-	-	-				
X4X13	40.00 FT	D 145209	48	11,328	16	13	59	17	6	26	9	2	11	2	1	15	10	31	515 520	396 395	26.0 26.5	0.769 0.760						
4-1/2X109	40.00 FT	N 041212	33	65,241	18	16	101	24	9	25	10	2	15	3	15	3	14	41	567 558	442 422	23.5 25.0	0.780 0.757						
4-1/2X109	40.00 FT	N 041213	29	57,333	18	15	94	21	11	23	8	2	13	3	13	1	10	39	559 547	442 402	24.0 26.0	0.791 0.735						
4-1/2X109	40.00 FT	N 041214	4	7,908	18	14	93	21	10	23	9	2	13	3	13	1	12	39	557 546	424 410	24.5 25.5	0.762 0.751						
4-1/2X90	40.00 FT	N 041200	8	13,056	18	15	97	22	11	27	9	2	12	3	13	3	10	40	556 549	438 414	24.5 26.0	0.788 0.755						
4-1/2X90	40.00 FT	N 041201	8	13,056	18	15	97	21	13	23	10	2	13	3	13	3	9	40	564 551	446 424	23.5 25.0	0.791 0.770						
4-1/2X90	40.00 FT	N 041202	18	29,376	18	13	97	18	10	19	7	2	13	3	14	3	9	39	559 552	435 421	24.0 25.0	0.779 0.763						
4-1/2X90	40.00 FT	N 041203	16	26,112	18	14	97	20	12	22	10	2	14	3	14	4	9	40	557 546	434 408	24.0 25.5	0.780 0.748						
4-1/2X90	40.00 FT	N 041204	17	27,744	18	15	96	18	10	22	11	2	11	2	13	3	8	39	548 551	417 426	25.5 25.0	0.761 0.774						
4-1/2X90	40.00 FT	N 041205	24	39,168	19	17	95	22	9	21	8	2	11	4	12	2	9	40	563 554	441 433	24.0 24.0	0.784 0.782						
TOTAL			205	290,322	====== NEXT ======																							

CE=C+Mn/6+Cr/5+V/5+Mo/5+Ni/15+Cu/15)
length : 200 mm
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. Ahn

General Manager of Q.A Team