CERTIFICATE NO(성적서 번호) : BB03387
DATE OF ISSUE(발행일자) : 2017-11-15
CONTRACT(P/O) NO.(계약번호) : 25598
PR NO.(주문서번호) : F170600262
COMMODITY(제품명) : E.R.W. CARBON STEEL PIPE
SPECIFICATION(제품규격) : ASTM A53 B

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

CUSTOMER(고객사): 현대종합상사(주)

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure PSI	Hydrostatic Test Time SEC	Spec. Min.	Spec. Max.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base MPa	Tensile Strength Weld MPa	Yield Strength MPa	Y/R Rate %	E.L %	Hardness Test ※3	Hardness Test Max. Value	Hardness Test & CVN Impact Test ※2 ※3	CVN Impact Test(℃) Specimen size	Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
									Min.	Max.		415	415	240														
																					Criteria : In the case of 10×10)							
1	EB BE	12" X 0.406 " X 20.177 F	17	8,331	343.009	P30015	1340	5			T	478	466	392		39												
2	EB BE	12" X 0.406 " X 20.177 F	107	52,441	2,158.939	SQ42537	1340	5			T	459	469	333		45												
		TOTAL	124	60,772	2,501.948																							

No.	Heat No.	Spec.	※4	C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	CM3 ※10	Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
				Chemical Composition(%) 2 :×100 3 :×1000 4 :×10000											Zn-Coating Test			HC-Test	H.I.C Test			
				2	2	2	3	3	2	2	2	3	3	3		Time	Result	psi	%	%	%	
		Min.																				
		Max.		30		120	50	45	40	40	40	150	80	1000								
1	P30015		H	6	1	80	10	6														
			P	7	2	80	10	7	3	1	3	4	1	70								
			P	7	2	79	10	7	3	1	2	4	1	70								
2	SQ42537		H	17	1	47	9	3														
			P	18	1	44	9	5	2	1	2	2	TR	58								
			P	18	1	44	9	5	2	1	2	2	1	59								

Remark
※1) Type of pipe end(관종)
EB:ERW Black BE:Bevel End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※7) For each reduction of 0.01% below the specified C max.
an increase of 0.06% Mn above the specified max.
will be permitted up to a max. of 1.65%
※10) CM3=Cu+Ni+Cr+Mo+V
※ SPEC YEAR - ASTM A53(2012ED)

Heat Treatment	Non-Destructive Test (U.T)	Flattening / Bending Test	Visual & Dimension
GOOD	GOOD	GOOD	GOOD

본 제품은 관련 규격에 합격되었음을 보증합니다.
WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN ACCEPTED IN ACCORDANCE WITH THE PRESCRIBED SPECIFICATION AND ORDER.
* 본 검사증명서에 명기된 규격용도외 사용시 안전상 문제가 발생할 수 있으며, 검사증명서 위.변조시 사문서 위조로 불이익을 당하실 수 있습니다.

SURVEYOR

H.K. CHOI
QA Manager