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CONTRACT(P/O) NO.(계약번호) : 28991

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COMMODITY(제품명) : E.R.W. CARBON STEEL PIPE

SPECIFICATION(제품규격) : ASTM A53 B

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): 현대종합상사(주)

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

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (M)	HEAT No.	Hydrostatic Test Pressure	Hydrostatic Test Time	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base	Tensile Strength Weld	Yield Strength	Y/R Rate	E.L	Hardness Test ※3	Max. Value	※2 ※3	CVN Impact Test Specimen size	CVN Impact Test(℃) Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	a
		※1	(본)	(KG)	(M)		PSI	SEC	Min. / Max.		MPa / 415	MPa / 415	MPa / 240	%	% / 28													
1	EB BE	12" X 0.375 " X 6.150 M	56	25,410	344.4	SP52113	1240	5		T	450	502	332		39				Criteria : In the case of 10×10									
		TOTAL	56	25,410	344.4																							

No	Heat No.	Spec.		C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	CMS ※10	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HIC-Test Colaose Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
			※4	2	2	2	3	3	2	2	2	3	3	3				psi	%	%	%	
		Min.																				
		Max.		30		120	50	45	40	40	40	150	80	1000								
1	SP52113		H	18	1	40	13	4														
			P	17	1	42	5	1	2	1	2	20	1	67								
			P	17	1	42	4	TR	2	1	2	20	1	67								

2 : ×100 3 : ×1000 4 : ×10000

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

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(2018ED)

SURVEYOR

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This material has been manufactured, sampled, tested and inspected in accordance with the specification and has been found to meet the requirements.
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H.K. CHOI
QA Manager

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