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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): PLESA ANAHUAC Y CIAS., S.A. DE C.V.

HYUNDAI STEEL
울산공장 : 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 (PSI)	Hydrostatic Test Time (SEC)	Spec.	※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 Max. Value	※2 ※3	Hardness Test & CVN Impact Test CVN Impact Test(℃) Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
									Min.		415	415	240		28			Specimen size							
									Max.									Criteria : In the case of 10×10							
1	EB BE	10" X 0.365 " X 6.150 M	60	22,247	369	SQ89478	1430	5		T	500	536	366		38										
		TOTAL	60	22,247	369																				

No.	Heat No.	Spec.		Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	CM3 ※10	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HC-Test Collapse Pressure (psi)	H.I.C Test CLR (%)	CTR (%)	CSR (%)	S.S.C.C Test
			※4	2	2	2	3	3	2	2	2	3	3	3								
		Min.																				
		Max.		30		120	50	45	40	40	40	150	80	1000								
1	SQ89478		H	19	1	53	16	2														
			P	19	1	50	14	2	1	1	3	1	TR	48								
			P	20	1	51	15	3	1	1	3	2	1	52								

※ 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(2016ED)

SURVEYOR

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WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN ACCEPTED IN ACCORDANCE WITH THE PRESCRIBED SPECIFICATION AND ORDER.
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H.K. CHOI
QA Manager

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