CERTIFICATE NO(성적서 번호) : D204135 Page 1 of 2
DATE OF ISSUE(발행일자) : 2019-02-27
CONTRACT(P/O) NO.(계약번호) : 27795
PR NO.(주문서번호) : F1812001'91
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 %	EL %	Hardness Test ※3	Max. Value	※2 ※3	Hardness Test & CVN Impact Test CVN Impact Test(℃) Specimen size	Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
									Min.		415	415	240													
									Max.										Criteria : In the case of 10×10								
1	EB BE	14" X 0.312 " X 6,150 M	62	25,890	381.3	P97966	940	5		T	462	467	346		42												
2	EB BE	14" X 0.312 " X 6,150 M	97	40,506	596.55	P97970	940	5		T	466	466	344		44												
3	EB BE	14" X 0.312 " X 6,150 M	172	71,824	1,057.8	P97976	940	5		T	436	461	337		41												
4	EB BE	14" X 0.312 " X 6,150 M	15	6,264	92.25	SQ68821	940	5		T	452	455	299		43												

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	CM3 ※10	2:×100 3:×1000 4:×10000	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HIC-Test: Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
		Min.																	psi	%	%	%	
		Max.		30		120	50	45	40	40	40	150	80	1000									
1	P97966		H	6	2	72	12	4															
			P	6	2	75	13	7	1	1	2	2	1	42									
			P	6	2	76	13	7	1	1	2	2	1	43									
2	P97970		H	6	2	74	13	5															
			P	7	2	76	13	8	1	1	2	1	1	50									
			P	7	2	76	14	8	1	1	2	2	1	51									
3	P97976		H	6	1	79	12	6															
			P	7	1	81	12	7	2	1	2	2	1	54									
			P	7	1	81	12	6	2	1	2	2	1	56									
4	SQ6882'		H	18	1	46	11	3															
			P	16	2	43	9	5	1	1	3	1	3	50									
			P	16	2	43	9	5	1	1	3	1	3	51									

Remark

※1) Type of pipe end(관종)
EB:ERW Black BE:Bavel 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)

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

SURVEYOR

본 제품은 관련 규격에 합격되었음을 보증합니다.
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H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : D204135 Page 2 of 2
DATE OF ISSUE(발행일자) : 2019-02-27
CONTRACT(P/O) NO.(계약번호) : 27795
PR NO.(주문서번호) : F181200191
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. 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 Max. Value	※2 ※3	Hardness Test & CVN Impact Test CVN Impact Test(℃) Absorbed Energy(Joule) Specimen size	1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
												415	415	240					Criteria : In the case of 10×10							
		TOTAL	346	144,484	2,127.9																					

No.	Heat No.	Spec.	※4	C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	CM3 ※10	2:×100 3:×1000 4:×10000	Zn-Coating Test 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
		Min.		2	2	2	3	3	2	2	2	3	3	3					psi	%	%	%	
		Max.		30		120	50	45	40	40	40	150	80	1000									

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 Anaysis
※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 A53'2018E01

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

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